

# MINI DAKAR RALLY 2016 MEDIA GUIDE.











## 01/ FOREWORD.

### Sebastian Mackensen, Senior Vice President MINI.

Dear Media Representatives,

The Dakar Rally continues to be the ultimate challenge for man and machine. Its demanding terrain and punishing climatic conditions provide a level of uncertainty that support the Dakar's reputation as the most exciting motorsport endurance event in the world.

It's a race that epitomises adventure, making it the ultimate proving ground for the MINI ALL4 Racing. At this event, our race team partners, engineers, competitors and support crews tackle the world's most challenging racing conditions. This enables us to transfer learnings to our road-going MINI to support customers' everyday adventures.

The X-raid Team MINI ALL4 Racing crews are highly experienced in cross country rally driving. However, all of the Dakar competitors are facing a new, more intense event through the heart of South America. For 2016, the withdrawal of Peru from the course has, arguably, created a more demanding event for the drivers, teams and vehicles. The opening three

days now present more technical tracks, while the addition of a new marathon stage presents a true test of endurance for the competing machines. However, one element that remains unchanged is the Dakar's capability to provide the perfect opportunity for MINI to grow our rich motorsport heritage.

With 190 countries expected to see the Dakar brought to life on their TV screens, all eyes will be on the MINI ALL4 Racing crews to see if one of the 12 pairings can continue the tradition of success. Achieving Dakar victory for the last four years since 2012 has ensured that MINI continues to be known globally as a durable and iconic machine, equipped to deal with any challenge that comes its way. For 2016, MINI is, once again, ready to compete at the highest level and add further honours to an already impressive motorsport heritage.

Yours sincerely,

Sebastian Mackensen

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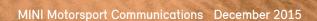
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## 02/ MINI IN RALLYING: THE ROAD TO THE TOP.



- · MINI ALL4 Racing makes debut at 2011 Dakar
- First win of MINI ALL4 Racing in Abu Dhabi Desert Challenge by Stéphane Peterhansel
- · Stéphane Peterhansel finishes 2nd in Silk Way Rally 2011
- · Filipe Campos wins Baja Portalegre 500.



- 5 MINI ALL4 Racing enter Dakar.
- Stéphane Peterhansel takes first overall victory in Dakar Rally for X-raid team.
- · Joan 'Nani' Roma finishes second, securing 1-2 finish for the MINI ALL4 Racing.
- · All 5 MINI ALL4 Racing finished in the top 10.
- MINI ALL4 RACING wins FIA Cross Country Rally World Cup.

### 2014

- · 3 victories in a row at Dakar for MINI, Joan 'Nani' Roma's first win in a MINI ALL4 Racing.
- MINI ALL4 RACING 3rd consecutive win in FIA Cross Country Rally World Cup.
- A MINI ALL4 Racing Dakar podium 1-2-3.
- All 11 MINI ALL4 Racing completed the Dakar.









- Nasser Al-Attiyah gains 4th consecutive win in the MINI All4 Racing at the Dakar Rally – 5 MINI in top 10.
- Driver Krzysztof Holowczyc secures 3rd at the Dakar Rally.
- · MINI ALL4 RACING wins 4th consecutive FIA Cross Country Rally World Cup.





- · Peterhansel takes second Dakar victory for X-raid in MINI ALL4 Racing.
- · Second consecutive win for MINI ALL4 RACING in FIA Cross Country Rally World Cup.
- · Three MINI ALL4 RACING in Dakar top five.









· MINI ALL4 Racing designed

# 03/ DAKAR RALLY: A MINI SUCCESS.



DAKARS CONTESTED:

5



FOTAL MINI DRIVERS + NAVIGATORS (2012-2015):

34



WINS:

## 4 times:

2012: Stéphane Peterhansel + Jean-Paul Cottret
 2013: Stéphane Peterhansel + Jean-Paul Cottret
 2014: Joan 'Nani' Roma + Michel Périn
 2015: Nasser Al-Attiyah + Mathieu Baumel



### **DAKARS ENTERED:**

· 2011: 1 car

· 2012: 4 cars

· 2013: 6 cars

· 2014: 11 cars

· 2015: 10 cars

(2016: **12** cars)

· Total: 32 cars over 5 years







# STAGES WON BY MINI DRIVERS:

· 2012: 10 of 13

· 2013: 6 of 14

· 2014: 9 of 13

· 2015: **11** of 13



### **DISTANCES:**

· 2011: **9,618km** (Argentina, Chile)

· 2012: **8,377km** (Argentina, Chile, Peru)

· 2013: 8,592km (Peru, Argentina, Chile)

· 2014: 9,374km (Argentina Bolivia, Chile)

· 2015: **9,111km** (Argentina, Chile, Bolivia)

· Total: 45,072km covered







04/ TESTING AT ITS BEST.





Four consecutive Dakar Rally victories spanning 2012-2015 certainly make the MINI ALL4 Racing the car to beat in the 2016 edition of the world's most action-packed endurance race. However, its racing pedigree and successful heritage are not enough alone to ensure that the MINI ALL4 Racing secures another accolade.

The FIA Cross Country Rally World Cup has proved to be the ideal testing ground for the development of the car in between the Dakar Rallies. The combination of challenging terrain and extreme environments, from the extreme dust-like fesh fesh in desert heat to grip-less ice and packed snow conditions in Russia, have amounted to thousands of kilometres of testing — and it's a test that man and machine have proved they can withstand.

2015 Dakar Rally victors, Nasser Al-Attiyah and Co-Driver Mathieu Baumel, also added the title of 2015 FIA Cross Country Rally World Cup to their list of achievements. Taking to the top step of the podium in Qatar, Egypt, Italy, Hungary and Morocco helped to propel the experienced pairing to the overall championship win.

However, they were not the only successful MINI ALL4 Racing drivers in the 2015 series. Vladimir Vasilyev and Konstantin Zhiltsov secured early victory in Abu Dhabi, Joan 'Nani' Roma and co-driver Alex Haro also tasted success in Aragon, Spain and Krzysztof Holowczyc with Lukas Kurzeja enjoyed a home victory in Poland. Outside of the FIA World Cup, Orlando Terranova and Bernardo 'Ronnie' Graue steered the MINI ALL4 Racing to a win in the popular Ruta 40 in Argentina.

This challenging testing regime married with competitive racing has provided huge amounts of data and insight that will prove vital in the preparations for the 2016 Dakar Rally. Every component has been honed to ensure reliability goes hand-in-hand with performance along with an exemplary driving experience. Braking, suspension and chassis are sharpened extensions of the first MINI ALL4 Racing that first thrilled spectators in the MINI ALL4 Racing's Dakar Rally test year in 2011.

X-raid (DE) is the German company who build all MINI ALL4 Racing for competition use and do so with massive cross country experience. This experience is amplified with comprehensive racing support and devising testing programmes — not just for the MINI ALL4 Racing but also for the drivers and co-drivers...

November 2015 once again saw the annual 'team building exercises' organised by X-raid. In the snow topped mountains of Germany, MINI ALL4 Racing crews were put through their paces in controlled arenas that would further cement their trust in each other. One such example saw blindfolded crew members walking across single-wire 'bridges' guided only by the eyes and voice of another crew member.

Argentina is the starting point for the 2016 Dakar Rally but for every person associated with MINI and its MINI ALL4 Racing, the all-important preparations never, ever stop. The rewards of such actions can be underlined by not just the results but also by the words of the MINI ALL4 Racing crews.







"After 10 or 11 years now it is much easier. But sometimes I need to be really focussing only on my driving and not take the work off my co-driver. Inside the car the power is more the co-driver than

the driver... me, I only follow; I am the taxi driver and follow his instructions".

Joan 'Nani' Roma









"Dakar is one of the toughest challenges that you can do with a car. It's a long distance rally and you don't have to be fighting every day and every second in the corner but even so you do have to push

hard. When MINI offered me the chance to test the MINI ALL4 Racing with the experienced X-raid team, of course I really, really wanted to give it a go.".

Mikko Hirvonen









O5/ A DRIVER'S PERSPECTIVE OF THE 2016 DAKAR RALLY.

Interview with Nasser Al-Attiyah.





Two-time Dakar Rally winner, Nasser Al-Attiyah (QAT) enters this year's contest as the reigning champion alongside co-driver Mathieu Baumel (FRA). The experienced duo secured the endurance race victory as well as the 2015 FIA Cross Country Rally World Cup title in a MINI ALL4 Racing. In 2016, the pairing are set to take on the terrain of Argentina and Bolivia, once again in a MINI ALL4 Racing, but this time under the banner of AXION X-raid Team and both are ready...

### Q: A MINI ALL4 Racing has secured the Dakar title for the last four years. What makes this vehicle so outstanding?

N. A-A: The MINI ALL4 Racing has won four Dakar titles because it is so good. I think there are also many other reasons such as X-raid team putting all the development into the car, and also having good drivers. Together they make the perfect package.

## Q: You have won many rally titles so far in your career, which do you consider to be your greatest winning achievement?

N. A-A: Of course it is Dakar. Dakar is a great race and to win Dakar this year was a great win for me.

## Q: With the new route announced, do you think the MINI ALL4 Racing will still have the edge?

N. A-A: It will have an edge in most stages, of course, and be extremely competitive in other stages. But you never know where luck will be with you or with another crew or team. The MINI ALL4 Racing is well known for its all-round ability of speed, agility,

performance and reliability. It is a proven car and this is why so many top drivers have succeeded at Dakar with MINI – we hope to continue with this success.

### Q: The competition looks to be the toughest for many years. Who do you think will be the main threat and where.

N. A-A: Everybody is a threat... especially MINI ALL4 Racing crews! For sure Peugeot has a very strong line-up of winning drivers and a car that is getting better. I cannot say if and where they might be stronger because the course is designed to be even more challenging for 2016. The same can be said for the other manufacturers. But for MINI and the ALL4 Racing five years continual development, which is really refinement, plus four of those five years as a winning force is a definite advantage.

### Q: The 2016 Dakar Rally organisers have stated this year's race will be more demanding for the driver, and navigation will test the co-drivers. Is this a worry?

N. A-A: Not for Mathieu and me, and I doubt for the other MINI crews. Dakar is the most demanding endurance challenge there is and the reason why the best in the world are attracted to Dakar. Finishing Dakar let alone taking the win is reason to celebrate. We obviously do as much pre-race preparation of the route as we can but so many unforeseen forces can ruin any planning. Ice, rain, heat, or even a small rock fall weeks before the race can make a big, big difference to your race. You can't foresee what you don't race until that day, that stage, that split second.







#### Q: When you are driving what are you thinking?

N. A-A: Ha-ha! Yes, many things. Concentration is key. Your co-driver is giving instructions and it is important to listen and act upon them. At the same time you are driving and with driving I mean steering, looking ahead, braking, accelerating — everything a normal car driver would do but at, say, four-times fast-forward speed. You are also thinking about the other crews; where are they, what speed are they doing, are they faster or slower, have they opened a time gap. Remember, you can't see anyone else in the mountains and valleys. You and your co-driver are effectively alone out there.

#### Q: What strengths would you say make a Dakar winner?

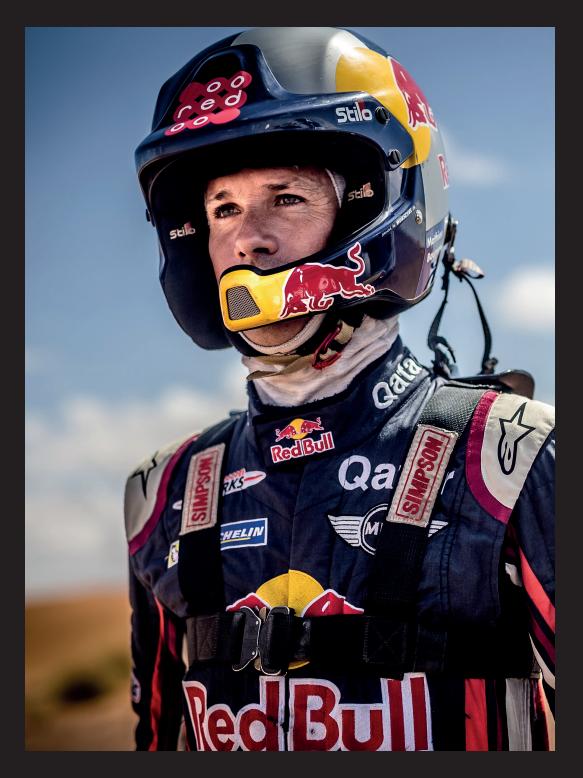
N. A-A: To win Dakar you need good luck, a good team and good co-driver — and also work very hard yourself to achieve a win in Dakar.

Q: 2016 is looking like a busy year for you. You have your Dakar title to defend and your sixth consecutive Olympic Games in Rio, Brazil for skeet shooting. How does it feel to be part of an elite crop of athletes who have represented your country at the Olympics so many times?

N. A-A: I am so happy and proud of what I do... to win Dakar, race and represent my country at the Olympic Games. My plan is to win Dakar again in 2016... To compete in Olympic Games is also not easy because of the competition. This will be my sixth Olympic Games for me so far in my life and every time I compete I always try to raise the Qatar flag in the same way as I do when racing.







O6/ A CO-DRIVER'S PERSPECTIVE OF THE 2016 DAKAR RALLY.

Interview with Mathieu Baumel.





Mathieu Baumel is the co-driver for Nasser Al-Attiyah. Together they have made just as much impact in the world of long distance cross country rally as the celebrated MINI ALL4 Racing by winning the 2015 Dakar Rally and the FIA World Cup in one season. This remarkable achievement comes courtesy of MINI and its special MINI ALL4 Racing, support from X-raid and, of course, the skillsets of the two men in the cockpit at the front of the action. Here then, Mathieu Baumel gives us the co-driver's insight on the run up to the 2016 Dakar Rally...

### Q: What were your first thoughts when the route was revealed by the Dakar organisers?

MB: We all knew the Dakar would be a little more complicated after the withdrawal of Peru. The reason being we will stay in some areas of Argentina that we have visited before, and because of this we know it will be difficult because the organisers will try to use a new off-piste routes and new navigation places. This makes it more difficult for the navigators because we will have no experience from the year before and we will arrive and have to discover everything first hand.

### Q: Is it a problem that racing in Peru had to be abandoned because of the problematic climate?

MB: I was a little sad that Peru would not be part of the Dakar because the sand dunes and sand sections are very good terrain for Nasser and me – we are able to go very fast on this kind of surface. Unfortunately it is not to be so, for sure, it makes the race a little more difficult for us. Also for the route you can see now there will be three different parts

to the race. The first part in Argentina will be the least demanding part of the race. The four or five days in altitude will be difficult for the physique of many crews. The second week of the race will be the most difficult with regards to navigation, and from this, I believe, many things will happen to the race order.

## Q: Dakar drivers are quoted as saying the Dakar is the ultimate long distance rally. Does it hold the same appeal for co-drivers?

MB: Dakar is the most difficult race in the world; it is long, it is high, it is difficult, it is everything in one race. The navigation will not be easy. For the driver it is technically difficult with the arrival of a fast track, twisty track, sand track, dunes, ravines... Every terrain you can race on around the world can be found here in one race – and for me that is a challenge that makes Dakar the best race you can be part of. It is a race where you try your best against competitors in front of you and behind you for a long time. Nasser and I will try our best for MINI and the team as well as ourselves.

#### Q: The opening Stage 1 (Day 2) starts with 404km of road section. Is this good or bad?

MB: We try before the rally to imagine where there will be various stages, road and off-road sections. The highway sections are the time where you can take it easy, relax, be cool and take your time. This prepares the crews for the next section of special stages. But this is all guesswork because nobody knows the route for the day's racing until the night before and that is when I have to do my navigation homework. That is why it is important to remember sections of the year before in case some parts of them are used again.





### Q: Stage 4 is the marathon stage, where only the crew are allowed to service the car after stage completion. Have you decided which of you does what?

MB: We have had specific mechanical training. The latest was some weeks ago again with X-raid technicians to know exactly what we can do and when during a stage and the Marathon Stage. Everything has been prepared so we know how to change, for example, driveshafts, and a prop-shaft, disconnect the gearbox if we need to, and more if there is a problem. We carry many spares with us but not a gearbox because it is too big.

### Q: Stages 5, 6 and 7 will take the racing to high altitude. What can you do to lessen the impact of thin air

MB: For sure if you lose concentration, get a big headache, or feel sick with the altitude then it's a problem. There are two more days this year at altitude so preparation has been very important. We have had good altitude training with the use of a special room that can replicate the altitude we will be racing at. Every night we can sleep at 2500, 3000 metres, or the height required. This is good because it gets the blood ready for less oxygen intake. We will be racing between 3000-5000 metres high and this will be very, very difficult for the body.

## Q: Stage 10 (Day 12) will place you in hot conditions and a total of 763 km distance to cover. Will this be a struggle to deal with?

MB: During the year with Nasser we drive many, many times in the desert with temperatures of 40 to 50 degrees outside, so you can imagine what it's like inside a MINI ALL4 Racing. Fortunately, the experience of racing in heat means we are more used to

these conditions and can deal with them. Also, Nasser lives all year in Qatar so he knows everything about living in high temperatures. In this case his body can adapt easily to these conditions. This can be an advantage over competitors who are not used to such conditions because they will start to slow when Nasser can push even harder.

## Q: Stage 13 (Day 15) is the final stage of the Dakar Rally. What thoughts go through you mind before the start?

MB: With the last day we will prepare like all the other days because you don't finish racing until the very end. But if you are leading you are always scared that something might happen and so we would drive a little bit slower, carefully in case of making a mistake. It is very tough mentally because we always think that maybe a competitor will push really hard and take no chances in order to make up time. This is exactly what happened last year and it is mentally fatiguing. If we are not leading then there is no question that we will push, push, and push more to take the win.

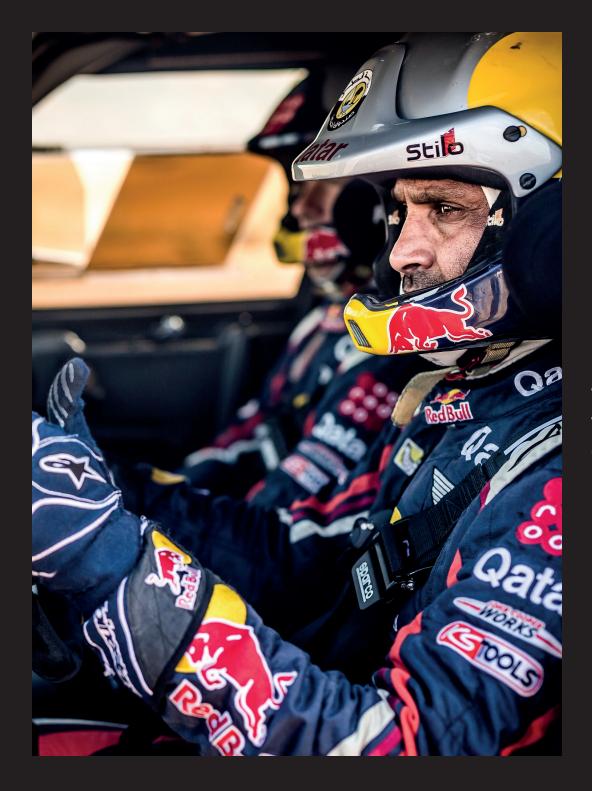
#### Q: How physically tough is Dakar for a co-driver?

MB: It is not easy for a co-driver because when reading the road book he cannot see what is in front of him. The driver has the steering wheel to support his upper body and can brace himself in the seat, but we have nothing but a book to hold. This is why it is so much harder for us under braking, or jumping, or hitting an obstacle — we are looking down so we cannot prepare for an obstacle and this means a co-driver's neck and head can move violently. Fortunately X-raid has a physio team to help our bodies recover.





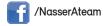




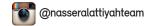
07/ 2016 DAKAR RALLY: DRIVERS AND CO-DRIVERS.















Born 21/12/1970 (age 44)

Born in Doha

 In shooting, Al-Attiyah won the bronze medal in the men's skeet event at the 2012 Summer Olympics in London.

8-time Middle East Rally Champion

2006: 1st place Production World Rally Championship

2011: 1st place Dakar Rally2014: 1st place WRC22015: 1st place WRC2

1st place FIA World Cup for Cross Country Rallies

1st place Dakar Rally





Co-Driver:
Mathieu Baumel (FRA) defending Dakar champion

· Born 17/01/1976 (age 39)

· Born in Manosque, France

2008: 1st place FIA World Cup for Cross Country Rallies

(Co-driver of Guerlain Chicherit)

1st place FIA World Cup for Cross Country Bajas

(Co-driver of Guerlain Chicherit)

2009: 1st place FIA World Cup for Cross Country Rallies

(Co-driver of Guerlain Chicherit)

2014: 1st place Sealine Cross Country Rally, Qatar

(Co-driver of Nasser Al-Attiyah) 1st place OiLibya Rallye du Maroc

2015: 1st place Dakar Rally

1st place FIA World Cup for Cross Country Rallies

1st place Rallye du Maroc, Morocco

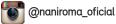
1st place Hungarian Baja 1st place Italian Baja, Italy 1st place Pharaons Rally, Egypt



















### Driver: Joan 'Nani' Roma (SPA)

Tunisia

1st place in the Baja

España Aragón

- Born 17/02/1972 (age 43)
- · Hobbies: cycling, skiing, climbing
- · Born in Folgueroles, Barcelona, Spain

1994:	1st place in the Rallies Cross Country Senior	2003:	1st place in the Rally of Egypt
	European Championship		1st place in the Rally of
	Golden medal in the ISDE		Sardinia
1996:	1st participation in the	2004:	1st place in the Clermont-
	Dakar Rally		Ferrand-Dakar Rally
1997:	1st place in the Rallies		(motorcycle)
	Cross Country Spanish		1st place Dakar Rally
	Championship		(motorcycle)
	1st place in the Raids	2005:	1st place in the Baja
	Spanish Championship		España Aragón
	Gold medal in the ISDE	2014:	1st place Dakar Rally
2002:	1st place in the Rally of		for Mini X-raid

### Co-Driver: Alex Haro (SPA)

· Born 14/03/1980 (age 35)

Cup in Spanish Tarmac

Basols)

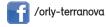
Championship (Co-Driver of J.

- · Born in Barcelona, Spain
- Hobbies: Mountain biking, skiing, outdoor activities

2002:	1st place Catalonian Tarmac Rally open class (Co-Driver of	2009:	1st place Rally of Nations Team Spain
	J. Basols)	2010:	1st place FIA S-2000 Rally
	1st place Junior Catalonian		World Championship
	Tarmac Rally open class	2012:	1st place Co-Driver Cup
	(Co-Driver of J. Basols)		Group N Spanish Gravel
2003:	1st place Copa Fiat Punto		Championship
	Catalonia (Co-Driver		(Co-Driver of A. Llovera)
	of J. Basols)	2015:	1st place Baja Aragon, Spain
2005:	1st place Desafio		
	Peugeot Spanish Tarmac		
	Championship		
2007:	1st place Mitsubishi Evo		















· Born 10/11/1979 (age 36) in Mendoza, Argentina

 Terranova began his professional career in 1997 as an enduro rider, taking four national titles and placing third in the Latin America enduro championship in 2001

2013: 5th place Dakar Rally

Dakar Rally won one stage

2014: 5th place Dakar Rally

2015: 1st place Desafío Ruta 40

2nd place Baja Aragon, Spain Dakar Rally 4 stages won







Co-Driver: Bernardo 'Ronnie' Graue (ARG)

Born 12/05/1969 (age 46) in Mendoza, Argentina

Hobbies: Mountain climbing

2010: 9th place Dakar Rally (Quad)

2012: 5th place Dakar Rally

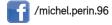
2014: 2nd place OiLibya Rallye du Maroc 3rd place Hungarian Baja, Hungary

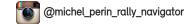
2015: 1st place Desafío Ruta 40

2nd place Baja Aragon, Spain Dakar Rally 4 stages won











### Driver: Mikko Hirvonen (FIN)

• Born 31/07/1980 (35) in Kannonkoski, Finland

Hobbies: Tennis, football, badminton

2001:	2nd place Finnish Rally	2011:	2nd place WRC
	Championship	2012:	2nd place WRC
2006:	3rd place WRC	2015:	3rd place Baja Aragon,
2007:	3rd place WRC		Spain
2008:	2nd place WRC		Test MINI ALL4 Racing
2009:	2nd place WRC		









### Co-Driver: Michel Périn (FRA)

Born 19/01/1957 (age 58) in Saint-Mihiel, France

Cross Country Rallies 1st place Rally Transiberico 2nd place UAE Desert

1st place Central Europe

Challenge

Rally

2008:

1993:	1st place FIA World Cup for Cross Country Rallies	2009: 2013:	1st place Baja Spain 1st place Hungarian Baja
1994:	1st place FIA World Cup for Cross Country Rallies 1st place Dakar Rally		1st place Baja Aragon - Spain 1st place Desafio Ruta 40,
1995:	1st place FIA World Cup for		Argentina
	Cross Country Rallies 1st place Dakar Rally		1st place Abu Dhabi Desert Challenge
1996:	1st place FIA World Cup for Cross Country Rallies	2014:	1st place Desafío Inca, Peru 1st place Baja Aragon, Spain
	1st place Dakar Rally		1st place Dakar Rally
2005:	1st place FIA World Cup for		
	Cross Country Rallies		
2007:	1st place FIA World Cup for		









· Born 29/08/1968 (age 47) in Reusel, Netherlands

· Hobbies: Rally, Cycling, Fitness, Golf

 Has 60 hours work weeks in normal life owning one of the leading meat manufacturers in the Netherlands

2012: 1st place Amsterdam Short Rally

2013: 3rd place OiLibya Rallye du Maroc

3rd place Pharaons Cross Country Rally, Egypt

2015: 3rd place Abu Dhabi Desert Challenge

3rd place Abu Dhabi Desert Challenge

5th place Baja Russia 4th place Dakar Rally





#### Co-Driver: Wouter Rosegaar (NL)

• Born 27/05/1983 (age 32) in Nijmegen, Netherlands

2008: 3rd place FIA Baja Championship
2009: 3rd place FIA Baja Championship
2010: Henri Magne Navigation Trophy
2014: 3rd place OiLibya Rallye du Maroc

3rd place Pharaons Cross Country Rally, Egypt

2015: 3rd place Abu Dhabi Desert Challenge

5th place Baja Russia 4th place Dakar Rally









- Born 03/12/1997 (age 37) in Wisła, Poland
- One of the most successful ski jumpers of all time
- Four individual Winner Olympic medals in Salt Lake City and Vancouver
- Four Individual World Cup titles (all-time record shared with Matti Nykänen)
- 39 individual competition wins
- 96 podiums (individual and team)
- The only ski jumper to have won three consecutive World Cup titles (2001–2003)
- Competed in Dakar Rally in 2012, 2013, 2014 finishing 37th, 15th and 13th respectively.





#### Co-Driver: Xavier Panseri (FRA)

• Born 21/05/1971 (age 44)

2007: 1st place Polish Rally Championship
 2008: 2nd place Polish Rally Championship
 2009: 3rd place Polish Rally Championship
 Won 2011 Monte Carlo Rally

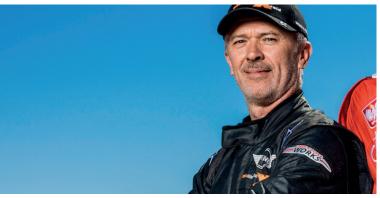








- Born 24/03/1985 (age 30) in Warsaw, Poland
- A nasty crash during the Abu Dhabi Desert Challenge forced him off his bike for more than five months
- · Crash injuries: compacted vertebrae and multiple fractures
- 2014 Dakar 6th place (Motorbike)





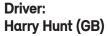
#### Co-Driver: Andrei Rudnitski (RUS)

- Born 12/11/1979 (age 36)
- Men's 400m Runner
- Budapest 2004 Silver in 4x400m (Indoor World Championships)









Born 03/09/1988 (age 27) in London, UK

Hobbies: Running, Water-Sports, Sky-Diving, Rally

He was named 'Rookie of the Year' in his first year of world championship rallying in 2011

MINI brand ambassador

First International Rally 2009:

2010: 1st place WRC - JWRC Rookie Cup 1st place IRC - IRC 2WD Championship

1st place WRC - PWRC 2WD Championship 2011:

1st place IRC - IRC 2WD Championship 2012:

Podium place at the Abu Dhabi Desert Challenge 2015:

> 8th place Rallye du Maroc, Morocco 13th place Baja Aragon, Spain

3rd place Abu Dhabi Desert Challenge







Co-Driver: Andreas Schulz (GER)

Born 03/03/1955 (age 60) in Munich, Germany

Hobbies: skiing

1st place Dakar Rally (Co-driver of J. Kleinschmidt) 2001:

1st place Dakar Rally (Co-driver of H. Masuoka) 2003:

2010: 1st place FIA World Cup for Cross Country Rallies (Co-driver of L. Novitskiy)

2011: 1st place FIA World Cup for Cross Country Rallies (Co-driver of L. Novitskiy)

1st place FIA World Cup for Cross Country Rallies 2012: (Co-driver of K. Al Mutaiwei)

2013: 1st place FIA World Cup for Cross Country Rallies (Co-driver of K. Holowczyc)

1st place Baja Portalegre 500

2015: 3rd place Abu Dhabi Desert Challenge









Born 11/07/1963 (age 52) in Santiago, Chile

2011: 3rd place OiLybia Rally of Morocco2012: 3rd place Desafío Litoral (Dakar Series)

2015: 12th place Dakar Rally





Co-Driver: Filipe Palmeiro (PRT)

· Born 11/07/1977 (age 38) Portalegre, Portugal

2005: First Dakar Rally

2009: 1st place Rally Tunisia (Co-driver of O. Terranova)

2nd place Rally Transiberico (Co-driver of H. Oliveira)

2nd place World Cup

2012: 1st place Baja Poland (Co-driver of K. Holowczyc)

2013: 2nd place Baja Portalegre 500 (Co-Driver of M. Kaczmarski)

2015: 12th place Dakar Rally



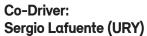






 Born 25/11/1984 (age 31) in Rada Tilly, Chibut Province, Argentina





· Born 22/05/1966 (age 49) in Maldonado, Uruguay

Weightlifter in Barcelona 1992 and Atlanta 1996 Olympics

2011: 14th place 2012: 5th place 2014: (DNF) 2015: (DNF)

Dakar Rallies (Quad)











· Born 15/10/1952 (age 63) in Frankfurt, Germany

Hobbies: Greyhounds, Rally sport

2012: 10th place Abu Dhabi Desert Challenge2013: 8th place Abu Dhabi Desert Challenge

2014: 8th place Baja Poland

5th place Abu Dhabi Desert Challenge

19th place Dakar Rally

2015: 15th place Baja Poland





· Born 10/08/1965 (age 50) in Makranstädt, Germany

2005: 16th place Abu Dhabi Desert Challenge

2012: 30th place Dakar Rally

10th place Abu Dhabi Desert Challenge

2014: 8th place Baja Poland

19th place Dakar Rally

2015: 22nd place Dakar Rally











- Born 11/10/1968 (age 47) in Beijing, China
- · Hobbies: Mountain climbing, hiking, canoeing
- Successful business woman
- Former ATV racer
- Charity worker





### Co-Driver: Min Liao (CHN)

- · Born 15/06/1970 (age 45) in Shanghai, China
- Hobbies: Outdoor activities, cooking, photography
- Dakar participations 2
- Best Dakar result 18th (2012)







# 08/ 2016 DAKAR RALLY: PHYSICAL PREPARATION AND MAINTENANCE.

The Dakar Rally is physically demanding on the competing cars. But spare a thought also for the crews who aren't so tough – or are they?





Cross country rally, as its name suggests, is notorious for its changing terrain. Different days, different hours, minutes and seconds will throw all manner of surfaces at the competitors. Driving at speed intensifies the bumps, jumps, jolts and other effects of driving across harsh terrain. With the Dakar Rally, 14 days of this can stress and strain and even break components on Dakar cars that are not fully prepared. Fortunately, the MINI ALL4

Racing on fearsome, changing terrain at differing altitudes in variable weather and at any speed will have similar effects on drivers and co-drivers — while we may think of them as superhuman, their bodies are nothing more than traditional flesh and bone. When suspension is compressed to completely bottom out the transmitted force goes through the rest of the car, this includes the steering wheel and seat, and ultimately the person sitting in the seat.

Cross country rallying is a fast exciting sport but it is also very physical. Aches and pains are expected in cross country rallying. So too is fatigue and the occasional injuries. Therefore, the physical well-being of MINI ALL4 Racing crews is very important. From pre-race training to the Dakar start line and during the race, the competing crews are assured of the best medical services. As well as full-time Dakar medical crews, the MINI ALL4 Racing crews will be under the care of MINI technical partner X-raid and its three sports physiotherapists.

X-raid's sports physiotherapists are better known as human mechanics. It is their job to repair the crews after each stage; it's not until after each stage do they know if there are problems. If crews are late coming in from a race then the physio guys and girls get nervous because it could mean an accident has happened and serious injuries are possible.

When driving for up to eight hours and more, the most common problems for crews occur with the back, lower spine, bottom and also for the drivers' underarms from continual use

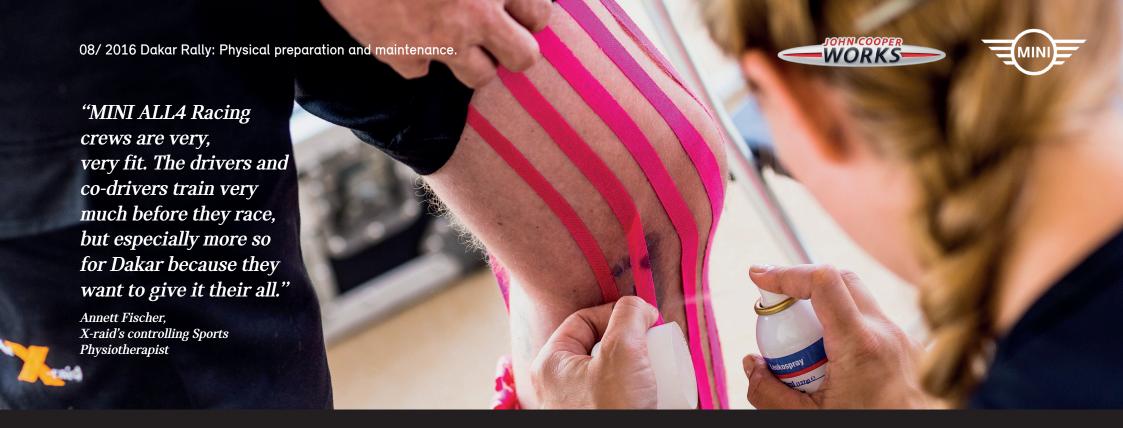
of the steering wheel – there is a lot of movement here and the arms have to deal with the feedback from the steering/wheels.

Each problem is different and each needs different treatments. The best way to describe the way treatment is administered is to think of the crew members as cars — they need different tools to repair them, and the X-raid physios have a big toolbox at their disposal. Some of these tools are manual therapy, lymphatic drainage, massage therapy, osteopathic treatments, Kinesio taping (a therapy which uses the nervous system to get different reactions like reducing pain, better muscle reaction and reduced swelling) and much, much more,

What you have to remember is everybody is different, racing crews especially. Height and build differences can produce different effects from the same driving conditions. Being carefully strapped tight into the special racing seats can reduce compression of the spine but each jump and landing is like the rocks and holes — all different. The use of a HANS device (Head And Neck Support) is mandatory for all competitors because it saves them from a lot of upper spine injuries. Most injuries are now with the lower spine. The fitness level of the crews is also very important to reduce injury.

"MINI ALL4 Racing crews are very, very fit," says Annett Fischer, X-raid's controlling Sports Physiotherapist. "The drivers and co-drivers train very much before they race, but especially more so for Dakar because they want to give it their all. They have their own routines. Some go to the gym for exercise; others ride bicycles and go running, or a mix of all these and more." Again, because of their different build structures, each crew member has their own fitness and dietary schedule to maintain peak physical fitness.

Dakar is renowned for its high altitude stages and high altitude sickness can be a problem. The 2016 Dakar Rally will feature the longest racing time spent at altitude. There are



many goods on the market that help with altitude sickness but most will contain prohibitive substances that violate anti-doping rules. Natural products can be used but must be approved.

Some crews will prefer to train themselves for high altitude events by using different styles of special low-oxygen training. Based on the principle "train low-sleep height" some of them rent for 3-4 weeks hypoxic-tents, where low-oxygen air is pumped into the tent while they are sleep inside. This should be the gold standard of the high altitude preparation. But mechanical training at a machine while using a hypoxia-mask can be similarly helpful. If some people are lucky to live in the mountains then they already have some benefit in this case. And it will be much easier for them to train at low altitude and sleep at high altitude.

In the car, each crew member has three litres of drinks. It is a special nutritional blend for them consisting of carbohydrates and other necessities. They also have a survival package with them that will provide more than 1500 calories. This is a must if they are in the desert.

There will also be sports energy gels, fruit mousses and energy bars. BiFi sausages are also included because of their salt content. All of these obviously need to be easy to open and close because it is not so easy to eat and drink while driving and the crews should have no distractions while driving. The crews will eat on the go at set times to ensure a controlled and consistent intake of nutrition

As part of the X-raid support there is a large kitchen truck where food is prepared. Special meals are supplied that provide fast carbohydrates such as noodles, and meat for protein. The most important thing for the crews is to eat and drink within the first 30 minutes after arriving at the bivouac. This is not so easy because of debriefing and meetings with the press. For this reason, right away, the crews are provided with a recovery drink that contains a lot of carbohydrates and calcium. Sleep is also very important to maintain stamina and keep fatigue at bay. In simple terms, regular care and service of the crews is no different to the MINI ALL4 Racing cars they are strapped inside.







09/
MINI ALL4 RACING:
POLISHED
PERFORMER.





From its first appearance in 2010, the MINI ALL4 Racing then debuted throughout 2011 in the fast-paced motorsport action of World Cup Cross Country Rally. From this point it rapidly evolved into a champion thoroughbred by clinching the FIA Cross Country Rally World Cup title four times in consecutive years (2012–2015) and secured four Dakar Rally wins, again in consecutive years (2012–2015).

Under the direction of MINI and X-raid of Germany, the MINI ALL4 Racing has become the true definition of a cross country rally car. Based on the stunning MINI John Cooper Works Countryman production car, it is fair to say the MINI ALL4 Racing has become the equivalent iconic rally-sport car to the original Mini Cooper S that won the hearts of so many racing crews and fans in the early 1960s.

Today's MINI ALL4 Racing, or to be precise the 12 that will line-up for the start of the 2016 Dakar Rally, do not differ dramatically from the original car that first tasted Dakar soil in 2011. Nothing major has occurred to the MINI ALL4 Racing's chassis or engine in five years. Indeed, the one alteration worthy of a mention was adapting the MINI ALL4 Racing's frame to enable two spare wheel/tyre combinations to be carried under the area of the driver and co-driver, while the third remained in the back of the car. Progressive honing and development work during thousands of competitive racing kilometres and testing programmes has ensured the MINI ALL4 Racing's ability to excel in all arenas of international long distance cross country rallying.

#### 1. ENGINE

TwinPower turbo, straight-six diesel engine by BMW Motoren GmbH, Steyr, Austria.

Designed with endurance competition in mind, the 2993 cc engine produces over 320 hp @ 3250 rpm to power a MINI ALL4 Racing to a top speed of 178 km/h with the regulatory 38mm air restrictor in place. Dry sump lubrication is used to reduce the engine's overall height and ensure total lubrication in extreme racing conditions. The Inconel exhaust system is by specialist exhaust manufacturer Akrapovič.

#### 2. GEARBOX

A Sadev six-speed forward, sequential gearbox with one reverse gear is designed for reduced weight and extreme reliability. The gears are selected via a gear lever positioned between driver and co-driver — being sequential the lever is simply shifted forward or backward for the appropriate gear. An AP Racing multi-plate, sintered metal clutch, capable of transmitting the engine's large torque output of approximately 800 Nm @ 2100 rpm, allows for clutch-less gearshifts when the MINI ALL4 Racing is in forward motion. The MINI ALL4 Racing is also equipped with lockable oil-cooled Xtrac front and SADEV middle and rear axle differentials.

#### 3. CHASSIS

The majority of the MINI ALL4 Racing body is made of a carbon/Kevlar fibre mix with its overall dimension 9% larger than a standard road-going MINI John Cooper Works Countryman. The MINI ALL4 Racing interior is compact and secure in order to give the highest level of safety to the two occupants. A bespoke tube frame consisting of integrated steel pipes is specially made and, as per all steel and alloys used, meets and surpasses stringent aerospace standards.





#### 4. COCKPIT LAYOUT

Carbon fibre is also used for the dashboard area and consists of three sections: driver, central and co-driver dashboards. Information displayed is reduced to essential info only. The driver has selected gear display and RPM LEDs indicating a different gear ratio is required. Speed, oil pressure, fluid temperatures and electronic functions are displayed on the central dashboard to enable both persons to view. It is also a quick-release unit for reduced service time. All navigational systems are located on the co-driver's dashboard.

#### 5. WHEELS & BRAKES

Michelin All-Terrain tyres (245/80R x 16) give grip and feedback across all surfaces. A total of seven wheel/tyre combinations are located on the car — four mounted and three spares, of which two are located in the bottom of the chassis and one in the rear compartment. Steel inner-vented disc brakes (320 mm x 32 mm) are used all-round and bitten by air-cooled six-piston calipers on the front axle, water / air-cooled six piston calipers on the rear axle.

#### 6. SUSPENSION

Dutch-made Reiger Suspension shock absorbers (four to each axle) are adjustable in Bump, Rebound and Roll. The damper oil is cooled by external reservoir units for consistent damping properties and reliability.

### MINI ALL4 RACING: TECHNICAL SPECIFICATIONS

• Engine TwinPower turbo diesel

• Output 320 bhp / 3250 rpm

• Torque approx. 800 Nm / 2100 rpm

· Capacity 2993 cc

Air restrictor
 38 mm diameter

• Top speed approx. 178 km/h

Transmission six-speed sequential gearbox (Sadev)

• Clutch AP Racing clutch

Differential Xtrac

• Brakes AP Racing disc brakes (320 x 32 mm), air-cooled at

front, air/water-cooled at rear

· Length/Width/Height 4333/1998/1966 mm

• Wheel base 2900 mm

• Track 1736 mm

• Kerb weight 1952.5 kg

Tank capacity approx. 385 litres

Chassis frame
 CP Autosport

• Tyres Michelin All-Terrain (size: 245/80R 16)











#### MINI ALL4 RACING - FAST FACTS

- The Michelin tyres run with air only.
- Typical tyre pressures are 2.7 Bar in sand down to 1.1 Bar.
- All competing MINI ALL4 Racing cars are registered and road legal regarding the German TüV.
- $\cdot$  The grade of diesel fuel used is local petrol station pump grade.
- To overcome excessive heat build-up of the braking system, AP Racing 'RadiCal' brake fluid is used.
- Electrical systems are powered by 12 Volt Lithium iron phosphate batteries one big one (400 A shortly 1200A /20 Ah), and a small one (with 200A shortly 600A /10Ah) connected as a spare.
- MINI ALL4 Racing cars carry a comprehensive tool and spares kit for use when
  racing: a tool box with different spanners, pliers, screwdriver, shovel, sand plates
  and a hammer. Spare parts: chamber adjuster, driveshaft, tie-rods, alternator.

- Two hydraulic telescopic jacks mounted to the chassis out of sight are operated from inside and one manual hydraulic jack is carried as an emergency spare.
- The hydraulic jacks are used to lift the MINI ALL4 Racing to allow the crews to change punctured wheels as quickly as possible.
- Even though it means time lost, MINI ALL4 Racing crews must torque up the retaining wheel nuts of replacement wheels to the correct figure of 140 Nm.
- Only one modified Bosch road car windscreen wiper is used to keep the MINI John Cooper Works Countryman windscreen clear of rain, mud, dust, insects etc.
- Oil capacity of the BMW TwinPower straight-six engine is 12 litres.
- A MINI ALL4 Racing weighs the required FIA minimum weight of 1952.5 Kg (including 2 x spare wheels but without fuel, crew and spare parts).







10/ DRIVER AND CO-DRIVER SAFETY: NECESSARY EQUIPMENT.





While the MINI ALL4 Racing is highly regarded for its performance and reliability, it is true to say the skill of the driver and co-driver are another reason why MINI and its MINI ALL4 Racing has proven to be such a dominant force in the world of cross country rally. Therefore, the crew's safety is paramount. Not only is the use of the HANS (Head And Neck Support) system mandatory for all rally competitors but also the rest of competition equipment has to meet stringent standards as well as being comfortable for competition use in opposite scales of temperature.

Safety harness and HANS systems are important but so too is the use of a crash helmet — nobody can foresee the problems and possible dangers that can come with high-speed rally racing and a recognised crash helmet can prove to be a life saver, as can the driver-to-co-driver intercom system.

#### Helmet and intercom

The shell of the race helmet commonly used by MINI ALL4 Racing crews is made in carbon fibre with the internal padding in high performance absorbing material and fireproof fabric and this includes the Double-D ring chinstrap. Stringent safety tests net a certified safety rating of Snell 2015, the latest release from the Snell Foundation.

Some drivers instead prefer other selected models of helmet rated to FIA 8860-2010 and Snell 2005 certified.

Most helmet orders are delivered in standard sizes but crew members have the option of a customised fitting service where all internal components can be adapted to their head shapes and preferred comfort. The helmets are normally supplied in plain white but some crews like their own choice of helmet colour schemes for recognition or personal customisation. Bare shells are supplied to the painter that customers decide and once the job is done, the shell is returned to the manufacturer, assembled, checked and then delivered with the homologation labels to the customer.

The helmets normally ordered are open-face and do not need specific tools for ventilation to be applied to the helmet. A top air-system can be supplied that works using holes pre-drilled in the shell and organised to allow cool air to get inside and warm air to vent outwards.

Open face helmets do need special adaptations in terms of water and air connections if required. The helmets can come with an adjustable peak that the wearer can use with the sun low on the horizon and can add a short visor that would work as a sunglass. An







intercom is fitted into the vehicle that allows the crew to communicate — cockpit noise can reach really high levels and clear communication is important. WRC-type helmets also serve as a communication centre and come with a fixed arm for an integrated microphone, ear-speaker and with a plug that is integrated into the shell and is to be used to connect the helmet (and its radio kit) to the MINI ALL4 Racing's intercom system.

#### Clothing

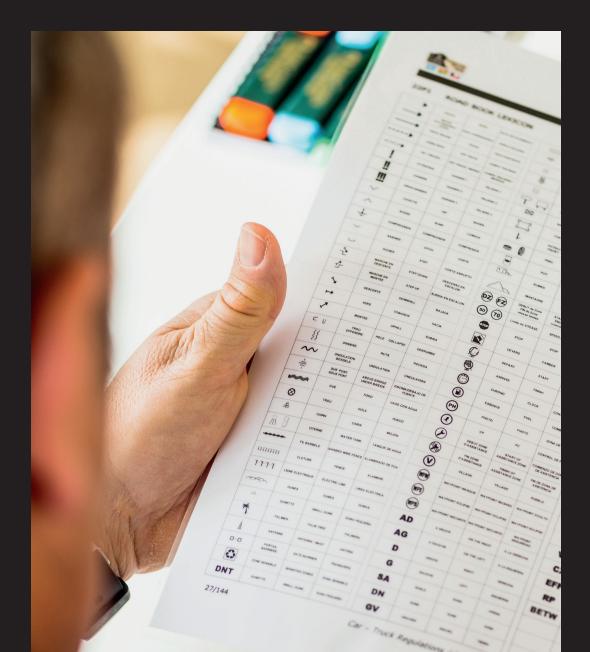
Clothing is equally important in terms of safety and comfort. Typically the suit for the MINI ALL4 Racing crews of Axion X-raid Team are a one-piece suit made of a three-layer construction: external fabric is 100% meta-aramid, inner fabric double face knitted with lining in Nomex comfort and the suit is also treated with X-Cool Silver treatment. Fastening is by zip closure on the front with a Velcro flap which covers the zip. The suit weighs approximately 1100g is flame retardant and is made in compliance to rules FIA 8856/2000.

The suit doesn't have any ventilation but a refrigerant finishing called X-Cool silver. The X-Cool treatment gives a sensation of freshness and is antibacterial too. During the Dakar Rally temperatures can reach 50 degrees but it depends on low-pressure area.

There are places where you reach altitudes of 3500-4000 meters with extremely cold temperatures. The suits produced for the team are custom-made with sponsor and colours.

Crew gloves feature external seams and are pre-curved for greater fit. They also feature HTX high grip material at strategically located areas on the palm and are also flame retardant in compliance with FIA8856/2000. The same standard also applies to the crew's footwear leather race boot with high levels of comfort and a more balanced feel when driving. Ultra-thin pure rubber sole further increases the level of feel available on the pedals, while being anti-static and resistant to fuel and oils.

Unbelievably, the crews also wear approval rated underwear of shirt with long sleeves, trouser, balaclava and socks and are designed to follow the body's shape. The material is a mixed blend of Nomex/Viscose/Modacrilic/EA jersey and rib-knit. Altogether a cross country rally crew's attire puts a whole new spin on "getting dressed for work."







# 11/ DAKAR RALLY 2016 KEY STATS.









STAGE 4:
San Salvador de Jujuy
429km special section takes place at an average of
3,500m, alternating sandy, rocky terrain.

STAGE 5:
Altitude sickness occurs above
2,400m
and is caused by low pressure and lack of oxygen





STAGE 10: Fiambala Dunes 1,230m high dwarf the Burj Khalifa at only 828m









12/
2016 DAKAR RALLY:
HISTORICAL
PREPARATION.





The Dakar Rally is an established motorsport endurance race. Participation in such a prestigious event requires not only a reliable, high performance car such as the MINI ALL4 Racing, and skilled drivers and co-drivers but, as all competitors will tell you, competing at any level — especially the Dakar Rally — requires a background team from start to finish.

Behind the competing MINI ALL4 Racing and their crews is a huge team of support workers who specialise in different areas. Technicians, cook, support truck drivers, medical staff and many more people are required to ensure MINI ALL4 Racing participation of the Dakar Rally — not just one, but 12 of these highly specialised cross country rally cars at the 2016 Dakar Rally.

The team behind the scenes is X-raid, a privately-run motorsport competition company based in Trebur, Germany. X-raid founder and team principal is Sven Quandt. As a former world-class rally driver, his competition and then managerial experience led him to form X-raid in 2002. Under his direction, the men and women who make up X-raid have tasted cross country rally championship success on an envious scale. To date X-raid has won nine World Cup titles, with 2015 being the year X-raid celebrated winning eight of these titles in succession – the last four years with the MINI ALL4 Racing – and an unbelievable four consecutive Dakar Rally wins again with a MINI ALL4 Racing.

To be four times victorious in the Dakar Rally and FIA Cross Country Rally World Cup proves beyond doubt that MINI ALL4 Racing and X-raid are a formidable combination. Based on the MINI John Cooper Works Countryman, MINI ALL4 Racing cars are built from scratch and prepared for competition with technical expertise, experience and, no doubt, a helping of affection by highly specialised X-raid staff. This team of technicians are reinforced with other X-raid staff that organise the movement of competing MINI

ALL4 Racing cars to the required racing locations. In the case of the Dakar, 12 MINI ALL4 Racing have to be shipped from Germany to Argentina.

Along with X-raid support vehicle drivers, engineers, technicians and medical staff to attend the 2016 Dakar Rally, there will also be many tonnes of equipment and spares also shipped to the starting point. All of this requires planning many months ahead of the Dakar. Like the actual racing, preparing and attending the Dakar is a challenge in itself...

### **FAST FACTS: NUMBERS**

- Spare tyre / wheel combinations shipped to Dakar start: 800
- · X-raid personnel participating at Dakar (technicians, physio etc.): 130
- X-raid support vehicles at Dakar: 5 motorhomes, 16 service trucks (inc. kitchen and office truck), 10 service cars and 4 press cars
- $\boldsymbol{\cdot}$  Weight of spares and equipment transported to Dakar start: 50 tonnes
- X-raid staff celebrating a birthday during Dakar: 3
- Duration of all X-raid equipment and MINI ALL4 Racing cars on boat to Dakar: 21 days
- Collection date of MINI ALL4 Racing and X-raid equipment, Buenos Aires: 29th December 2015
- 2016 Dakar Rally prologue: 2nd January 2016







# 13/ DAKAR RALLY 2016: GLOSSARY.





BIVOUAC: At the end of every stage, this is the camp where all the teams and competitors erect their service spots. In addition to the medical centre and the media centre, the bivouac also features a big catering camp, representing the meeting place for all the members of the Dakar teams.

BRIEFING: During the rally, the organisation will hold a driver briefing on every evening. In this briefing, special incidents of the day will be recounted, and hints for the coming stage will be provided.

CHECKPOINT: At a checkpoint, competitors must collect a stamp on their time cards to prove that they passed the checkpoint. Should a competitor miss a checkpoint (or fail to collect the stamp), he receives a time penalty.

FAST ASSISTANCE: As only competitors are allowed to help one another, in the Dakar, many teams enter a "Fast Assistance". This Fast Assistance is usually a race truck that contests the event in the truck category and provides the competitor extensive support in the case of an accident or a technical problem. The truck has spare parts and tools on board.

FESH FESH: A certain kind of fine-grained Sahara sand, called "Guadal" in Argentina.

GPS: In the Dakar, the GPS is used as control system. In the special stages, the competitors may navigate solely through use of the road book. The GPS only confirms arrival at and passing of the checkpoints.

INTERCOM: Used by the driver and co-driver to communicate roadbook instructions.

IRITRACK: This satellite-supported system provides position control. With this system, the PC Course can control the position and speed of every competitor. In case of an emergency, the competitors can contact the PC Course using an integrated satellite phone.

LIAISON: The liaison takes the competitors to the start, and from the finish to the bivouac. It must be completed by the drivers in a specified time.

MINI ALL4 RACING: The X-raid-entered Dakar MINI is based on the MINI John Cooper Works Countryman. Its TwinPower turbo engine with a capacity of 2993 cubic centimetres is based on a BMW production engine and generates 320 bhp at 3250 revs per minute. This allows the MINI ALL4 Racing to hit a top speed of 178 km/h. The tank capacity is approximately 375 litres of diesel fuel. Twelve MINI ALL4 Racing will compete in the 2016 Dakar. With its 2012 to 2015 victories the MINI ALL4 Racing is the reigning four-time defending Dakar champion.

NEUTRALISATION: A neutralisation phase can be embedded in a special stage. In this area, no time is added to the competitors' tally.

PARC FERMÉ: An area in which the vehicles must be parked at certain times during the event. Repairs, refuelling or tyre changes are prohibited there. Cars may only be covered by a transparent protection foil.





PC COURSE: This race control is responsible for sports and safety-relevant aspects and for appeals.

REST DAY: On this day, at rally half-time, no stage is contested, and the competitors and vehicles stay in the bivouac. The teams use this day to perform extensive maintenance work on their cars.

ROAD BOOK: The competitors are provided with the road book when entering the bivouac at the end of a stage. It provides all important navigation information: distances, dangerous passages and special hints. The information is displayed using arrows and symbols.

SCRUTINEERING: Racing and service cars are checked to ensure that they meet all technical regulations.

SENTINEL: This acoustic and optical warning system is used to alert competitors that a faster vehicle is approaching from behind, which should make overtaking easier and safer.

SERVICE ROUTE: All service cars — which means all cars apart from the competitors' and press cars — will drive from bivouac to bivouac on this route, which is stipulated by the organisation.

SPECIAL STAGE: Competitors must contest this part of the stage as a race against time. Time, from start to the finish of the special stage, is used in evaluating competitors' position in the overall standings.

SPEED ZONE: In a speed zone, competitors must abide by a specified speed limit (30, 50 or 90 kph). These zones were introduced to protect potential spectators and/or the specific terrain being driven through.

STAGE: A stage comprises liaisons that take the competitors from the bivouac to the start and/or from the finish to the bivouac and the special stage.

TIME CARD: Start and finish times are recorded on this document. In addition, the co-drivers collect the necessary stamps on this document at the checkpoints (CPs).

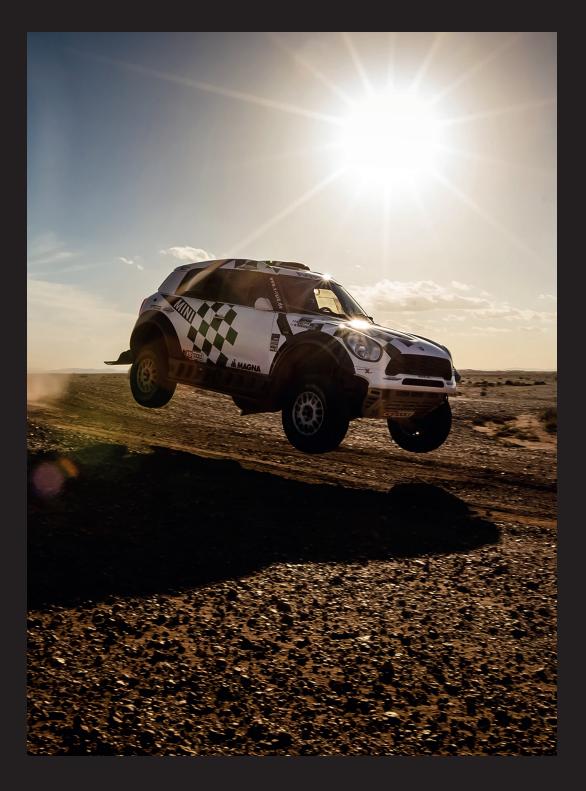
TRIPMASTER: This electronic measuring system is intended to support the co-driver. It measures the total distance and individual stage distances (for instance, between two points in the road book), and can be adjusted by the co-driver.

WAY POINT WP: These points along the route are determined by the organisation and must be passed by competitors. There are four different types of waypoints: WPV, WPM (hidden way point), WPE (eclipse way point), and WPS (safety way point).

X-RAID: Privately-run motorsport team based in Trebur, Germany. Winner of the 2012, 2013, 2014 and 2015 Dakar Rally with the MINI ALL4 Racing. Also competing in the FIA World Cup for Cross Country Rallies. World Cup winner since 2008. Team principal is Sven Quandt.







### 14/ MEDIA CONTACT.

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