

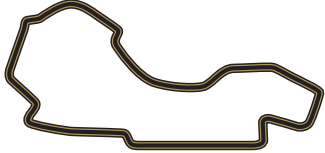
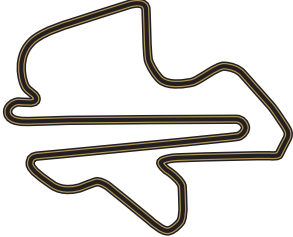
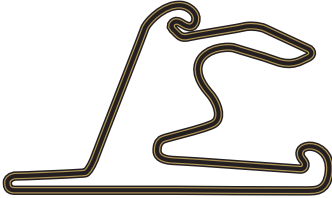
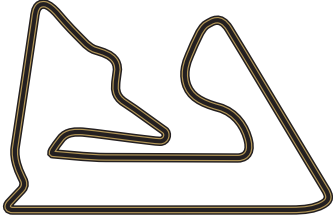

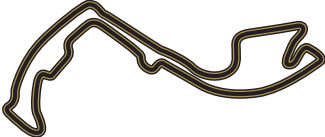
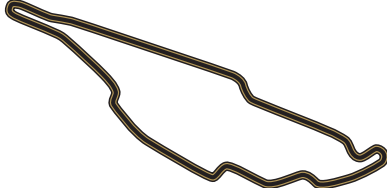
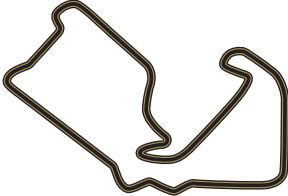
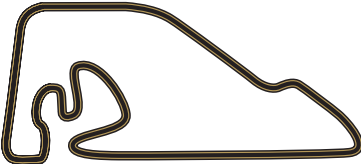
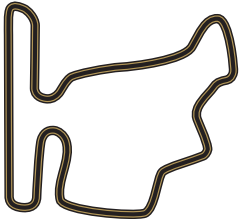
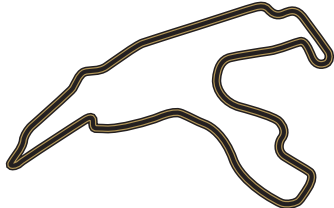
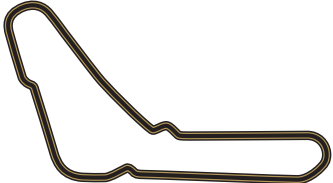
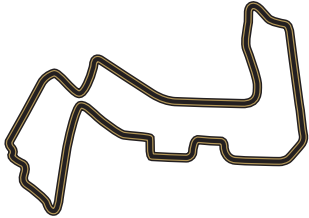
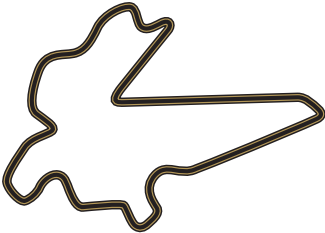
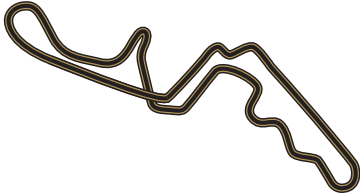
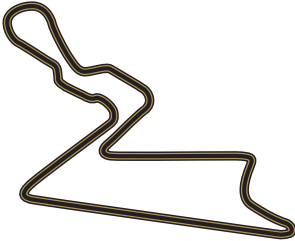
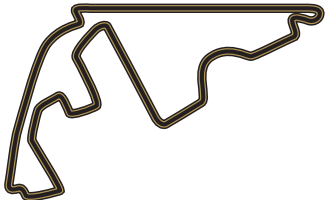
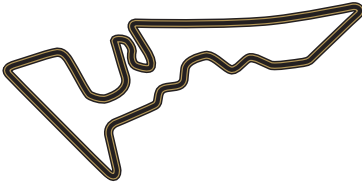
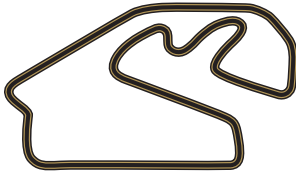


# PREVIEW

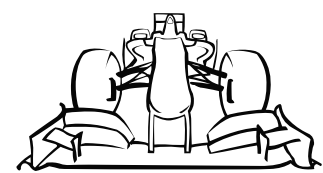
2013 FIA FORMULA ONE  
WORLD CHAMPIONSHIP





<div>AUSTRALIA   MELBOURNE</div> <div>15 - 17 MARCH</div> <div></div>	<div>MALAYSIA   KUALA LUMPUR</div> <div>22 - 24 MARCH</div> <div></div>	<div>CHINA   SHANGHAI</div> <div>12 - 14 APRIL</div> <div></div>	<div>BAHRAIN   SAKHIR</div> <div>19 - 21 APRIL</div> <div></div>
<div>SPAIN   BARCELONA</div> <div>10 - 12 MAY</div> <div></div>	<div>MONACO   MONTE CARLO</div> <div>23 - 26 MAY</div> <div></div>	<div>CANADA   MONTREAL</div> <div>7 - 9 JUNE</div> <div></div>	<div>GREAT BRITAIN   SILVERSTONE</div> <div>28 - 30 JUNE</div> <div></div>
<div>GERMANY   NURBURGHEIM</div> <div>5 - 7 JULY</div> <div></div>	<div>HUNGARY   BUDAPEST</div> <div>26 - 28 JULY</div> <div></div>	<div>BELGIUM   SPA</div> <div>23 AUGUST - 25 AUGUST</div> <div></div>	<div>ITALY   MONZA</div> <div>6 - 8 SEPTEMBER</div> <div></div>
<div>SINGAPORE   MARINA BAY</div> <div>20 - 22 SEPTEMBER</div> <div></div>	<div>KOREA   YEONGAM</div> <div>4 - 6 OCTOBER</div> <div></div>	<div>JAPAN   SUZUKA</div> <div>11 - 13 OCTOBER</div> <div></div>	<div>INDIA   NEW DELHI</div> <div>25 - 27 OCTOBER</div> <div></div>
<div>ABU DHABI   YAS MARINA</div> <div>1 - 3 NOVEMBER</div> <div></div>	<div>UNITED STATES   AUSTIN</div> <div>15 - 17 NOVEMBER</div> <div></div>	<div>BRAZIL   SAO PAULO</div> <div>22 - 24 NOVEMBER</div> <div></div>	





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# GOING FORTH

THE LOTUS F1 TEAM CHAIRMAN SETS OUT THE TEAM'S AMBITIONS FOR THE YEAR AHEAD.

*Last year was an exciting season for us. We finished on the podium ten times. We won a Grand Prix. We comfortably achieved our objective of fourth in the Constructors' Championship. Our results were a strong endorsement of all the hard work we've put in at Enstone over the past three years.*

It wasn't only on track that we saw fantastic results. Internationally known brands such as Microsoft and Unilever's Clear and Rexona appeared on the car thanks to the hard work of our commercial department. We even ran with Angry Birds and Star Wars designations thanks to the innovative approach of our PR and Marketing team.

We launch the E21 with lofty aspirations. Our 2012 car, the E20, was a superb racing car – on occasions

last season the fastest on track, against significant opposition. With the E21 we want to build on this and achieve yet better results.

Our team is a real family and it's a family of over 500 people. We cannot underestimate the hard work of everyone at Enstone and beyond who contribute to the successes we have enjoyed over the course of the previous season, and the successes we hope to be enjoying in 2013.

Last year, some people thought we took something of a risk employing two drivers who had been out of Formula 1 for two years. With Kimi Räikkönen finishing in third position in the Drivers' Championship we demonstrated that Enstone created the perfect environment for him to flourish.

Romain Grosjean demonstrated exceptional

pace and drove some superb races in his first full season of Formula 1 and we're all looking forward to building on his exciting debut season through 2013.

Behind the scenes, we are developing and enhancing the fantastic facility we have nestling in the Oxfordshire countryside. Where in 2011 we implemented a 60% wind tunnel, so 2012 saw our 'Driver in the Loop' simulator go live. For 2013, it's our Gearbox Dyno facility which adds to our operation, and this has particular relevance to the developments for the 2014 change in regulations.

## OUR AIM FOR 2013?

We took a fantastic step forward in 2012 so naturally we want to build on that and do better. Better than fourth place in the Constructors' Championship means third position or higher. Better than third position in the Drivers' Championship means second position or higher. These are lofty targets, but the only way to improve is to set yourself goals. The competition intensifies nearer everyone's goal of victory, but we are ready for that battle.



# “GREAT THINGS ARE POSSIBLE”

**The Team Principal wants to play with the big boys in 2013.**

## **HOW ARE YOU LOOKING FORWARD TO 2013 AND WHAT DO YOU HOPE CAN BE ACHIEVED?**

I think it is fair to say that great things are possible. The leap we made from 2011 to 2012 showed what we are capable of. Add to this the continuity and potential of our driver line-up and we have a very powerful cocktail for the season ahead. Our ambitious plan to turn ourselves into one of the top teams in Formula 1 is coming to fruition and now we need to harness this with strong and regular podium results.

## **WHAT ADVANTAGES DO THE TEAM HAVE COMPARED TO THE CHAMPIONSHIP RIVALS?**

We are lean and hungry. Enstone knows how to win championships, but it is a while since we have won so we are very eager to taste glory again. We have a fantastic facility at Enstone, and one which has benefitted from significant and strategic investment over the past couple of years. We have a highly accomplished technical and design team who last year designed a fantastic car, the E20. The E21 builds on this. We have a superb driver line-up, with the 2007 champion, Kimi, and a hungry young gun in Romain. We have strength in partners and we are certainly primed and ready for action.

## **HOW DO YOU SEE THE DRIVER DYNAMIC EVOLVING THROUGH THE COURSE OF THE SEASON?**

We know that both drivers work well together and their skills and talents complement each other. Kimi has such a wide range of experience and he knows how to react to any situation or circumstance. He's also a superb resource technically. Romain has great raw speed which we are confident will be harnessed in a more effective manner in races for 2013. Both are competitive individuals – as race drivers are – and this pushes each one of them and the team to better things. It was clear how much we benefitted from having two very talented drivers in 2012 and I can only see this getting yet better in 2013.

## **WHERE IS THE TEAM'S FOCUS IN 2013?**

It is certainly an interesting year. On the one hand, we have the season ahead and the very strong desire to achieve great things. On the other hand, we have significant technical changes around the corner in 2014 and an element of resource will naturally be focused in this area. On the track, we want to achieve the very best results possible, and this is true off track too. In every element of our operation we want to be the best.

## **ARE THERE FORMAL TARGETS FOR 2013 AND WHAT ARE THEY?**

We want to do better than we did last year. 2012 was a good season for us – certainly in the context of the previous season – but we, like every team in this highly competitive sport, want to win. We want to make regular appearances on the podium, and add to our tally of appearances on the top step.



*“In every element of our operation we want to be the best.”*



# “2012 WAS A GOOD START, LET’S SEE WHAT WE CAN DO IN 2013”

THE 2007 FORMULA 1 WORLD CHAMPION TALKS OF HIS HOPES FOR HIS SECOND SEASON WITH LOTUS F1 TEAM AFTER HIS SUCCESSFUL COMEBACK TO THE SPORT.

**What are your thoughts heading into your second season with Lotus F1 Team?**

I’m feeling pretty good. Last year was my return to Formula 1 and it went pretty well. This year will be my second with Lotus F1 Team and my eleventh season overall in Formula 1 so I’ve got a pretty good idea of what to expect. I’m sure it will be an exciting season and I’m sure there’ll be lots to talk about. For me, I will continue to do the best I can; let’s see how good our car is, and how good the cars of our opposition are too.

**Is the continuity of going into your second season with the team beneficial to you?**

It helps. It’s not a massive thing which will suddenly mean you start winning all the races, but it’s nice to be at the same team as you understand how they work, and they understand how you work. We quickly developed a pretty good way of working together last year and there’s no reason to think that won’t continue this season.

**Are you still learning as a driver?**

I don’t think you ever stop learning, but there is less to learn than if you’re a rookie. I don’t think I could say I’m a rookie. We had new tracks last year, and that’s always

something nice to learn – and best learnt for me on the tracks themselves. There will be a new car which we’ll want to develop and get working at its best. There are always changes in the sport, some small, some big. Generally, everything’s pretty similar, and the feeling of racing on track is pretty familiar.

**This is the second year of a two-year deal. Are you thinking of 2014 and beyond?**

I’m not really thinking beyond this season at the moment, but I’m sure there will be talk before the end of the year. I enjoyed my comeback to Formula 1 last year and there’s no reason to say I shouldn’t enjoy the 2013 season too. I know there will be big changes to the cars and regulations for 2014, so who’s to say that won’t be exciting.

**Have you set yourself targets and objectives for the season?**

To do the best job I can. I’ve not driven the E21 yet so it’s difficult to say what could or could not be possible. We know we had a good car last season, but everyone is working hard to make the best car. I will be working with the team to help get the car as strong as we can, then in Melbourne we’ll have our first taste of results. It’s a long

season from there. 2012 was a good start, let’s see what we can do in 2013.

**Do you think the team has what it takes to win a championship?**

Yes, I think they do. It’s clear from working with them that they are racers, and you can see in their history that they’ve won championships. Nothing I saw last year made me think that another championship was impossible in the future. Of course, there is some pretty tough competition out there, and everyone wants to win. The team have beaten everyone before, there’s nothing to say they can’t do it again.

**Are you looking forward to working with Romain again?**

We had a pretty good relationship last year and it’s clear he’s fast and motivated. On track we were pretty close to each other at times but we didn’t have any issues. It’s good when you have a team-mate who’s fast and works hard. I think we should be fine in 2013.

**Do you think you proved a point in 2012?**

Maybe for other people, but not for myself. I knew I could still perform well in Formula 1 given the right opportunity; it was only other people who had doubts.



*“I’m sure there will be lots to talk about.”*



# KIMI RÄIKKÖNEN

## CURRICULUM VITAE

**DATE OF BIRTH** 17 OCTOBER 1979

**PLACE OF BIRTH** ESPOO, FINLAND

**NATIONALITY** FINNISH

Having spent two seasons contesting the FIA World Rally Championship alongside selected NASCAR outings, Kimi Räikkönen made an eagerly anticipated and highly successful return to Formula 1 in 2012 with Lotus F1 Team.

Kimi entered the sport in 2001 despite having only 23 races in junior categories under his belt and was quickly recognised as a star for the future. After finishing as runner-up in the Drivers' Championship to Michael Schumacher in 2003 and Fernando Alonso in 2005, he finally took the title in 2007 during his first year driving for Ferrari.

**2012: LOTUS F1 TEAM** Citing his desire to once again compete in wheel-to-wheel racing as a source of renewed interest in the sport, Kimi delighted fans and pundits alike by announcing his return to Formula 1 with Lotus F1 Team for the 2012 season. Despite spending two years away from motorsport's elite category, the Finn instantly demonstrated the skill and technique which has seen him rated as one of the most natural talents of a generation; taking seven podiums and a victory in his comeback year to clinch P3 in the Drivers' Championship. 2013 sees the Iceman remain with the Enstone squad and touted as a potential Championship contender for the season ahead.

**2010 – 2011: RALLYING AND NASCAR** The FIA World Rally Championship was the destination for Kimi with the Citroën Junior Team in 2010, with a best finish of fifth in the Rally of Turkey. The following year he drove for ICE 1 Racing, with two sixth places in Jordan and Germany. He combined his rallying with two NASCAR outings.

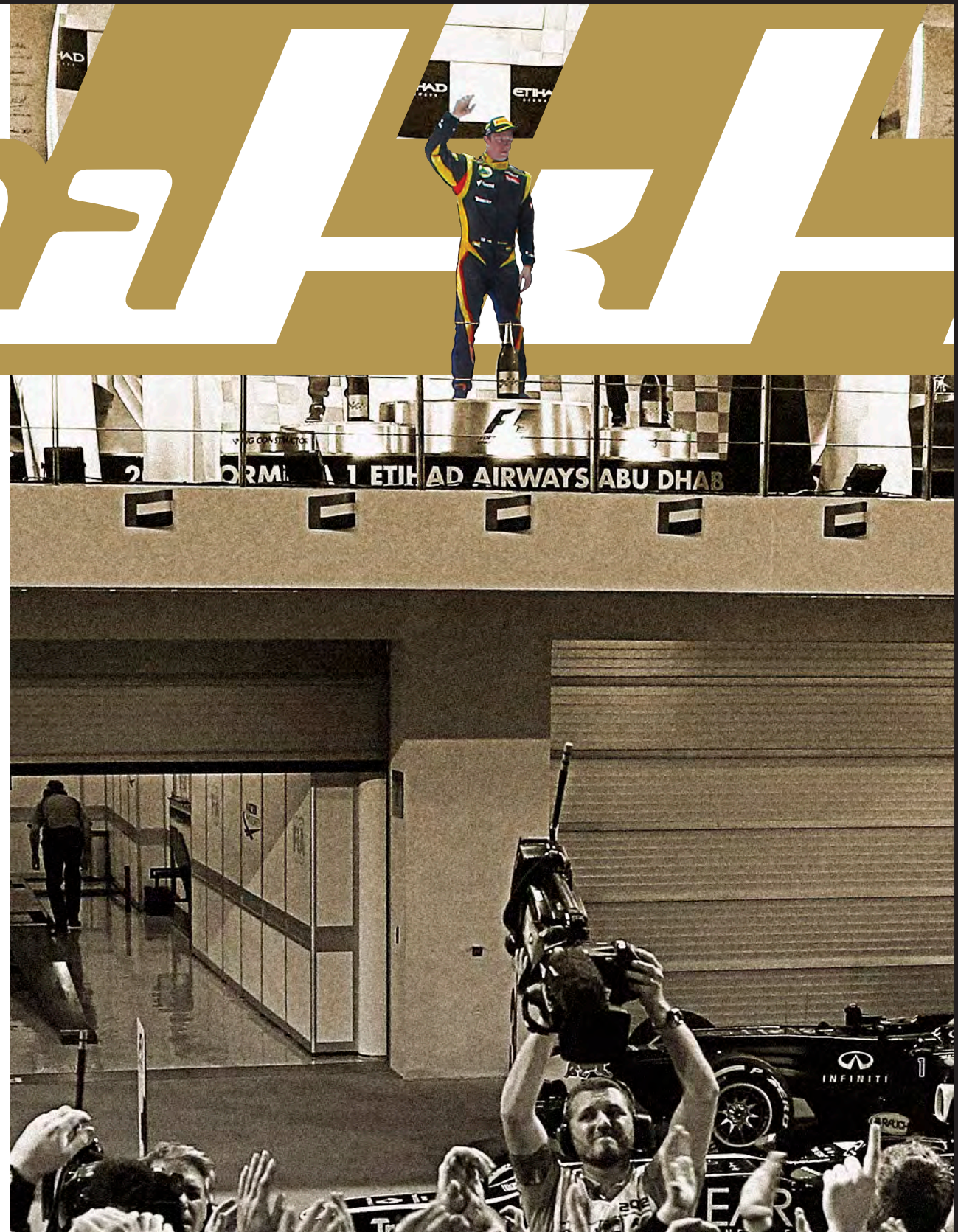
**2007 – 2009: FERRARI AND DRIVERS' TITLE** Kimi's debut for the prancing horse was a fairytale, with pole position, fastest lap becoming the first driver since Nigel Mansell in 1989 to win on his Ferrari debut. He followed that with a further five wins, stealing the title from under the noses of the battling McLaren duo of Fernando Alonso and Lewis Hamilton at the season-ending Brazilian Grand Prix. The following two seasons were more low-key, finishing third in the standings in 2008, and sixth the following year.

**2002 – 2006: THE MCLAREN YEARS** Such was Kimi's debut that he moved to McLaren for the 2002 season as a replacement for two-time champion, Mika Häkkinen. He finished third in his debut race with the team and came close to winning the French Grand Prix. The following year Kimi won his first race, the Malaysian Grand Prix. Despite no further wins, a strong run meant he finished second in the title race, just two points adrift of Michael Schumacher. 2004 was to prove frustrating. Kimi took McLaren's only win that year at the Belgian Grand Prix. The following year he finished second to Fernando Alonso in the title race, with seven wins to his name. 2006 was to prove Kimi's final year at McLaren and the momentum did not continue from the year before, with Kimi finishing fifth in the standings.

**2001: FORMULA 1 DEBUT WITH SAUBER** Kimi scored a point in his debut race, with Sauber at the Australian Grand Prix. He completed the year having achieved four points scoring finishes and eight in the top eight..

**PRE 2000 – KARTING, FORMULA FORD AND FORMULA RENAULT** After an impressive karting career, including placing second in the 1999 European Formula A championship, Kimi competed in the Formula Ford Euro Cup before graduating to the British Formula Renault winter series which he won, winning the Championship the following year, with seven wins from ten starts.

**OFFICIAL WEBSITE** [kimiraikkonen.com](http://kimiraikkonen.com)





# GETTING CLOSE TO THE



## ICEMAN – THE NICKNAME GIVEN TO KIMI RÄIKKÖNEN BY RON DENNIS IN THE BEGINNING OF THE 2002 SEASON – SUITS THE 2007 FORMULA 1 WORLD CHAMPION PERFECTLY.

The Finnish star is most likely the coolest guy in Formula 1... ever. There is nothing that really makes him upset, angry or happy for more than for fifteen minutes or so. Kimi is quick to put everything behind him. The cool nature is innate.

Kimi's mother Paula remembers him only once being very nervous and losing his cool outlook. He was six years old at the time.

Paula took her son for a regular check-up with their doctor and Kimi had to wait in the corner with toys to keep him occupied as mother and doctor talked. There were many toys, but suddenly Kimi became agitated, biting his finger nails and acting very nervously.

"The doctor started to think that Kimi perhaps had a concentration problem," Paula explains, "but it was only a question of the toys!

"In those days Kimi was interested in jigsaw puzzles and felt that the jigsaw puzzle available in the surgery was too easy. He saw the puzzle for older children – for 10-15 years old – but could not reach it. The doctor's assistant refused to give it to him and told him it was meant for older children, not for him.

"Finally Kimi got the more difficult jigsaw puzzle, put the pieces in place and smiled. The doctor was laughing; convinced now that this kid did not have any kind of problem with concentration," Paula says with the pride of a parent in her voice.

Kimi learnt to drive around that age and – as with putting the pieces together in a jigsaw puzzle – so he started to become the master of putting pieces right in his racing, without losing his concentration in any circumstances.

Paula confirms that Kimi's willpower has always been tremendously strong.

"He is always going his own way. Whatever you do, you cannot change his mind if he has decided something. As a small kid, if I wanted him to help me in some household chores – let's say like taking a trash can out – if I saw he didn't want to do it, it had to ask in an opposite way. I'd say to him: "Don't you take the trash can out; I will do it myself." Usually that way Kimi did it," his mother recalls.

**So when did his parents find out that their younger son had the talent to become a world-class motorsport star?**

"The closest people – like parents – never see those kind of things themselves," says Paula. "I think we noticed some promising signs for the first time when Kimi was about ten years old and started in the junior classes of go-karts in Finland. It's was a father of one the competitors – who had a lot of experience as a mechanic for his own son – who started to ask; "who's that boy in car number 104?" [which was Kimi].

**His mother also knows the strengths of her son.**


"An absurd will to win every time and a never give-up attitude; that's Kimi. From the time he started racing, he kept turning the steering wheel as long as the wheels kept rolling. I think it is that Finnish-style of tenacious fighting spirit we call 'sisu' in him."

**How surprised was Paula when Kimi decided to make a comeback to Formula 1?**


How surprised was Paula when Kimi decided to make a comeback to Formula 1?

*"To be honest, I was amazed. Kimi never talks about his work with me if I don't ask first, but I heard some rumours of his negotiations with Williams and I asked him about that. He answered* »






29/11/11  
Confirmed as Lotus F1 Team race driver for the 2012 season




23/01/12  
Valencia Run: Returns to the cockpit after 2yr absence

07/02/12  
Winter Testing, Jerez: P1 on the opening day




18/03/12  
Australian GP: Storms to P7 from P18 grid slot

13/05/12  
Spanish GP: Back-to-back podium finishes with a fine P3



24/06/12  
European GP: Pushes Fernando Alonso all the way to claim P2

22/07/12  
German GP: Inherits P3 after a penalty for Sebastian Vettel



29/07/12  
Hungarian GP: Stand out performer in P2, narrowly missing the win

02/09/12  
Belgian GP: Battles to P3 after a tough weekend struggling for grip



25/11/12  
Brazilian GP: Despite an eventful race, hangs on to clinch P3 in the WDC

04/11/12  
Abu Dhabi GP: Wins in emphatic fashion with a calculated drive

« that he would go to Lotus, because it was a better option for him.

“It was a surprise. His friends had been saying to me that Kimi was so tired and finished with Formula 1 and then suddenly he went back. I think it was very good for him to have his break as he seems to really be enjoying racing again,” she emphasizes.

The closest people – relatives and friends – know a totally different Kimi Räikkönen compared to the one race fans see. He is far from lacking emotion, far from being blunt and tough. Quite to the contrary, he likes to help, he likes to be around, he likes to take care of his family.

Kimi’s brother Rami has two sons, Justus and Tiitus. Kimi is a godparent of the elder, Justus, and continually brings presents for both of them.

“The boys are in a way like I was with Kimi; competing with each other in every possible way. Kimi likes to keep them well equipped with all kind of racing stuff for kids. This Christmas he bought them tablets; or should I say Santa Claus brought tablets for them,” Rami reveals.

**But how close are the ever-competing Rami and Kimi nowadays?**

“Kimi is my brother. I think it’s a very normal brother-to-brother relationship. We talk almost every week, we play ice hockey and do some other sports together. We both have

our own work and that takes time; especially Kimi works and travels a lot.”

Toni Vilander has been very close friend of Kimi since they started to race together as 10-year-olds and were also in the army together.

Toni won the 2012 FIA World Endurance Championship for Ferrari in the GTE class and is a very experienced GT racer.

“As we race in different places we have not been seeing each other very often, but I think the friendship is forever,” he says.

Toni is a father himself and Kimi is also the godparent of his son Luukas.

**Was it any kind of a surprise to Vilander to see his friend having such a consistent season after two years’ absence?**

“I was more surprised about Kimi making a comeback than how he performed during the season,” says Toni.

“When he stopped, he was so fed up with Formula 1 and kept saying “never again”. I think it’s a good thing to have some distance away from everything and do something totally different, like rallying. That’s how your way of thinking changes and your approach gets stronger and stronger.

“Kimi is Kimi. It doesn’t matter how different the cars, the tyres or the rules are, it takes only a couple of laps and he is straight away within a second of the top guys. That’s what he did at the beginning of the Lotus era, too.”

Kimi’s image as a laid back person was seen even more in his first season as a Lotus F1 Team driver. His physio, Mark Arnall, has been working with Kimi since 2001 and asserts that the laid back image gives a wrong impression of how hard the Finnish star trains.

“When Kimi races he is not laid back. He fights and keeps fighting as long as the car is moving. That’s how he works in training as well. Since we started, he has always been like that. He gives 110% every time, whatever the programme.”

Kimi even ensures that his trainer stays in top condition. “He gave me the latest heart rate monitor from the Finnish company Suunto for Christmas,” says Mark.

One long-time trusted friend has a big input into how Kimi looks on track. Uffe Tägtström – one of the leading helmet designers of the racing world – has been designing Kimi’s helmets since his karting days.

**The driver is very much involved in the design, too, so how artistic is Kimi?**

“Artistic? I would not say he is very artistic, but he knows, what he wants and he is very fashion-conscious. He is certainly of his generation,” Tägtström says.

Kimi has always been a certain kind of a trend

creator in design style. “Sometimes it has been that whatever Kimi brings to his helmet design, it doesn’t take that much time to see the same idea in some way on somebody else’s helmet, too.”

Kimi saves all his helmets and remembers the season just by having a look at the helmet design.

“Usually Kimi gives a hint of what should be on his helmet for the season ahead,” says Uffe. “I’ll then make five different versions of the idea with the computer and he picks what he likes the most.

“Last year he wanted to have his race number up there. He had the number previously during the McLaren times, but then it was at the back of the helmet. Now the number will change from 9 to 7, but there won’t be that much of change for 2013, just some new partners,” Uffe explains.

At the 2012 Monaco Grand Prix, Kimi showed his respect to a driver of the 1970s when he incorporated the James Hunt design and name on his helmet.

“The idea was there for many years, but with McLaren and Ferrari, there was no opportunity to use it. Last year it was perfect and the feedback was great too,” Tägtström praises.

Let’s wait and see what Monaco brings along this time...



# "I WANT TO SCORE A LOT OF POINTS FOR THE TEAM"

WITH HIS FIRST FULL SEASON OF FORMULA 1 NOW IN THE BANK, ROMAIN GROSJEAN LOOKS AHEAD TO 2013 AND A CHANCE TO BUILD ON A PROMISING START TO HIS SECOND LOTUS F1 TEAM CAREER

**How is the Romain Grosjean that starts the 2013 season different from the Romain Grosjean who started the 2012 season? How have you changed?**

Well first of all I'm older! It's clearly different for me this year. I have much more experience in Formula 1. Even if I knew the team before, I know how to work with the engineers much better on the technical side. I also know all the tracks and understand better the various challenges of a season. Generally things worked out pretty well last year, although some things didn't always work as good as we wanted. It's going to be very interesting to start the new season.

**What are your targets or objectives for 2013?**

I can clearly say I want to score a lot of points for the team - everybody knows that - but I think it would be wrong for me to say I want to finish in a particular position in the championship. I really want to jump out of the car as many times as possible thinking that I did a good job. Thinking that everything I could do, I did and feeling proud of my race or my session. I hope to feel that way as many times as possible this year.

**What did you learn most last season?**

It's tough to pick just one thing.

You start your career in Formula 1 thinking 'Okay, that's a new challenge, a tough challenge' but then you work into the season and you think 'Whoa! This challenge is even bigger than I thought!'. All the elements of a Formula 1 season: Including the travelling - energy-wise, managing the jet lag - the media and marketing stuff, the physical demands and preparation for driving the car are quite something. I know what I need much better now and that's what I've learnt from last year.

**How good did it feel to finally get confirmation for 2013, which came very shortly after you became the 'Champion of Champions' at the Race of Champions?**

There were a few things which we had to go over before a decision was made, and for sure it wasn't nice waiting, but it certainly was very nice to get the confirmation. The timing was good too, just after the Race of Champions win - which was a confidence boost. It allowed me to have a much better winter.

**How much input have you had on the E21? Did you have a wish list of what you would like?**

All through last year all the feedback given about the E20 was interpreted by the development team for the

E21. This means there's a lot of information from me and Kimi which went into this car. It's difficult to say after the season 'we would like this or that' for next year. I think it's more about the work done during the whole season - discussing this or that, or an idea about this or that. After 20 races you know more-or-less what has been good with the car and what hasn't. Hopefully we've made the right calls for this year.

**Behind the scenes, how exciting have the developments been at Enstone?**

I like the development process and I really like seeing the new car 'growing up'. You see the first design, you see it being tested in the wind tunnel and then finally after a long time you see the finished car. It's very interesting and I really like to follow it and understand as much as I can, without being an engineer. It's always good.

**Do you think you have a point to prove in 2013?**

I think everyone is waiting to see if I'm able to be consistent, which is where I was lacking a little bit last year. I know it and I'll do everything I can to prove to people that I'm able to achieve this goal.



"I know what I need much better now."



# ROMAIN GROSJEAN

## CURRICULUM VITAE

**DATE OF BIRTH** 17 APRIL 1986

**PLACE OF BIRTH** GENEVA, SWITZERLAND

**NATIONALITY** FRENCH

Romain Grosjean made a return to Formula 1 with Lotus F1 Team in 2012 having previously contested the final seven Grands Prix of 2009 for the Enstone outfit (at the time known as Renault F1 Team). Prior to that, the Frenchman had secured the 2007 Formula Three Euroseries championship and won the inaugural GP2 Asia Series championship in 2008.

After his 2009 Formula 1 foray, Romain contested the inaugural FIA GT1 World Championship in 2010, winning the opening race of the season whilst also competing in his first Le Mans 24 Hours. It wasn't long before he returned to single seaters, with partial campaigns in the Auto GP and GP2 championships that same year before taking both the GP2 Asia Series and GP2 Series championship titles in 2011.

**2012: BACK IN THE BIG TIME** Having impressed during his two test sessions the previous year, Romain was handed a return to the Formula 1 grid by Lotus F1 Team for the 2012 season. The team's faith in the Frenchman was soon justified, with a second row start at the season opening Australian Grand Prix followed by a string of impressive qualifying performances and three podium finishes throughout the season. For 2013, Romain will be looking to build on his first full season in the sport and push for that elusive first Grand Prix victory.

**2010 – 2011: REGROUP AND REFOCUS** He contested the inaugural FIA GT1 World Championship, winning the first championship race. He also returned to single seaters scoring a first and second at his first event in the Auto GP series, and within three further races the title was his. In July he returned to the GP2 Series, which proved to be a precursor to a full-time return the following year. Late in the year, Romain became Pirelli's test driver. 2011 proved to be highly successful, with the GP2 Asia Series and the GP2 Series titles won, and a return to an Formula 1 car with Friday runs at Abu Dhabi and Brazil for Lotus Renault GP.

**2009: GP2 SERIES AND ING RENAULT F1 TEAM TEST AND RACE DRIVER** 2009 was to prove to be a year of opportunity for Romain. He started the year as test driver for the ING Renault F1 Team as well as contesting the GP2 Series. By the European Grand Prix he was a full-time race driver for the team, starting seven Grands Prix as team-mate to Fernando Alonso.

**2008: GP2 SERIES AND ING RENAULT F1 TEAM TEST DRIVER** In 2008, Romain combined his responsibilities as test driver for the ING Renault F1 Team with campaigns in the GP2 Asia Series and GP2 Series. He won the Asia series, taking four wins along the way. Romain was also a frontrunner in the main Series, winning two races.

**2006 – 2007: F3 EUROSERIES** Romain finished 13th in the F3 Euroseries, which included two wins during the British F3 Championship rounds. For 2007, he took the title in impressive style in a closely-fought series, with a total of 6 wins, 6 podiums and 4 pole positions.

**2004 – 2005: FORMULA RENAULT 2.0** Romain competed partial seasons in both the French and European Formula Renault championships, finishing as second best rookie in the 2004 French championship, including 1 win and 3 podiums. He won the title with 10 wins the following year.

**2000 – 2003: KARTING AND FORMULA RENAULT** Romain raced Karts from Junior categories through to ICA karts, as well as completing Formula A races in 2002. He combined Formula ICA in 2003 with the start of his car racing career. Ten wins from ten races saw Romain crowned Swiss Formula Renault champion.



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# ROMAIN

## OUR CHAMPION OF CHAMPIONS

It was certainly an interesting debut Formula 1 season for Romain Grosjean in 2012, with podiums, epic battles on track and more than a few headlines. It was a year that ended in glory too, with victory in the drivers' event of the Race of Champions in Bangkok.



**T**he Race Of Champions is an unbelievable get-together for the stars of international motorsport who are drawn from the corners of the globe to compete in equal machinery on a tight and twisty stadium course.

The event has become all the more successful over the years, such that the 25th anniversary event was played out in Bangkok and broadcast live around the world.

Taking place over two days, Saturday sees the ROC Nations Cup where countrymen pair to battle their rival nations. Romain and team-mate, 2011 Champion of Champions Sébastien Ogier, fought valiantly through the heats to the final against a certain German pairing of Michael Schumacher and Sebastian Vettel.

The all-conquering Germans emerged victorious, to increase a remarkable six year winning run, but it was in Sunday's drivers' competition where Romain made his mark.

Progressing through the heats, Romain vanquished the disappointment of finishing second in the Nations Cup by beating both of the victorious Team Germany drivers, Sebastian, in the quarter final and Michael, in the semi.

For the final it was Le Mans

legend Tom Kristensen in a best-of-three format, where Romain won two to take glory.

"That's what I'd call a crazy day!" said a beaming and champagne-drenched Romain afterwards. "It got a bit tough in the group stages but I managed to make it through. Then I had to face Sebastian in the quarter-final before Michael in the semi-final – the two Germans who beat us in the ROC Nations Cup final.

"Then I had the final with Tom. We've had a good history at this event and I've raced him before so it was good to face him in the final. I got a bit of extra luck to be in the right car at the right time but it felt good!"

Romain received great praise from the beaten Dane.

"This was the 25th year of the race and Romain is a deserving winner," he said. "He had a very good Sunday – and I'm getting closer every year! It was a small gap between us in each of the heats and I made small mistakes but that's the challenge of the Race Of Champions: to jump into different cars."

It was an epic way to cap off a roller-coaster season.

"It's been a tough end to the Formula 1 season but I finally got back on the podium in the team event, then become the Champion of Champions!"

As well as taking glory, Romain also made new friends at the event, meeting 2012 MotoGP World Champion, Jorge Lorenzo.

"Jorge was fantastic and we even swapped overalls at the end of the event. We're a similar age and he gave me some good advice about all kinds of things.

"The event was superb. It's not often you get time to talk in such a relaxed way to so many other people competing in motorsport. Everyone was amazing."

### And of his new moniker?

"Champion of Champions sounds pretty good. It certainly feels pretty special to end my year like this. It wasn't an easy route to the crown either; with Sebastian, Michael and Tom you've got ten Formula 1 titles and eight Le Mans wins! To win against those guys is very special indeed!

"It's a really fabulous event and we received a fantastic welcome in Bangkok. It's superb to be able to relax with so many different competitors from different disciplines and we all had a great time. It was great to see the support I received from fans at the event and online too, and I hope that my superb end to 2012 translates to a fantastic start to 2013!"



# DAVIDE VALSECCHI

## I'M EXCITED ABOUT THE FUTURE

### How good is it to get the third driver role with Lotus F1 Team?

I'm really happy that the team want me on board and I'm excited about the future. I hope that this is a really good start to a career in Formula 1.

### What are your targets for the season?

Every day I will do the very best job that I can to give Lotus F1 Team the same passion and commitment that I showed last year. My last season in GP2 in 2012 was something I really focussed on, and in the end I succeeded. Now in Formula 1 my target will be a little different, but my focus to do the very best is still the same.

### What is your experience so far of the team?

I took part in the young driver test in Abu Dhabi at the end of last year and that was unbelievable. I've spent some time in GP2 but the step up to Formula 1 is very different. Before the test I had not really spent much time in a Formula 1 car, and to get the opportunity to have a full day's testing was an incredible experience. I was thankful to Lotus F1 Team for giving me the chance, and I knew that I was in a position to do well as I was about to drive a car that, just two or three days earlier, had won the Abu Dhabi Grand Prix! The day itself went very well, and I managed to top the timing board which made me very happy.

### Last year you won the GP2 Series with DAMS, do you see your new role as the next step in your Formula 1 career?

I very much hope, step by step, to get into Formula 1 as a race driver, and being here as third driver is as near as you can get. It's a great opportunity here – If I do the best job I can this year then it will open up my chances for the future, and we'll see if I'm good enough.



## CURRICULUM VITAE

**DATE OF BIRTH** 24 JANUARY 1987

**PLACE OF BIRTH** ERBA, ITALY

**NATIONALITY** ITALIAN

Reigning GP2 Series Champion Davide Valsecchi took part in the 2012 Abu Dhabi Young Driver Test for Lotus F1 Team having previously tested for two other teams, including driving a Friday practice session at the 2011 Malaysian Grand Prix. As well as the 2012 GP2 Series title, he also won the 2009-10 GP2 Asia Series having previously competed in Auto GP, the Le Mans Series and a variety of European single-seater categories.

**2012:** GP2 Series, P1

**2011:** GP2 Asia Series, P7 / GP2 Series, P8

**2010:** GP2 Asia Series, P1 / GP2 Series, P8 / Auto GP, P23

**2009:** GP2 Asia Series, P4 / GP2 Series, P17

**2008:** GP2 Asia Series, P8 / GP2 Series, P15

**2007:** Formula Renault 3.5 Series, P16

**2006:** Formula Renault 3.5 Series, P10 / Le Mans Series, P15

**2005:** Formula Renault 2.0 Italia, P7 / Italian Formula Three, P7 / 3000 Pro Series, P14

**2004:** Formula Renault 2000 Italia, P14 / Formula Renault 2000 Eurocup, P31

**2003:** Formula Renault 2000 Italia, P15

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# DAVIDE Valsecchi

## PATH TO FORMULA 1

DAVIDE VALSECCHI ENTERED THE WORLD OF MOTOR RACING WHEN HE WAS JUST FOUR YEARS OLD WITH A GO-KART RECEIVED AS A GIFT FROM HIS FATHER FIORENZO, AND A CLOSE FRIEND, GIGI BRUSADELLI, A FORMER FORMULA 1 MECHANIC.

The gift proved to be well-chosen, and Davide would later graduate through the karting ranks to begin single-seater racing in the 2003 Italian Formula Renault Championship, moving through to the Formula Renault Eurocup before entering the World Series by Renault, where he gaining his first international victory.

In 2007, he debuted in the GP2 Asia Series with the Durango team. The GP2 Series beckoned the following season, but a vertebrae-fracturing crash at Istanbul somewhat interrupted the year. However, despite doctors' expectations of a long recovery, Davide was back behind the wheel at Silverstone, less than two months after the accident. A first win in GP2 that year fulfilled one of Davide's life-long dreams as success came on the last race on the calendar, at Monza.

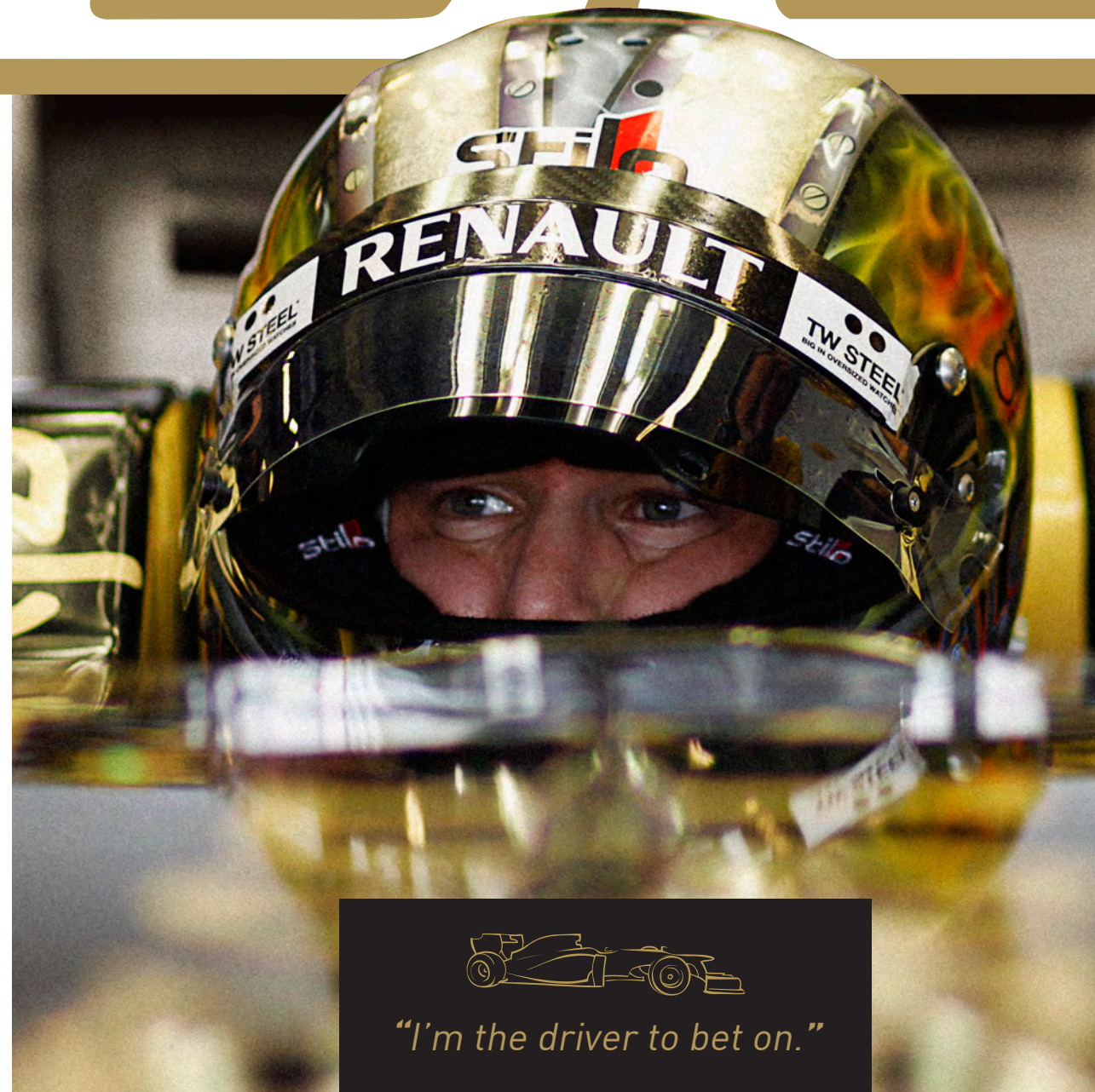
Championship glory came with iSport in the 2009-2010 GP2 Asia Series thanks to three victories, one pole position and six podium finishes in eight races overall. The GP2 Series followed in 2010 with a further victory at the season-ending Abu Dhabi event.

Through his performances, Davide's name had come to the attention of Formula 1 teams and a young driver test with HRT was followed by a joint role in 2011; GP2 for another season with a brand new outfit, Caterham Racing, plus a test driver position for the Caterham Formula 1 Team. A GP2 win in Monaco was the highlight of his season.

For 2012 he moved to the DAMS GP2 team where he had an incredibly successful year, scoring ten podiums, winning four races, and providing six of the fastest laps of the season. He earned himself the GP2 Series title, and was invited by Lotus F1 Team to

test in Abu Dhabi in November. A successful trial for the squad who finished fourth in the Constructors' Championship brings us right up to date with Davide's appointment to the position of third driver for Lotus F1 Team at the start of 2013.

"What is important for me is to show that I'm the driver to bet on, and that you can count on me," says Davide. "I want to be consistent, so that every time I'm involved with something I am professional, every time I drive I'm extremely fast, and every time I race, I want to fight for something important without making any mistakes."



*"I'm the driver to bet on."*



# NICOLAS PROST

## IT'S AN HONOUR TO CONTINUE WORKING WITH THE TEAM

### How good is it to be continuing to work with Lotus F1 Team?

It's really an honour to continue working with the team as it means that I've done a good job - last year in particular. 2012 was interesting as I started doing some proper testing with the R30 on demo tyres. Since then, I've been working with the team on the simulator and technical programmes plus I completed the Abu Dhabi Young Driver test in 2012, which was great.

### You did a good job on the first day of the Young Driver Test last year; looking back now, how significant and important was that test?

The test was very important. Obviously when people put trust in you and give you that opportunity you want to deliver and I think we had a very challenging programme. It was also my first time in Abu Dhabi and at the Yas Marina Circuit so I had a lot to pick up quite quickly! At a test like this, no-one except the team can understand how well you perform. None of the different teams run the same tyres, no one runs the same fuel and you don't know what types of test each team are running with their car. So if Lotus F1 Team was happy with my performance then that's the most important thing to me and to earn my current position shows the significance of that test.

### What's your perception of the team? What is the feeling that you get from Enstone?

I would describe Enstone as being a big family. When people talk about F1 it's always that it is full of sharks, but in this team everyone I meet is so nice. The people are friendly, they want to win, they want to work and there is a very good atmosphere. Every time I come here - should it be for a seat fit, or training at the sport centre - it's always a pleasure and I think that's one of the biggest strengths of the team. For me, just to be in Formula 1 is already quite an achievement, but it is fantastic to be involved with one of the best teams. I think Lotus F1 Team is really one of the best, and the underdog who is scaring everyone!



## CURRICULUM VITAE

**DATE OF BIRTH** 18 AUGUST 1981

**PLACE OF BIRTH** SAINT-CHAMOND, FRANCE

**NATIONALITY** FRENCH

**Nicolas, son of four-time Formula 1 World Champion Alain, contested the 2012 FIA World Endurance Championship for Rebellion Racing whilst also featuring for Lotus F1 Team at last year's Abu Dhabi Young Driver Test. He has also competed in the A1 Grand Prix Championship for Team France, entered the Le Mans 24 Hours five times and enjoyed considerable success in a variety of European single-seater categories.**

**2012:** FIA World Endurance Championship, P1 [Team], Petit Le Mans, P1

**2011:** Andros Trophy, P1 / Le Mans Series, P3 / Le Mans 24 Hours, P6

**2010:** Andros Trophy, P1 / Le Mans Series, P5 / FIA GT1 World Championship, P49

**2009:** A1 Grand Prix, P5 [Team] / Le Mans Series, P5 / Le Mans 24 Hours, P12

**2008:** Euroseries 3000, P1

**2007:** Spanish Formula Three, P3 / Le Mans 24 Hours, P5

**2006:** Spanish Formula Three, P4

**2005:** Championnat de France Formula Renault 2.0, P10

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# NICOLAS PROST

## NEW SCIENTIST

**GROWING UP AS THE ELDEST SON OF FOUR-TIME FORMULA 1 WORLD DRIVERS' CHAMPION ALAIN PROST, THERE WAS A CERTAIN EXPECTATION THAT NICOLAS WOULD AT SOME POINT TURN TO THE RACE TRACK. IT WAS GOLF, HOWEVER, THAT WAS THE FRENCHMAN'S FIRST MAJOR SPORTING PLAYGROUND, WITH RACE SUITS NOT A REGULAR PART OF HIS ATTIRE UNTIL HE CONTESTED FORMULA CAMPUS AGED 22.**

Though the start was late, a strong career was rapidly carved out with the 'best rookie' title as he took fourth in the 2006 Spanish Formula Three Championship, improving to third in the standings during his second season.

In 2008, he joined Bull racing and won the Euroseries 3000 championship in his first year with one win, two poles and seven podiums. A1GP beckoned next, with 2007-2008 and 2008-2009 spent as the fastest rookie driver, and the announcement that he would drive the entire 2009-2010 season. Whilst Nicolas was ready for this opportunity, the championship itself did not happen.

As with any French racing driver, there is a Le Mans pedigree to Nicolas. In 2012 he contested the FIA World Endurance Championship which saw him finish joint-fourth in the Drivers' World Championship, contributing

to his squad Rebellion Racing. They won the LMP1 Trophy and achieved an exceptional fourth place at Le Mans, the first car home behind the three Audi works effort, and the first petrol car home.

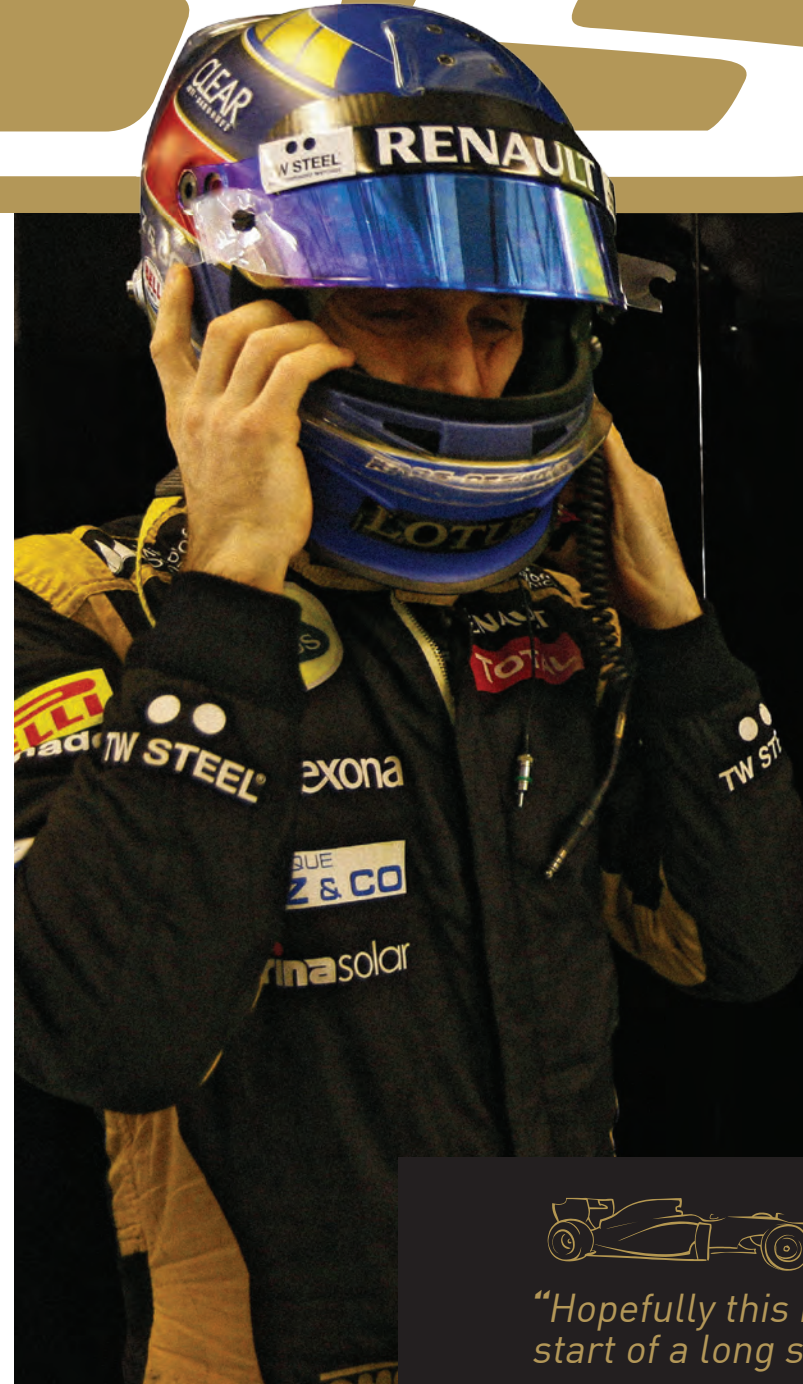
Nicolas is particularly well equipped to be part of the support infrastructure for the team which lists the Iceman on its race driver roster; being something of an ice-racing specialist himself.

Participation in the 2009-2010 winter season of the Andros Trophy ice racing series saw Nicolas win the electric car category with 5 poles, 6 wins, and 18 podiums from 21 races. He successfully defended his title during the winter of 2010-2011. In 2011-2012, he joined his father in the works Dacia team and claimed the rookie title in the main series.

In terms of Formula 1 experience, Nicolas drove for the Renault F1 squad at Magny Cours in 2010 and has subsequently been a driver for Lotus F1 Team at test sessions, demonstrations, straight-line tests and for simulator work, culminating in a place at the Abu Dhabi Young Driver test in November 2012.

For Nicolas, 2013 has truly exciting prospects.

"It's really an honour to be working with the team as it means that I've done a good job so far - last year in particular. I see it as a great accomplishment and my aim is to continue working well with the team, hopefully seeing this as the start of a long story."



*"Hopefully this is the start of a long story"*



# JÉRÔME D'AMBROSIO

## I'M IN A VERY GOOD POSITION SHOULD AN OPPORTUNITY ARISE

**Jérôme, talk us through your role and how you see the season ahead...**

I'm very pleased to be continuing my relationship with Lotus F1 Team. Of course, consistency is a huge plus for any Formula 1 team so I'm happy that I am in a position to be able to help to contribute to the team's progression. Kimi and Romain are both fantastic drivers and I enjoyed working with them in 2012, so I'm really looking forward to this coming season. The team really moved forwards last year and I'm proud that I was able to play a part in that. Now as we continue to aim higher, I'm happy to keep up my role as reserve driver and stay with a team that has a real chance of doing well in the 2013 season.

**Was the Italian GP the highlight of your 2012 season?**

Of course any racing driver wants to spend as much time in a Formula 1 car as possible, although the circumstances are not always ideal. Because we don't test anymore, it's very hard to be able to just step into a car and be race ready, however I felt very comfortable and settled in very quickly. I'm used to the Grands Prix with my time at Marussia however it felt great to be back in a car and racing. I think it's testament to the time that I've spent with the team, and the relationship we have that we did so well under difficult circumstances.

**What are your aspirations for the year ahead?**

Obviously to remain consistent and keep working with the team to do the best job we can. I learned from last year that you need to be ready in order to step straight into a race seat, so my aim will be to keep focussed and be prepared! Of course my ultimate aim is always to gain a race seat, however I know that by doing the best job I can here, and proving myself valuable to the team, I'm in a very good position should an opportunity arise.



## CURRICULUM VITAE

**DATE OF BIRTH** 27 DECEMBER 1985

**PLACE OF BIRTH** ETTERBEEK, BELGIUM

**NATIONALITY** BELGIAN

After contesting the 2011 season as a race driver for Marussia Virgin Racing, Jérôme D'Ambrosio joined Lotus F1 Team in 2012 as third driver and will continue to form part of the reserve line-up in 2013. Prior to his Formula 1 debut, Jérôme contested the GP2 Series and GP2 Asia Series, in addition to winning the inaugural International Formula Master series.

- 2012:** Third Driver, Lotus F1 Team
- 2011:** FIA Formula 1 World Championship, P24
- 2010:** GP2 Series, P12 / Test Driver, Renault F1 Team
- 2009:** GP2 Asia Series, P2 / GP2 Series, P9
- 2008:** GP2 Asia Series, P11 / GP2 Series, P11
- 2007:** International Formula Master, P1
- 2006:** Euroseries 3000, P5
- 2005:** Formula Renault 2.0 Italia Winter Series, P3 / Formula Renault 2.0 Italia, P4 / Italian Formula 3000 Light, P6 / Eurocup Formula Renault 2.0, P15
- 2004:** Championnat de France Formula Renault 2.0, P4 / Formula Renault 2000 Eurocup, P15
- 2003:** Formula Renault 1.6 Belgium, P1 / Formula König, P4

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# JÉRÔME D'AMBROSIO

## OL' BLUE EYES IS BACK

AS A RESERVE DRIVER YOU HAVE TO ALWAYS BE READY FOR A CALL UP TO THE RACE SQUAD, EVEN AT SHORT NOTICE AS LOTUS F1 TEAM RESERVE DRIVER JÉRÔME D'AMBROSIO DISCOVERED LATE IN THE 2012 FORMULA 1 SEASON.

Jérôme, full-time Formula 1 race driver for Virgin Racing in 2011, received the call to drive at the 2012 Italian Grand Prix shortly after the news came through of a one-race ban for regular driver Romain Grosjean.

As Team Principal Eric Boullier explains, "When we signed Jérôme as our third driver for the 2012 season we signed a driver who is highly motivated, fresh and talented and who contested the full 2011 season. This meant that when we did need to call on him for the Italian Grand Prix, we knew he would perform."

It's never easy jumping back into a Formula 1 car and being expected to perform at the highest level against the best drivers in the world – all of whom are race fit

from having already contested 12 races that season – but that's exactly what Jérôme had to do. On the first day of practice he eased himself in, narrowing the deficit between himself and Kimi on track from over a second to just over six tenths whilst learning all the race systems and getting in as much mileage as possible.

Under six tenths was the difference in the high pressure scenario of qualifying, which equated to P16 on the Monza grid for Jérôme.

The team had reckoned on strong race performance from both car and driver, but an early KERS issue meant that Jérôme was racing with one hand tied behind his back; eventually finishing in 13th place to Kimi's fifth.

"It was a pretty long and difficult race for me," says Jérôme of his solo 2012 Grand Prix outing. "After losing my KERS on lap 6 it was always going to be tough as that's worth about half a second per lap around Monza.

"My last stint on the medium tyres in clean air was pretty good and I didn't make many mistakes, so maybe with a bit more luck we could have had a slightly better result. My main aim was to finish the race and I achieved that."

The boss was pretty pleased with the performance.

"Jérôme did an amazing job after being thrown in at the deep end," says Eric. "Without his KERS issue I'm pretty sure he could have achieved a points finish."



*"Jérôme did an amazing job after being thrown in at the deep end."*



# E21

## TECHNICAL OVERVIEW







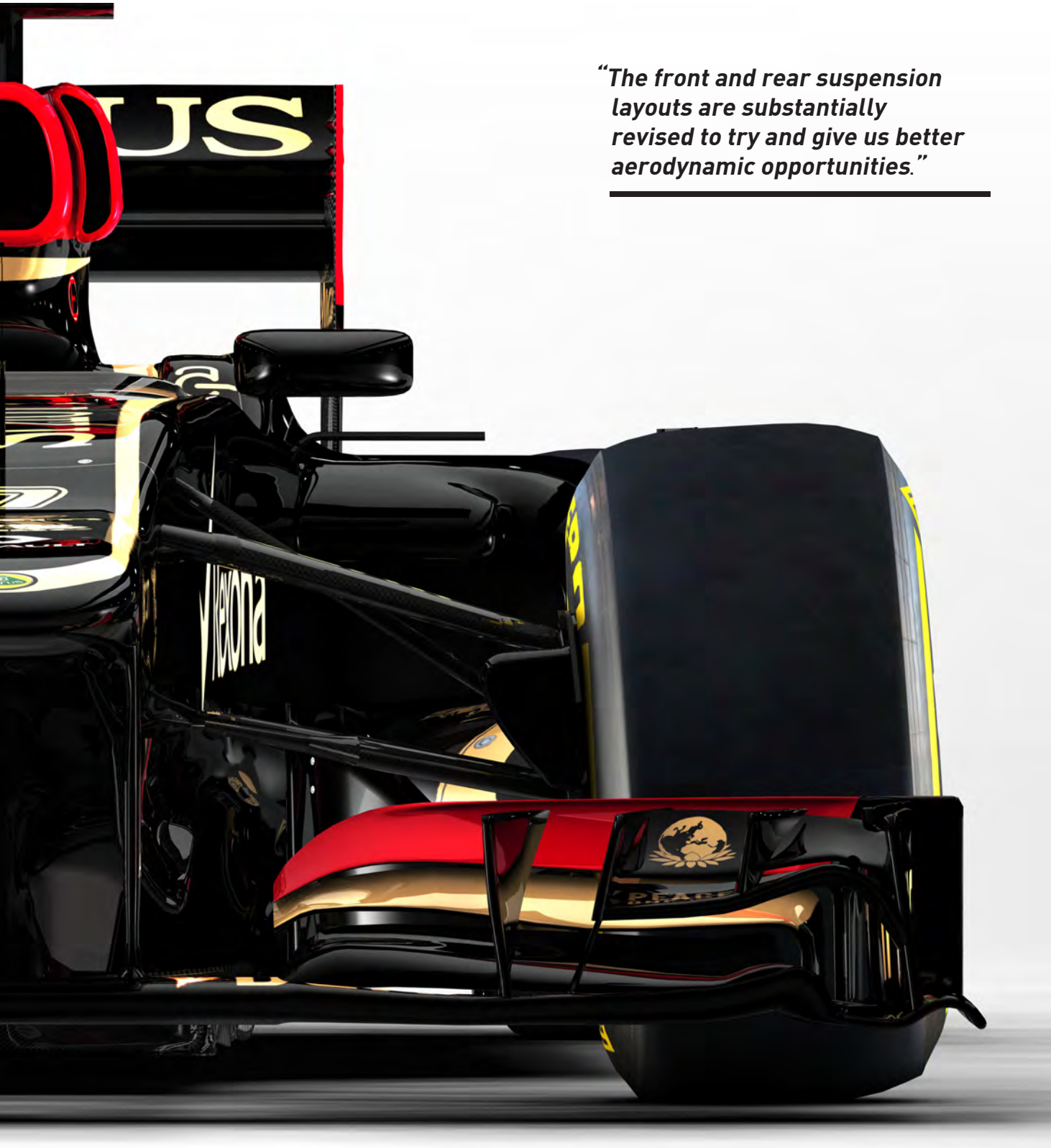
## “THERE IS AN ELEMENT OF EXPECTATION FROM THE E21”

### LOTUS F1 TEAM TECHNICAL DIRECTOR JAMES ALLISON LOOKS TO THE SEASON AHEAD...

**How different are the 2013 regulations compared with 2012?**  
After a string of quite eventful rule changes and interpretations in the years since 2009 it looks as if 2013 is going to be a year of regulatory stability. There are only a few, very limited changes, which comes as a considerable relief to the entire grid given the size of the transformation bearing down on the sport for 2014. Mind you, even with no changes to the text of the regulation, we never stop poring over the rules to look for new loopholes. Quite often, young engineers fresh from university will point out an ambiguity in the text of a regulation that has been settled for decades because they are looking at what is written with fresh eyes and no preconceived ideas about what is actually intended.

**Will the cars we see in 2013 look much different from those we saw in 2012?**  
I’m guessing not. There is one rule which opens the possibility of a change as we will now be permitted to fit a non-structural “vanity panel” on the upper surface of the nose as a means of avoiding the duck-bill style noses that we saw in 2012. However, such a panel is optional, and I would not be surprised if the majority of the grid chose not to make use of it. The panel will add a few grammes of weight, and so it is only likely to run on the car if a team can find a performance benefit from doing so.

**Does continuing with our two drivers give the technical team benefits?**  
The best thing about sticking with our 2012 pairing is that they are both fast! Fringe benefits also include not having to re-invent the seat, pedals, steering wheel. Not having to establish fresh relationships between engineers and drivers is also welcome.



*“The front and rear suspension layouts are substantially revised to try and give us better aerodynamic opportunities.”*

**What is completely new and what is more familiar on the E21?**  
Depending on where you look, some parts of the new car are a ground-up redesign and in other areas we have further optimised the best bits of the philosophy we’ve adopted for several seasons. The front and rear suspension layouts are substantially revised to try and give us better aerodynamic opportunities. The front wing is a continuation of the concepts we have worked on since the 2009 rules were published. For the rear wing system, we’ve continued work on having a satisfactory level of rear downforce stability, whilst having a maximum DRS switching potential.

**Talking of DRS, what about the so-called Double DRS Device?**  
This is an area we continue to explore and the passive nature of the switching of our device means it is not outlawed by the latest regulations. It is not something which will be a silver bullet to transform our car, but it is something which could add performance as part of the overall design.

**Are there likely to be any further ‘secret weapons’ in the arsenal for 2013?**  
That would be telling...

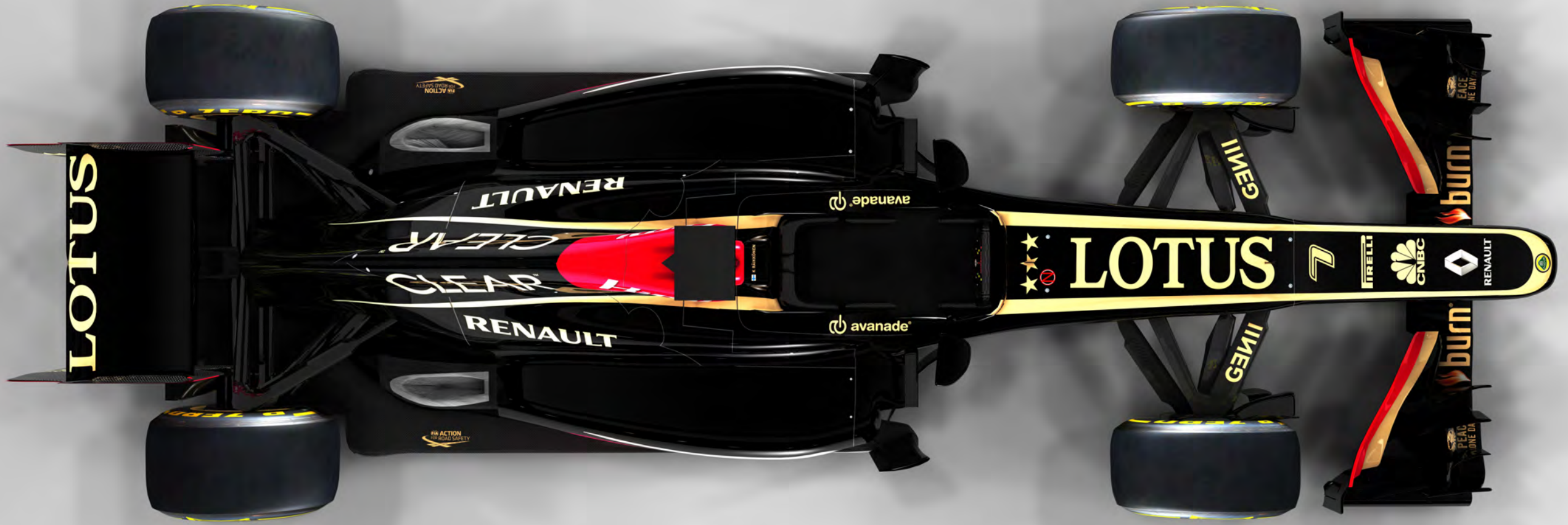
**Does the E21 have great expectations on its shoulders?**  
The E20 proved itself to be an effective racing car, so there is an element of expectation from the E21. We have continued with our design themes and tried to build a more efficient and faster racing car based on all the lessons we learnt last year. We will only know how successful we have been at this, once we take to the track in Grands Prix.

**What can we expect from Pirelli’s 2013 tyres?**  
We had a brief taste of the development tyre on track in Brazil and it did appear to be a step forwards. Pirelli have also published the compound list for 2013, and we are happy to see that they are sensibly aggressive choices. Pre-season testing will give us a much better idea of what to expect, but most of the indications suggest that the tyres will play a helpful part in making another attractive season.

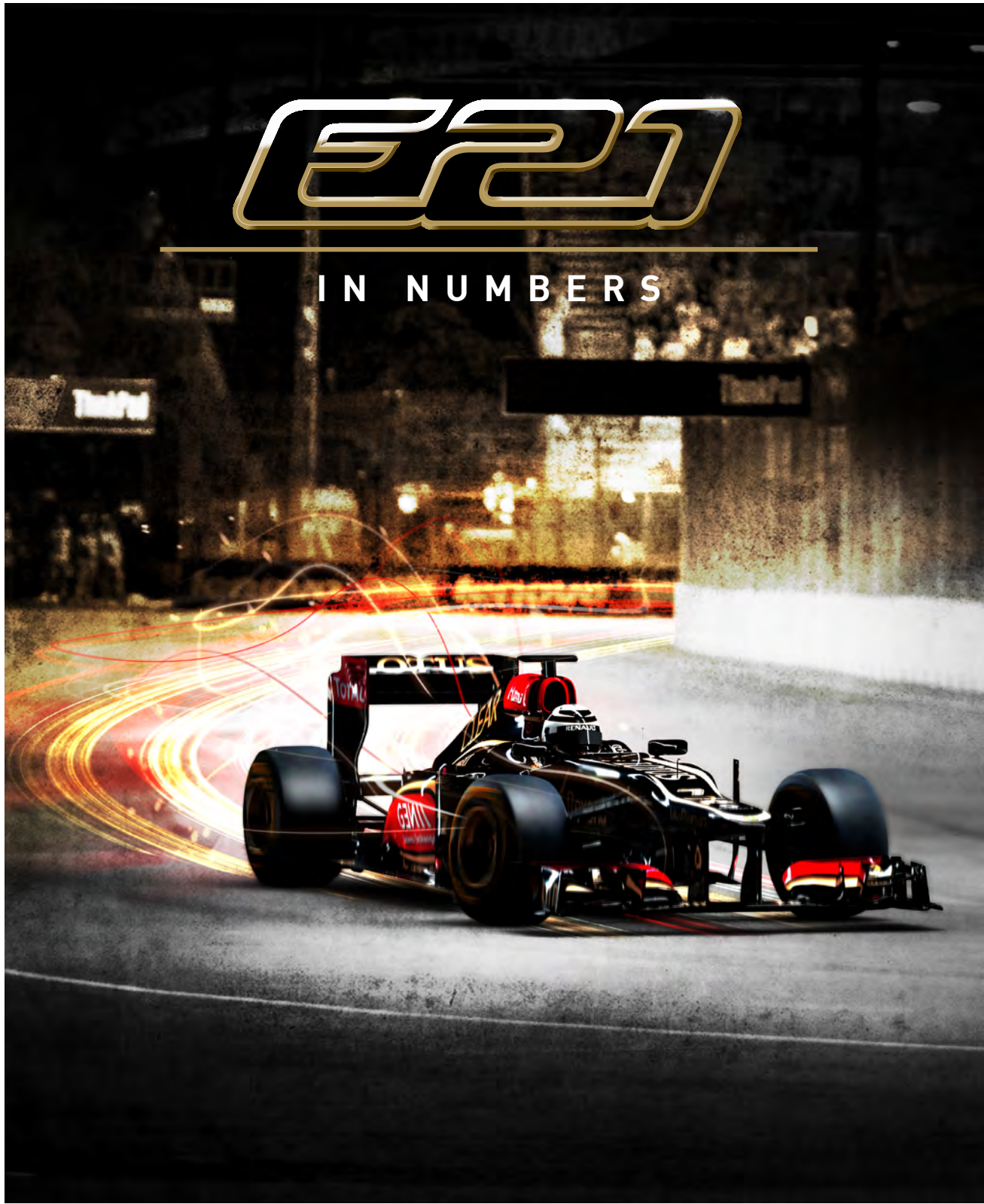
**What are the goals and targets for 2013?**  
In terms of goals and targets, we never set out to build the second-fastest or third-fastest car; we set out to build the fastest and most effective car that we possibly can. We want to improve our car in all areas from last year’s and we want the improvements we make to be greater than those made by the opposition. However, having said all that, the official target established by the team’s owners is to achieve a minimum of third in the Constructors’ Championship.



*E21 2013*



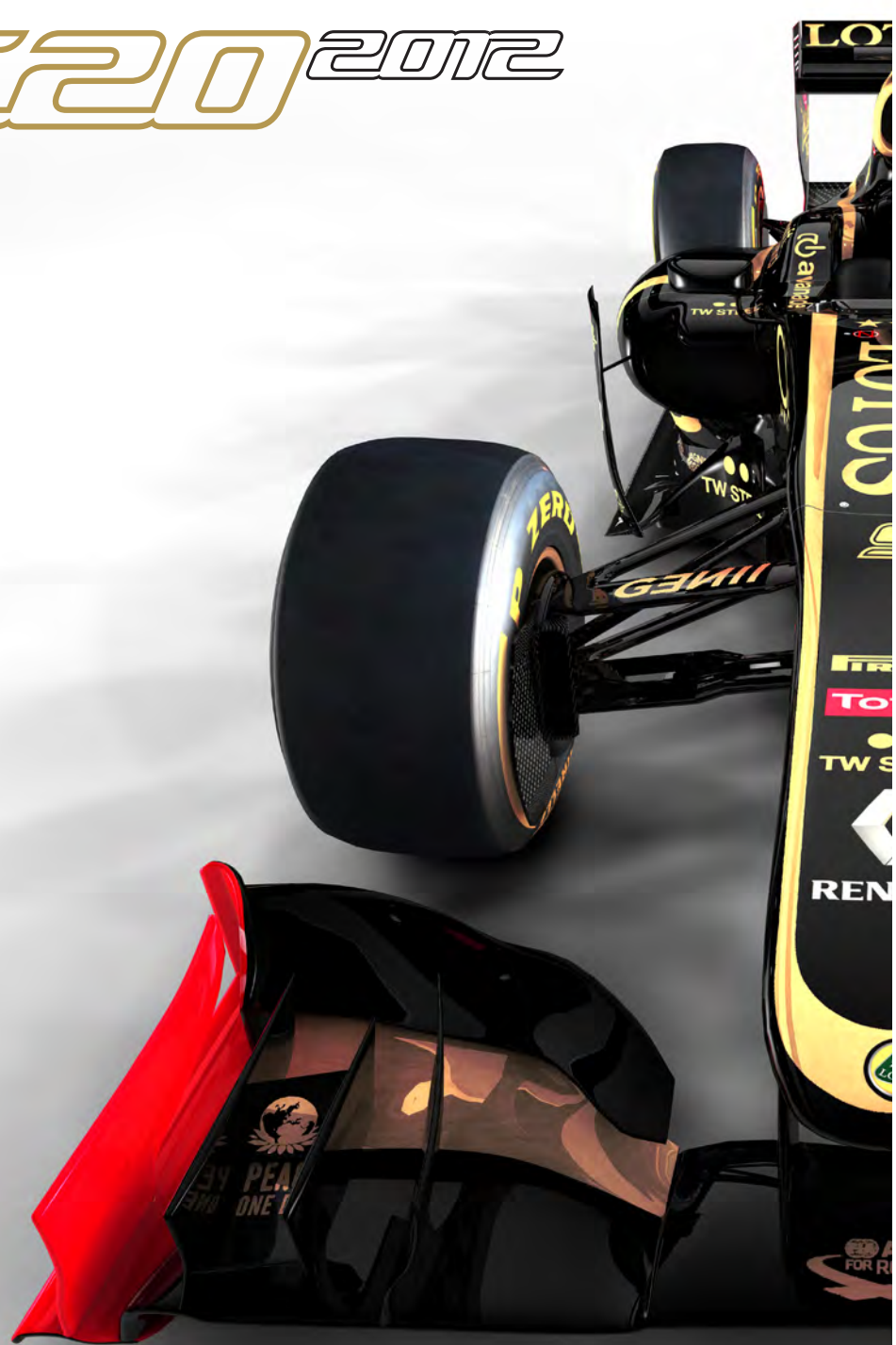




0	The time taken in seconds for the gearbox of the E21 to change gear (drive is never lost during the gearshift).	87.75	The impact energy in kilojoules that must be withstood by the nose of the car when it is crash tested by the FIA. This is the same amount of energy as would be required to stop a 4 tonne elephant moving towards you at 25km/h.
0.1	How much faster in seconds the E21 goes each lap due to the reducing weight as the car burns fuel (not accounting for tyre degradation).	90	The operating temperature in degrees Celsius of each Pirelli tyre.
1.6	The time in seconds for the E21 to decelerate from 100 km/h to standstill.	130	Measured in decibels, this is how loud the RS27-2013 engine is at full revs.
3.0	The average time for the pit crew to change all four wheels and tyres at a pitstop.	400	The amount of braking energy in kilojoules that the KERS generator can place into the KERS battery in a single lap.
4.9	How many seconds it takes for the E21 to reach 200 km/h from standstill.	500	The temperature in degrees Celsius reached by the clutch during a race.
5	The number of consecutive races each gearbox must survive before it can be changed without suffering a five-place grid penalty.	642	The minimum weight of the car in kilograms.
6	How many hours it takes for a complete rebuild of the car at the track with 12 mechanics (assuming sub-assembly is already complete). From scratch at the factory it would take 150 people seven days.	900	The temperature in degrees Celsius of the exhaust gases when the car is on full throttle.
6.67	The number of seconds per lap that the KERS electric motor can be activated at full power.	1,100	In degrees Celsius, this is the temperature a brake disc can reach during the race.
7	The number of gears in the E21's gearbox.	1,500	This is the total number of moving parts in each RS27-2013 V8 engine.
8	The number of engines allocated to each driver in 2013.	2,500	The number of gear changes the drivers have to make during an average Grand Prix.
10.2	The weight of a Pirelli rear tyre (with rim) in kilograms.	4,000	The total number of parts that make up each RS27-2013 V8 engine.
18.5	In psi, this is the average pressure for an Formula 1 tyre.	10,000	The number of aero parts tested annually in the wind tunnel.
30	The weight of a driver's head and helmet in kilograms during maximum braking of 4.5G (the same as a heavy suitcase).	11,000	The number of technical drawings produced by the time of the E21 car build.
42	The number of revolutions per second by a tyre when the E21 is travelling at 300 km/h.	30,000	The number of individual parts that make up each E21.
60	The amount of water dispersed in litres per second by a wet Pirelli tyre travelling at 300 km/h.	250,000	The amount of man hours that have gone into the design of the E21.



E20 2012



E21 2013





# E21

## TECHNICAL SPECS

**CHASSIS** Moulded carbon fibre and aluminium honeycomb composite monocoque, manufactured by Lotus F1 Team and designed for maximum strength with minimum weight. RS27-2013 V8 engine installed as a fully-stressed member.

**FRONT SUSPENSION** Carbon fibre top and bottom wishbones operate an inboard rocker via a pushrod system. This is connected to a torsion bar and damper units which are mounted inside the front of the monocoque. Aluminium uprights and OZ machined magnesium wheels.

**REAR SUSPENSION** Carbon fibre top and bottom wishbones with pull rod operated torsion springs and transverse-mounted damper units mounted in the top of the gearbox casing. Aluminium uprights and OZ machined magnesium wheels.

**TRANSMISSION** Seven-speed semi-automatic titanium gearbox with reverse gear. "Quickshift" system in operation to maximise speed of gearshifts.

**FUEL SYSTEM** Kevlar-reinforced rubber fuel cell by ATL.

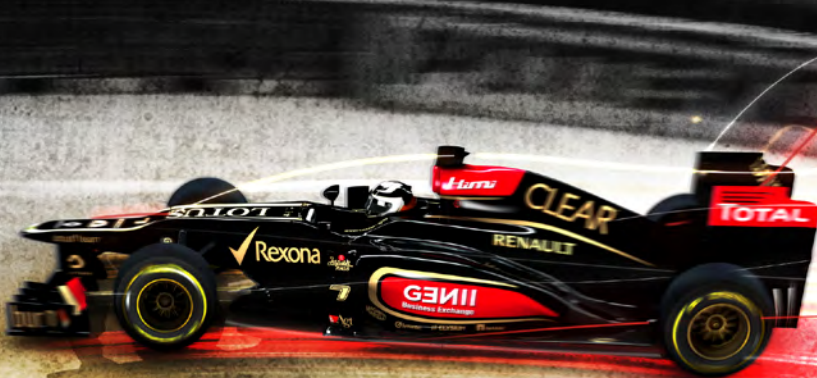
**COOLING SYSTEM** Separate oil and water radiators located in the car's sidepods and cooled using airflow from the car's forward motion.

**ELECTRICAL** MES-Microsoft Standard Electronic Control Unit.

**BRAKING SYSTEM** Carbon discs and pads. Calipers by AP Racing. Master cylinders by AP racing and Brembo.

**COCKPIT** Removable driver's seat made of anatomically formed carbon composite with six-point or eight-point harness seat belt. Steering wheel integrates gear change, clutch paddles, and rear wing adjuster.

**KERS** Motor generator unit driving into front of engine with batteries as an energy store. Motor Generator supplied by Renault Sport F1. Electronic control unit by Magneti-Marelli.



## DIMENSIONS AND WEIGHT

FRONT TRACK	1450 mm
REAR TRACK	1400 mm
OVERALL LENGTH	5088 mm
OVERALL HEIGHT	950 mm
OVERALL WIDTH	1800 mm
OVERALL WEIGHT	642 kg

with driver, cameras and ballast

## THE RS27 – 2013 ENGINE TECH SPECS

CONFIGURATION	2.4l V8
NO OF CYLINDERS	8
NO OF VALVE	32
DISPLACEMENT	2400 cc
WEIGHT	95 kg
V ANGLE	90°
FUEL	TOTAL
OIL	TOTAL
POWER OUTPUT	750 bhp
SPARK PLUGS	Semi surface discharge
IGNITION SYSTEM	High energy inductive
PISTONS	Aluminium alloy
ENGINE BLOCK	Aluminium alloy
CRANCKSHAFT	Nitrided alloy steel with tungsten alloy counterweights
CONNECTING RODS	Titanium alloy
THROTTLE SYSTEM	8 butterflies



# RULES AND REGS

## TECHNICAL REGULATIONS

## SPORTING REGULATIONS

WITH THE CURRENT BREED OF 2.4 LITRE V8 ENGINES SET TO BE REPLACED BY MORE EFFICIENT 1.6 LITRE TURBOCHARGED V6 UNITS IN 2014, MAJOR CHANGES IN TERMS OF CAR DESIGN HAVE INEVITABLY BECOME A KEY AREA OF DEVELOPMENT FOCUS FOR THE FORMULA 1 PADDOCK.

WITH THIS IN MIND, THE RULES AND REGULATIONS FOR 2013 WILL REMAIN MUCH THE SAME AS THOSE SEEN IN 2012, ALBEIT WITH A SMALL NUMBER OF MINOR ALTERATIONS; EACH OF WHICH COULD POTENTIALLY CREATE AN EVEN MORE TIGHTLY PACKED GRID THAN THAT WHICH BROUGHT US LAST SEASON'S EPIC BATTLE FOR HONOURS...

### ACTIVE DOUBLE-DRS SYSTEMS

For the season ahead, active drag reducing devices which make use of the DRS system have been banned. In 2012, some teams developed a concept which allowed air to be channelled through an opening in the rear wing endplate when DRS was activated, subsequently travelling through the car to help stall the front wing. Not only is it now forbidden for the rear wing end plates to transport air around the car, but a similar rule also applies to the centre section of the front wing. This will not, however, affect passive systems as trialled by Lotus F1 Team last season.

### STEPPED NOSES

When regulations were announced for the 2012 season which lowered the overall permitted height of the car nose for safety reasons, much was made of the somewhat unappealing 'stepped' design solution developed by the majority of the grid. While the maximum height limit remains unaltered for this season, teams now have the option of utilising a small piece of laminate – known as a 'modesty'

or 'vanity' panel – to smooth the appearance of the nose section.

### FRONT WING STIFFNESS

Flexible bodywork became a significant talking point over the course of last season, with a number of teams believed to have excessive movement in their front wing design and subsequently gaining aerodynamic performance. As a result of this a further deflection test has been introduced to ensure that the front wing assembly remains as rigid as possible as speed increases, thereby reducing the possibility of such advantages being made. Whilst continuing to limit the extent to which the tips of the front wing 'droop' under load, the new test will also ensure that the assembly is not capable of rotating the nose up or down around a lap.

### FRONT WING TOLERANCES

In years gone by, it has become accepted practice to allow front wing systems to run up to 3mm lower than the regulations prescribe. Decades ago when this

trend was established, it was a nod to the difficulties of manufacturing and measuring to a precise tolerance. However, for many years it has been possible to be much more accurate in the production process, and so from 2013 the front wing height dimensions will need to be respected without any implied tolerance. This means that all teams will be forced to lift their front wing assemblies by up to 3mm, giving rise to a certain loss of front wing performance.

### SUSPENSION MEMBERS

A traditional Formula 1 suspension system has 6 members, namely the top wishbone front leg, top wishbone rear leg, lower wishbone front leg, lower wishbone rear leg, trackrod and push / pullrod. Although not previously exploited, it became clear during the 2012 season that it was possible to make a suspension system which satisfied the written rules, but which consisted of more than 6 members. The potential benefit of such a system would be that it could afford more aerodynamic surfaces to exploit. To forestall such a system,

it has been agreed to amend the rules to limit all suspension systems to just 6 members.

### MINIMUM WEIGHT

Minor increases in the weight of Pirelli's 2013 Formula 1 tyre range have led to the minimum weight limit for each car and driver combination to be increased from 640kg to 642kg, with mandatory weight distribution regulations adjusted accordingly.

### CHASSIS TESTING

In the weeks building up to the first test all Formula 1 chassis are subjected to a series of squeeze tests, where large forces are applied to the chassis to prove that it is strong enough to be used in anger. In the past, the first chassis under production was subjected to a special series of tests that were at 120% of the level applied to each subsequent chassis. As this difference was agreed to be somewhat spurious, the rule has been changed for 2013 such that all chassis must now demonstrate satisfactory performance at the higher level of load given to the first chassis, thereby providing further assurances in terms of driver safety.

### DRS DEPLOYMENT

Since its inception in 2011, drivers have been free to deploy the DRS [Drag Reduction System] at any time which suits them during practice and qualifying. In 2013 however, new rules stipulate that DRS usage will be restricted to designated activation zones as used during the races themselves as part of on-going efforts to increase on-track safety.

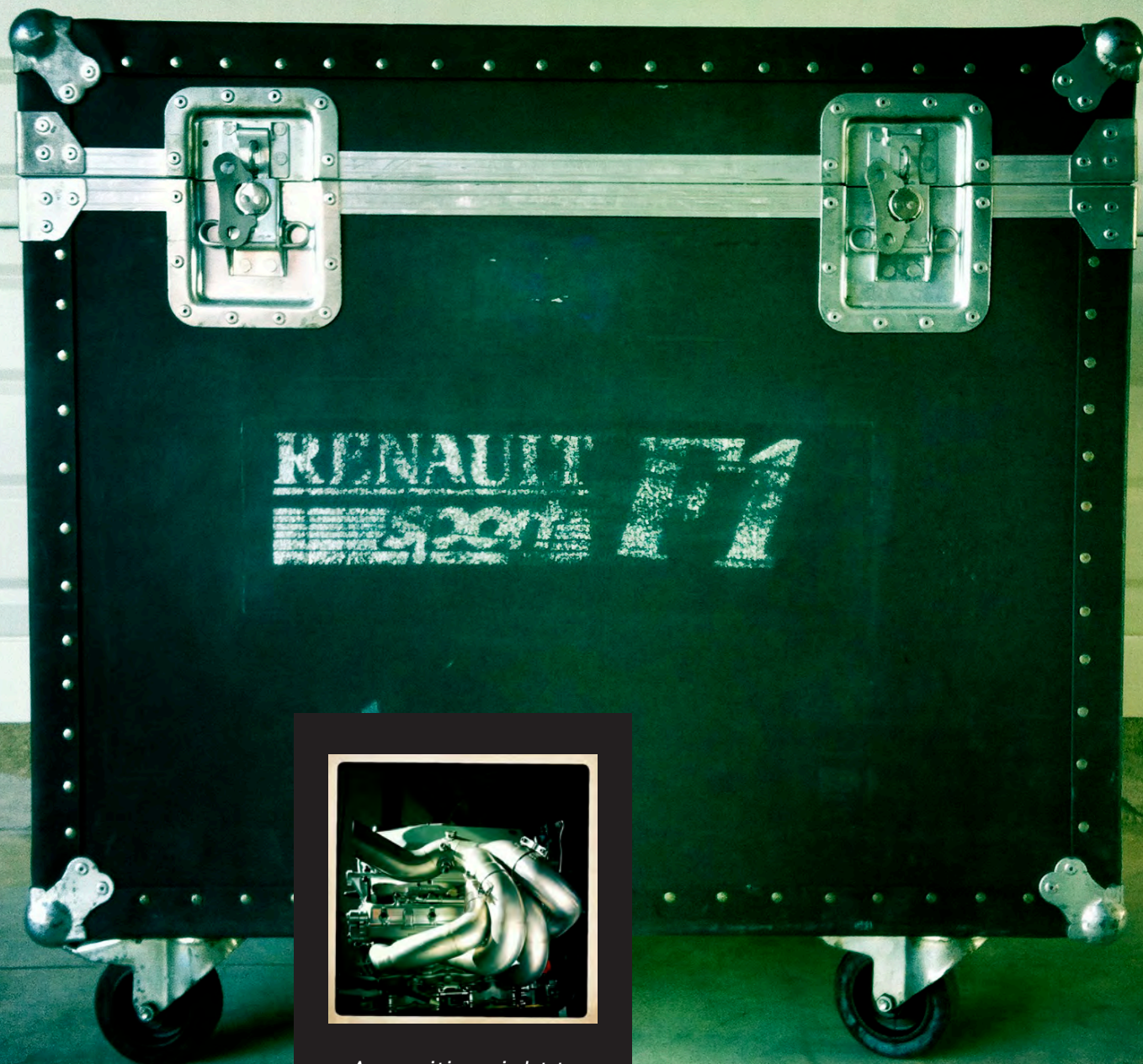
### FORCE MAJEURE

In previous seasons, the 'force majeure' allowance has provided teams with some leeway in terms of fuel levels remaining in a car should it stop on the track during qualifying. This element has been removed from the regulations for 2013, with rules now stating that any car which stops out on track must have enough fuel for the mandatory one-litre minimum sample, plus an additional amount proportional to the amount of fuel that would have been used in returning to the pits [as determined by the FIA].

### QUALIFYING

With the 2013 grid fielding an entry list of 22 cars – reduced from 24 last season – there will now be six drivers eliminated at the end of both the Q1 and Q2 qualifying sessions as opposed to the seven ruled out at each stage in 2012.





*Are critics right to be concerned by this new dawn?*

# V8

## THE END OF AN ERA

**In a sport where speed, skill and superior technological prowess reign supreme, the challenge of squeezing every last ounce of performance from increasingly restricted resources is one that defines Formula 1 engineers as the best of the best.**

Of course, walking hand-in-hand with this endless quest for automotive perfection is an inherent goal to entertain; to provide the unique spectacle that feeds the thirst of motorsport aficionados the world over.

With these intertwined factors of peak importance, it comes as little surprise that fundamental changes within the sport are frequently met with scepticism as all parties concerned seek the ultimate in both performance and entertainment. When the 2006 season got underway in the searing heat of Bahrain, both paddock and spectators alike waited with baited breath as a much-debated topic finally came to a head; what effect would the switch from the spectacular scream of V10 units to the smaller, quieter, more efficient V8 packages have on our beloved sport?

As we head into the fresh battlefield of 2013, the same question is once again at the forefront of many minds as Formula 1 prepares to enter a new era with the introduction of 1.6 litre V6 power plants at the end of the year. So, are critics right to be concerned by this new dawn? On the evidence of the past seven seasons, there is plenty to suggest that this overhaul could provide yet more intrigue from a variety of perspectives.

On paper, the V8 era would inevitably generate mixed reactions from the mechanical purist. The more nostalgic would highlight the golden age of the all-conquering DFV engine, which dominated the grid from the late 60s right through to the early 80s taking 155 wins from 262 races between 1967 and 1985. By contrast, some would »



THE END

OF AN ERA

V8V6

2.4L V8-90°, 98mm bore	CONFIGURATION	1.6L V6-90°, 80 mm bore, standard fixings to chassis and gearbox
8	NO. OF CYLINDERS	6
2400cc	DISPLACEMENT	1600cc
32	NO. OF VALVES	24
95kg	WEIGHT	155kg without energy store
Unlimited, but typically 160 kg	PERMITTED FUEL QUANTITY PER RACE	100 kg (-35%)
Unlimited, but typically 170 kg/h	MAXIMUM FUEL FLOW	100 kg/h (-40%)
18,000rpm	REV LIMIT	15,000rpm
Normally aspirated	INTAKE	Turbocharged, with single-stage compressor and single stage exhaust turbine
Two exhaust outlets	EXHAUSTS	One single exhaust outlet (via engine cover)
750bhp	INTERNAL COMBUSTION ENGINE POWER OUTPUT	Approx 600 bhp
Kinetic Energy Recovery System (KERS), capable of harvesting 400kJ for a max power of 60kW, equivalent of a boost of approx. 80bhp for 6-7secs per lap.	ENERGY RECOVERY SYSTEM	ERS-K (Kinetic Energy Recovery) and ERS-H (Exhaust heat recovery system by E-turbo). The maximum power used to propel or brake the car through the ERS-K must not exceed 120 kW (approx. 160 bhp), while Energy input from the MGUK to the ES may not exceed 2MJ in any one lap. Energy released from the ES to the ERS-K may not exceed 4MJ in any one lap (approx. 33secs per lap). No limit from and to ERS-H.
8	NUMBER OF POWER UNITS PERMITTED PER DRIVER PER YEAR	5

« view a switch to what would theoretically be a more restricted format as a backwards step in the pursuit of absolute performance. In either case, it takes merely a brief glance through the archives of recent seasons to note the V8's influence on what may arguably have been some of the most thrilling championship battles of the modern age.

Since the introduction of mandatory V8 power in 2006, five different Drivers' World Champions have emerged from as many manufacturers, with three engine suppliers among them. As if that weren't enough, five out of the seven Drivers' Championship battles have been decided at the final race of the season, including unforgettable nail-biters in Brazil [2007] and Abu Dhabi [2010] where any one of three and four men respectively could have conceivably clinched the title.

Beyond the points table there have been further positives to take. Although the engine architecture and capacity has remained the same since its inaugural appearance during the 2006 season – when development was free and units were required to last two race weekends – the V8 has operated under a wide variety of regulations; each leading to significant technological advances.

With engine homologation introduced for 2007 continuing right through to this final fling for the V8, each subsequent engine iteration produced by the various suppliers has forced designers and engineers to painstakingly glean incremental but significant improvements from what has been effectively the same piece of hardware.

Combine this with the regulation changes of 2009, which limited each driver to a pool of eight engines for an entire season plus the introduction of KERS that same year and the V8 has made substantial strides in terms of both engine efficiency and reliability which are filtering down into wider fields of automotive design.

What significance the end of this period may hold for the future of the sport remains to be seen. Changes to regulatory formats throughout the years have brought the demise and re-instatement of various engine platforms – including the V8 itself – so to condemn this era to the annals of Formula 1 history could potentially be somewhat premature; particularly given the positive impact this most recent incarnation has had on the industry as a whole.

Whether 2013 proves to be the final fling for the V8 or not, there is of course the chance for one last 'hurrah' over the coming months, and if the unprecedented events of 2012 can be seen as a benchmark, it should be one heck of a send-off...



V8

LOTUS F1 TEAM

V8 MILESTONES

2013 will be the final season of competition for the V8, normally aspirated engines. Introduced across the board in 2006, the eight cylinder units are highly optimised and capable of producing well over 750bhp. Subject to a freeze in specification and performance gains since 2007, the engines will be 'retired' after the season-ending Brazilian Grand Prix to make way for a turbocharged V6 unit equipped with potent electrical recuperation systems and a greater emphasis on fuel economy.

- 240 GPs entered
- 2 Drivers' World Championships
- 1 Constructors' World Championships
- 25 wins
- 98 podiums
- 14 pole positions
- 30 fastest laps

\* 1988 – 1994 [Benetton, Ford]  
2006 – 2012 [Renault F1 Team / Lotus Renault GP / Lotus F1 Team, Renault]



# “There is a new optimum to be found each year”

**2013 will be the final season of competition for the RS27; Renault’s normally aspirated V8 engine. The eight cylinder units were mandatory from 2006 and after nearly eight years of competition, the RS27 is highly optimised. As a result, the focus in 2013 is to deliver optimal reliability and flexibility in engine management, as Renault Sport Technical Director Rob White explains.**

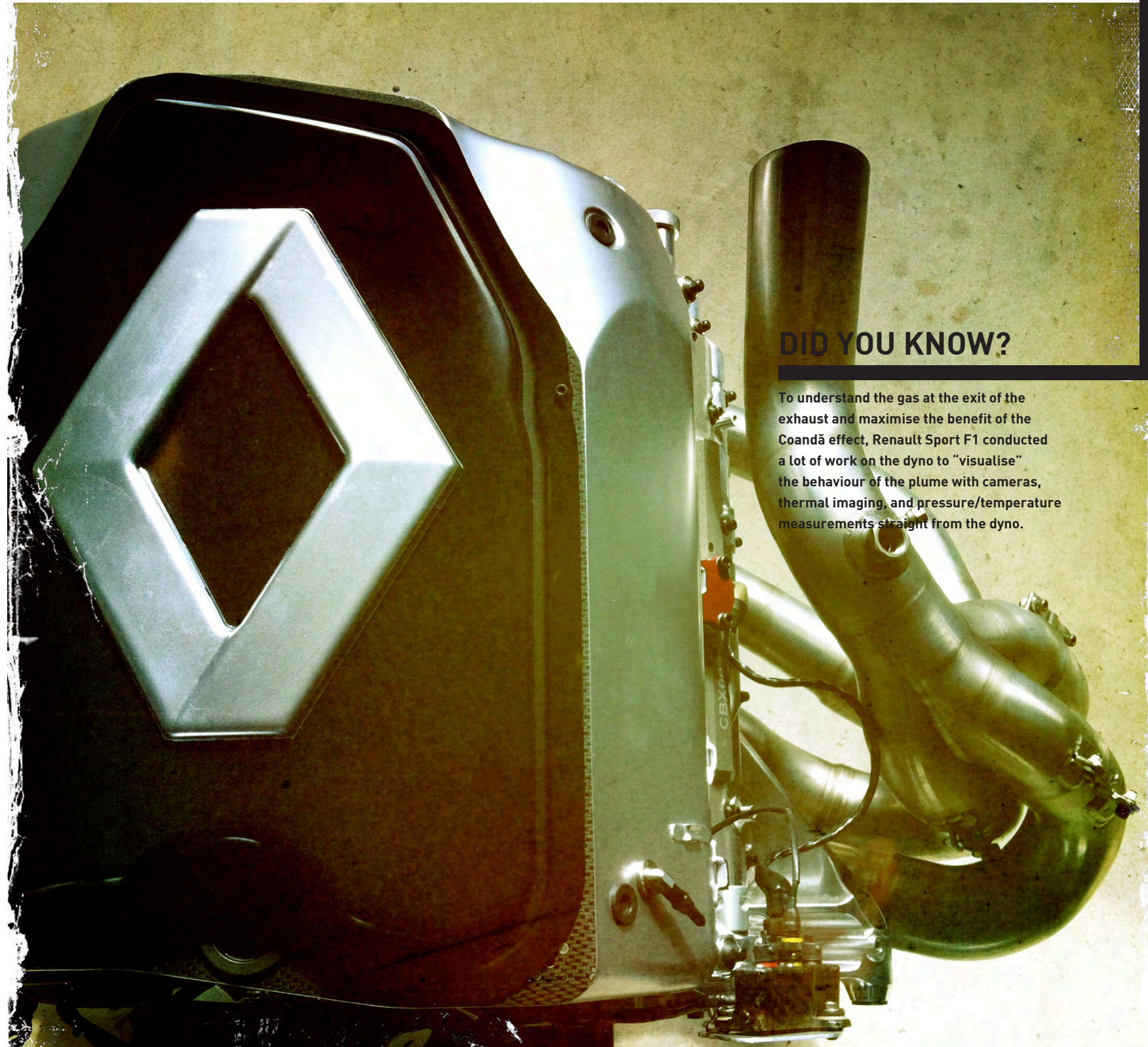
The V8s will make way for the V6 at the end of the year. After eight seasons, the engines – and indeed regulations – are now very mature, but there is a new optimum to be found each year. We work with our partners to be able to support them as they seek this level; for example on the Coandă effect exhausts we saw introduced in 2012, which will continue to have performance gains this year. Through a slightly different use of the engine we can get the final tenths and hundredths out of every single part.

“Obviously the working window to explore becomes smaller and smaller,” expands Head of Track Operations, Rémi Taffin. “There are a few remaining tweaks we can introduce on engine mapping that will improve fuel consumption even further, but with this being the end of the V8 era we will try to make the engine as neutral as possible. This requires relations between the team and engine partner to be even closer than ever before.

“Last year we felt we consolidated on the operational side, with our procedures and structures allowing us flexibility to adapt to the culture of each team. We could ensure that the engine was correctly optimised in line with chassis developments; including the Coandă effect exhaust systems which were progressively introduced. Being responsive enough to incorporate and positively influence developments of these magnitudes is something we have worked hard at, and we want to continue this into 2013. This consistency in our procedures is something we will also lean on as we seek to improve across-the-board reliability. Last season proved that, yet again, every single kilometre needs to be completely on point to achieve 100% reliability.”

Unlike in previous years – where we have seen clarifications or tightening of engine rules – there aren’t any major changes for this season, which is positive as it allows us to fully capitalise on previous years’ experiences.

Reliability is an area the Renault team continues to focus on, as Rob explains: “We are not making major changes, rather we have an action plan in place to counteract each problem we suffered in 2012 and we aim to fully satisfy the expectations of all our teams.”



## DID YOU KNOW?

To understand the gas at the exit of the exhaust and maximise the benefit of the Coandă effect, Renault Sport F1 conducted a lot of work on the dyno to “visualise” the behaviour of the plume with cameras, thermal imaging, and pressure/temperature measurements straight from the dyno.



# Inside Enstone

**The Enstone home of Lotus F1 Team at the Whiteways Technical Centre is a highly impressive facility nestled amidst the sleepy picturesque Oxfordshire countryside. This is where dreams are made.**

Based on the site of a former quarry, the team’s base is in a natural protection area and designed to blend into the local environment without causing an eyesore. It houses over 500 people with the main aim of producing two very fast racing cars to contest the Formula 1 World Championship.

The essence of Enstone is an exceptionally friendly persona, producing some highly sophisticated products. Everyone eats in the same canteen and can make use of the team’s 24 hour gym and from the person who greets you at the gate, to the very highest echelon of the organisation, everyone is approachable and easy-going.

This friendliness shouldn’t be perceived as a lack of focus; great things happen at Enstone as all the trophies and seven World Championships can testify.

It would be wrong to think of the team’s base as a static entity. Over the past few years, dynamic developments have been taking place.

Evidence of this can be seen in the ongoing upgrades of the CFD facility, significant upgrading of the wind tunnel from 50% to 60% (2011), creation of a ‘driver in the loop’ simulator (2012) and the installation of a new gearbox dyno facility as the team looks to the significant changes for 2014.

“An oft-stated truism about car development in Formula 1 is that ‘if you stand still...’. Although the sport tends to focus on the cars themselves, this statement is just as valid when applied to the facilities we use to design and make the cars,” explains Technical Director, James Allison.

“To build the best car – you need the best tools at your disposal; whether that be the wind tunnel, the computers which simulate and assist in the design, or the wide range of specialist manufacturing equipment that is required to be able to realize those designs; all of these contribute to making a faster car for the track.”

Allison is proud of the recent developments to the facility at Enstone.



“Our CFD upgrade allows us to complete more accurate aerodynamic simulations in less time than previously,” he explains.

“The wind tunnel upgrade allowing us a 60% scale model in place of the previous half-scale device has two significant advantages: The bigger the model you use, the better the results from the tunnel will match those that we see in reality on the track. This means that our upgrades are more likely to produce their intended performance improvement when they are tried on the track. Also, at 60%, it becomes possible to design and use various systems in the model that would have been impractically small on the old 50% model. This last point is particularly relevant around the wheels, where modelling the flow of air through the rims and brake drums has become an increasingly important performance area.”

The ‘driver-in-the-loop’ simulator went live at Enstone in 2012 and enables a driver to give further input into the development process.

“Although conventional computer simulations are very powerful, they are still limited in their ability to tell us whether a new concept will produce acceptable handling characteristics. The driver in the loop simulator goes a long way to closing off that gap in our previous competence,” says Allison.

The latest ‘new-build’ at Enstone is a gearbox dyno facility.

“2014 brings some enormous regulation changes. In particular, the transmission designs which have been pretty stable for the last 6 years or so must all be torn up and started from scratch for 2014. The RPM and torque range of the 2014 engine is so different to what went before it that we must replace our factory testing facilities to make sure that they are compatible with the new designs. This investment will ensure that Enstone’s 2014 gearboxes are fast and reliable from the moment that the season begins.”

The creation of the E21 at Enstone occurs with only limited outsourcing. Most of the creative engineering takes place on site with components manufactured from raw materials and design, fabrication, carbon build, quality and durability testing on a multitude of rigs and with simulations in in electronic virtual worlds as well as on mechanical simulator rigs.

Contained within the factory are the race bays – a set-up which is largely familiar to the race garage layout. Here the race team mechanics work on the build of the cars and it’s where the E21 is first seen as the components are bolted to the chassis for the birth of the 21st championship contender to come out of Enstone.



515

race starts

38 Nelson Piquet is the oldest driver to have won for the team, all three wins having occurred when he was over 38 years old.

(lucky) 13 Six drivers have managed to improve 13 positions from their grid position for the team, including Ayrton Senna, Jenson Button and Fernando Alonso; the Spaniard being the only one amongst them to reach the podium in doing so at the 2005 Japanese Grand Prix.

2924

laps led

0.215

seconds  
The smallest win margin – 0.215 seconds – Fernando Alonso 2005 San Marino GP.

25 Different circuits at which the team has won, Monte Carlo and Suzuka, being the most successful (4 victories each).

13965

kilometres led

112

races led

264 Race started with Renault engines.

3

Constructors' Championships  
1995: Benetton/Renault (Michael Schumacher, Johnny Herbert)  
2005 + 2006: Renault (Fernando Alonso, Giancarlo Fisichella)

54

fastest laps  
Set by 15 drivers including one each by Kimi Räikkönen and Romain Grosjean.

9 Nine Italian drivers lead the nations list, followed by Brazil and Great Britain with five each.

119

Races started for the team by Giancarlo Fisichella; our most capped driver ahead of Fernando Alonso and Michael Schumacher.

4

Drivers' Championships  
1994: Michael Schumacher, Benetton/Ford  
1995: Michael Schumacher, Benetton/Renault  
2005 + 2006: Fernando Alonso, Renault

1 The biggest win margin – more than 1 lap – was achieved by Michael Schumacher at the 1994 Brazilian GP.

22

years and 26 days  
At the Hungaroring in 2003, Fernando Alonso became, at the age of 22 years and 26 days, the youngest ever driver to win a GP. He is still the youngest driver to have won a GP for the team. Jenson Button is the youngest driver to start a race for LF1T (21years, 1 month and 13 days, 2001 Australia).

6 drivers to have taken their first Grand Prix win with the team, including Gerhard Berger, Alessandro Nannini, Michael Schumacher, Johnny Herbert, Fernando Alonso and Jarno Trulli.

36

pole positions  
By 7 drivers, with Fernando Alonso (16) and Michael Schumacher (10) at the top.

64.215

seconds  
the shortest lap completed by the team, with Teo Fabi [Toleman/Hart] at the 1985 South African Grand Prix.

1981 The team finishes its first race with Brian Henton [Toleman/Hart] at the Italian Grand Prix.

2196.5

World Championship points

48

wins  
Of these, 19 times the winner started from pole position.

33 Renault has powered the team to the most wins, 33, followed by Ford, 14, and BMW, 1.

259.578

km/h  
The fastest average speed set by the team around a single lap, taken by Fernando Alonso [Renault] at the 2004 Italian Grand Prix.

(lucky) 13 13th race win obtained by Michael Schumacher (Benetton/Ford) comes at the 1994 French Grand Prix. 13th podium for the team comes courtesy of Alessandro Nannini (Benetton/Ford) at the 1988 Spanish Grand Prix.



# THE WISEST OF WORDS

When it comes to making a point, few can match Kimi Räikkönen; something the straight-talking Finn has reminded us of on several memorable occasions over the last twelve months.

From the very beginnings right through to that unforgettable exchange in Abu Dhabi, we take a look back as the Iceman tells it exactly as it is...

*Winter Testing, Jerez 2012*

**Q:** Will the new Pirelli tyres will make a difference to his driving style?  
**A:** I don't know and it doesn't mean anything to me. Tyres are what they are.

*Belgium 2012*

**Q:** OK Kimi, we need to pick up the pace a little bit for the last couple of laps.  
**A:** So give me full power then, just give me full power!

*Japan 2012*

**Q:** Kimi, what happened?  
**A:** I spun.

*USA 2012*

**Q:** Between Sebastian and Fernando, what's your bet for the championship?  
**A:** I think whoever scores most points will get it.

*Abu Dhabi 2012*

**Q:** OK Kimi, next car behind you is Alonso; Alonso five seconds behind you. I'll keep you updated on the gap; I'll keep you updated on the pace  
**A:** Just leave me alone, I know what to do.

*Abu Dhabi 2012*

**Q:** OK Kimi, we need to keep working all four tyres please, keep working all four tyres  
**A:** Yes, yes, yes, yes I'm doing all the time; you don't have to remind me every second.

*Abu Dhabi 2012*

**Q:** Kimi; it's your first victory since the 2009 Belgian Grand Prix; tell us about your emotions at this time?  
**A:** Not much really.

*India 2012*

**Q:** Kimi; it's your first time in India... what are your thoughts, your impressions?  
**A:** Well I came last night at like one o'clock so I've only seen the motorway and the hotel. The inside of the hotel looks nice so, I mean, I have no complaints so far.

*India 2012*

**Q:** Are you a fan of Indian food?  
**A:** Yeah actually I am; if it's the same like in Europe.

## PREVIOUS YEARS...

*On advice to rookies*

I hope that they are good at giving way.

*On preparations for a new season*

I usually get to read from magazines what I have done.

*On qualifying P5*

It's the 5th grid place.

*On F1 past vs. present*

My life would be much easier had I been an F1 driver in the 70s with the guys. I was definitely born in the wrong era.

*On the sensation of driving at over 300kmh*

It feels normal.

*On his idols*

There aren't any.

*On the role of his helmet and design*

It protects my head.

*On rituals with his helmet*

I wipe it so that I can see better.

*On the value of simulators*

Others can sit in simulators if they want. I'm here to drive.

*On failing to score points*

Do I look satisfied?





## EXPERIENCES

**Never before has a Formula 1 team offered such a comprehensive driver training package. iRace provides guests with an opportunity to experience the power, performance and technology of a real Formula 1 car.**

The iRace experience allows guests to immerse themselves in a programme where they will experience the highest standards of race driver training. This high-paced day will require intense concentration, as it guides guests through the key activities race drivers experience within Lotus F1 team.

Guests are transferred from the hotel to the circuit, conduct a track recce with a driving instructor, are given safety equipment, and receive training in both physical preparation and driving techniques.

### DRIVING TECHNIQUES

To get acquainted with the circuit, guests will first drive a Formula Renault 2.0 in two twenty minute sessions. This gives the drivers time to learn the track, teaches basic race driving techniques and allows drivers to acclimatise to driving a single-seater racing car.

As well as being shown how and where to position the car on the track, guests are taught how to use the gearbox, get acquainted with the cockpit layout and understand the controls of the car.

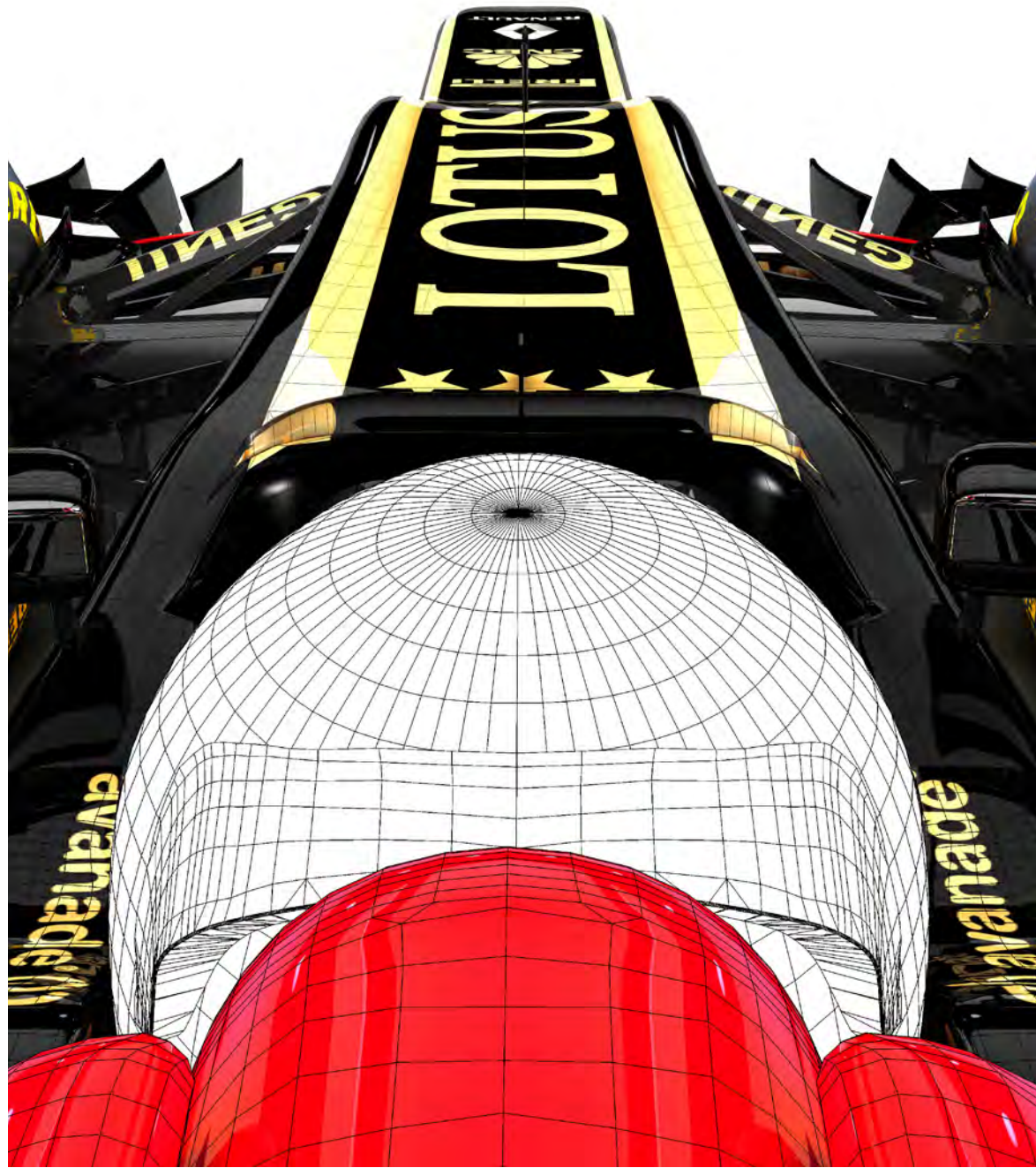
Instructors leave nothing to chance and can fully answer any questions that guests may have. They are professionals and aim to ensure safety and unparalleled enjoyment.

### INFORMATION FIRST

Analyzing telemetry readings enables drivers to dissect every action; braking, gear changes, engine speed, corner entry speed and sector times.

Just as a professional racing driver, the information gathered from the engineer's debriefing will help drivers understand the characteristics of a single-seater and measure progress. There is also the facility to compare times and telemetry data with the team's current F1 drivers. Then it's time for the real thing – two laps at the wheel of a full 700bhp Formula 1 car; in the ultimate driving experience.

Finally, to give guests the full sensation of a Formula 1 car at top speed, guests will be driven around the circuit in a Formula 1 passenger car by a Lotus F1 Team Reserve Driver.



## ADDITIONAL PACKAGES

### iRace Plus

For the more experienced driver, the iRace plus package offers a similar programme as iRace with more driving time in the Formula 1 car. For those who have already sampled driving a racing car and can therefore maximise their time at the track to best effect. Here is no time allocated to the basics of race car driving as it is assumed that drivers already know the standard controls and techniques. With fewer guests and more time dedicated to driving the Formula 1 car, each driver has up to 6 laps available per session.

### iRace Formula Renault

A more economic alternative to iRace with guests able to experience full team integration and a day of driving Formula Renault single seaters. After being briefed by engineers and learning the track, guests will experience the Formula Renault 2.0. The experience includes 2 Formula Renault 2.0 sessions, one in the morning and one in the afternoon. The Formula Renault cars contain a 210bhp 4 cylinder engine reaching 7,500rpm with a 7 speed semi-automatic sequential gearbox, carbon-fibre monocoque, front and rear wings and diffuser weighing only 500kg.



# It Won't Let You Down: Rexona

*Rexona for Men has a perfect fit with Formula 1: both stand for passion, ambition and excellence in performance.*

We empower our consumers to be daring, to be adventurous and to push the limits, offering the best protection throughout the day. We tap into our consumers' passions – cars, sports, extreme adventure – in order to engage with them. The thrill of speed and fierce competition of Formula 1 falls right at the heart of what our consumers are passionate about.

In the high octane environment of Formula 1, it's crucial for drivers to stay cool under pressure and Rexona is able to help Lotus F1 Team by providing its top of the range antiperspirants. Rexona has already launched its special edition Lotus F1 Team antiperspirant which will be available at several key retailers and Grands Prix throughout the season. Rexona is in the midst of launching



F: [facebook.com/RexonaMen](https://facebook.com/RexonaMen)  
T: [@RexonaF1](https://twitter.com/RexonaF1)  
Y: [youtube.com/Rexona](https://youtube.com/Rexona)

an exciting new brand positioning which has a natural fit with the Lotus F1 Team sponsorship, and will be activated across global markets as part of through the line campaigns. In addition to building our core Grand Prix marketing campaigns, side events such as Rotterdam City Racing and Moscow City Racing will be integral to building the Rexona brand within key markets.

The digital strategy and Pit Crew 360 campaign will continue to use Facebook, Twitter and YouTube to present fans with exclusive behind the scenes content that will focus in on the unsung heroes of Lotus F1 Team: the engineers, mechanics and support crew. Rexona will offer latest team news and insights from within the garage at every Grand Prix, supplemented by various podcasts and sound bites recorded from hand-picked Lotus F1 Team members. Digital content will continue to be promoted through various media outlets, Lotus F1 Team owned channels, Formula 1 bloggers and lifestyle journals, bringing fresh and engaging content to Formula 1 consumers.



# Helmets for Heads: Clear

*CLEAR Men stands for efficacy, precision technology, and performance – and no other sport values precision performance technology like Formula 1.*

We offer consumers the best customized solutions against dandruff – giving them the confidence to make a powerful impact anytime, anywhere. Our global partnership with Lotus F1 Team provides our consumers the opportunity to see and live the winning impact that a high efficacy, high precision, high performance brand like CLEAR Men can offer.

A major milestone accomplished last year was securing the Lotus F1 Team drivers' helmets as ownable space. The helmets played well into CLEAR's 'Scalp Protection' and we subsequently developed a ground breaking helmet design Facebook app. With over 25,000 designs submitted to date as part of a global consumer competition, we intend to announce the final winner at the Monaco Grand Prix, when Romain Grosjean will wear the winning design.

W: [clearparis.com](https://clearparis.com)  
F: [facebook.com/clear](https://facebook.com/clear)



Social media will continue to play an integral role in reaching and engaging with our consumer base in 2013. Driving conversation and releasing exclusive content will be key to consumer engagement. We will continue to push CLEAR FINISH – a unique online game already hugely popular with our Formula 1 fan base and designed to elevate CLEAR as one of the most technologically advanced brands in Formula 1.

CLEAR's all encompassing corporate social responsibility initiative 'Helmets for Heads' will continue to be a focal point for this year's Formula 1 campaign. By partnering with the UN Decade for Action for Road Safety campaign, we engage the public brand and identity of the Lotus F1 Team drivers to promote awareness around this global public health issue. Through bespoke helmet auctions conducted last year, CLEAR raised more than US\$15,000 after successful PR launches in Singapore and Abu Dhabi. This initiative will continue to grow for strength to strength with further launches planned at the Malaysian Grand Prix in March.





# Burn: Formula 1’s Free State of Creativity

*The aim of burn - a leading global energy drink from The Coca-Cola Company - is to encourage and inspire everyone to live in a “Free State of Creativity”; challenging norms without fear or boundaries in the pursuit of creative expression.*

A symbol of active fire, burn stimulates the senses, providing consumers with the energy to channel raw creativity into purposeful self-expression. Available in 80 countries throughout Europe, Asia, Africa and Latin America, the ambition of burn is to add to culture, be a place to bring talented people together, and energize creators in all fields. Over the years, burn

has partnered with a range of world-class global creators in the fields of snow, skate and electronic dance – people who are the living manifestation of the brand – to give them a voice and the chance to ignite their creativity in a different way. By partnering with true visionaries, burn aims to nurture talent and help realize their creative goals in order to ignite the creative flame in everybody.

Burn’s most recent creative project saw burn igniting the fusion of electronic music and street art in a collaboration the likes of which had never been seen before, bringing together GRAMMY® award-winning DJ and producer David Guetta and



Los Angeles-based Filmmaker and critically acclaimed Pop artist Mr Brainwash. The two visionaries worked together to create a music video for David Guetta’s latest club hit ‘Metropolis’, co-produced with rising superstar Nicky Romero.

Check out the video at [www.youtube.com/burn](http://www.youtube.com/burn)



Formula 1 is fuelled by creativity, speed and energy, making the iconic sport an ideal partner for burn. Lotus F1 Team – as the emerging challenger in sport – demonstrates exceptional creativity in its approach to Formula 1 racing and collaborations with partners – an approach which mirrors the philosophy of burn. Together, burn and Lotus F1 Team aim to break the conventions of traditional Formula 1 sponsorship marketing through their partnership.

To find out more about what burn is up to, please use the following links:

- [burn.com](http://burn.com)
- [youtube.com/burn](https://youtube.com/burn)
- [twitter.com/burn](https://twitter.com/burn)
- [flickr.com/burnenergydrink](https://flickr.com/burnenergydrink)
- [twitter.com/burnstudios](https://twitter.com/burnstudios)
- [vimeo.com/burn](https://vimeo.com/burn)





# Partner of Your Challenges: Total

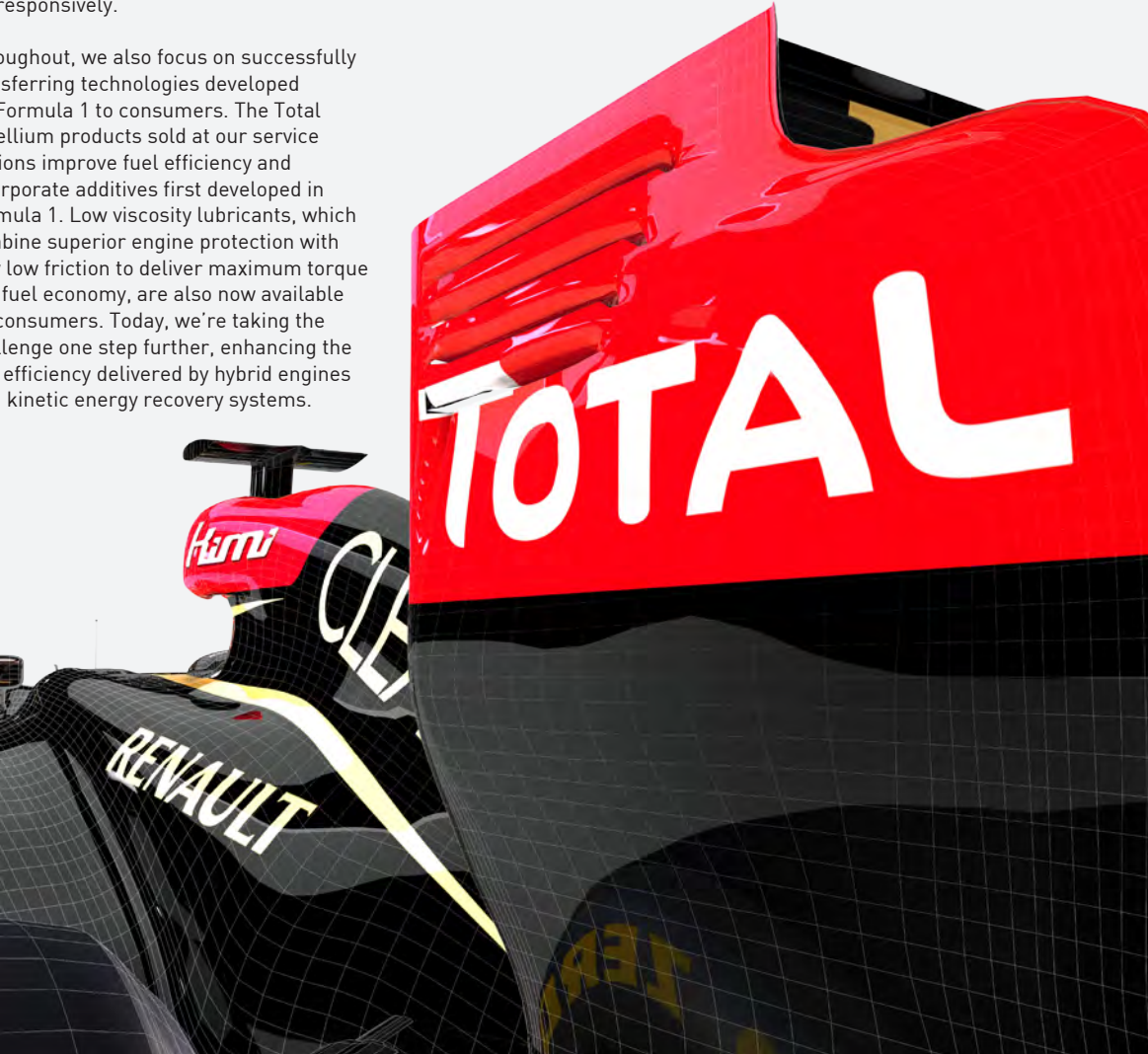
*Involved in Formula 1 racing for more than 40 years, Total has demonstrated a long lasting commitment to a sport where both the human and technological challenges can change very quickly from one season to another.*



“Constantly innovating to further improve our expertise and stretch the envelope is how we support Lotus F1 Team, and we learn every day from that. It is also how Total – a major energy player – develops the products and services offered to our customers. Both processes are fabulous human and technological adventures.”  
**Jérôme Paré**  
*Senior Vice President Strategy Marketing R&D, Marketing & Services, Total*

Our objective is to enable Lotus F1 Team to benefit from the latest product developments and actual performance data that Total engineers collect at every practice session and Grand Prix, then collate and share with our R&D teams. This allows us to contribute to Lotus F1 Team’s performance, while encouraging our engineers to innovate and to act responsively.

Throughout, we also focus on successfully transferring technologies developed for Formula 1 to consumers. The Total Excellium products sold at our service stations improve fuel efficiency and incorporate additives first developed in Formula 1. Low viscosity lubricants, which combine superior engine protection with very low friction to deliver maximum torque and fuel economy, are also now available for consumers. Today, we’re taking the challenge one step further, enhancing the fuel efficiency delivered by hybrid engines with kinetic energy recovery systems.



# MiLo and Me

*The weekend of 3-4 November 2012 was an important one in Enstone’s history. Not only did the team see it’s first Grand Prix victory in four years, but a fundamental change to the team’s IT and process management was implemented.*

As Kimi was crossing the finish line at the Yas Marina circuit to take the 48th win for an Enstone outfit, so MiLo Phase 1 went live at the team’s factory.

MiLo? The moniker given to the co-operation between Microsoft Dynamics and Lotus F1 Team, with branding seen on the cars on track an illustration of the business transformation going on at the team’s base.

MiLo is a business transformation which is providing efficiency gains across the board at Enstone with all processes analysed and defined before the improvements are wrought through Microsoft Dynamics Enterprise Resource Planning (ERP) infrastructure.

Phase 1 incorporated Human Resources, Finance, Purchasing and Inventory Management. This was completed to an aggressive schedule, with analysis started in May, first training started in July, final acceptance in October and then going live in November.

Thomas Mayer – Lotus F1 Team’s Chief Operating Officer – was extremely happy for the first phase to have been implemented so effectively. “Everyone was congratulated on the successful implementation of MiLo Phase 1. That it went live over the weekend of our fantastic victory in the Abu Dhabi Grand Prix was quite a way to celebrate!”

As Phase 2 – covering Engineering, Aerodynamics and Manufacturing – started, so Enstone received a rather special visitor in Kirill Tatarinov, President, Microsoft Business Solutions Division.

“Enstone’s certainly an impressive facility. Obviously, both Lotus F1 Team and Microsoft Dynamics pride themselves on being at the forefront of technology, but the depth of this link becomes increasingly evident when you see the two combining in an environment such as Enstone.

“I think what stands out most is the way our two organisations have worked together to implement such a significant business transformation within a very tight time scale. Looking at what has been achieved already, the project seems to have been a highly successful venture thus far and there is still plenty to come.”





# Give Peace A Chance

*Lotus F1 Team will continue to run with Peace One Day branding on both cars for the 2013 season. Peace One Day is a non-profit organization founded by filmmaker Jeremy Gilley working to institutionalise Peace Day 21 September around the world, making it self-sustaining.*

Founded in 1999 by filmmaker Jeremy Gilley, the non-profit organisation Peace One Day led the initiative to establish an annual day of ceasefire and non-violence with a fixed calendar date, unanimously adopted by United Nations member states in 2001 as 21 September – Peace Day. Peace One Day’s objective is to institutionalize Peace Day 21 September, making it a day that is self-sustaining, an annual day of global unity, a day of intercultural cooperation on a scale that humanity has never known.

In 2007, Jeremy Gilley, his film crew and Peace One Day Ambassador Jude Law travelled to Afghanistan to help develop and document preparations for life-saving activities across the country for Peace Day. As a result of this 4.5 million children in areas hitherto unreachable or hard to reach due to conflict were immunised against polio.

The UN Department for Safety and Security, which monitors security related incidents, recorded a 70% reduction in violent incidents on Peace Day 2008 in Afghanistan; it is this recorded reduction in violent incidents that has prompted Jeremy to launch the Global Truce campaigns.

A report supported by McKinsey & Company has found that approximately 280 million people were made aware of Peace Day 2012 – 4% of the world’s population! McKinsey further estimates that 2%

of those 280 million people, approximately 5.6 million people, were more peaceful in their behaviour as a result. The report suggests that, on present growth, approximately 600 million people will be aware of Peace Day 2013. On McKinsey’s calculations, 2% of that 600 million, that’s 12 million people, will behave more peacefully as a result.

The figures above represent a solid foundation that will support Peace One Day and all their partners in informing 3 billion people about Peace Day by 2016.

**WHO WILL YOU MAKE PEACE WITH?**  
Following the remarkable success of the Global Truce 2012 campaign, Peace One Day has launched a new theme for Global Truce 2013: Who Will You Make Peace With?

Peace Day is not just about a reduction of violence in areas of conflict, it’s also about reducing violence in our homes, schools, places of work and local communities. Peace begins with individual action, so Peace One Day is inviting individuals to consider who they will make peace with, who they will bring together on 21 September 2013. Individual stories of reconciliation spread, inspiring the wider community to mark 21 September, supporting the institutionalisation of the Peace Day.



Peace One Day works principally through education and music to help support its work.

**EDUCATION**  
Peace One Day Education aims to advance active learning in the areas of conflict resolution, global citizenship, human rights and the link between sustainability and peace, using Peace Day 21 September as a focus. Our goal is to provide free resource materials to every school on earth, inspiring a generation to become the driving force behind the vision of a united and sustainable world. There are currently over 14,300 educators registered and using Peace One Day education materials in 197 countries.



**MUSIC**  
Preparations for Peace One Day’s Celebration on Saturday 21 September 2013 are well underway. Announcements about the venue, global broadcast and international artists will be made via [www.peaceoneday.org](http://www.peaceoneday.org) and social media.



# THANK YOU

*Formula 1 is truly international, with races in 19 countries and a massive global audience; there is no better ‘vehicle’ to help raise awareness of Peace Day. It provides an unrivalled opportunity to deliver our message on a global scale. We are delighted to be partnering with Lotus F1 Team for another season. Their ambition, fantastic global network of*

*partners and their genuine belief in the cause sets them apart. We have witnessed their desire and ability to push the limits in not just design but everything they do – a quality that is also necessary for Peace One Day to achieve its aims. We are incredibly grateful to Lotus F1 Team for their continued support and wish them the best of luck for the 2013 season.*



# Doctors' Orders: Auden McKenzie

*Auden Mckenzie (Pharma Division) Ltd is proud to be sponsoring Lotus F1 Team for a third year. Our core DNA shares many synergies with Lotus F1 Team and together we passionately believe we are well placed to challenge our respective industries.*

Auden Mckenzie (Pharma Division) Ltd was honoured to be given the accolade of the second fastest growing small to medium enterprise in the UK during last year, but just like Lotus F1 Team and their year on year rise in the Constructors' Championship we continually strive to do better. With our talented staff we look forward to achieving and maintaining this aim.

Auden Mckenzie (Pharma Division) Ltd is a privately owned, dynamic and fast growing company focused on the development, licensing and marketing of niche generic medicines and proprietary brands in the UK and across Europe.

We are committed to providing quality pharmaceutical products and currently hold over 70 product licenses in the UK and across Europe. Our product portfolio consists of a broad range of molecules in various dosage forms for the treatment of a cross section of therapeutic areas.

The company specializes in the development and registration of high value, technically demanding formulations and also pursues first to file opportunities. With access to both in-house and external regulatory, development and manufacturing capabilities in Europe and Asia, Auden Mckenzie has over 50 pharmaceutical products in various stages of development and registration.



The company's growth is based on the strategic selection of products, partners and markets, in addition to further enhancing our established international supply chain structure. Future growth will be achieved through In-licensing and acquisition of niche Generics and Branded Pharmaceuticals, internal product developments and collaborative work with strategic partners around the world supporting product development and manufacturing.

With a proven ability to achieve profitable sales, the upcoming years will see a stream of new Auden Mckenzie products being launched in various markets. By being dedicated, innovative and creative we continue to seek improvement. The company is dedicated to ensuring a better quality of life for patients and are proud of our association with various patient support groups.

*Our business confidence is sustained by continued success and company ethos shaped by our on-going experiences.*



# LOTUS F1 TEAM AND THE ENVIRONMENT

LOTUS F1 TEAM EXPLORES THE CONTRIBUTION OF FORMULA 1 TO 'GREEN' ISSUES



*Although Formula 1 is not a sport naturally associated with greenness in the public consciousness, it actually has a strong track record of delivering environmentally relevant technology.*

*Success in Formula 1 is all about efficiency; the teams attempt to wring every drop of performance from a fixed set of resources to allow them to gain a competitive advantage over their rivals. In doing so, they create and develop technology which allows wider society to enjoy improved performance from fewer resources.*

## TEAM PRINCIPAL ERIC BOULLIER, EXPLAINS LOTUS F1 TEAM'S VISION FOR A GREENER FUTURE

"Formula 1 has a long history of providing technology that is much more than simply making fast racing cars. The trickle down of useful technology has, however, been incidental to the aims of the sport.

"In recent years the sport has taken a conscious decision to change its regulations to ensure that the technology it delivers is both immediate and directly relevant to the future improvement of road car efficiency. Lotus F1 Team has played, and continues to play, a constructive role in the creation of these regulations

"Back at our factory, we have delivered many smaller scale initiatives to ensure that our direct activities have a reduced carbon footprint. So, whether on the small stage of our operations at Enstone, or on the wider stage of the strategic direction for Formula 1, Lotus F1 Team is committed to promoting and supporting initiatives that ensure that our activities contribute to a greener future for society."



*The importance of aerodynamic efficiency on the race track is obvious to see, and the areas of development for making cars more slippery to go faster on the track are relevant to make cars more slippery and therefore more fuel efficient for the road.*

**MAKING FUEL EFFICIENT**

*A common misconception about Formula 1 is that on-track performance is a function solely of power. In fact, performance comes from a number of different sources, and one of those is fuel consumption. If you can lower fuel consumption while still generating the same performance, you improve the car's efficiency. Achieve this in Formula 1 and your car will possess a performance advantage in racing conditions since less fuel needs to be carried, which reduces overall weight and improves performance.*

# AERODYNAMICS

**WIND TUNNELS**

The aerodynamic importance of the region between the underside of the car and the ground has recently come to the fore, as it is clear that careful design in this region can yield substantial fuel consumption benefits through drag reduction. Major road car manufacturers are now using precisely the same wind tunnel technology pioneered and perfected in Formula 1 ten years earlier to allow them to exploit this benefit.

**CFD**

The development of wind tunnel technology, important though it has been, pales into insignificance alongside the rapid growth of Computational Fluid Dynamics (CFD). With a wind tunnel, experiments are made by blowing wind over a real object in a controlled environment and measuring the aerodynamic forces that arise. In CFD, the same experiment may be conducted in the form of a computer simulation.

A huge range of industries benefit from the mastery of aerodynamic design that a successful CFD programme enables. It is probably no surprise that the aerospace, road car and wind turbine industries use CFD in their design process. In fact,

for any application where there is any sort of fluid (gas or liquid) flow, CFD can bring benefit.

Climate modelling, the force of wind on a building, the way in which medicine is distributed in an inhaler, efficient air conditioning design, transport of gas or liquids in pipelines; the list of applications is truly enormous. All of these applications benefit, to a greater or lesser extent, from the investment that Formula 1 has made in the growing technology of CFD.

A case study was carried out at Enstone for Nissan to demonstrate the power of the optimisation technique for road car design. Nissan provided the team with a virtual model of an existing Nissan road car as a test case, and using this new CFD software we were able to optimise the external shape of the car and reduce drag by over 4%. This figure was then confirmed by Nissan using a different CFD code. This 4% drag reduction is a significant improvement and is achieved through geometry changes not easily identified using conventional CFD codes. In this example the wider benefit of this novel CFD technology is clearly contributing to the design of more fuel-efficient cars.

# FUEL

Fuel consumption and the efficient conversion of fuel into energy are major development priorities for engine and fuel manufacturers. It is for this reason that Lotus F1 Team's close working relationship with TOTAL is of such importance, especially with the ban on refuelling which was introduced in 2010, meaning cars must carry enough fuel to last the entire race distance.

Total engineers also seek to

minimise friction wherever it can occur in the car, not only in the engine, but also in the gear box, oil pumps, hydraulic pumps, transmissions and bearings by adapting and optimising lubricants and greases for the needs of each mechanical component.

However, the benefits don't just apply to the racetrack because what TOTAL learns from Formula 1 is transferred directly to its commercial products.

# THE FACTORY CULTURE

Awareness of the environment runs through the backbone of Lotus F1 Team. Built on the site of a disused quarry, the team's UK base at Enstone prides itself on being energy-efficient and cost-effective in every respect. With intelligent lighting systems, recycling programmes and car-share schemes, respecting the environment has become an integral part of the team's culture.

The following examples demonstrate the team's desire to reduce its carbon footprint:

- Enstone has been carbon neutral since 2005, with agreements in place for the site to be powered by renewable energy from large-scale hydro sources.
- The team is committed to reducing operational waste by recycling. At present 97% of electrical waste is recycled, while the machine shop recycles over 40 tonnes of waste metal annually. The team also makes use of a waste disposal compactor, which has reduced HGV traffic to Enstone by 50%, with compacted waste being sorted and recycled rather than going to landfill.
- Energy efficient lighting is utilised on all new projects and areas of refurbishment. Movement sensors switch off lights when rooms are not in use, while Trilux lighting systems can track levels of natural light during the day, adjusting artificial lighting accordingly to reduce energy wastage. Likewise, Building Management System controls have been installed to provide improved control over the factory's heating and ventilation systems to optimise efficiency.
- When the Kyoto Protocol was signed the UK committed to reducing CO<sub>2</sub> emissions by 12.5% by 2012 from a 1990 baseline. Lotus F1 Team achieved this objective for their operational facility at Enstone in 2005.

- Ecological improvements are continually made at Enstone to encourage wildlife populations in an area which is registered as a 'Site of Special Scientific Interest'. Recently 1,600 indigenous young trees were planted on the site, with ecological and ornithological improvements to encourage wildlife populations on the site.
- The new 'Driver in the Loop' simulator makes use of solar power, with a 30kW panel design providing sufficient electricity to power the building. Any redundant electricity when the simulator is not in use is used for lighting and air conditioning requirements elsewhere on site.
- Lotus F1 Team continually strives to implement green IT solutions. For example, both Enstone and engine partner Renault's Viry-Châtillon (Paris) base make use of video conferencing facilities to avoid unnecessary travel between the UK and France.
- The team also looks for energy-related standards when making purchasing decisions, considering the recycling competency of the equipment as well as the packaging. In terms of software, the team operates a policy of removing underutilised equipment, while our VCS cluster provided by Symantec has helped consolidate servers, thus saving energy.
- The advancements made in computing have also allowed simulation to reduce the need for track testing, which leads to significant saving of resources. A good example is found in our Research and Development department, where we make use of a chassis dynamics rig to simulate the forces experienced by the car on the racetrack. The rig is used primarily to develop new suspension settings and to assess new concepts using servo-hydraulic actuators. By doing this the team can test and optimise suspension solutions without ever leaving the factory.

*When building the new CFD centre, Lotus F1 Team took the unusual decision to build a subterranean facility. This allowed a design that addressed planning and environmental concerns, resulting in a building that is entirely integrated with the surrounding area. During the construction of the centre, the soil removed to make space for the building was retained on-site, avoiding the need for relocation of the 24,000m<sup>3</sup> of quarried material. This material was subsequently recycled and used to submerge the building into the ground, thus reducing the carbon footprint of the construction phase. Building underground also opened up other advantages, such as the stable temperature. At a depth of just 1.5 metres the ground temperature rests at an almost constant 10°C all year round. This means the facility consumes less energy, as it will not be subject to the large external temperature variations of an exposed building and requires less energy to heat and cool.*



**You Tube** QR code

**f** QR code

**Twitter** QR code

**LOTUS F1 TEAM** QR code

**Pinterest** QR code

**in** QR code

**g+** QR code

**Lotus F1 Team** Twitter post: World exclusive! Be the 1st to see our 2013 F1 car, the E21! Tune in on Mon 28.01.13 at 19:15 GMT for the live launch! pic.twitter.com/91nsE1V

**Lotus F1 Team** Facebook post: Fancy hearing the E21 breathing life for the first time? Click, turn up the volume and sigh with relief... we're back!

**Lotus F1 Team** YouTube video: How about that for dedication! She knows what she's doing... even at 10,000 feet!

**Ashley Parlett @Just\_AP** The marketing wit and creativity of the @Lotus\_F1Team is second to none. Creative hash-tags, non stop insight, photos etc. #Brilliant

**Roy Booth @willfly777** @Lotus\_F1Team I think Lotus have become the Team of the People this year with their insight and openness. Well Done.

**Raves @RavenZech** I have to say @Lotus\_F1Team are the absolute BEST team to follow on Twitter by a long shot. They're pretty awesome #AlwaysEntertaining #LOVE

**JenniKate Wallace @jenni\_kate** Catching up on @Lotus\_F1Team tweets from earlier. Seriously best & funniest #F1 team tweeting. Just one of many reasons I love them

**Ross W @RossWZA** @Lotus\_F1Team I love how you are the most active, information rich and openly communicating formula 1 team twitter account. Keep it up!

# DIGITALLY YOURS

Lotus F1 Team's online presence has become one of the key cornerstones of our communications strategy and continues to grow in 2013.

Over the past twelve months a unique blend of direct fan interaction, contemporary humour and targeted content has helped the team develop one of the fastest growing, most loyal, and above all, engaged communities in the Formula 1 paddock.

Since the beginning of last year, the official Lotus F1 Team Facebook fan page has progressed from 50,000 'likes' to over half a million; the fastest growth rate of any team and currently the third largest total following; greater than Ferrari and bettered only by McLaren and Red Bull.

Rave reviews for our Twitter feed from fans and media alike have further enhanced Lotus F1 Team's status amongst the digital community, while a host of original, creative content available via the team's official YouTube channel has received in excess of four million views during the past twelve months alone.

For the year ahead, development of brand new profiles utilising emerging social media platforms such as Google+, Instagram and Pinterest will now form the next step in broadening the team's online reach, which supplemented by the latest edition of our official website – due to go live in the build-up to winter testing at Jerez – are set to provide more information, updates and exclusive behind-the-scenes content than ever before.

To see what all the fuss is about, scan the QR codes within the team badges opposite to explore each of our expanding communities.

- 1,623,879,485** Potential impressions on Twitter
- 267,000,000** Facebook page impressions
- 4,335,953** YouTube video views in 2012 [vs. 791,849 in 2011]
- 895,900** Interactions on Facebook
- 707,900** Clicks on Twitter
- 503,860** Facebook fans: +1000% growth rate [from 53,136 base]
- 175,800** Retweets on twitter
- 158,700** Mentions on Twitter
- 167.630** Twitter followers: +316% [from 51,014 base] \*01.01.12 – 25.01.13





# OFFICIAL TEAM PARTNERS



RENAULT

TOTAL



CLEAR  
ANTI-DANDRUFF

## GROUP LOTUS

Group Lotus plc, is based in Norfolk, UK, and has three operating divisions: Lotus Cars, Lotus Engineering and Lotus Racing.

Lotus Cars builds world class, high performance sports cars including the award-winning Evora, the iconic Elise, the stunning Exige and the road / track orientated 2-Eleven. Lotus New Era, the future product line-up, was unveiled in Paris on 30th September 2010 featuring the new Esprit, Elan, Elite, Elise and Eterne.

Lotus Engineering provides comprehensive and versatile consultancy services to many of the world's OEMs and Tier 1 suppliers and is an internationally recognised automotive engineering consultancy. Global facilities include those in the US, Malaysia, China and offices in Germany and Japan, with rapid expansion in new territories such as South East Asia.

Lotus Racing operates the motorsports activities of Lotus and includes the strategy to return the Lotus name to a great number of series including endurance racing with GTE, GT4 and single-seater racing with GP2 and GP3.

## RENAULT

Renault – France's number one car brand and one of the world's top automakers – relies on more than 110 years of technical innovation to bring customers high-quality, carbon-efficient road-going vehicles.

Throughout its history, Renault has incorporated motorsport into its global marketing and technical development strategy. The sport has proven to be an effective testing ground for road car products, with innovative track solutions for downsizing, reliability and electric technology filtered through to the consumer ranges.

Renault Sport F1 is the sporting division created to supply engines to carefully selected partners in the FIA Formula 1 World Championship. Since 1977, Renault has won 11 Constructors' World Titles and ten Drivers' World Titles in the championship, plus more than 200 pole positions and 150 wins.

## TOTAL

Involved in Formula 1 racing for more than 40 years, Total has demonstrated a long lasting commitment to a sport where both the human and the technological challenges can change very quickly from one season to another.

Our objective is to enable Lotus F1 Team to benefit from the latest product developments and the actual performance data that Total engineers collect at every practice session and Grand Prix race, then collate and share with our R&D teams. This allows us to contribute to Lotus F1 Team's performance, while encouraging our engineers to innovate and to act responsively.

Throughout, we also focus on successfully transferring technologies developed for Formula 1 to consumers. The Total Excellium products sold at our service stations improve fuel efficiency and incorporate additives first developed in Formula 1. Low viscosity lubricants, which combine superior engine protection with very low friction to deliver maximum torque and fuel economy, are also now available for consumers. Today, we're taking the challenge one step further, enhancing the fuel efficiency delivered by hybrid engines with kinetic energy recovery systems.

## REXONA

Rexona for Men has a perfect fit with Formula 1: both stand for

passion, ambition and excellence in performance. We empower our consumers to be daring, to be adventurous and push the limits, offering the best protection throughout the day. We tap into our consumers' passions – cars, sports, extreme adventure – in order to engage with them. The thrill of speed and fierce competition of Formula 1 racing falls right at the heart of what our consumers are passionate about.

In this high octane environment of Formula 1, it's crucial for drivers to stay cool under pressure; Rexona is able to help Lotus F1 Team by providing its top of the range antiperspirants. Rexona has already launched its special edition Lotus F1 Team antiperspirant which will be available at several key retailers and GPs throughout the season.

Rexona is in the midst of launching an exciting new brand positioning which has a natural fit with the Lotus F1 Team sponsorship, and will be activated across global markets as part of through the line campaigns. In addition to building our core GP marketing campaigns, side events such as Rotterdam City Racing and Moscow City Racing will be integral to building the Rexona brand within key markets.

## CLEAR

Clear Anti-Dandruff Shampoo is a world leader in the fight against dandruff and other scalp problems. Unlike other shampoos that only wash the flakes away, Clear nourishes deep inside the scalp, where dandruff and other scalp problems begin - so they never come back.

With Clear Men and Clear Women, it offers both genders the best customized solutions against dandruff and other scalp problems - giving them the confidence to make a powerful impact anytime, anywhere.





# OFFICIAL TEAM PARTNERS

## BURN

The aim of burn – a leading global energy drink from The Coca-Cola Company – is to encourage and inspire everyone to live in a “Free State of Creativity”; challenging norms, without fear and boundaries, in the pursuit of creative expression.

A symbol of active fire, burn simulates the senses, providing consumers with the energy to channel raw creativity into purposeful self-expression.

Available in 80 countries throughout Europe, Asia, Africa and Latin America, the ambition of burn is to add to culture, be a place to bring talented people together, and energize creators in all fields.

Over the years, burn has partnered with a range of world-class global creators in the fields of snow, skate and electronic dance – people who are the living manifestation of the brand – to give them a voice and the chance to ignite their creativity in a different way. By partnering with true visionaries, burn aims to nurture talent and help realize their creative goals in order to ignite the creative flame in everybody.

Formula 1 is fuelled by creativity, speed and energy, making the iconic sport an ideal partner for burn. Lotus F1 Team, as the emerging challenger in sport, demonstrates exceptional creativity in their approach to Formula 1 racing and their collaborations with partners; an approach which mirrors the philosophy of burn. Together, burn and Lotus aim to break the conventions of traditional Formula 1 sponsorship marketing through their partnership.

## MICROSOFT DYNAMICS

Microsoft is the worldwide leader in software, services and solutions that help people and businesses realize their full potential.

Microsoft Dynamics is a line of simple to learn and use business solutions that work with your existing technology and scale as you grow to give you long-term value. These solutions are designed to work the way people work, so they are better able to make informed decisions and businesses are able to adapt to rapid change. We call this enabling the Dynamic Business.

Dynamic Businesses are ones that are connected and forward-looking; anticipating and embracing change continuously while also sustaining a competitive advantage. People are what make a Dynamic Business thrive; impassioned individuals are a company's greatest asset and when organizations can realize the potential of their people they see substantive business impact.

In Formula 1, speed and agility of the car helps a driver win. In business, empowering people with the right information when they need it is what makes them successful. Microsoft Dynamics is committed to equipping Lotus F1 team with solutions that empower its people, helps them be more productive, gives their organization a competitive edge and be a Dynamic Business.

## AVANADE

Avanade is a business technology

solutions and managed services provider with more than 17,000 professionals in over 20 countries. Founded in 2000 by Accenture and Microsoft Corporation its services help customers improve their business, increasing business agility, employee productivity and customer loyalty in all industries, and put power in the hands of the people who need it most; employees.

As the official business consulting partner of Lotus F1 Team, Avanade, helps Lotus F1 Team on track by delivering innovative, intuitive car setup, car configuration and data analysis applications. Utilizing Microsoft expertise and leveraging the latest Microsoft technologies, they also support the team in the factory by optimizing operational activities to drive greater flexibility, agility and performance through line of business applications.

Built on a sustainable, platform model, Avanade helps Lotus F1 Team realize results in all aspects of their business.

## PIRELLI

The fifth largest operator in the world in the tyre sector by sales, Pirelli is the market leader in the high-end segments with high technological content. Founded in 1872, there are now 22 Pirelli Tyre factories throughout the world, in four continents, operating in more than 160 countries.

In line with its ‘green performance’ strategy, Pirelli, which has



always focused on research and development, operates with constant and increasing attention to products and services of high quality and technology and low environmental impact. The focal point of the Pirelli Group's growth strategy is its capacity for product and process innovation and ability to assess new opportunities stemming from its continuing research activities.

In pursuing its objectives, Pirelli is committed to combining economic profitability with social responsibility. In line with an industrial tradition dating back more than a century, the Group, in its international expansion, always maintains strong roots in the local communities in which it operates.

Pirelli brings approximately 1,800 tyres to every Grand Prix and 55 people work at each race to give the teams the best possible support. Each team has a dedicated Pirelli tyre engineer and tyre fitter who work closely with them all through the year. 18 tyre fitters are in charge of mounting all tyres correctly and in time. Senior engineers make sure that all questions and any issues arising are immediately dealt with on-site.

## GENII

Genii Business Exchange is a business platform created by Genii Capital to transform the global exposure derived from the Formula 1 World Championship into unique business opportunities for our partners and worldwide network.

With market leaders, opinion leaders, high network individuals, political leaders, key global corporate finance players and global players in the Formula 1 community, Genii Business Exchange identifies the needs of its partners by initiating positive dialogue with the appropriate counterparties leading to win-win commercial, financial and industrial relationships.

Genii Business Exchange acts as a portal for:

- Strategic partnership development
- Business development
- Financial structuring and fund raising

The Genii Business Exchange team hosts meetings both on and off-track with clearly defined partners and prospects. Flexible and reactive, the team strives to identify, quantify and close business opportunities efficiently.

Simply put, Genii Business Exchange's mission is to cultivate one of the best and most dynamic business environments possible.

## JAPAN RAGS

A specialist in “authentic” jeans, the Japan Rags brand has been expressing a cultural desire for the genuine article since 1998 and is perfectly positioned as the expert on vintage.

Established in the south of France by father and son Gil & Lylian Richardiere, Japan Rags is today a rapidly expanding denim brand which models itself on the Japanese culture

of second hand clothes. Pioneers of vintage fashion, customizing, repurposing and recycling clothes, this is a trend that continues to have a strong influence on current fashion.

It is in this rich universe that the brand finds its inspiration each season. The basics of second hand clothes are reworked, rethought and redesigned to meld into a more urban and sporty fashion.

Aware of environmental problems, Japan Rags openly expresses its will to encourage a more green view of the industry. After years of research, and numerous scientific tests, Japan Rags chooses a revolutionary fading technique, the Ozone Treatment. This treatment consists of washing denim without water, reducing chemical treatments needed for fading the blue jeans, and abolishing the use of permanganate.

## PEACE ONE DAY

In 1999, filmmaker Jeremy Gilley launched the non-profit organisation Peace One Day (POD) to document his journey to create the first ever annual day of ceasefire and non-violence. As a result of these efforts, the day was unanimously adopted in 2001 by United Nations member states, fixed as September 21 – Peace Day.

With the day in place, POD's objective is to institutionalise Peace Day, making it a day that is self-sustaining. By 2007, 100 million people were actively involved on the day (source UNDPPI) in every country of the world.





# OFFICIAL BUSINESS PARTNERS



## AGT

As the leading Emissions Spot Trading brokerage within the voluntary Carbon Credit market, AGT boasts the scale, resources and expertise to source and trade Verified Emissions Reduction (VERs) Carbon Credits in the dynamic over the counter green market for individuals, hedge funds and global corporations.

AGT's platform delivers cutting-edge technology, sophisticated trading tools and the opportunity to monitor investments efficiently and cost-effectively at any time using its iPhone app, meaning AGT's clients enjoy unrivalled high levels of liquidity and online access to their accounts.

Through AGT's experienced leadership, the organisation prides itself upon integrity and a commitment to establishing carbon offset partnerships throughout a wide range of industries, which will fund future sustainable technologies and encourage corporate social responsibility on a broad scale.

## AUDEN MCKENZIE

Auden McKenzie (Pharma Division) Ltd is a privately owned, dynamic and fast growing company focused on the development, licensing and marketing of niche generic medicines and proprietary brands in the UK and across Europe.

Auden McKenzie is committed to providing quality pharmaceutical products and currently holds over 60 product licenses in the UK and across Europe. Our product portfolio consists of a broad range of molecules in various dosage forms, for the treatment of a cross-section of therapeutic areas.

The company specializes in the development and registration of high value, technically demanding formulations and pursues first to file opportunities. With access to both in-house and external regulatory, development and manufacturing capabilities in Europe and Asia, Auden McKenzie has over 50 pharmaceutical products in development and registration.

With a proven ability to achieve profitable sales, the upcoming years will see a stream of new Auden McKenzie products being launched into the market. By being dedicated, innovative and creative we continue to seek improvement. The company is dedicated to ensuring, a better quality of life for patients and are proud of our association with various Patient Support Groups. Our business confidence is sustained by continued success and company ethos is shaped by our on-going experiences.

## OPTIMAL PAYMENTS

Trusted by businesses and consumers in over 180 countries to move and manage billions of dollars each year, Optimal Payments Plc is the leading payments company offering a true alternative to banks and card schemes.

Merchants use the NETBANX® processing service to simplify how they accept and settle card, direct-from-bank, and cash payments; and the NETELLER® payment account to increase margins, capture new customers and increase their lifetime value. Being independent has allowed the company to support tens-of-thousands of retailers and merchants in many geographies and across multiple industries.

Optimal Payments specialises in providing safe payment and money transfer services, giving businesses and consumers the freedom to manage and move their money online. The company's solutions are built from the ground up to address the unique challenges of a virtual marketplace to remove the risks of variable factors such as identity, currency exchange and distance. In doing so, Optimal Payments is able to facilitate safe, instantaneous transactions for both consumers and businesses and offer a real alternative to banks and card schemes.

Optimal Payments Plc is quoted on the London Stock Exchange's AIM market, with a ticker symbol of OPAY. Subsidiary company Optimal Payments Ltd is authorised and regulated as an e-money issuer by the UK's Financial Services Authority (FSA).





# OFFICIAL TECHNICAL PARTNERS



alpinestars



DigiPen  
INSTITUTE OF TECHNOLOGY

ELYSIUM

+GF+ AgieCharmilles

iRISE

## ALPINESTARS

With extensive R&D facilities in the US and Europe and a global racing development program, Alpinestars ensures the highest quality and consistency of its products for motorsports athletes and customers.

Founded 50 years ago, Alpinestars today maintains an integral role across every major motorsports category, from motocross and motorcycle road racing to Formula 1 and NASCAR.

Together with the world's top athletes who embody our principle of 'One Goal. One Vision' – from Kimi Räikkönen and Sebastian Vettel (Formula 1) to Jorge Lorenzo and Dani Pedrosa (MotoGP) – Alpinestars delivers a diverse range of technical apparel and footwear which incorporates unsurpassed levels of performance, comfort and protection.

True to the company's pioneering spirit, Alpinestars has successfully extended its influence to progressive action sports such as surfing and mountain biking, as well as producing complete collections of casual and street fashion apparel for worldwide distribution.

## CD-ADAPCO

CD-adapco is the world's largest independent CFD focused CAE provider. Our core products are the technology-leading simulation packages STAR-CCM+ and STAR-CD. The scope of our activities, however, extends well beyond CFD software development to encompass a wide range of CAE engineering services in CFD and structural mechanics, battery and motor design.

STAR-CCM+ plays a critical role in Lotus F1 Team's aerodynamic development, while both STAR-CCM+ and STAR-CD are used extensively in engine design. CD-adapco's partnership leading-edge companies

like Lotus F1 Team helps us to define the future direction of our software tools and to test new features in the toughest possible engineering environment.

CD-adapco's purpose is "Engineering Success." We aim to help our customers to succeed through the application of engineering simulation, driving innovation in their products while reducing the engineering time and cost associated with bringing those products to market.

## DIGIPEN

DigiPen Institute of Technology is a pioneer educator in the field of interactive digital entertainment and media, including video game development and 3D animation. Since 1996, DigiPen has offered its unique Bachelor of Science in Real Time Interactive Simulation – the world's first four-year degree in video game development – through its campus in Redmond, Washington, and more recently through its international branch campuses in Singapore and Bilbao, Spain.

Today, DigiPen's programs include degrees in Digital Art and Animation, Sound Design, Game Design, Computer Engineering, and Computer Science, in addition to summer workshops and college-preparatory courses for younger students and Continuing Education classes for working professionals.

DigiPen is also a hotbed for technological innovation, partnering with organizations such as Lotus F1 Team and the Boeing Company to create leading-edge simulation software.

## ELYSIUM

Elysium Inc. provides CAD Data Translation products that allow for a one-touch solution to address

an entire world of complex Interoperability problems. We are the conduit for zero defect 3D digital model collaboration.

## GF AGIE CHARMILLES

GF AgieCharmilles, a pioneer of innovative machine tool technology, has established an enviable reputation for exceptional performance, outstanding value, ease-of-use, and lasting precision. The Electric Discharge and 5 axis Vertical Milling Machines of GF AgieCharmilles allow the team's designers to push the technological limits in Formula 1 by adopting radical approaches to the design, manufacture and materials of strategic car components.

## iRISE

iRise is the world's leading enterprise visualization platform for business software. Visualization has become a critical competitive advantage for business stakeholders to more effectively communicate their needs to technology teams and gives everyone involved the ability to interact with and fully experience business applications during the requirements phase prior to development.

With iRise, business analysts and designers can visualize off-the-shelf packages such as SAP, custom software, mobile business applications for the iPhone/iPad and various types of legacy software. Companies of all sizes use iRise to "test drive" their applications before building, which accelerates time to market by more than 50%, dramatically improves customer experience, and drives cost materially down.

Customers include JPMorganChase, Deutsche Bank, American Express, Bank of America, General Motors, Toyota, Ford Motor Company, FIAT, »





# OFFICIAL TECHNICAL PARTNERS



« National Grid, Southern California Edison, UPS, FedEx DHL, Kaiser Permanente, United Health Group, MD Anderson, AT&T, Verizon, and hundreds of others.

Headquartered in Los Angeles, iRise is backed by Morgan Stanley and Deutsche Bank, and has offices in San Francisco, New York and London.

## MAGNETI MARELLI

Magneti Marelli designs and produces advanced systems and components for the automotive industry. With 83 production units, 12 R&D centres and 26 application centres housing around 34,800 employees in 18 countries, the group supplies all leading carmakers in Europe, North and South America and the Far East.

The Magneti Marelli Motorsport Business Line designs and produces HW and SW components for motorsport series. Its portfolio includes electronic and electro-mechanical systems for engine and vehicle control, data acquisition and transmission.

The Magneti Marelli portfolio includes ECUs, displays, telemetry systems, alternators, voltage regulators, coils, sensors, fuel

systems, high performance hybrid systems, electric actuators, SW tools and technical support.

Through its technical partnership, Magneti Marelli Motorsport helps Lotus F1 Team to tailor and adapt its KERS system to best suit the layout and operation of the car, while at the same time reducing weight and increasing performance.

## NETAPP

NetApp creates innovative storage and data management solutions that deliver outstanding cost efficiency and accelerate business breakthroughs. Customers around the world choose us for our “go beyond” approach and broad portfolio of products and services.

Our solutions provide nonstop availability of critical business data and simplify business processes so you can deploy new capabilities with confidence and get to revenue faster than ever before.

Lotus F1 Team’s data is stored on NetApp storage arrays, including back office, track and design data with the latest NetApp storage systems travelling the world with the race team.

NetApp storage solutions have

enabled Lotus F1 Team to reduce cost through increased utilisation, ease of management and reduction in power and cooling as well as delivering improved performance.

## OZ RACING

Created in 1971, OZ produces and distributes its light-weight alloy wheels via a network of branches and partners across the globe and is a legendary name in the motorsports industry; synonymous with victory thanks to over 40 years of success in motor-racing.

The numbers speak for themselves; OZ has been involved in Formula 1 since 1985 and the World Rally Championship since 1988, currently holding 150 awards to its name.

OZ is one of Italy’s front-runners in the world of wheels and is involved in many motorsport disciplines – including Formula 1, Rally, DTM and IndyCar – in addition to the after-sales market for road cars, motorbikes and OEM with customised projects for prestigious teams and constructors.

Besides its headquarters in Italy which employs over 200 people, OZ also has offices in Germany, the UK, Japan, Denmark and Singapore.

OZ’s vast experience in the world of

motorsport is available for all lovers of wheels. Today OZ is an important player in the aftermarket car wheel industry offering over 70 styles of alloy wheel available in over 25 different finishes and a choice of diameters from 14” to 22”.

Lotus F1 Team and OZ Racing works together every day in order to reach the maximum performance, quality and safety for drivers.

## PROCESSIA SOLUTIONS

Processia Solutions is a leader in the field of Product Lifecycle Management (PLM) integration and optimization with offices in Canada, USA, France and UK.

Processia’s expertise is used in Motorsport, Aerospace, Automotive and other industries with a suite of services that includes solution design, software development, application integration and implementation services. Processia Solutions is a Dassault Systèmes Global Services Partner.

## SIEMENS

The business segment of Siemens PLM Software containing the former Vistagy organization is a leading global provider of specialized engineering

software and services focused on the specific requirements of vertical industries, including the Fibersim™ portfolio of software for designing and manufacturing products made of advanced composite materials.

Siemens PLM Software is proud to be a technical partner to Lotus F1 Team. Engineers at the Enstone facility have used Fibersim extensively since the 2002 season to significantly reduce design and production time and improve the accuracy of its composite racing car parts, which make up 85% of the car but only 20% of its weight.

This relationship along with the strength of Siemens and its integrated portfolio of PLM products puts Fibersim at the forefront of motorsports and high performance automobile engineering.

## SYMANTEC

Symantec helps organizations secure and manage their information-driven world with endpoint security, messaging security, web security, data protection, identity authentication and security management solutions.

Symantec is a global leader in providing security, storage and

systems management solutions to help consumers and organizations secure and manage their information-driven world.

## 3D SYSTEMS

3D Systems is a leading provider of 3D content-to-print solutions including 3D printers, print materials and on-demand custom parts services for professionals and consumers alike. The company also provides CAD, reverse engineering and inspection software tools and consumer 3D printers, apps and services.

Its expertly integrated solutions replace and complement traditional methods and reduce the time and cost of designing new products by printing real parts directly from digital input. These solutions are used to rapidly design, create, communicate, prototype or produce real parts, empowering customers to create and make with confidence.

The partnership with 3D Systems allows Lotus F1 Team to take full advantage of their wind tunnel testing capacity and pioneer new full-scale manufacturing opportunities in their Advanced Digital Manufacturing Centre (ADM).





# OUR HISTORY 1981 – 2012

TOLEMAN

BENETTON

RENAULT

LOTUS RENAULT GP

LOTUS F1 TEAM



## TOLEMAN

### 1981 – 1985

DEBUT	1981 San Marino Grand Prix
FINAL RACE	1985 Australian Grand Prix
RACE WEEKENDS	70 (57 starts)
WINS	0
POLE POSITIONS	1 Germany 1985 Teo Fabi
FASTEST LAPS	2
PODIUMS	3
FRONT ROW	1
POINTS	26
DRIVERS' CHAMP.	0
CONSTRUCTORS' CHAMP.	0
RACE DRIVERS	9 Brian Henton Derek Warwick Teo Fabi Bruno Giacomelli Johnny Cecotto Stefan Johansson Pierluigi Martini Ayrton Senna Piercarlo Ghinzani



TG181



TG183



TG183B



TG184 (Monaco)



TG184 (Germany)



TG185



## BENETTON

### 1986 – 2001

DEBUT	1986 Brazilian Grand Prix
FINAL RACE	2001 Japanese Grand Prix
RACE WEEKENDS	260
WINS	27
	Michael Schumacher 19
	Nelson Piquet Sr. 3
	Gerhard Berger 2
	Johnny Herbert 2
	Alessandro Nannini 1
POLE POSITIONS	15
	Michael Schumacher 10
	Teo Fabi 2
	Jean Alesi 1
	Gerhard Berger 1
	Giancarlo Fisichella 1
FASTEST LAPS	36
PODIUMS	102
FRONT ROW	33
POINTS	861.5
DRIVERS' CHAMP.	2
	1994, 1995
	Michael Schumacher
CONSTRUCTORS' CHAMP.	1
	1995
RACE DRIVERS	17
	Gerhard Berger, Teo Fabi
	Thierry Boutsen
	Alessandro Nannini
	Johnny Herbert, Emanuele Pirro
	Roberto Moreno, Nelson Piquet Sr.
	Michael Schumacher
	Martin Brundle, Riccardo Patrese
	JJ Lehto, Jos Verstappen
	Jean Alesi, Alexander Wurz
	Giancarlo Fisichella
	Jenson Button



B186



B187



B188



B189



B190



B191



B192



B193



B194



B195



B196



B197



B198



B199



B200



B201

## RENAULT

### 2002 – 2010

DEBUT	2002 Australian Grand Prix
FINAL RACE	2010 Abu Dhabi Grand Prix
RACE WEEKENDS	159
	[158 starts]
WINS	20
	Fernando Alonso 17
	Giancarlo Fisichella 2
	Jarno Trulli 1
POLE POSITIONS	20
	Fernando Alonso 16
	Giancarlo Fisichella 2
	Jarno Trulli 2
FASTEST LAPS	13
PODIUMS	57
FRONT ROW	34
POINTS	933
DRIVERS' CHAMP.	2
	2005, 2006
	Fernando Alonso
CONSTRUCTORS' CHAMP.	2
	2005, 2006
RACE DRIVERS	10
	Jenson Button
	Jarno Trulli
	Fernando Alonso
	Jacques Villeneuve
	Giancarlo Fisichella
	Heikki Kovalainen
	Nelson Piquet Jr.
	Romain Grosjean
	Robert Kubica
	Vitaly Petrov



R202



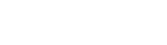
R23



R24



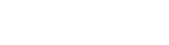
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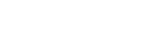
R26



R27



R28



R29



R30

## LOTUS RENAULT GP

### 2011

DEBUT	2011 Australian Grand Prix
FINAL RACE	2011 Brazilian Grand Prix
RACE WEEKENDS	19
WINS	0
BEST FINISH	3rd
	Australia 2011, Vitaly Petrov
	Malaysia 2011, Nick Heidfeld
POLE POSITIONS	0
FASTEST LAPS	0
PODIUMS	2
FRONT ROW	0
POINTS	73
DRIVERS' CHAMP.	0
CONSTRUCTORS' CHAMP.	0
RACE DRIVERS	3
	Vitaly Petrov
	Nick Heidfeld
	Bruno Senna



R31

## LOTUS F1 TEAM

### 2012

DEBUT	2012 Australian Grand Prix
FINAL RACE	N/A
RACE WEEKENDS	20
WINS	1
	Kimi Räikkönen
POLE POSITIONS	0
FASTEST LAPS	3
PODIUMS	10
FRONT ROW	1
POINTS	303
DRIVERS' CHAMP.	0
CONSTRUCTORS' CHAMP.	0
RACE DRIVERS	3
	Kimi Räikkönen
	Romain Grosjean
	Jérôme d'Ambrosio



E20