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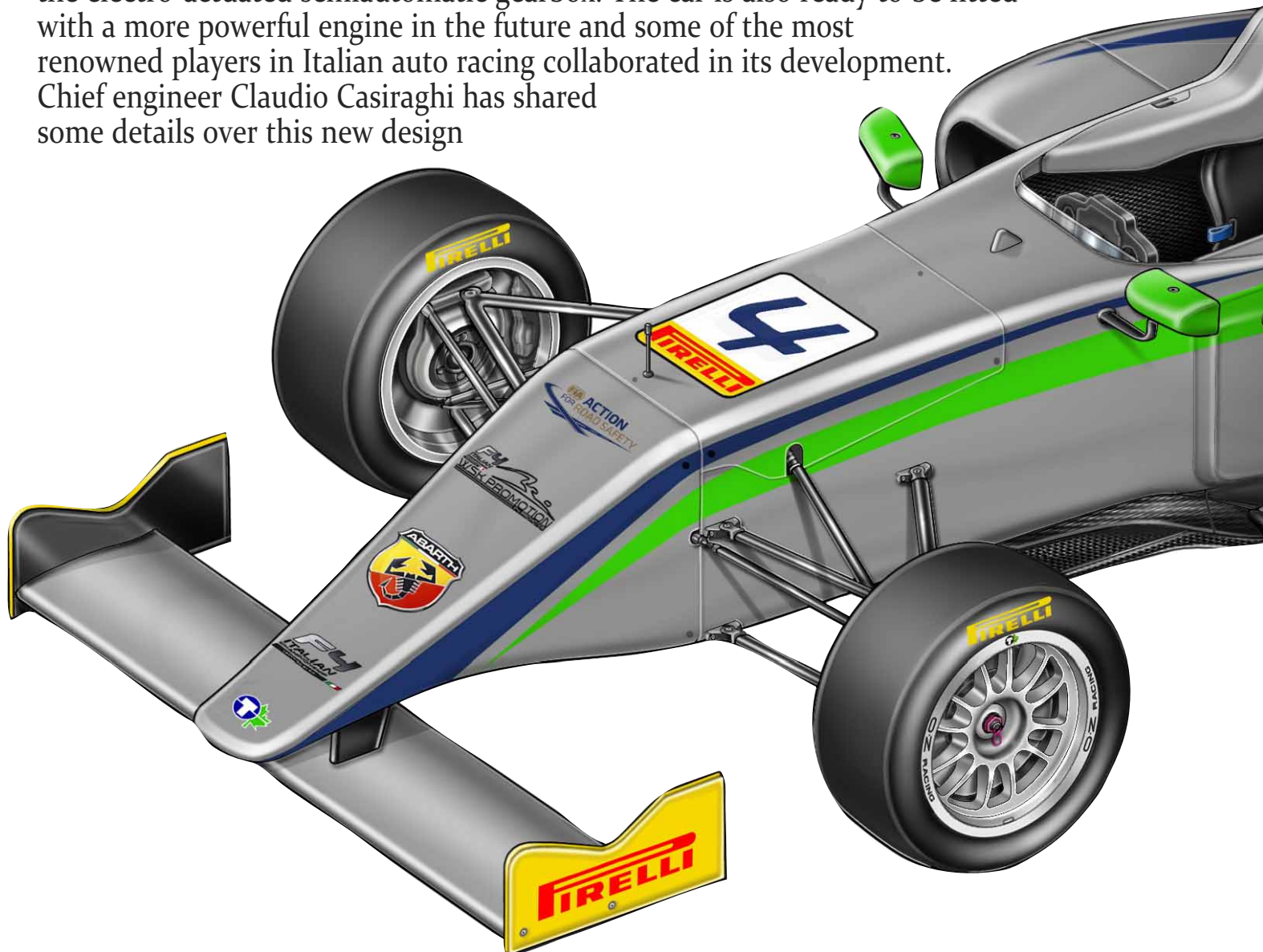
TATUUS RACING ACTIVITY

n.2 - 2014

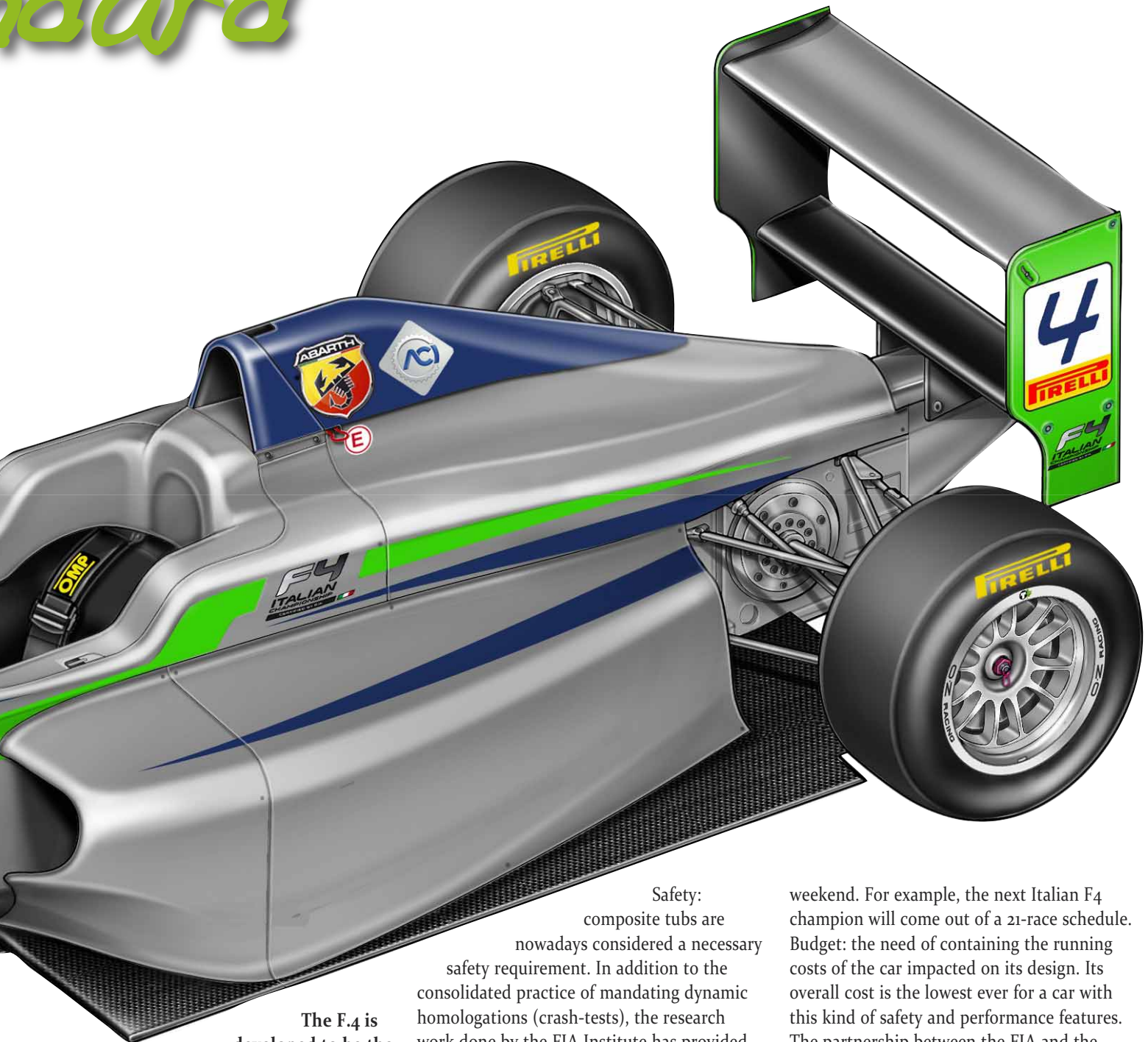
NEW!

# "F.4, a new start of excellence"

The new category created by the FIA is set to become the first approach to open-wheel racing for drivers coming from go-kart competition. And thanks to the new car developed by Tatuus, they will be relying on some steady starting points. The safety parameters are state-of-the-art, while the modular chassis enables to keep the running and maintenance costs low while retaining some high-tech features like the electro-actuated semiautomatic gearbox. The car is also ready to be fitted with a more powerful engine in the future and some of the most renowned players in Italian auto racing collaborated in its development. Chief engineer Claudio Casiraghi has shared some details over this new design



# Standard

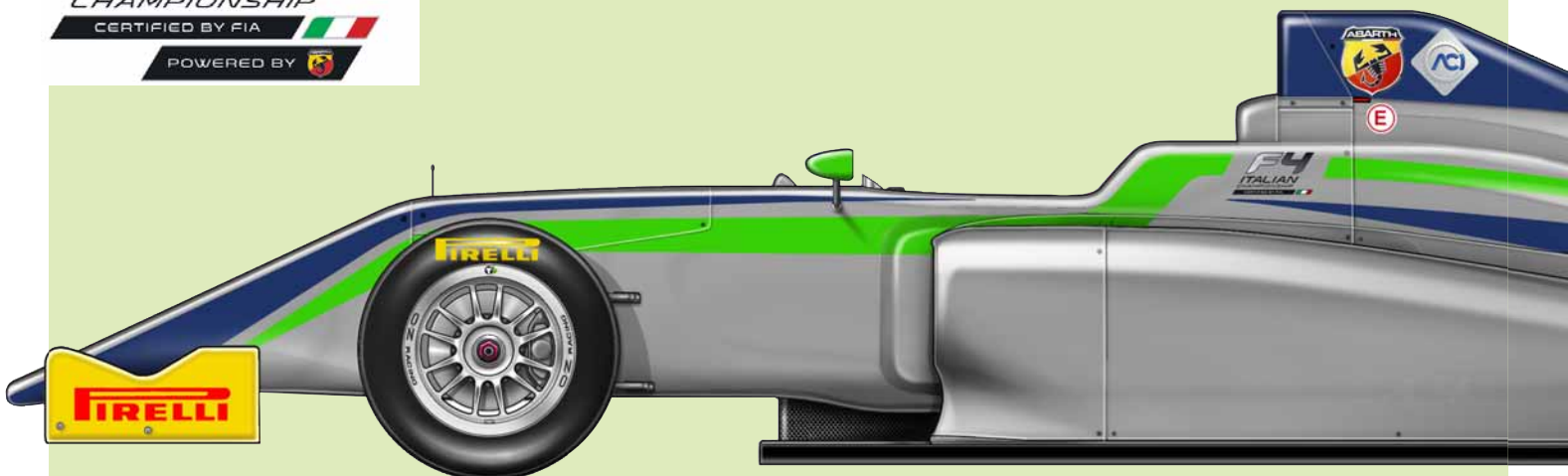


**The F.4 is developed to be the first stepping stone from go-kart racing to open-wheelers. What are the required features of it?**

«This category was created by the FIA to provide a stepping stone into auto racing for the drivers coming from go-karts. The project started from a clean sheet of paper and the federation tried to incorporate in it some of the most interesting aspects that emerged in motorsports during the last 10 years. The most significant of them are:

**Safety:** composite tubs are nowadays considered a necessary safety requirement. In addition to the consolidated practice of mandating dynamic homologations (crash-tests), the research work done by the FIA Institute has provided the new car the latest specifications including a full-length anti-intrusion lateral panel. **Formation:** the new F4 will help drivers to step up from karting to open-wheelers and that's why we decided to create a developmental racecar. The limited downforce is meant to develop the young drivers' sensibility in terms of vehicle dynamics. The FIA also planned the sporting aspects for this series including two free practices and one qualifying session plus three races per

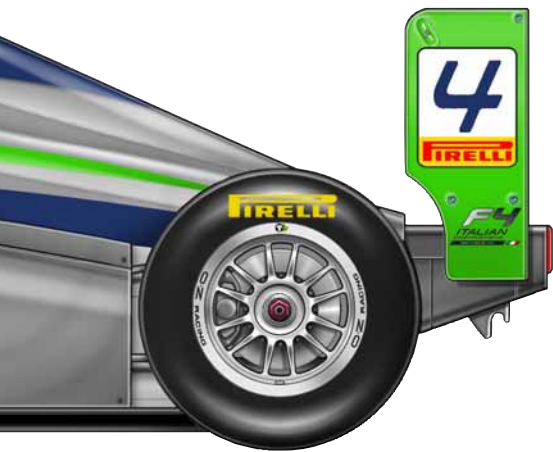
weekend. For example, the next Italian F4 champion will come out of a 21-race schedule. **Budget:** the need of containing the running costs of the car impacted on its design. Its overall cost is the lowest ever for a car with this kind of safety and performance features. The partnership between the FIA and the manufacturers brought to the use of many standard components with the goal of reducing the running and maintenance cost. The goal is to reduce the mileage costs to enable a better formation for the drivers. **Promotion:** the support that the International Federation committed to give in terms of marketing and media must not be forgotten. And that will be added to the promotion package delivered by WSK Promotion in Italy.



## Technical outline Formula 4 Tatuus F.4 T 014

<b>Chassis</b>	Tatuus monocoque carbon composite FIA F.4 homologated
<b>Safety features</b>	Carbon composite front and rear crashbox FIA F.4 homologated Steering column FIA F.4 homologated Roll-hoop FIA F.4 homologated Wheel tethers Cortex FIA homologated OMP Six-point safety harnesses, Hans system OMP Extinguisher electrically operated Removable head protection Removable seat FIA standard
<b>Bodywork</b>	Fiberglass
<b>Wings</b>	Front wing with mainplane adjustable Rear wing with two aero profiles adjustable
<b>Engine</b>	Fiat Abarth Turbo 1.4 cc. 160 cv.
<b>Electronics ECU</b>	Magneti Marelli
<b>Instrumentation</b>	Display LCD integrato al volante Next Solution
<b>Data acquisition</b>	AIM Evo 4 inclusa camera car
<b>Transmission</b>	Sequential Sadev six-speed gearbox Paddle shift Magneti Marelli EGA
<b>Front Suspension</b>	Double wishbone with pushrods Twin shock layout Camber and toe adjustable
<b>Rear Suspension</b>	Double wishbone with pushrods Twin shock layout Camber, toe, roll centre, anti-squat adjustable
<b>Dampers</b>	Oram Bump e rebound regolabili
<b>Brakes</b>	Brembo 2 pistons calipers, cast iron ventilated discs Ferodo brake pads
<b>Fuel</b>	Premier FIA FT3 fuel cell compatible, 40 lt. volume
<b>Tires</b>	Pirelli front 200 x 540 x 13" rear 250 x 575 x 13"
<b>Wheels</b>	O.Z Aluminium front 8 x 13" rear 10 x 13"
<b>Dimension</b>	Wheelbase: 2750 mm Front track: 1510 mm Rear track: 1460 mm

Can we introduce some of the new car's specifications? What is the expected performance level?



«The expected performance will be influenced by the technical choices mandated by the FIA with the new rulebook, the limited aero downforce and the increased weight prescribed by the new safety rules. It will also be proportioned to the higher categories but it will definitely be impressive for a young driver at his first time on the world's top circuits. We think that this car's potential is enormous and it could be equipped by some

much more powerful engines. The semiautomatic gearbox is similar to the ones used in the top categories and, from a technical standpoint, we would love to see these characteristics used in a more extreme way. We hope for an evolutionary approach to the technical and sporting rules, while keeping the costs at bay».

**What is the most interesting component of this design?**

«The biggest challenge is to be among the pioneers with the new rules and all the safety, material and cost reduction standards that this project introduced. The FIA worked hard together with the manufacturers to write a set of rules that will enable, in the next few years, an almost infinite number of chassis/engine combinations for the new F4 championships. Our chassis is designed to accept different engines without major modifications to the standard components (tub, gearbox, bodywork, electric compartment). We are confident that this philosophy will be key to turn F4 into a success».

**Did you get some inspiration from the Formula Renault 2.0 and F.Abarth**

**designs? If so, in what components?**

«The main inspiration comes from the design method. The know-how of having 15 years of experience in designing cars for top manufacturers has been put into this project. From the practical point of view, the generational jump prescribed by the rules resulted in a limited amount of parts shared with the previous designs. We must not forget that the F4 is not a spec car like Formula Renault or Formula Abarth. Its modularity brought us to design many new solutions».

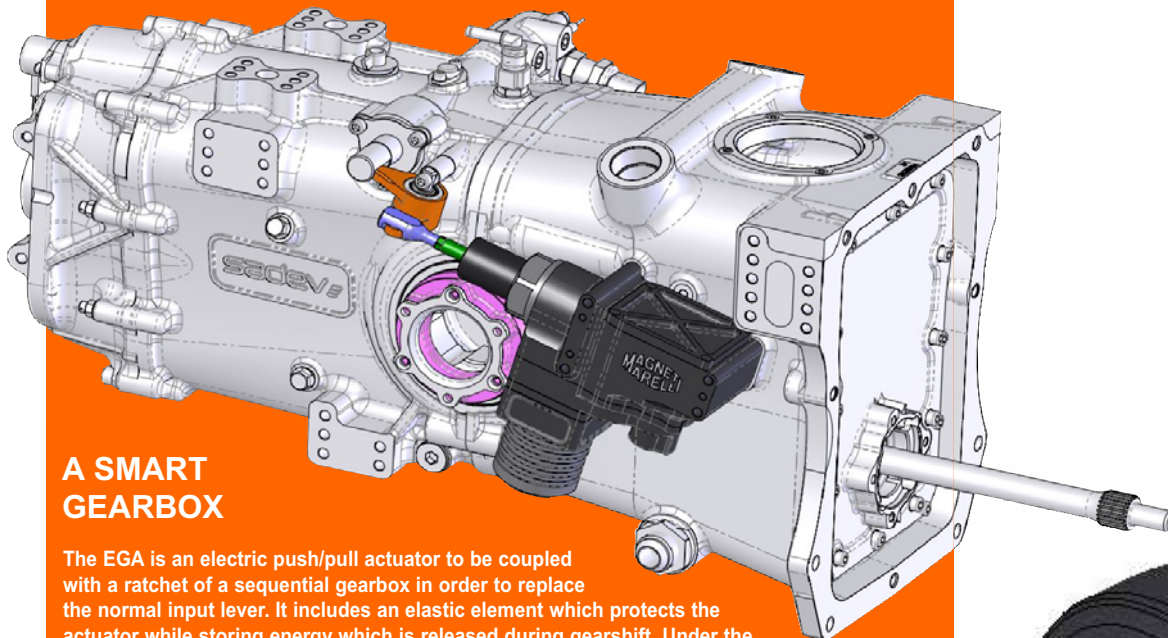
**What is the secret in matching high performance and low running costs?**

«The secret is an huge design effort in optimizing every single component of the car. The balance between keep costs down and performance is the result of more than 10 years of experience and more than 1200 cars produced. This compromise keeps evolving and the challenge is to keep the pace with the times. Ten years ago, I would have excluded the use of high-performance semiautomatic gearbox with the budgets needed with the F4. Now it will not only be used on the car, but it will also take advantage of a ground-braking hybrid technology».



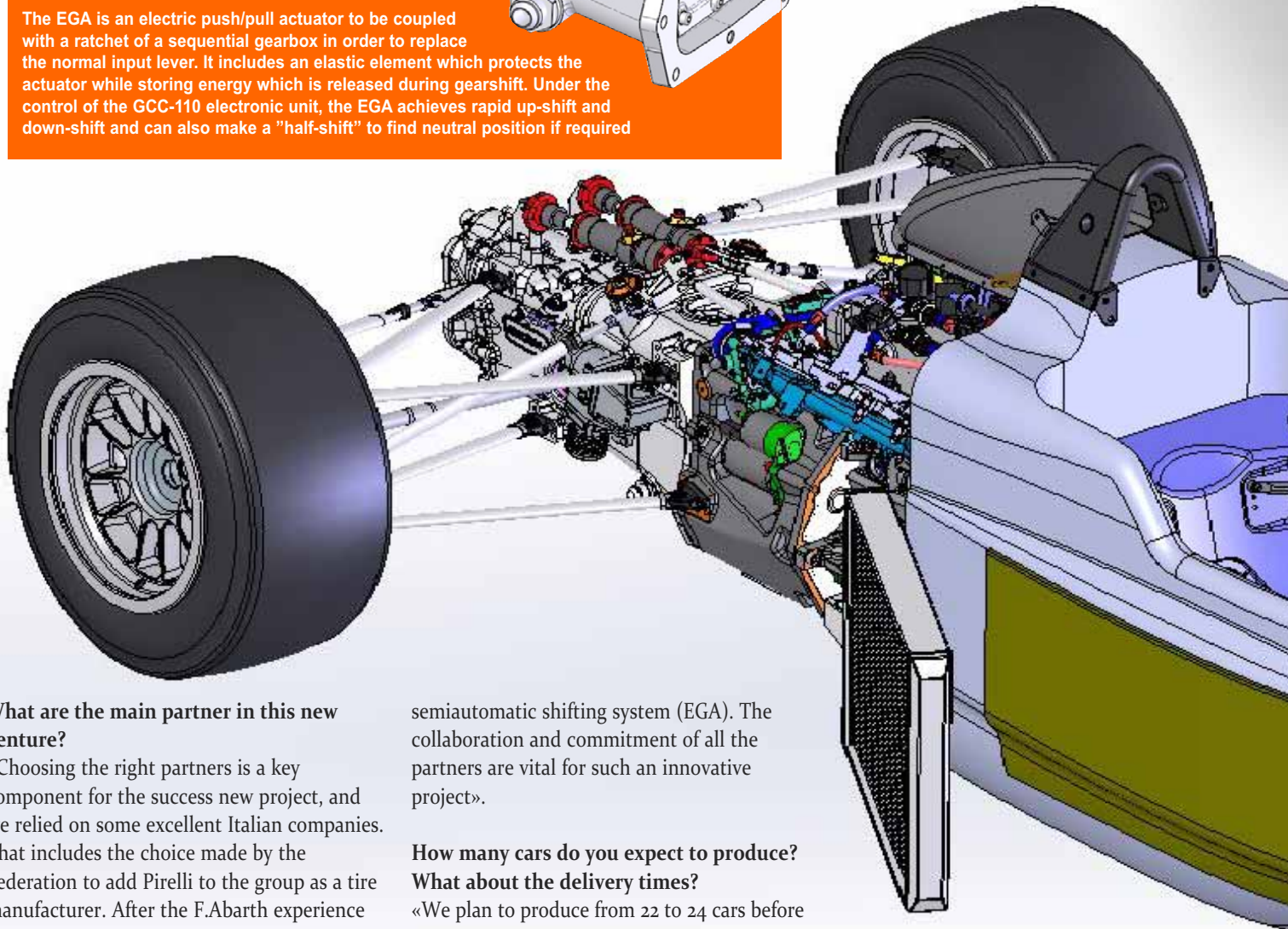
RACING DATA POWER





## A SMART GEARBOX

The EGA is an electric push/pull actuator to be coupled with a ratchet of a sequential gearbox in order to replace the normal input lever. It includes an elastic element which protects the actuator while storing energy which is released during gearshift. Under the control of the GCC-110 electronic unit, the EGA achieves rapid up-shift and down-shift and can also make a "half-shift" to find neutral position if required



### What are the main partner in this new venture?

«Choosing the right partners is a key component for the success new project, and we relied on some excellent Italian companies. That includes the choice made by the Federation to add Pirelli to the group as a tire manufacturer. After the F.Abarth experience we welcomed back the FIAT group. They were really motivated and interested, delivering a new 1.4 Turbo engine that is a true guarantee in terms of performance and reliability and has a very interesting weight to power ratio. Among the other key partners stands HPC. They will deliver the tub and the safety structures following the same path started by building over 1000 Renault cars. Magneti Marelli will be the spec supplier for the engine and gearbox electronic control system. Years of joint work and development brought to the debut of a new electro-actuated

semiautomatic shifting system (EGA). The collaboration and commitment of all the partners are vital for such an innovative project».

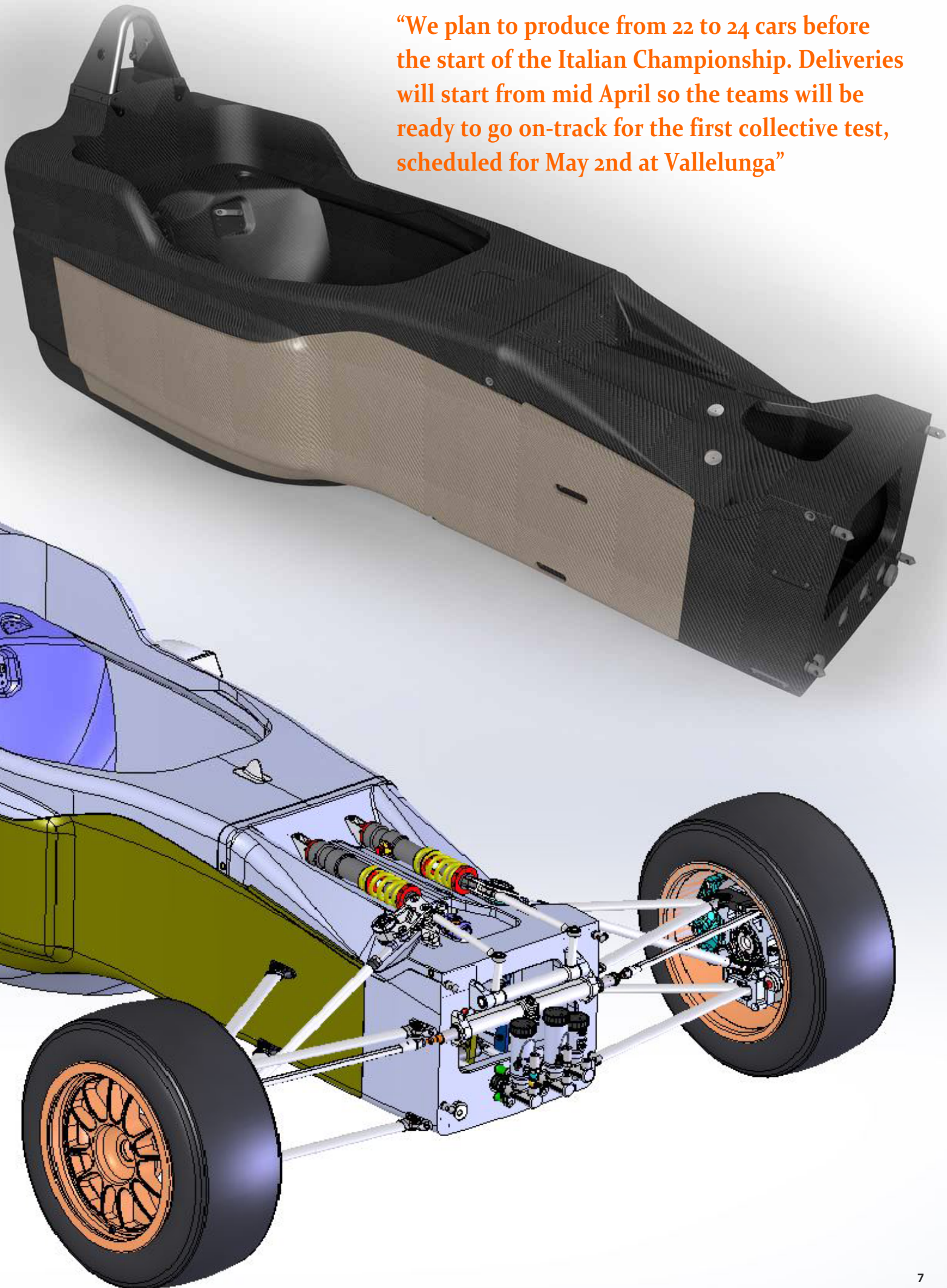
### How many cars do you expect to produce? What about the delivery times?

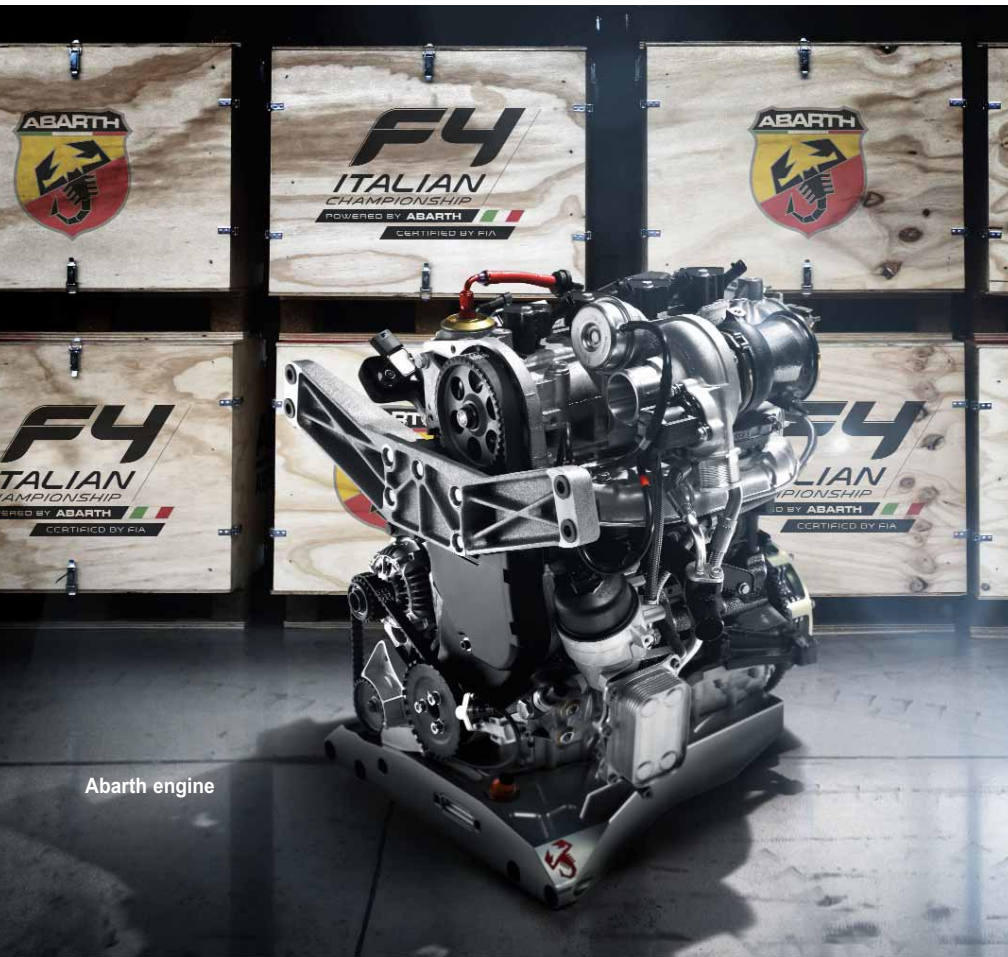
«We plan to produce from 22 to 24 cars before the start of the Italian Championship. Deliveries will start from mid April so the teams will be ready to go on-track for the first collective test, scheduled for May 2nd at Vallelunga. Of course, we know where we'll be spending our weekends in the next few months».

### Is there a testing schedule?

«The first test are scheduled for the month of March. The engine, gearbox and electronics are currently being validated with dynos and simulators».

“We plan to produce from 22 to 24 cars before the start of the Italian Championship. Deliveries will start from mid April so the teams will be ready to go on-track for the first collective test, scheduled for May 2nd at Vallelunga”





Abarth engine

**How important is the F4 project for Tatuus?**  
 «The F4 project is key for Tatuus, we've been selected by the FIA as manufacturers and then chosen by the Italian Federation to develop the world's first series that will make use of this platform. Of course, there are lots of attention on the start of this program so we are doing the best we can to line-up in the best possible shape. In order to meet the deadlines and the quality level, Tatuus reinforced their technical department and added some staff to the group that have been designing and producing the cars».

**So far the F4 is limited to Italy but we know that the FIA is aiming to create some new national championships around Europe. Will Tatuus bid for the other championships too?**

«As decided by the FIA, F4 is an international reality. The Italian Federation needs some credit for having been the first one to finalize this project. We're looking forward to an expansion of this formula and we know from Gianfranco De Bellis that there's lots of interest coming from federations and promoters around the world. We hope to capitalize from this early debut compared to the other manufacturers to offer a technically consolidated product».



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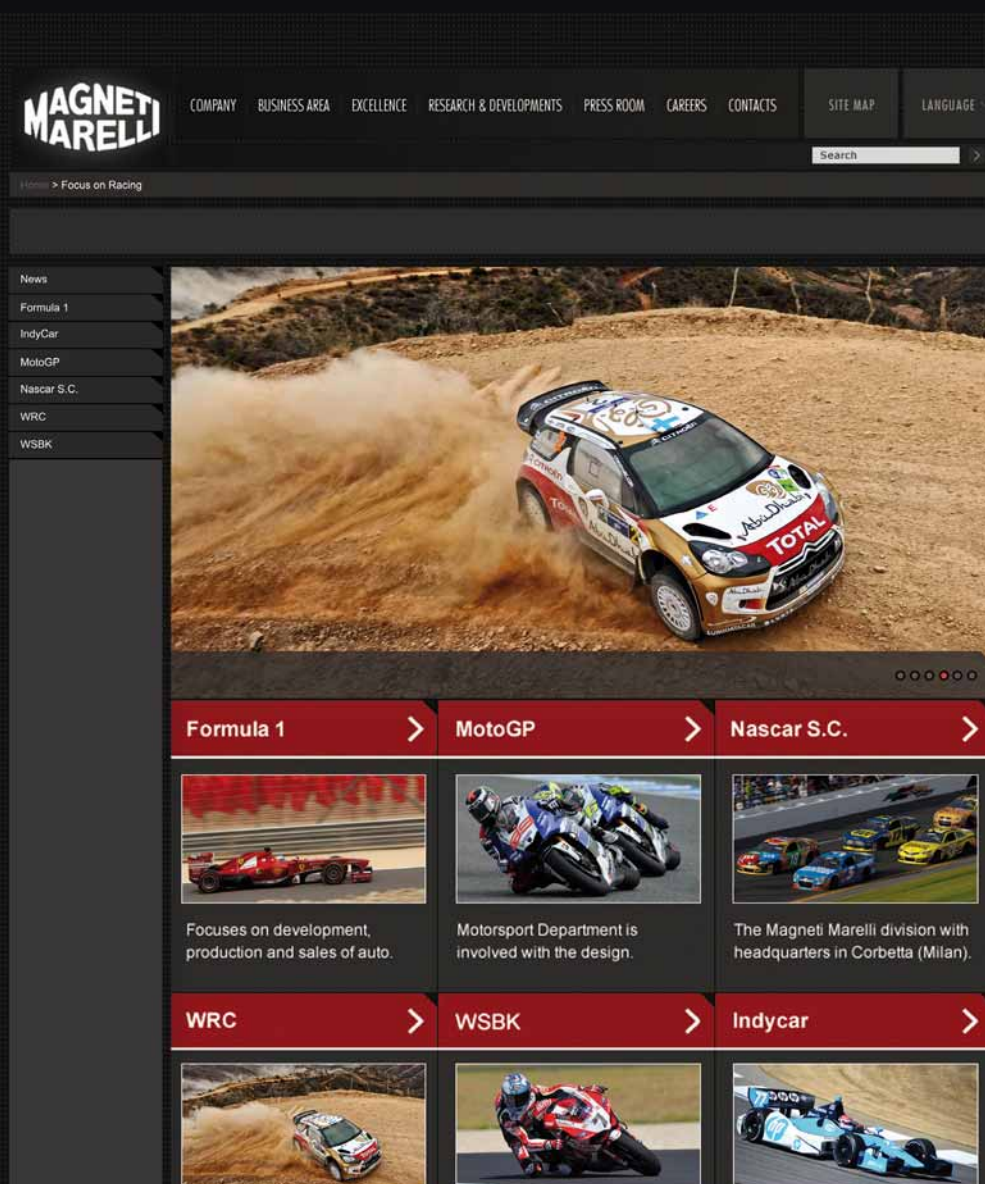




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is an open window on the world of motorsport competitions: news, results, race classifications, statistics and history.



THE  
STORY

Andrew Tang  
2014 winner





# *Talent from another world...*

Started with the goal of helping young New Zealanders and turned into an off-season training ground for young racers coming from Europe, the Toyota Racing Series has evolved in one of the most renowned spec series of the Asia-Pacific region. And, of course, the promoters relied on Tatuus in order to provide young drivers coming from go-kart racing with a perfect stepping stone

When thinking about motorsports in New Zealand, the first thoughts are for Bruce McLaren and Denny Hulme, two men who held their nation's banner very high in racing since the sixties. In more recent times, with the exception of Scott Dixon, the Pacific country struggled in delivering new fresh drivers able to establish their names at the top of the motorsports panorama. In order to turn the situation around, in 2005 the New Zealand federation decided to start the Toyota Racing Series, the first single-make championship for young local drivers coming from karting. The promoter decided to join forces with Tatuus, as it was already involved at international level with the Formula Renault 2.0 project, for the design of a developmental racecar respecting the FIA Formula 3 standards. The package was then completed by the 2zz-GE Toyota engine, coupled with a Sadev gearbox, and by Michelin tires. The first TRS seasons, mainly featuring local drivers,

delivered young talents like Van Gisbergen, currently racing in V8 Supercars, Hartley and Van Der Drift, who then enjoyed successful stints in Europe. In more recent times, despite some alternate fortunes, Bamber and Stanaway also made their way in racing. In the last three years, the Toyota Racing Series changed its character, becoming a training ground for drivers aiming to keep themselves in shape in January and February by taking advantage of the southern summer. With low running costs and a five-race schedule covering five weeks and some pretty intense weekends (each featuring five practice sessions, a qualifying session and three races), the "user base" also included Asia and Europe. Many drivers joined the TRS as regulars including Lynn, Auer, Bonifacio and Serralles, in addition to Kvyat nel 2011, Van Asseldonk, King and Marciello nel 2012, and Schothorst, Derani and Mardenborough in 2013. Despite the increasingly international nature of the championship, the Kiwi banner was held high by Evans and Cassidy, who won two titles each in the last four seasons.



Steijn Schothorst

## Past winners

- 2005 - Brent Collins (BC Motorsport)
- 2006 - Daniel Gaunt (International Motorsport)
- 2007 - Daniel Gaunt (International Motorsport)
- 2008 - Andy Knight (Knight Motorsport)
- 2009 - Mitch Cunningham (Giles Motorsport)
- 2010 - Mitch Evans (Giles Motorsport)
- 2011 - Mitch Evans (Giles Motorsport)
- 2012 - Nick Cassidy (Giles Motorsport)
- 2013 - Nick Cassidy (M2 Motorsport)



Egor Orudzhev

2013 highlights:  
Schothorst, Cassidy e Lynn



## Tatuus TT104ZZ Spec Sheet

Chassis	Carbon Fibre monocoque responding to the FIA F.3 safety rules
Engine	Toyota 2ZZ-GE, 1800cc, 215hp
Gearbox	SADEV sequential, 6-speed
Safety Harness	6-point 3" shoulder and lap straps
Safety Features	SPA fire extinguishing system, LED rear light
Front Suspension	Push rod, monodamper
Rear Suspension	Push rod, two dampers
ABS	Ohlins w/bump and rebound adjustment
Springs	58mm x 140mm
Brake Calipers	Alcon, 4 pots
Brake Rotors	Alcon, Ventilated, 274 x 17,5 mm
Wheels	Single-bolt aluminium
Tires	Michelin, 8 x 13 (front), 10 x 13 (rear)
Weight	550 kg (driver included)
Fuel	E85 Bio Fuel (85% Ethanol)



Michela Cerruti

# "Growing up with Tatuus"

Barrie Thomlinson and his wife Louise are in charge of Toyota Racing Management. The company that promotes the Toyota Racing Series, the New Zealand developmental category that featured several new and talented drivers throughout the last decade, all aboard Tatuus racecars, and also enabled them to discover a truly fascinating country. In 2015, the series will welcome a new racecar developed by the Concorezzo-based factory in order to keep up with the times. As Thomlinson himself told us, this is the next step in a positive relationship also from an human perspective

**Mister Thomlinson, ci può spiegare come è nata la Toyota Racing Management e qual è il suo obiettivo?**

«We started this company when we began planning for the Toyota Series back in 2004. We only had six months available to produce the cars and engines, in addition to the overall structure, before the opening race. It's been a massive effort from our side but also from Toyota New Zealand, Tatuus and all the other suppliers. And in the end, we made it! My wife Louise and I are the owners and directors of the company. Louise oversees the administrative side while I manage most of the other aspects. Our company cooperates with Toyota New Zealand for the series' management and we work closely with Steve Boyce and John

Fowke, who control the interests and investments in the series of Toyota NZ».

**How does your operating structure looks like?**

«In addition to me and Louise, our staff includes five full-time members. Jasmine works on management, logistics and hospitality; David Gouk is in charge of the engines while Andi Thomlinson is the Chief Mechanic of TRS. Budi Walker is the composites technicians and Ian Nabb serves as a technical director for the 86 Series and also assists us for the TRS».

**You only operate in New Zealand?**

«Yes, we operate exclusively in New Zealand».





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Talking about the Toyota Racing Series. What is the state of the art of this championship and how pivotal it did become to promote New Zealand in the world motorsport panorama?

«TRS helped the young drivers from New Zealand to get some experienced on a racecar built with the same philosophy as in Europe. In addition to that, enables drivers from other countries to race during the northern winter. We held onto offering an high-level championship aimed at enabling young racers to improve themselves. TRS is not based on car design. We can count on a great car by Tatuus which is also reliable so the drivers can take full advantage of every single lap they do - of course if they don't crash. The TRS is an important step for their professional path and they know they will grow up for sure here. Many of them have to fly for 24 hours to get here and when they arrive, they have to make it on their own in a beautiful and fascinating country. Some of them never had to wash their own clothes, and many details here in the TRS provide them with an unique life experience. In New Zealand they can also experiment things like



Toyota Racing Management staff

skydiving, bungee jumping and all the extreme sports that are popular here, all of that while enjoying the beautiful landscapes of this Nation».

**Can you name some of the most famous drivers that have raced in the TRS?**

«Just to name a few of them, Brandon Hartley, Mitch Evans, Richie Stanaway, Earl Bamber, Nick Cassidy and Chris Van der Drift».

**Let's talk about the 10-year relationship with Tatuus. The sporting partnership is boldened by a great chemistry off the circuits, isn't it?**

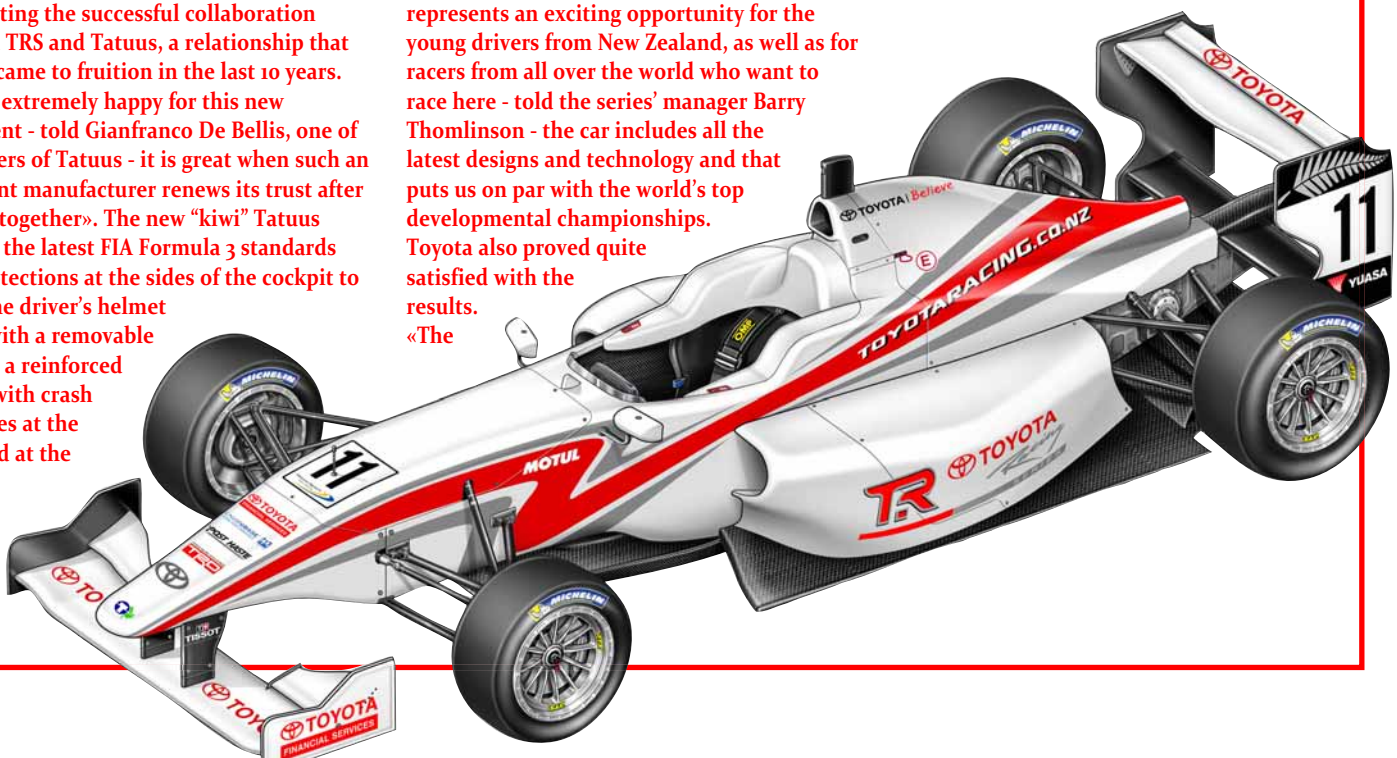
«The relationship with Tatuus has been key for both Toyota New Zealand and for ourselves. They built an extremely good racecar and a reliable one in terms of management and maintenance. Another very important element, it's a really safe and robust car. We received proposals from other

## FT50, here's the new Tatuus for the 2015 TRS

The new Tatuus for the 2015 Toyota Racing Series is called FT50. The car replaces the FT40 and celebrates the start of the second decade for the New Zealand-based series. It was officially showcased by Toyota at the TSR awards in Palmerston North, in the Northern Island of the country. The teams and drivers immediately showed their appreciation highlighting the successful collaboration between TRS and Tatuus, a relationship that already came to fruition in the last 10 years. «We are extremely happy for this new agreement - told Gianfranco De Bellis, one of the owners of Tatuus - it is great when such an important manufacturer renews its trust after 10 years together». The new "kiwi" Tatuus respects the latest FIA Formula 3 standards with protections at the sides of the cockpit to retain the driver's helmet paired with a removable seat and a reinforced chassis with crash structures at the front and at the back.

The design features a long nose at the front, widened suspensions, double front dampers and a six-speed sequential Sadev gearbox. The engine will be the same of the F40, the reliable Toyota 1.8-liter unit developed in New Zealand for the TRS and powered by Ethanol. The first tests are scheduled in April and May with the production starting in 2014. «The FT50 represents an exciting opportunity for the young drivers from New Zealand, as well as for racers from all over the world who want to race here - told the series' manager Barry Thomlinson - the car includes all the latest designs and technology and that puts us on par with the world's top developmental championships. Toyota also proved quite satisfied with the results. «The

new car is a signal of Toyota's commitment towards the motorsports development in New Zealand. A driver coming out of the TRS is ready to race in F.1, at Le Mans, and in all the world's top championships».







manufacturers too, but both Toyota New Zealand and us love to be loyal and we appreciate this long relationship based on mutual trust. So we never thought about changing ways.».

**You know Italy well. What did you impress you the most when you visited Tatuus and, in general, of our country?**  
«Tatuus has good facilities and a solid and committed staff which we liked a lot.

Regarding Italy... it has the second best coffee in the world... we have the best! Of course, there are many great cities in terms of architecture and a long motorsport tradition. Chris Amon is the main supporter for our series and raced with Ferrari at the end of the 60's. Also, Bruce McLaren and 1967 F.1 World Champion Denny Hulme came from New Zealand so we have some common ground in racing. Despite the fact that unfortunately for Italy, the All Blacks are too strong, we also share the passion for rugby.».

**What are the strongest vantage points for Tatuus as a manufacturer?**

«As I said earlier, they produced a very reliable car for us, and it also has a very good-looking design. It also has some features that make it easy and practical to manage».

**Are there plans for a new car in the future? What will it look like?**

«We will be introducing a new car for 2015, and once again it will be designed by Tatuus. We expect a great advancement in terms of

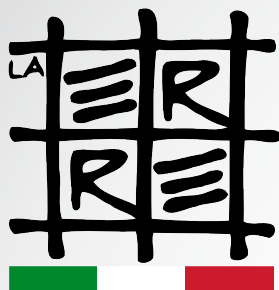
the design, with many attractive features that will be attracting a lot of young drivers in the future».

**What is the most important thing that New Zealand needs to progress in racing even further?**

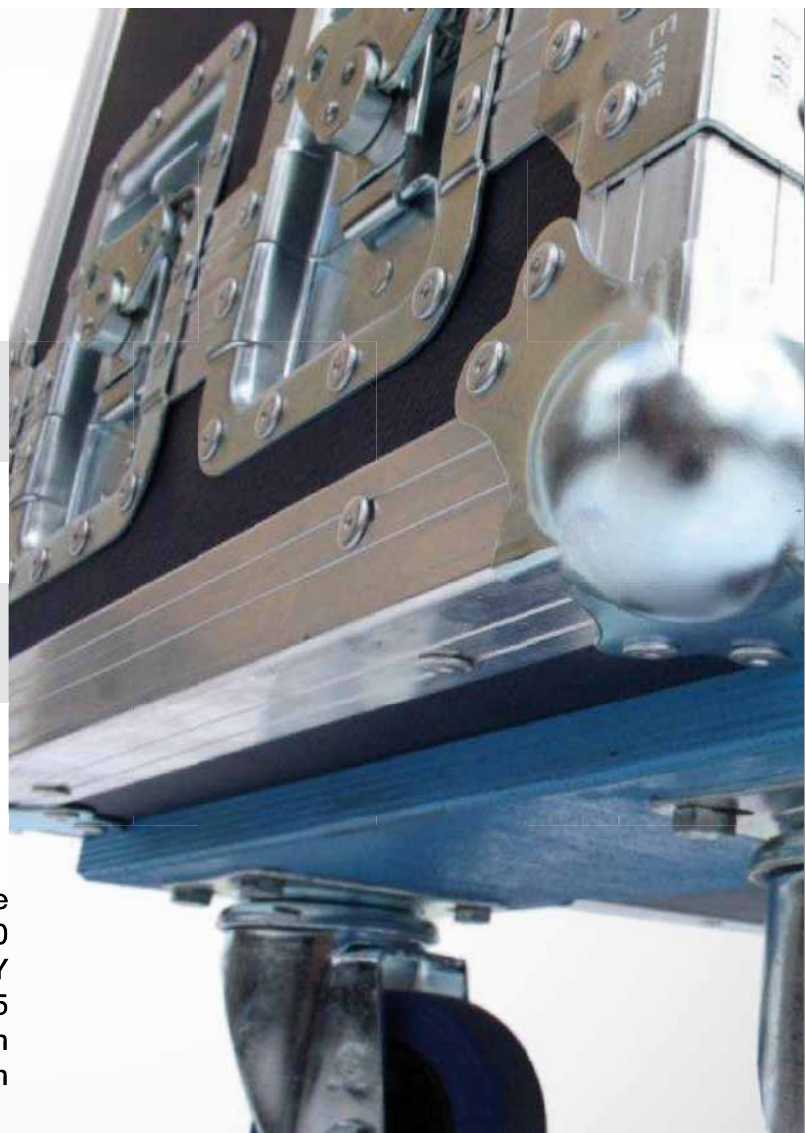
«We have to focus on maintaining a stable series here in New Zealand to enable drivers, mechanics and teams in general to have fun while learning how to race cars at a very competitive level».

**Do you mind a personal question? What are the upsides and downsides in managing TRM as a married couple?**

«The positive side is that we have to talk and stay close to each other for 24 hours a day. The negative side... is that we have to talk and stay close to each other for 24 hours a day! In other words, it is very interesting even though talking of work for 24 hours is not ideal. We're very passionate about our jobs in motorsport, but we also have two kids and many other interests. That kind of helps us to pull the plug a bit sometimes».



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HISTORIC, GT/TOURING,  
PROTO

**BARCELONE - CATALUNYA [SPAIN]**  
21-22-23 march  
4H GT/TOURING  
6H PROTO  
V DE V FUNYO  
V DE V SINGLE SEATER

**LE MANS [FRANCE]**  
18-19-20 april  
2H HISTORIC  
3H GT/TOURING  
3H PROTO  
V DE V FUNYO  
V DE V SINGLE SEATER

**PAUL RICARD [FRANCE]**  
30-31 may-1st june  
2H HISTORIC  
3H GT/TOURING  
6H PROTO  
V DE V FUNYO  
V DE V SINGLE SEATER

**DIJON-PRENOIS [FRANCE]**  
27-28-29 june  
2H HISTORIC  
3H GT/TOURING  
3H PROTO  
V DE V FUNYO  
V DE V SINGLE SEATER

**MOTORLAND ARAGON [SPAIN]**  
29-30-31 august  
4H GT/TOURING  
9H PROTO  
SPRINT CN  
SINGLE SEATER

**PAUL RICARD [FRANCE]**  
5-6-7 september  
2 Tours d'Horloge  
24H HISTORIC

**MAGNY-COURS [FRANCE]**  
10-11-12 october  
2H HISTORIC  
4H GT/TOURING  
6H PROTO  
V DE V FUNYO  
V DE V SINGLE SEATER

**ESTORIL [PORTUGAL]**  
7-8-9 november  
6H GT/TOURING  
6H PROTO  
2H HISTORIC



V DE V HISTORIC ENDURANCE CHALLENGE



V DE V GT/TOURING ENDURANCE CHALLENGE



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## HISTORIC ENDURANCE CHALLENGE

The **Historic Endurance Challenge** is opened to the following groups, with file :

- GT, Touring, E,F,G1,G2, H1, H2, I and J period in conformity to appendix K and Saloon car
- Sport prototype, E, F, GR, HR, IR, JR and KC period and Saloon Car Sport Protos (SPSC)
- Sports 2000 (up to 1983), and sports 2000 (up to 1986) with file, without aerodynamic features, compliant with SRCC Sports 2000 Historic and SRCC Sports 2000 pinto regulations
- GT from 1990 to up 996
- Groupe C.



## V DE V PROTO ENDURANCE CHALLENGE INTERNATIONAL SERIES



The **V de V Proto Endurance Challenge**, is open to the following cars, by invitation, after acceptance of the file, divided up in different categories :

- Cars homologated in CN - limited to 2000CC - Carbon body shell accepted
- Cars homologated in C3, CN-F - limited to 1600 cc
- LMC V8 - 6200 cc
- Cars homologated in C1 - C2 (by invitation, off-ranking)
- Cars homologated LMP1 - LMP2 (by invitation, off ranking)
- Any other car, with file.



## V DE V GT/TOURING ENDURANCE CHALLENGE INTERNATIONAL SERIES



The **V de V GT/Touring Endurance Challenge**, is open to the following cars, by invitation, after acceptance of the file, divided up in different categories :

- Cars homologated in GT1 FIA
- Cars homologated in GT2 FIA
- Cars homologated in GT3 FIA and GT3 ASN
- Cars from GT4 groups
- Cars homologated in Silhouette evo category with V6 or V8 engine
- Grand Touring cars from Brands Cup or Challenge
- Cars homologated in Gr. A, Gr. N, Super Touring, Superproduction, F2000, Stock GT.



## V DE V FUNYO CHALLENGE



Accepted cars :

- Funyo 4
- Funyo 5.

V de V Funyo Challenge is run as follows :

- Private practices : 2 x 25' or 30'
- Qualifying practices : 15'
- Races : 3 x 20'.



## V DE V SINGLE-SEATER CHALLENGE



Accepted cars :

Class A :

- FR 2.0 from 2010 up to 2014

Class B :

- FR 2.0 up to 2009
- Formula X
- Formule BMW
- Formula Abarth
- Motorbike engine single-seaters.



V de V Single seater Challenge is run as follows :

- Private practices : 2 x 25' or 30'
- Qualifying practices : 15'
- Races : 3 x 20'.



"I want to win with Tatuus"

The 27-year-old driver from Cuenca has become a racing fan when he was really young, following his father, also a driver in his rally and touring car outings. After a brilliant karting career and thanks to the Ferrari Driver Academy program, he found a ride and a new family with Tatuus, taking part in last season's VdeV series. He stopped by to share thoughts about the Italian team and country

by Stefano Semeraro

**Sebastián Merchán, tell us a bit of your story: how did your passion start and how did you make your way to racing?**

«My racing history started thanks to my father, who was a rally and touring car driver. I was always with him at the races and my passion for racing started back then. I began racing when I was 6. In Ecuador, karting was a new sport and I was the youngest guy in the smaller class. I became national champion at my first year, then I won two more South American championships, both in karting. When I was 15, I started to drive prototypes and won the national championship in Ecuador twice, while two years later I started driving in F. Renault, F. Abarth, F. 3000, continuing my career both in America and in Europe».

**Do you have heroes in racing?**

«In Formula 1, Ayrton Senna, Michael Schumacher and Fernando Alonso are my favourites. Their ability to push the cars to the limit and fight in every situation is amazing. I also admire Sebastian Loeb, who won a lot in rallying and was able to combine with Citroen in an indestructible car/driver pairing».

**You raced in Italy quite some times. How did you get here and how's your relationship with the country?**

«I really consider Italy as my second

homeland. I raced many times here starting from when I lined-up for the Andrea Margutti karting trophy in Parma, I was 11. I also raced with CRG, where I joined Robert Kubica and Nico Rosberg as a team-mate. I came back in 2006 to race in the F.Renault Winter Series at Vallelunga and then join the Euroseries 3000. Then last year I made my way back again to drive the Tatuus prototype. Your culture is fascinating and I always try to study it when I have some spare time. Then I deeply love your food, it's fabulous, and I have to say that all the people I met have been sensational with me. I'm happy I have been welcomed this way to continue my racing career».

**What are your best qualities and the weak spots still to correct?**

«I don't like to make mistakes, go off-track or crash, so I try to keep a careful driving style without taking too many risks or stressing the car too much. When I was at the Ferrari Driving Academy, thanks to my success in the South American F.Abarth Series, I worked with Francesco Pon, who showed me that by "disconnecting" the brain a little more on-track and being more aggressive I could become a more compete driver. I always think to these words and now when I hit the track I try to be as fast as possible without damaging the car».

**How did your relationship with Tatuus start?**

«The first contact came during the Formula 3 test at Fiorano with the Ferrari Driver Academy, when I met with Gianfranco De Bellis and the whole team. We had some talks over my future. At my age, staying in open-wheel racing didn't have much sense and Tatuus was developing a prototype I was really intrigued to race. Thanks to the good offices of Luca Baldisserrri I signed a contract, and I'm very pleased with the choice because Tatuus is like a family to me. I like their work system and how they organize their activity. Staying with them on a regular basis and visiting the factory every made me learn new things. I really want to thank Gianfranco for giving me the opportunity to race with Tatuus».

**How was your season in the VdeV championship? What do you like the most about prototype racing?**

«Considering that I had raced open-wheel cars for most part of my career, moving to prototypes hasn't been too complicated. It wasn't difficult to adapt myself to the driving style considering that this car isn't too much





different compared to a single seater. On the other hand I had to adapt myself to the length of the races, to tire management, to the fact that you have to race with a full tank of fuel and without stressing the brakes throughout the whole distance. You need to be more “passive” without losing speed. I like the championship as it has many cars and a pretty high competitive level. It’s enabling me to grow as a driver and acquire new skills».

**Let’s talk about your Tatuus prototype, what were its most impressive features?**

«I like the prototype’s project. Its refined design it’s very good-looking off the track, while it’s fun to drive in racing conditions. The aerodynamic downforce makes it very stable in fast corners. Its compact outline means that the weight distribution is easier to manage. In addition to that, it’s a very safe car in case of crashes. I like to drive this type of car because it lets you take it to the limit and you can keep it there without signs of premature wear».

**What are the team’s strongest points?**



«In my opinion, the continue development between the races. Engineers and mechanics make us shave some tenths of a second each time we are on-track. The car is extremely reliable and we really have all what it takes to succeed. They are able to disassemble and assemble the car completely between each session, and when a problem appears, they fix it very quickly».

**Will you return to VdeV this season? What are your goals?**

«I’m evaluating what is the best solution for me together with the team. I would like to keep racing in the VdeV because I’m ambitious and I want to try and aim for the championship. Last year, I put some experience under my belt and learned the tracks so I’d like to go for the title in 2014. It’s a very tough task but with this kind of team, we can make it. We’re evaluating some more options with the Tatuus chassis and we hope for a new project to develop in a positive way».

**You will be driving prototypes in the future or you aim for a comeback in single seaters?**

«I would love to race with open-wheelers, but my career is headed towards sport prototypes and GT cars also due to my age. They are very competitive championship with a lot of world-level manufacturers competing. I hope time will prove this is the right path for my career». ».

Before the start of his sports car career Sebastian Merchan drive in the Euro Series 3000 and Italian F.Renault

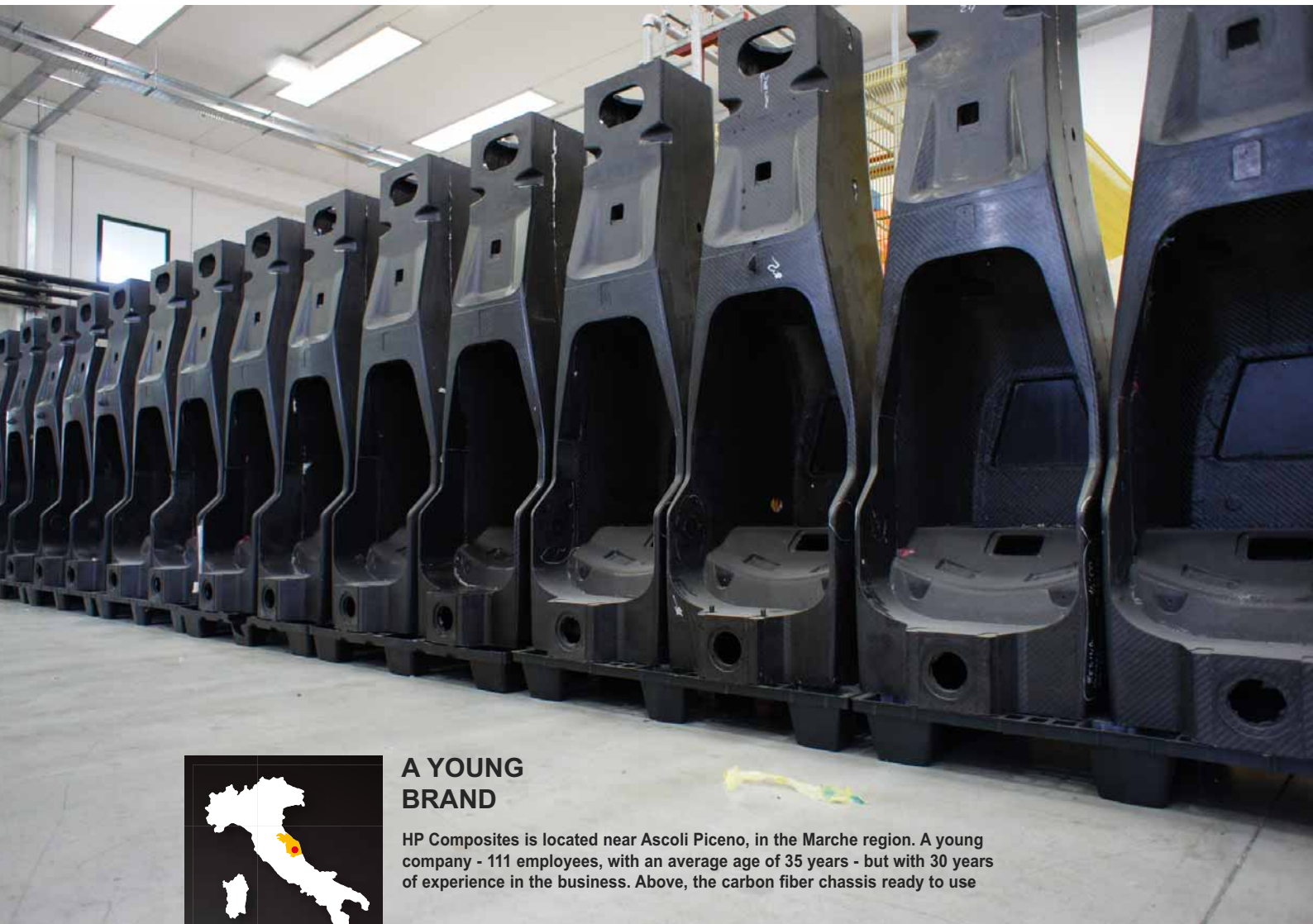




# "Inspired by Motorsports"

## INSIDE THE FACTORY

What we are about to discover together with Piero Consorti, Sales Manager of HP Compositi, has become a key business for automotive production and motorsports. The Ascoli-based company has a young and dynamic character with 110 employees and an average age of 35. It also has racing in its DNA. They have been working closely with Tatuus for the last 15 years and the joint development of the PY012 Prototype is just the latest step in a relationship that made turned innovation and reactivity to the market's needs into its main pillars



### A YOUNG BRAND

HP Composites is located near Ascoli Piceno, in the Marche region. A young company - 111 employees, with an average age of 35 years - but with 30 years of experience in the business. Above, the carbon fiber chassis ready to use

**Piero Consorti, how did HP Compositi start? What is its mission and its market sector?**

«The heart of HP is in a group of extremely professional technicians that have been active in the field of high-performance composites for more than 30 years. The core business of the company is strongly tied - for history, know-how and passion reasons - to the road and racing automotive panorama. It has an integrated offer that includes prototyping, production, engineering and industrial development. However, there are a lot of potential market openings for carbon fiber, basically everywhere both performance and lightness are needed. It's a typical problem of vehicle engineering, especially with fast vehicles! HP is the acronym of High Performances, and it's pretty much Nomen Omen, there is not really much to add on our mission. Our goal is to be the benchmark company in the composites business by delivering increasingly light and high-performance components».

**How does the current structure of your company look like? How many departments and employees? What kind of technology do you employ?**

«The company's staff features more than 110, thoroughly selected people, all of them with a long-standing experience in the most prestigious car manufacturing programs of the motorsports and supercar panorama. On the other hand though, it's surprising to see that our average employee is just 35 years old! We have a vertical structure meaning that we can carry-on the whole production process in-house, so we can provide a complete offer ranging from engineering to the production of models, molds, components and to dimensional check and quality control. This kind of organization enables us to be very reactive to the market's demands and also establish new production processes in record times. Regarding our technology, although the autoclave is still the benchmark for racing components, there are also little gems like high-performance RTM».

**Is there a way to quickly explain to a racing fan what composites are and what is their role in motorsports?**

«Technically speaking, a composite material descends from simpler and diverse materials that, once put together, create a new material with an own character. There's composite



Piero Consorti

materials all around of us: wood, cement, paper, bones... they're all made of a reinforcement (in racing we use carbon fiber texture which has great mechanical properties) and a matrix that enables the forces to travel between one fiber and the other. In our case,

we use epoxy resin. It's easy to realize why the use of composites has almost become the only possible alternative in motorsports. From the first F1 monocoques at the start of the 80's to the current racing cars of any category, the motivation never changes: given the same power, a light weight leads to better acceleration and vehicle dynamics. Shaving one kilo can count as an additional horsepower! Also, if we consider how composites have a particular vocation for absorbing and dissipating impacts our picture is complete on why they became the first option in racing!».

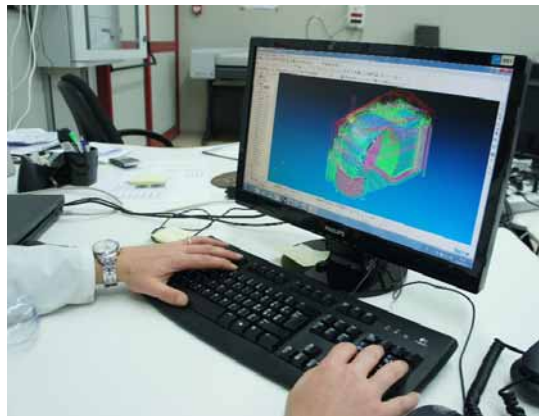
**How important is racing for HP?**

«Racing is our inspiration and provides us with a continuative push towards innovation, improvement and excellence in an effort to go beyond limits. That works for men as well as for the products they produce! Soichiro Honda, who founded Honda Motor Company, once said 'If Honda does not race there is no Honda'. We definitely share that view because without that magnificent proving ground that is motorsport, we would have never reached and surpassed some limits and we also have to consider the technical fall-out that end up and consolidates in road-related projects».

**How did your relationship with Tatuus start?**

«We have a solid relationship with them which dates back to more than 15 year ago when our best technicians were part of another company, ATR, which at the time was a benchmark in composites development. At the time, they produced the first Formula Renault 2.0 car, an

historical landmark that needs no introduction. When Tatuus decided to have HP on their side for their new Renault 2.0 project for 2013, we shared the vision of delivering an absolutely excellent chassis, even if it was for a developmental championship. An incredible deal of commitment was put in the project in order to create a small jewel in terms of performance and construction efficiency. It would have never been possible without the trust and the close cooperation that Tatuus provided. The final result proved really rewarding for both parties».



**Can you tell us something more about your newest challenge, the prototype racer developed with Tatuus?**

«The PY012 prototype has been a revolution indeed, both for its unconventional design and philosophy and on our side, for the technology used for its production. This project is actually a proving ground for many of the innovative technical solutions that we eventually incorporated in the FR 2.0. On the

other hand, we stayed truthful to an unstoppable pursuit of efficiency and detail optimization. As we say in racing, even the greatest machines are made of many little parts».

**What are the key requirements for a motorsports company in order to be successful?**

«The ability to keep innovating is one of the key drivers towards success, especially in a sector like ours where there are basically no standard solutions. The production process of composites for motorsports is an extremely high-tech craft and you need to mix the know-how, the manual skills and the expertise while sticking to rigorous mechanics. The other thing is to be quick in reacting to the demands of the market. Today everything moves so fast but the projects are growing more and more complex. Only who can keep it up with the quick pace of motorsports can survive».



# WHAT IS CARBON FIBER

The "carbon fiber" name does not originate from actual carbon - the natural carbon is better known as diamond - but from one of its early production stages. The "carbon" part of today's fiber is actually a derivative of oil, polyacrylonitrile. Polyacrylonitrile is first transformed in a wire and then put in an oven in order to be "carbonized" at temperatures ranging from 2800 and 3000 degrees celsius. At that point, the wire is woven, soaked with epoxy resin and stored at -30 degrees celsius to prevent catalysis, which would make the resin tougher and the whole production process much more difficult. In automotive engineering, in order to produce high-quality products, the fibers used vary from 200 to 800 grams per square meter with different types of fabric, from the plain one (which seems made of little squares and is used for cosmetic purposes), to the twill (fishbone) and uni-directional (all the fibers are in the same direction) types. After deciding what kind of component needs to be built, a mold is designed and, depending on the characteristics needed, several layers of fiber are laid in it. The mold is put in a vacuum container and then in an autoclave, which in substance is a pressurized oven that generates a pressure varying from 2 to 6 kilos per square centimeter and a temperature of 100-150° C for 80 to 120 minutes. Once out of its mold, the component is ready. The key features to assess a quality carbon fiber component are the consistency and uniformity of the texture, the absence of air bubbles and the look of the component's internal side: the carbon fiber must be visible to avoid dealing with pieces that have just fiberglass on the inside but just painted in black.





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Roberto Cavallari and JD Motorsport have been Tatuus customers since 1996. In the past 20 years, their relationship was built on their passion for motorsports and on some shared ideals about the sport. A world where professionalism, attention to the details and customer support make the difference

by Marco Cortesi

Roberto Cavallari is the heart and soul of JD Motorsport, a longtime success story in developmental motorsports. A pioneer in Formula Renault, the team scored their first win when the series was still open to chassis competition. JD found their place in racing thanks to the consistent results scored throughout their history, in Formula Renault, Formula Abarth and Formula 3.

#### How long have you been working with Tatuus?

«We've been working together since 1996, in the earliest stages of Formula Renault with open chassis. Tatuus had developed a chassis for that rulebook and we were honoured to represent them as a works team. In 1996, 1997 and 1998 we won triple titles as a works team, before repeating

in 1999 as a customer squad. In 2000, they started supplying the spec chassis for the championship and our history continued. We have always had at least one Tatuus car in our workshop».

#### How did it start?

«It was 1995 and I was the Technical Director of RC Motorsport. We've seen a lot of Tatuus racecars here starting ranging from the first Formula Renault to the Formula Master, the Formula Abarth and then again the Renault. We also joined forces for the development of their prototype. There's good chemistry between us. With Gianfranco De Bellis we use to call each other quite often to share advice. There's a long-standing trust relationship that have been going on for years with both De Bellis and Artico Sandonà».

How can a chassis manufacturer makes the

#### difference in motorsports?

«I believe that in racing in particular, but maybe also everywhere else, Italians deserve some credit for always paying a particular attention to the technical details and to the relationship with their customers. They can be close to the customer's or team's needs in every moment and every situation. That's what we found with Tatuus and in terms of making the difference, listening to the customer's advice for the future is also key. I think this is, in general terms, the strength of Italian manufacturing. We're second to none in motorsports and our technical ability speaks by itself».

#### Many teams decided to be back in Formula Renault when Tatuus was reappointed as the single chassis supplier. Why?

«When Tatuus is in the game, a team feels more... protected. With the tough times we're



# difference

in, what we need is a safe investment and knowing that a manufacturer like Tatuus was behind the whole project made me safe regarding the commitment we were facing both from the human and technical side. We're also

sure to offer our drivers an absolutely high-quality package».

### How does a driver take advantage of this package?

«If the product is efficient, every single component of the team can take advantage of it. This season we haven't experienced a single problem so the driver knows he or she can drive an all-around competitive car and always take advantage of the maximum amount of potential».

### how do you feel like to race in Formula Renault?

«The championships based on the Formula Renault concept are simply the world's most competitive. Many drivers are scared by the high level of competition, but the idea is that if you want to become the best, you have to beat the best. This season, we raced in both the Northern European NEC series and in the Pan-European ALPS championship. They are both well-organized and highly-competitive. From an international standpoint, we've seen drivers coming from all around the world.

Unfortunately, sometimes Italian drivers choose lower-tier championships, maybe because they're scared to compete at the highest level».

### What's the balance of the 2013 season?

«I think it's quite positive. Our main program was the NEC with two rookie drivers, and after having reached the top-10 in the first part of the season, we came closer and closer to the top-5. And we also accomplished the feature in the ALPS round at Spa-Francorchamps. Despite not having seen the track before, our driver eventually managed to score an impressive podium finish».

### What are your plans for 2014? How many test days did you schedule?

«We're in the latest evaluation stages for the 2014 program. We look forward to run about 15 test days but the number can change according to the weather and the driver's experience or budget. The car will get some upgrades to the braking system that Renault decided to mandate for the season, and the car will also receive an upgrade to the lower chassis to improve its capabilities even further».





## Tatuus builds its 170th new-gen Formula Renault chassis

The 2014 season is about to get underway, and the Eurocup Formula Renault 2.0, F.Renault 2.0 ALPS and F.Renault 2.0 NEC championships are completing their rosters. And for all three series the collaboration between Tatuus and the French manufacturer has not only been successful, but also very much appreciated by teams and drivers. «The relationship with Renault has been, and still is, very important - told Gianfranco De Bellis - being re-appointed as the spec car manufacturer for the Formula Renault 2000 in 2013 has been very positive, and I believe that everybody was already able to collect the dividends last year. The arrival of some new

orders is also a great signal and the total of cars built from 2013 to nowadays hit the 170-mark. That means the job has been done properly».

And that fact is confirmed by numbers. All the three championships have averaged more than 30 Tatuus cars at the start of the races, giving proof of how effective the Renault-promoted category is but also the success of the Concorezzo-built cars among the European team. Drivers that displayed their skills in all the three championships cited above are doing well in the upper categories. Eurocup champion Pierre Gasly earned himself a place in the Red Bull Junior

program and in the Renault 3.5 championship. Runner-up Oliver Rowland, Luca Ghiotto and Matthieu Vaxiviere also followed the same path, delivering impressive speed straight out of the box and showing the effectiveness of the Tatuus Renault 2.0 car in terms of driver development. The same goes for the main stars of the ALPS series. Antonio Fuoco provided excellent results in the FIA F.3 tests while NEC Champion Matt Parry was included in the Caterham F.1 Junior program. He will race in the Eurocup Renault in order to increase his level of experience even further.



## We know how



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