Autobahn Ambition

The PORSCHE Tuner Magazine

Shark Werks 3.9L GT3 RS

500 Horsepower Makes this GT3 RS a Ferrari Slayer



GT2 RS
2011 997 GT2 RS

C-GTS
2011 Carrera GTS

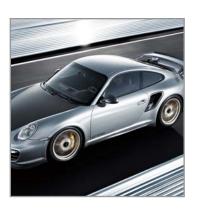
Cay R

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Porsche New Releases

Road Tests Conducted on 3 Electric Boxsters

By: Kevin Sims Photo By: Porsche Press

TLANTA --- With the development of three experimental allelectric-drive Boxsters, Porsche announced today that it is taking another major step toward its plans to build electric-powered sports cars.

In this practical test as part of the Stuttgart Model Region for Electromobility, the three electric Boxster research cars are being driven daily in order to provide insight into new electric drive components and new battery systems being developed by Porsche. In addition, these field tests are also intended to provide further findings on the infrastructure required for electromobility. Ultimately, the initiative will provide consumer insight into how future products must be designed and produced in order to meet customer expectations.

"We will definitely be offering electric sports cars in the future," said Michael Macht, the President and CEO of Porsche AG. "But such a concept only makes sense if it offers performance."

On the racing front, The hybrid system of the 911 GT3 R Hybrid has been developed especially for competition on the track, with two 60 kW (82 hp) electric motors on the front axle boosting the 480 hp six-cylinder power unit fitted at the rear. Replacing conventional batteries is an electrical flywheel power storage system that delivers power to the front wheels – and recharges whenever the driver applies the brakes. The 911 GT3 R Hybrid has already proven its racing qualities in the 24 Hours of Nürburgring and Petit Le Mans race at Road Atlanta.



Porsche Gets a New CEO - Matthias Miller

By: Kevin Sims Photos By: Porsche Press

PARIS/ATLANTA – Matthias Müller, the new Chief Executive Officer (CEO) of Stuttgart, Germany-based Dr. Ing. h.c. F. Porsche AG, officially assumed Porsche AG Board of Management responsibilities today when outgoing CEO Michael Macht ceremoni-

ally handed the Porsche steering wheel to his successor on the eve of the 2010 Paris Auto Show.

Müller, comes to Porsche via the Volkswagen Group, where he previously was in charge of Product Planning, Product Management and Model Series for the VW Group and the Volkswagen Brand and very successfully contributed to the development of the Group's product lines.

The move can be seen as being one step closer to finalizing the VW Group acquisition of Porsche AG. Given Miller's extensive product development background, we can assume his efforts at Porsche will be toward the same ends,

In one if his first official public acts, Müller will unveil the new 911 Speedster and 911 GTS Coupe and Cabriolet models to the global media at the Paris Auto Show.

Michael Macht has been appointed a Member of the Group Board Management of Volkswagen AG. He is responsible for the Production Division and the control and coordination of all plants within the Volkswagen Group. **AA**



Porsche Tuning News

Cargraphic 996, 997, GT2 Big Bore Kits

By: Kevin Sims Photo By: Cargraphic Press

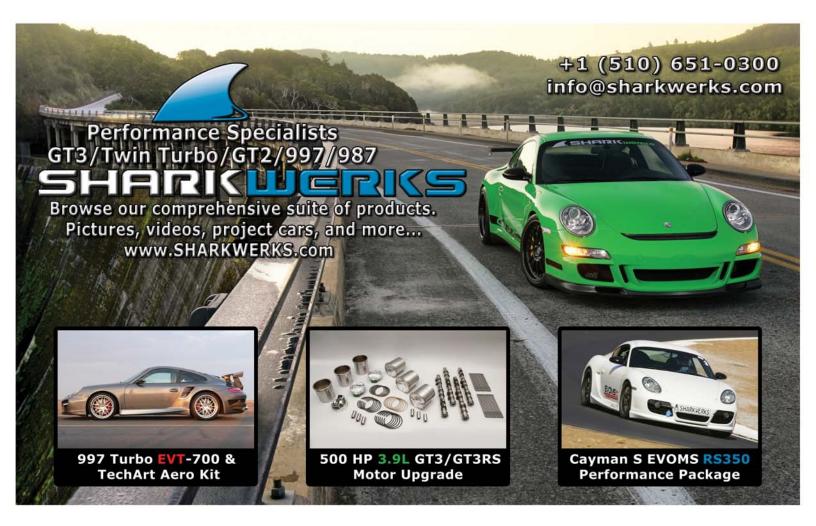
The bedroom is not the only venue where the displacement of thickness matters. According to Cargraphic it should also matter under the hood of your 996 turbo, 997 turbo or GT2. Porsche turbos have never been slow, but in the area of torque down low or up high the famed force inducted slayers from Stuttgart has always been a bit of a lame dog.

Cargraphic offers water-cooled Porsche Turbo owners with two basic options. Firstly, they can purchase a kit with the immediate ingredients needed to increase bore such as pistons, steel cylinder liners, o-rings and wrist pins. Customers can choose from a 3.9L or 4.0L kits. It's important to note that 4.0L kits require machining of the water jackets and crankcase to do the upgrade. Also, Cargraphic gives

their customers the ability to judge how they are going to use the car. If you're a track rat, then you'll want to go for the ClubSport version that includes a piston that's lighter and made with special forging techniques to increase strength. But, if you just want a big bore kit to impress your car buddies or to just simply make your commute more fun, then Cargraphic recommends the FastRoad version.



The first option does not upgrade any of the remaining engine components. For some, this deficiency would keep them up at night. With this in mind, Cargraphic is offering the 3.9L complete engine kit. It has it all – a 3.9 liter ClubSport package with Carrillo ConRods, an oil and water pump upgrade, new gasket and bearing sets, new timing chains, an upgraded DME, a sport air filter, improved camshaft timing, larger VTG turbos, a carbon-fiber intake piping, a sport manifold, a exhaust with 100 cell cats and a SECAN intercooler. May the broader thrashing begin. **AA**



Porsche Racing News

Porsche Motorsports Ponders F1 Racing

By: Kevin Sims Photo By: Porsche Press

Porsche chairman Matthias Mueller revealed Porsche is considering a return to F1 in 2013. Mueller thinks it doesn't make sense to have two VAG brands, Audi and Porsche, compete in sports car racing as rivals. Porsche could switch to F1 in 2013 when the FIA plans to

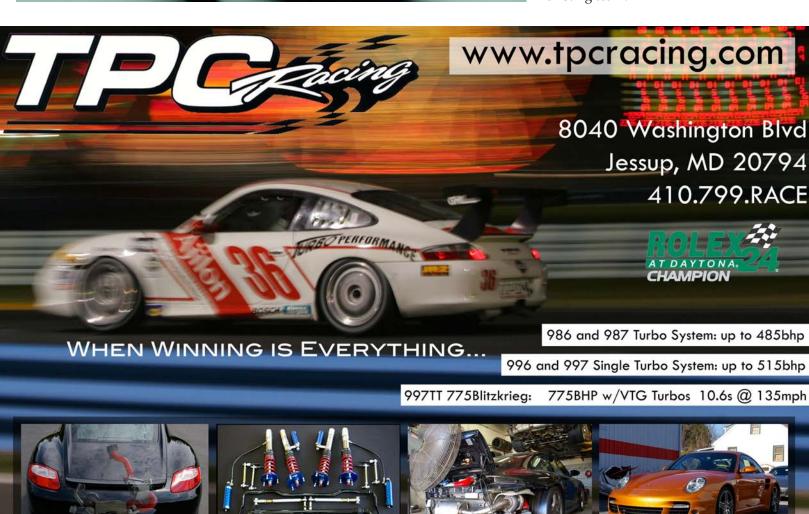
introduce 1.6 liter turbocharged engines with an energy-recovery system to make the sport greener.

Porsche entered into F1 in 1961 with Dan Gurney and Joachim Bonnier. They scored 22 points giving them enough to place third in the 1961 Constructors' Championship. In 1962, Dan Gurney won the French Grand Prix and placed third at the German Grand Prix. Despite this success Porsche placed fifth in the 1962 Constructors' Championship.

Porsche returned in 1983 by supplying a water cooled V6 turbocharged engine for the McLaren MP4. They were branded as a TAG-Porsche. The TAG-Porsche McLaren was very successful and won two Constructors' Championships (1984 and 1985) and three Drivers' Championships (1984-1986). All together the TAG-Porsche propelled McLaren to 25 Grand Prix victories in the hands of Niki Lauda and Alain Prost.

Porsche returned once more in 1991 as an engine supplier for the Footwork team, but the double V6 engines were too heavy and the team failed to qualify for many of the races. In 2013, Porsche could enter F1 as an engine supplier or buy an existing team. **AA**





2010 ALMS Conclusion

Long & Bergmeister Win GT Championship

By: Kevin Sims Photos By: Porsche Press



Patrick Long and Joerg Bergmeister, with assistance today from fellow Porsche factory driver Marc Lieb, clinched the 2010 American Le Mans Series GT championship with a gritty fifthplace in GT in their #45 Flying Lizard Porsche 911 GT3 RSR.

Joerg and Patrick have now won three championships together for Porsche and they helped the #45 Porsche win the season-long Michelin GREEN X Challenge for the Flying Lizards.. Developed by the U.S. Department of Energy, the Environmental Protection Agency and SAE International, the Michelin GREEN X Challenge recognizes the prototype and GT car that go farthest, fastest and with the smallest environmental footprint.

In LMP2, the Muscle Milk Porsche RS Spyder finished ahead of most of the class field, but could not match lap times with the HPD ARX-01c, and finished second on class and second in the season points. Drivers Klaus Graf, Lucas Luhr, and Sascha Maassen overcame race-long engine gremlins to finish seventh overall.

The GT Challenge Class race, for





2010 ALMS Conclusion

matched Porsche 911 GT3 Cup cars, came down to the last 30 minutes of the race, but the TRG Porsche of Henri Richard/Andy Lally/Duncan Ende outlasted the points leaders from Black Swan Racing - Tim Pappas and brothers Jeroen and Sabstiaan Bleekemolen. But all was not lost for the Black Swan Porsche squad as Pappas and Jeroen Bleekemolen clinched the season points title with their second- place finish.

Although it was not running for a podium finish or a championship, the Porsche's racing laboratory, the 911 GT3 R Hybrid, with 24 Hours of Le Mans champions Timo Bernhard/Mike Rockenfeller and Romain Dumas aboard, was the 18th best finisher in a starting field of 41 cars, and earned a time that would have put them eighth in GT2 out of 13 starters.

"After we overcame some early set-up problems, we were pleased that the car turned times comparable to the GT2 class leaders. This was an excellent exercise and we learned a lot, so we leave Atlanta smarter than when we arrived," said Dr. Armbruster, who lead the engineering team that developed the Hybrid system.

As for the GT championship, Patrick







Long said, "We really stole this championship - in a way. To earn our past titles, we would race against one or two competitive cars, but this year, we were both lucky and good against the best sports cars and top road racers in the world - eight cars which could win any given event. This was indeed our sweetest championship ever."

The Lizards just missed out clinching the manufacturers championship for Porsche as the Auberlen/Milner/Werner BMW edged the Long/Bergmeister Porsche by one place, so BMW ended up with 158 points, and Porsche with 157.

When the Muscle Milk Porsche RS Spyder had to miss Mid-Ohio due to a testing accident, it looked like there was no way the team could win the championship, but lead driver Klaus Graf knew differently.

"We have fought back all year, and this weekend was no different. It was a fantastic season, with three wins and a lot of podiums - this Porsche RS Spyder brought us lots of fun and lots of joy. Today, we had some problems, but we pushed through and finished second," said Graf. AA

2010 LeMans Series Conclusion

Porsche Wins All Three GT2 Class Titles

By: Kevin Sims Photos By: Porsche Press



orsche secured three championship titles in the LeMans' GT2 class in 2010 by executing three of racing's most essential imperatives - reliable technology, faultless driving, and perfect teamwork. With a fifth position showing at the 1,000 kilometers race at Silverstone, Porsche works drivers Marc Lieb (Germany) and Richard Lietz (Austria) successfully defended last year's driver title. The German Felbermayr team fiercely contested in the GT2 category with six renowned brands to also secure the prestigious manufacturers' title for Porsche. The Silverstone victory added to Porsche's 2010 GT2 trophy chest as they also won at the 24 hour races at Dubai, Le Mans and Spa-Francorchamps.

"What a year!" summarized Richard Lietz. "The fight in the GT2 class was even harder than last year; the Ferraris in particular were unbelievably strong. We had to fight hard at every race from the first to the last minute. In qualifying we were hardly ever the fastest, but thanks to the reliable technology of the 911 and the great teamwork we achieved three









2010 LeMans Series Conclusion

victories, and have now crowned the season with all titles for Porsche. We are truly proud of this."

Lieb and Lietz started the year's last race from third on the grid and initially held back to avoid unnecessary risks on the way to claiming the title. When the sole remaining rivals in the drivers' classification, Jean Alesi and Giancarlo Fisichella in their Ferrari, were pushed back in the field due to a mechanical problem a huge weight fell from the points leading Porsche pair.

The ProSpeed Competition pits were also the sight of celebrations as the team capped off a successful first year in the LMS by finishing second at Silverstone. "The adjustment (from the FIA GT Series) was harder than expected. Everything was new for the team and the drivers," said Richard Westbrook a ProSpeed driver. "We improved from race to race, but only here at the final did we manage to make a breakthrough." Starting from a fifth place grid position, Westbrook and his 22-year-old teammate Marco Holzer gradually worked their way to the front. According to Marco, "For me, the most difficult thing









in the Le Mans Series was getting used to the faster sports prototypes. They weren't exactly considerate to lower class driver in overtaking."

For the French IMSA Performance Matmut team, sixth place at the final race was a conciliatory end to a season of mixed fortunes. After clinching third place at the previous round in Hungary, Porsche works driver Patrick Pilet and his French compatriot Raymond Narac again had the podium in sight, but Narac was suffering from a bad bout of the 'flu. For this reason, the Porsche dealer and gentleman driver from Rouen wasn't able to follow on with his strong performance from the previous rounds. "Patrick had to do the bulk of the work," said Narac. "The race was indeed strenuous," stated Pilet. "But especially because the prototype drivers were very aggressive. Still, it was great fun to fight against our rivals on this super circuit. And our team can be proud, because we were always amongst the fastest in pit stops." AA

Grand Am 2011 Preview

Brumos to GT Class, Flying Lizard Joins DP

By: Kevin Sims Photos By: Brumos Press



Then Brumos Racing announced plans to campaign a Porsche 911 GT3 Cup Car in the Rolex Series' GT class for 2011, there was much to be done in a short time. The team took an important first step as they traveled to Homestead-Miami Speedway for the December test days. The pristine white Porsche had just arrived the week before, where it was delivered into the hands of Goldcrest Motorsports in Atlanta for its initial preparation. The Goldcrest group will be working with Brumos for the first two races of 2011 as Brumos assembles its Jacksonville-based team and upgrades its raceshop in preparation for the rest of the season.

Brumos drivers Andrew Davis and Leh Keen wasted no time getting acquainted with the new car, taking advantage of the opportunity to gain valuable seat time as they put the #59 though its paces. Day 2 of the test also saw Brumos veteran Hurley Haywood back behind the wheel as he checked out the newest Brumos entry, adding his feedback to that of the other drivers. Haywood will be com-

ing out of retirement to join the Brumos team at the 2011 Daytona 24. "It wouldn't be right for a Brumos Porsche 911 not to have the name Haywood over the door," explains Haywood.

"I thought our test went exceptionally well," Andrew Davis said. "Now I really feel like a Brumos driver since I have actually turned some laps in the #59. Our crew worked really hard over the last week to get the car ready. We were able to get a lot of testing in, and we went through a whole range of adjustments. We learned a lot - not only about the car but also about the new tires. On top of all that, we showed a lot of speed and were fastest in session, so I'm thrilled and really looking forward to Daytona."

Action Express Racing will be running in the DP class with the #9 LBP-Porsche V8 Riley that won last year's race. The team's race shop operations will remain based in Denver, North Carolina along with the experienced 2010 crew members.

For the first time, the Flying Lizard Motorsports team will run a Porsche-powered Riley Daytona Prototype. The Flying

Lizard #45 DP is powered by a Porsche Motorsports, flat-6 engine. The chassis, previously run by Brumos Racing, won the race overall in 2009. Flying Lizard is working closely with Riley Technologies and the Action Express team to prepare the car and wishes to thank Jim France for his support of this effort. The team will be using Joerg Bergmeister, Patrick Long, Seth Neiman, and Johannes van Overbeek as their driver line for the #45 DP car.

"The Daytona 24 is such a great race," said Flying Lizard team principal Seth Neiman. "We've always enjoyed competing here and are looking forward to the new experience of running a DP. I really want to thank Porsche Motorsport for their engine support and Bill Riley for his help as we come up the learning curve in this class. After the race, we'll head back to our American Le Mans Series program to get ready for the season opener at Sebring in March."

The Spirit of Daytona team will be switching from a LBP-Porsche V8 to a Chevy supplied V8. . **AA**





Porsche's command of the 'Ring was not repeated in 2010. Three Porsches retired including the 911 GT3 R. A street-legal 911 GT3 RS finished 13th, the remaining P-car

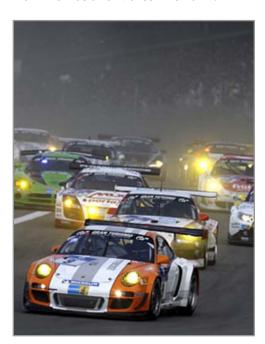
traight overall wins at the Nürburgring 24 Hours, the Porsche teams once again performed brilliantly, but without the necessary luck to win. In an exciting and dramatic race, Porsche vehicles dominated the action for over 15 hours.

After 22 hours and 15 minutes, the leading orange-and-white 911 GT3 R Hybrid retired with engine damage in the Metzgesfeld passage. "I heard a loud noise at the rear of the car and suddenly the power went," says Porsche works driver Joerg Bergmeister.

The street-legal Porsche 911 GT3 RS, which had been driven to the Nürburgring from Weissach, greatly exceeded all expectations. Ex-DTM pilot Roland Asch, race driver and TV commentator Patrick Simon, as well as journalists Horst von Saurma and Chris Harris crossed the finish line in an exceptional 13th. "We're totally over the moon," grinned Asch. The German and his three teammates completed a total of 145 laps without any technical mishaps. "Never in my wildest dreams did I think a normal street car could keep up at such a demanding race and also finish so far up the field."

The streak of bad luck that hit the 911 racing thoroughbreds began before the retirement of the 911 GT3 R Hybrid. After

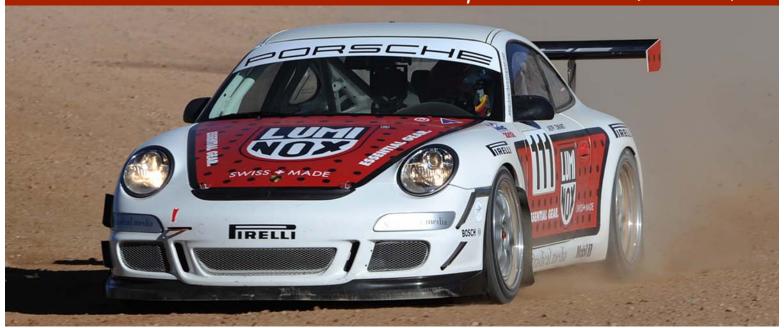
five hours, Chris Mamerow retired after an accident in his 911 GT3 R of the Mamerow Racing. The 911 GT3 R fielded by Manthey Racing, the winning team of the last four annual races, took the lead in lap one. Manthey Racing's luck came to an abrupt end when their GT3 R was struck by another car as it spun across the track. The heavy damages sustained by the 911 signaled an early end for the successful quartet Marc Lieb, Timo Bernhard, Romain Dumas and Marcel Tiemann. AA



Porsche At Peak's Peak

Wins Pike's Peak Attack Class in GT3 Cup Car

By: Kevin Sims Photo By: Porsche Motorsports



olorado Springs – June 27, 2010 – Jeff Zwart, from Woody Creek, Colorado, driving the specially-prepared Luminox Watch Porsche 911 GT3 Cup race car, has won and set a new record in the 2WD Time Attack class in Sunday's 88th running of the Pikes Peak Hillclimb.

Zwart, now a seven-time Pikes Peak class winner, not only broke Rhys Millen's 2009 class record by 38 seconds (after smashing his qualifying record by 18 seconds), but went faster than all but five of the entire field – three Unlimited Class and two Open Wheels cars, all with 600-plus horsepower. His 911 GT3 Cup car also beat all the production based race cars entries, 2WD and 4WD. Nobulhiro Tajima, from Japan, won the hillclimb overall in an eight-cylinder, turbocharged Suzuki 4WD one-off race car with an Unlimited Class entry.

Zwart said the key to his victory was the confidence that build up every time he drove the car.

"In my previous six victories – all in Porsche street-based turbo cars – I spent most of my practice time trying to tame the car to fit this difficult course; With this Porsche 911 Cup car, it was clear to me from the beginning that the car was challenging me to drive my best, and I

went faster every time I stepped behind the wheel. Each time I thought I was asking too much from the car, especially when I carried maximum speed into one of those hairpins, the Porsche responded and challenged me to push even harder," said Zwart.

He also repeated his amazement from Friday's qualifying session that the normally-aspirated car didn't lose horsepower from its 9,000-foot-elevation start and the 14,000-foot finish line. A combination of the 450-hp, 3.8-liter Porsche Cup car engine and expert engine map adjustments from Porsche Motorsport North America gave Zwart the performance of a lifetime.

Zwart again praised the Pirelli road racing rain tires, which he felt held their grip evenly on both the gravel and tarmac surfaces, a necessity as the course has been transformed from all gravel to half and half. Next year, with two more miles of the 12-mile course scheduled for paving, road-racing-based tires will make more sense than ever. The team made some adjustments to tire pressures on all four wheels prior to qualifying. Pirelli had developed a tire for Zwart based on the rain tire they use for the Rolex Grand-Am series.

"Without Luminox Watches, Porsche

Motorsport North America, and Pirelli tires support, this victory would not have been possible," said Zwart.

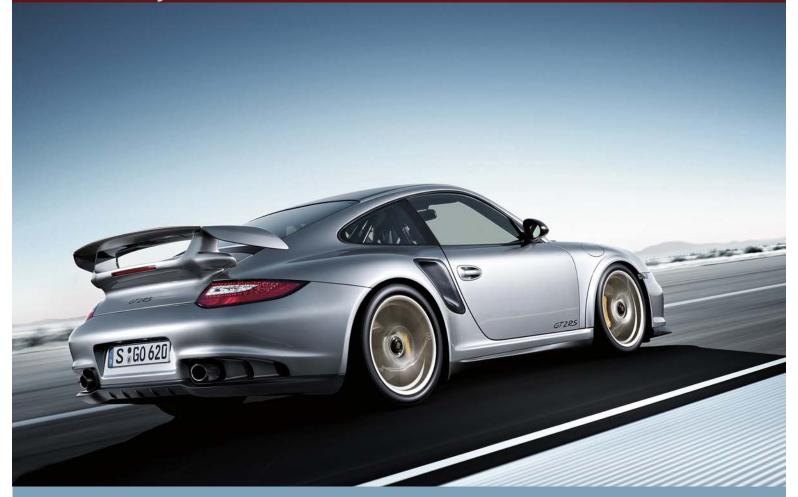
Porsche Motorsport started with a 2007 Cup car, updated it to 2010 specifications, and installed a new 450 horsepower 3.8-liter engine currently in use in the Patron GT3 Challenge, American Le Mans Series Challenge Class, and the Porsche Supercup series. The engine management mapping was modified to perform well in high altitude as the race starts at 9,390 feet and finishes at the summit, 14,110 feet above sea level, and ride height was increased for the gravel sections of the course. The underbody was also modified to protect the car from gravel and stones similar to rally competition.

Zwart has now won his class at Pikes Peak – all in Porsches - in 1994, 1995, 1996, 1997, 1998, 2002 and 2010, setting new class records four times. Most recently, before this weekend, he co-drove a Porsche Cayenne with Pikes Peak veteran Paul Dallenbach at the challenging Trans-Syberia Rally (Moscow to Mongolia) in 2007. He also has an SCCA PRO Rally Championship (1990) and a SCORE Baja 1000 class win (2004) to his credit. AA

2011 Porsche 997 GT2 RS

The Factory Power Haus

By: Kevin Sims Photos By: Porsche Press



Porsche boosts the GT2's performance credentials by releasing the 997 GT2 RS, the company's fastest and most powerful road-going sports car. With 90 more horsepower, and weighting 154 lbs. less, than the standard GT2 the RS version is said to be able to lap the Nurgburgring-Nordschleife in an impressive seven minutes and eighteen seconds.

The GT2 RS's 3.6 liter six-cylinder boxer engine features two variable turbine geometry turbochargers and provides its entire 620 hp to the rear wheels exclusively through a six-speed manual gearbox. With its lighter weight, the law of gravity only grapples with a GT2 RS that weighs a mere 3,020 lbs. The result is a Porsche factory machine with a power-to-weight ratio of just 4.9 lbs per horse-power. Such a figure gives the GT2



2011 997 Turbo GT2 RS



Porsche 911 GT2 RS Specs

Engine

Engine: 3.6 L, flat-6 cylinder

Power: 620 hp Torque: 516 lb/ft

Bore / Stroke: 100 mm / 76.4 mm Valvetrain: DOHC, 4 valves / cylinder

Compression Ratio: 9.4:1

Fuel: Bosch Motronic DME 7.8

Aspiration: KKK VTG Twin-Turbos

Technical Data

Weight: 3020.3 lbs Chassis: Unitary Steel

Front Suspension: McPherson struts, lower control arms, coil springs, gas pressurized twin-tube shocks, anti-roll

bar

Rear Suspension: Multi-link, coil springs, single sleeve gas pressur-

ized shocks, anti-roll bar **Drive**: Rear Wheel Drive

Steering: ZF variable rack and pinion

Brakes: carbon ceramic, ventilated

discs, all-round, ABS

Gearbox: 6 speed manual (No PDK)

Tires

Front: 245/35 ZR19 **Rear**: 325/30 ZR10

Performance

Specific Power: 172 hp per liter **Power-to-Weight**: 4.9 lbs per hp

Top Speed: 205 mph 0 to 60 mph: 3.4 seconds

Nurburgring Lap: 7 mins 18 secs

RS the best power/weight ratio in its class and makes it a genuine thoroughbred in the Porsche treasure chest of race-honed sports cars.

For those who believed the 911 platform had already seen its heyday, we can't help but mention that it's faster than Porsche's own Carrera GT. The GT2 RS propels from a standstill to 60 mph in a brisk 3.4 seconds and climbs to a top speed of 205 mph. The 911 concept still provides the enthusiast racing nut the best window into the coveted race car for the street dream.

Some may take a look at the GT2 RS and assume that it's just a twin-turbocharged GT3 RS. Strike that thought from your mind. The GT2 RS is its own beast as it sports a unique center locking wheel design with wider 245/35ZR 19's up front and 325/30ZR 19's out back. In addition, the GT2 RS has its own spring and swaybar setup to better match the engine's power curve. To enhance downforce, the car's carbon rear spoiler is 10mm taller and works in tandem with the revised carbon front spoiler lip. The interior features two-piece carbon-fiber bucket seats and lightweight door panels with fabric straps as door handles. Much of the interior is covered in alcantara as opposed to leather to save weight. The resulting car is priced at \$245,000 with only 500 being produced worldwide. AA



2012 Porsche Cayman R

The Long Awaited Club Sport Version

By: Kevin Sims Photos By: Porsche Press



fter years of media speculation, Porsche plans to release the Cayman ClubSport edition in the February 2011 as a 2012 model. The Cayman R, as it's called, reflects many wishes of Cayman owners who desired more. The R model features a standard limited-slip differential, which is a welcome upgrade. Power has always topped the wish list. The Porsche gods heard their disciple's prayers as they gave the new R's DFI, 3.4 liter flat-6 an additional 10 horsepower over the Cayman S to bring it up to 330 hp. Yes, I know - that's not the big power injection that the car really needs. However, Porsche reduced the car's weight by 121 lbs to improve the car's overall power-to-weight ratio to 8.58 lbs per pony (8.8 for the PDK equipped car). Such tinkering allows an R equipped with a six speed





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2012 Cayman R







to sprint from 0 to 60 mph in a fun-loving 4.7 seconds. The time is roughly twotenths of a second quicker than a Cayman S with a standard transmission. A sevenspeed PDK equipped R will do it in a further reduced 4.4 seconds.

The R's big news is its weight reduction that's been achieved by using aluminum doors, carbon-fiber backed seats and door panels from a 911 GT3 RS. To maximize the weight saving, Porsche decided to remove air conditioning and a stereo from the R. If these luxuries are required, Porsche will gladly add them along with the weight they involve. The purist may baulk at such a decision, but we are talking about a Cayman not a 911 GT3 RS. A little cool air and some tunes would be a nice touch.

The Cayman R is lowered by 20 mm with a retuned suspension thus lowering the car's center of gravity. As a result, the 2,849 lb Cayman R becomes a more agile crocodile with a personality that suited for winding back roads or a tight racetrack. In short, the R version is an improvement over the Cayman S, but lacks the horsepower needed to make it the ideal dream machine most hoped it would be. Let's now pray for a Cayman GT3 RS. AA

2011 Porsche 997 Carrera GTS

Piecing Together a New Model

By: Kevin Sims Photos By: Porsche Press





ith a year remaining in the 997 era, Porsche expands the Carrera line up by adding a new model that's positioned between the GT3 and the Carrera S. The 2011 997 Carrera GTS is graced with a 408 hp, 310 ft/lb version of the 3.8 liter flat-six engine. That equates to 23 more ponies than the Carrera S and 27 less than the GT3. As for torque, the GTS has 22 ft/lbs more than the Carrera S and 7 ft/lbs less than the GT3. All this extra power is delivered from a redesigned intake tract from the air box to the cylinder head and a twinfunnel air filter box. The intake tract has six different valve settings to optimize power and torque throughout the rev range. In addition, the GTS comes with Porsche's sport exhaust option.



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2011 997 Carrera GTS





Think of the Carrera GTS as factory tuned car built from the company's own options list. It's essentially a RWD version of the Carrera 4 with the optional Carrera S power kit (a special option that included the 408 hp engine). Like the AWD car, the GTS has the 44 mm wider body that provides room for the broader 305/30 ZR 19 rear rubber. Wheels are the black-painted RS Spyder inspired 19 inchers with center locking hubs that were previously only available on the Turbo. A Carrera GTS can be identified by the Sport Design front apron featuring a black spoiler edge, a set of special side-skirts, and the Carrera GTS logo displayed on the doors and rear lid. The body upgrades give the car a more aggressive stance without being race car like.

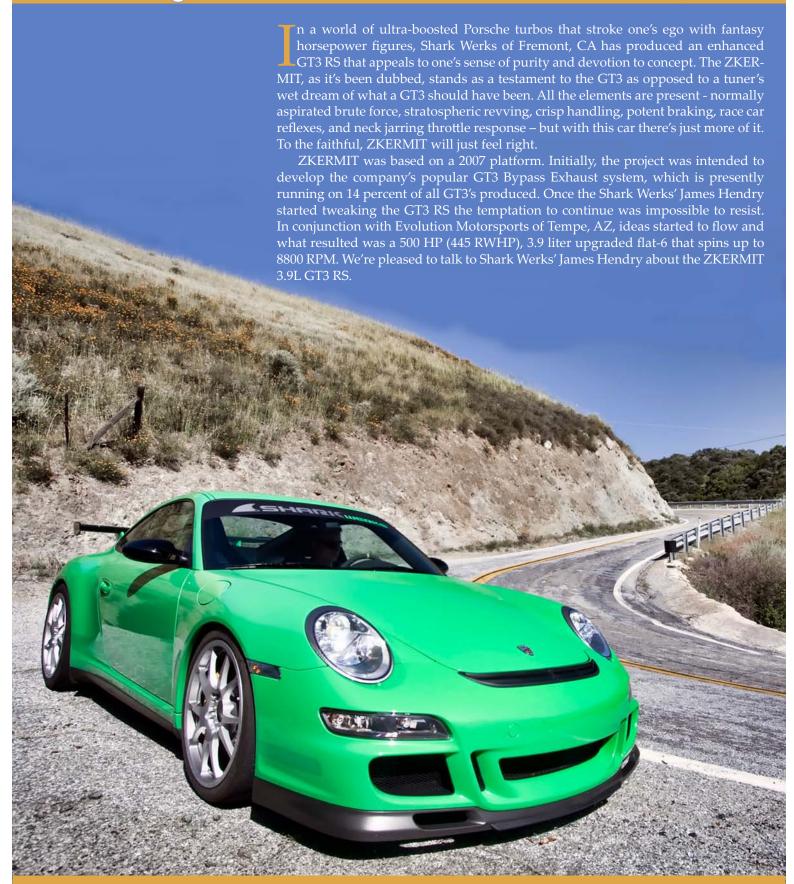
The new model screams to 60 mph in an entertaining 4.6 seconds. Cars equipped with a PDK transmission and the SportChrono package can do it in 4.2 seconds. The car runs flat out to 190 mph regardless of the transmission selected. The Carrera GTS will be available in coupe or cabriolet at the beginning of the 2011 calendar year. Considering the starting price tag of \$103,100, the Carrera GTS represents a more matured option to the wild track oriented GT3 at a more reasonable cost. **AA**



Shark Werks 3.9L GT3 RS ZKERMIT

Accentuating the GT3 Nature

By: Kevin Sims Photos By: Shaun Porcar





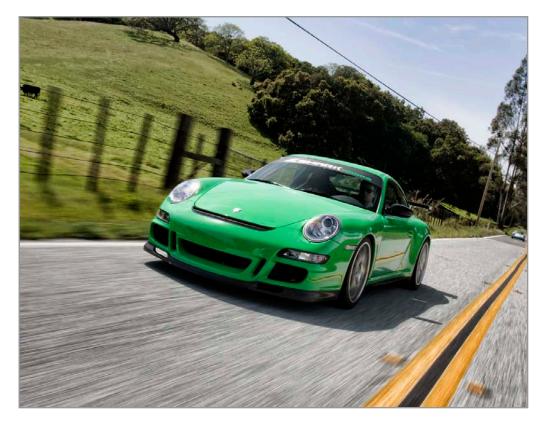
>> What inspired the Shark Werks ZKERMIT 3.9L project?

James Hendry - We were previously known mostly for our Turbo builds, but the high-revving GT3 motor caught our attention. Nobody in the US was modifying them during the 996 days. When we found out about the 997GT3 project we decided to chart a development plan. We went for the RS version having read some of the early press reports about a bigger bore motor. We've always been fans of the original RS green and orange colors so going green and giving her the name "KERMIT" was the easy part. We were disappointed in the restrictive sound of the stock RS, so the exhaust was the first part of our development. With that out of the way, we also decided that we really wanted to build a 3.9 engine.

>> What about the 2007-8 3.6 and 2010 3.8 engine did you feel needed to be improved upon?

JH – The GT3 engine is currently the most visceral and enjoyable 911 engine and so improving upon it was not taken lightly.

The Shark Werks 3.9L, 500 HP Flat-6 upgrade not only provides the GT3 RS with extra sizzle, it give one a 'factory' sense of quality and engineering.





With the strict noise laws in Europe, the cars sound a bit muted from the factory. So, we uncorked the exhaust. We've optimized the sound with our two exhaust offerings; one for the street and one super-light set up for the track. As with any naturally aspirated Bosch Motronic-controlled Porsche engine there is always some room for optimizations in both 91 and 93 octane levels. Thanks to our partnership with EVOMSit, we were able to eke out a few more ponies (10-12 HP) with modifications done to the factory software. Beyond those two basic modifications, the only effective upgrades were to modify the internal components of the motor itself to gain big power.

>> Shark Werks appeared on the "Battle of the Supercars" show on SpeedTV with your ZKERMIT. You competed with a modified Ferrari F430, tell us about the experience and how Shark Werks went head to head with the tweaked F-car.

JH – The experience was really incredible! The show's production crew, as well as drivers Paul Tracy and Tanner Foust, was all very helpful in making the experience a memorable one. The staff at Beale Air Force Base was professional and courteous in their support of us racing some-200

miles per hour on their U2 runway. For three days, Tanner (in ZKERMIT) battled against a tuned Ferrari F430 driven by Paul. The Ferrari was equipped with a free flowing exhaust, headers and a number of weight-saving upgrades from Ferrari's Scuderia model. The Ferrari was also tuned for an additional 24 horsepower. With these upgrades, the car is quite a bit faster than a stock F430, so we were all guessing what might happen as the two cars lined up to race early in the morning. We learned pretty quickly that our 3.9L GT3 RS was indeed quicker to about 170 MPH than the Ferrari. In a standing mile race the Porsche still edged out the Ferrari by a nose. In the top speed shootout, the Ferrari and Porsche both reached speeds nearing 200 MPH, which as you can imagine is quite a feat to see live. The Porsche took the day with its superior grip in the road race and by out accelerating the Ferrari throughout the day.

>> How do you feel your 3.9 engine is an improvement on the factory offering?

JH – All of the GT3's main characteristics owners are used to are retained, so nothing is "lost." In terms of what's gained, there's about 50/60 ft-lbs of torque more down low and then the power-band is ex-

tended out beyond 8400RPM all the way to 8800RPM. It revs even quicker! We spec'd the engine out to make sure that the power curve of the 3.9L keeps pulling after 7800 RPM, unlike the stock power curve that drops off considerably at this point. In fact from peak power at 7600 it only falls by 5 HP at 8800RPM.

>> Give us an overview of the modification made to the GT3 RS engine?

JH – There was a lot of thought, testing and R&D that went into pushing up the power. We started with a bigger bore piston set up that was lighter than the factory 3.6 pitons. We also used steel liners as opposed to the aluminum ones on the 3.6 to allow us to go thinner on the cylinder walls. Weight-reduction was a key requirement - even all the way down to wrist pins. The work we did with Evolution Motorsports in developing our camshaft profiles was a big part of our map for the engine's power curve. EVOMS was one of the first companies in the US to perform camshaft work to the GT1 block on a turbocharged platform. Our combined experience gave us the technical incite to go for more power in the midrange and up top. The 3.9 engine's larger displacement provided an advantage

mostly down low. The weight reduction helped us reduce the reciprocating mass and raise the engine's RPM while the cams and EVOMsit ECU programming gave us the power at the upper end. After all, what's the use of revving higher if you're not making any power?

>> How much bite does this little 3.9 Shark clamp down with?

IH – The complete 3.9 package with our exhaust and EVOMSit software will turn a tick over 500 HP measured at the crank (approximately 85 HP over the stock 3.6L, 70 HP over stock 3.8L 2010 GT3). Comparing the 3.9L versus a stock 3.6L, there is an additional 55 ft/lb torque, starting at around 2000 RPM and fully realized by 5000 RPM. This gives considerably better low-end grunt without requiring the extra RPM of the 3.6L. The power output on the Evolution Motorsports dyno was 458 rear wheel horsepower with 93 octane, up from 385 rear wheel horsepower on the stock 3.6L. The power output with a 93octane tune has about 10 more rear wheel horsepower due to increased ignition timing when compared with 91-octane.

>> How important was Evolution Motorsports in Tempe, Arizona to the project?

JH – Their involvement in this project was critical to its success. With the sourcing of parts and information, as well as tuning at their facility, we would have had a difficult time completing this project without their support. Evolution Motorsports is the leader in high-horsepower tuning for the Porsche 996 and 997 platform in the US.

>> How were you able to achieve a 13.0:1 compression ratio and be street legal?

JH – Todd Zuccone's EVOMSit software was essential in the tuning process. It's the primary reason we were able to run this level of compression ratio, even with 91-octane. Todd's ability to manipulate the Bosch Motronic ECU, along with hundreds of hours spent on the dyno and road testing the car, gave us confidence that the engine would safely run as an OEM unit.

>> What exhaust options are available?

JH – For street use, we recommend the Shark Werks GT3 Bypass Exhaust system.



Top: Shark Werks worked with Evolution Motorsports in developing cam timing. Bottom: Reducing its internal reciprocating mass gave them an 8800 RPM engine.





It offers the best sound at the most reasonable volume levels. In addition, its "Sport" functionality allows owners to make the car quieter at the press of a button. The GT3 Bypass Exhaust also reduces the car's rear weight by 16 lbs. For track use, we advise the Shark Werks GT3 Track Exhaust. This system offers slightly more power (12 RWHP, 10 ft-lb torque) and removes 57 lbs from the rear. Since its a very loud exhaust, we only recommend it for track duty and do not install it on a road car. We strictly use the OEM 997 GT3 headers and catalytic converters. As it turns out, we saw no benefit to switching to custom ones. Retaining the stock headers and cats also ensured that the vehicle emissions remained at the lowest possible level. It also prevented check engine lights issues from occurring through inefficient catalysts or O2 sensor readings.

>> How is the Shark Werks 3.9 GT3 RS as a street car or a track car?

JH – As a street car, the 3.9L GT3 RS does very well. The big torque of the motor allows you to cruise along in higher gears and still have power to pass. The torque is the most noticeable benefit of the motor. It happily revs at higher RPMs, making it a pleasure to drive on twisting roads, but it does fine for commuting and some of our customers still drive their 3.9L GT3 cars every day. The PCCB brakes are excellent for city driving and offer immediate response in emergencies. The suspension is compliant enough for most roads, as long as there are not too many potholes.

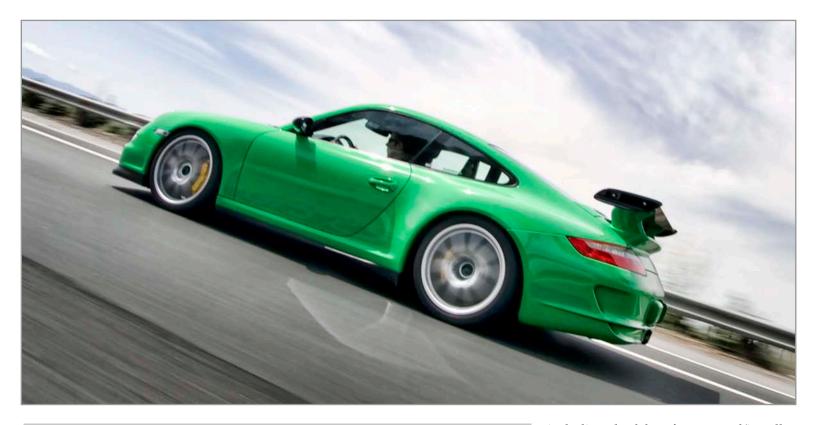
One upgrade we installed that makes the car nice for daily driving duty is its TechArt Noselift kit that allows the front clearance to be increased by over 2-inches when approaching steep driveways. This is one caveat of owning a car like a GT3 RS - it sits so low to the ground that the front lip will drag like a snow plow on even the smallest of bumps. This reliably addresses that problem. With the EVOM-Sit tuning, the gas mileage of the 3.9L is actually close-to, if not better at times than OEM. We marked just around 29 MPG on its maiden freeway voyage from EVOMS in Arizona. As a track car, it does not get much better. The connected feeling of the steering and the superb chassis make it fun on any track, even completely stock. The added power and higher RPM redline of the 3.9L motor gives you more room for passing and time before needing to shift.

>> What chassis and drivetrain alterations have been made? Why?

JH – The chassis for ZKERMIT is at the core unchanged from an OEM GT3 RS. We wanted the car to feel stock. We wanted the personality of the car to focus on the engine as much as possible. We did install lightweight Champion RS171 wheels to save some weight. The suspension is slightly modified with the TechArt Noselift system that includes a set of different/shorter/stiffer springs. With a good alignment, she's always ready for the track.

>> How much would it cost to add a 3.9 liter row of teeth to a stock 997 GT3 RS? What is involved in the conversion and how much time would it take?

JH – The price depends on options desired, but typically a 3.6L 997 GT3 RS can be converted to a 3.9L for around \$28,000



Shark Werks 3.9L GT3 RS Specs

Technical Data

Engine: 3.9 liter Flat-6 w/ Vario Cam

Power: 502 hp at 7,600 rpm

458 RWHP

Torque: 355 lb/ft at 5,400 rpm

326 RW lb/ft

Fuel: 91 Octane

Compression Ratio: 13:1

Engine Upgrades

EVOMS Head Stud Kit; Shark Werks Forged-400 gram, wider bore, 13:1 pistons; Steel Cylinder Liners with new rings, clips and wrist pins; Shark Werks exhaust and intake camshafts; Shark Werks Street GT3 exhaust; EVOMsit Tuning of the GT3 ECU

Performance

Standing Mile: 174.9 MPH

Transmission

6-speed Manual

Mechanical Limited Slip Differential

Upgrade Price

\$25,000 w/ GT3 RS, \$26,000 w/ GT3 Additional \$2500 for bottom-end re-

build

Suspension

Front: Independent MacPherson struts with aluminum control, coil springs, stabilizer bar and negative steering roll radius

Rear: Independent MacPherson struts with aluminum control arms and stabilizer bar; toe-angle control

Wheels and Tires

Champion Monolite MS171 Wheels

Front: 235/35 ZR19 **Rear:** 305/30 ZR19

including the labor for removal/installation of the motor, the build process, tuning and break-in. Standard GT3 models cost around \$1000 more for the lightweight flywheel, which comes stock on the RS. We offer additional services on higher mileage GT3s such as replacing the rod bolts and bearings so the case will not need to be serviced again for many years. Depending on our schedule, the build time is approximately 6-weeks including all the testing and break-in procedures.

>> What has been the most fun that you have personally had in ZKERMIT?

JH – ZKERMIT has had an interesting life to say the least. Watching her piloted by Tanner Foust and beating out a 500+ horsepower modified Ferrari F430 for television was certainly above and beyond the call of duty. Or perhaps the time one of our favorite customers, who at the time had almost 35,000 miles on his 997GT3, took Kermit for a test drive. The first time he mashed the gas and she lit up the tires he excitedly said, "How come mine doesn't do that?" He's since put 10,000+ miles on the 3.9L we built him. There's no doubt that we're already starting with an incredible platform out of the box, but for us 1%'ers, you can always eke out a little more. AA

SharkWerks 997S PDK





Vatching
Tanner
Foust pilot ZKERMIT in beating a
500HP modified
Ferrari F430 for
television was an
experience.

SharkWerks 997S PDK





Spyder RS Takes LMP2 Victory

ALMS >> 2010 Mobil 1 12 Hours of Sebring

Photos By: Randy Stevens & Porsche

Tebring, FL – March 20, 2010 – The Muscle Milk Porsche RS Spyder clinched a LMP2 class victory at the 58th Mobil 1 Twelve Hours of Sebring while the Porsche 911 GT3 RSR won the environmental Michelin Green X Challenge award.

Porsche Class Victory in LMP2

The Porsche RS Spyder scored Porsche's most recent overall win at Sebring International Raceway in 2008 and an LMP2 class win in 2007. The jubilation felt in the pits of the Cytosport team knew no bounds. No one had expected a non-factory team to place in the high ranks. Class victory with pilots Klaus Graf, Sascha Maassen and Greg Pickett at the wheel of the RS Spyder at the most prestigious race of the year was the first for a customer team with the RS Spyder in the American Le Mans Series.

The Patrón Highcroft Honda of David Brabham, Simon Pagenaud and Ma-







Pickett, who has been sports car racing for more than 30 years, including a Sebring IMSA GT0 win (Camaro with Tommy Riggins in 1987) and several SCCA Trans-Am championships, was thrilled with the effort of his drivers in their fifthstraight podium finish.

"We have been running the Porsche RS Spyder since last July, and the car has performed flawlessly, always predictable and always reliable. Today, we were behind early, but we pushed ahead, with Klaus and Sascha pushing the Muscle Milk car to the top when the opportunity presented itself," said Pickett, whose car outdistanced the new Honda Performance Development ARX-01c.

Porsche took the lead in GT2

The 58th running of the oldest sports car race in the USA began well for Porsche in the GT2 class. With the #17 911 GT3 RSR of the new Falken Tire squad, Porsche works driver Wolf Henzler got

the jump off the line to move into first in the fiercely-contested sports car class. He lead for 10 laps before his factory pilot teammate Joerg Bergmeister seized the lead in his #45 Flying Lizard Motorsports 911 GT3 RSR.

"Our car is good," said class title defender Joerg Bergmeister. "I put in some particularly quick laps towards the end of my stint."

The #45 Flying Lizard Motorsports Porsche 911 GT3 RSR finished fourth in the GT2 class. After the early leading, it was booted back to fifth place by an accident and a subsequent pace car snafu which caused the defending champions to lose three laps half-way through the event. While lapping the #17 Team Falken Tire Porsche 911 GT3 RSR, the Lizards' Joerg Bergmeister was in the wrong place when the Falken car lost a wheel and it bounced off to the Lizard Porsche and caused it to bend a wheel and lose a tire. Making matters worse, the team lost three laps with their subsequent pit stop as the series pace car was slow to pick up the leaders during the yellow flag, and the pits remained close, so the team could not get to work changing the wheel.

"Maybe it's a good omen," said Pat-





rick Long. "We kicked off the last season with a fourth in Sebring and followed up with five wins and the title."

This perspective seemed to help Joerg Bergmeister get over his initial disappointment. "I should have played lotto today. The chances of being hit by a wheel or buying the winning ticket are about the same."

Flying Lizard's second 911 GT3 RSR with starting #44 finished in fifth place. During the 2009 season, this car claimed overall honours in the Michelin Green X Challenge and now won the environmental award in Sebring again ahead of the #45 car. Porsche works driver Richard Lietz (Austria), who shared the cockpit with Darren Law and Seth Neimann, said: "The 911 GT3 RSR has again proven that it's the most efficient GT race car."

The #17 Team Falken Tire Porsche 911 GT3 RSR, which was running sixth in the GT2 class for the first seven hours of the Mobil 1 Twelve Hours of Sebring, lost a right rear wheel on the course, came in for a replacement and fender repair, and then lost the same wheel again, bringing out the full course yellow flag that involved the Flying Lizards car. The team ended up in 12th place after their multiple wheel problems. In seems a team sponsored by a tire manufacture would not have such problems.

Peugeot Wins Overall

Alexander Wurz's outlap after his final stop was quick enough for an overall victory for himself and Team Peugeot Total teammates Marc Gene and Anthony Davidson. Wurz drove his diesel-powered Peugeot 908 HDi FAP to a 13.817-second win at Sebring.

Sebastien Bourdais, Nic Minassian and Pedro Lamy were second, putting an exclamation point on the weekend for the French Lions. The Peugeots were 1-2 in every official session this week.

"We pushed, everyone was 100 percent," said Wurz, who won at Le Mans last year with Gene. The strategy people had smoke coming out of their ears. It was down to three seconds (the margin) for the last stop. It came down to Sebastian and myself."

"With Peugeot we came here as a team and wanted to accomplish a goal and we











did," said Davidson, who finished second in GTS during the 2003 race. "This was a big challenge to get through the traffic efficiently. That was where we excelled today. It's a big challenge for the cars. We know the circuit will throw up all kinds of issues for reliability. It's important to win the race, but also for preparations for Le Mans later in the year."

Adrian Fernandez, Harold Primat and Stefan Mücke placed third in the Lola-Aston Martin, making its first start in the 12 Hours. It will go up against Peugeot at Le Mans, as will Audi.

Risi Competizione won in GT2, the team's sixth straight victory in a major endurance race. Jaime Melo, Gimmi Bruni and Pierre Kaffer took a one-lap victory in their Ferrari F430 GT over BMW Rahal Letterman Racing's two BMW M3s, which swapped positions on the last turn of the last lap. Risi now has won consecutively at Sebring, Le Mans and Petit Le Mans, etching even more history in the F430 GT. AA







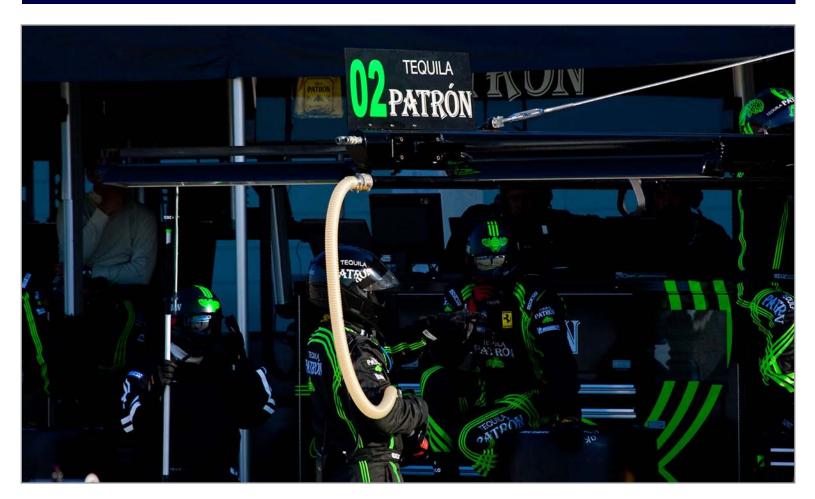


















RS Spyder Wins at Lime Rock

ALMS Round 5 >> 2010 Northeast Grand Prix

By: Kevin Sims Photos By: David Livshin





Ime Rock, CT - July 24th, 2010
- Porsche has taken off into the second half of the American Le Mans Series season with a double victory. In Lime Rock, Porsche works drivers Joerg Bergmeister (Germany) and Patrick Long (USA) snatched back the GT class points' lead with their third win of the season in the Porsche 911 GT3 RSR. At the wheel of the Porsche RS Spyder, Klaus Graf (Germany) and Greg Pickett (USA) claimed their first overall win in the race series featuring the fastest sportscars in the world.

The race on the short 2.480 kilometre circuit set amongst forests and meadows in the US state of Connecticut ran over 2:45 hours – but in





the end only seconds lay between victory and defeat. With the 911 GT3 RSR of Flying Lizard Motorsports, Patrick Long crossed the finish line just 1.495 seconds ahead of the fastest BMW. After a thrilling finale, Klaus Graf brought home the greatest success in the American Le Mans Series of his Muscle Milk Team Cytosport in the RS Spyder with a 29.573-second advantage. Moreover, the RS Spyder won the Michelin Green X Challenge environmental award as the most efficient vehicle in the field.

100 Percent Until the Last Lap

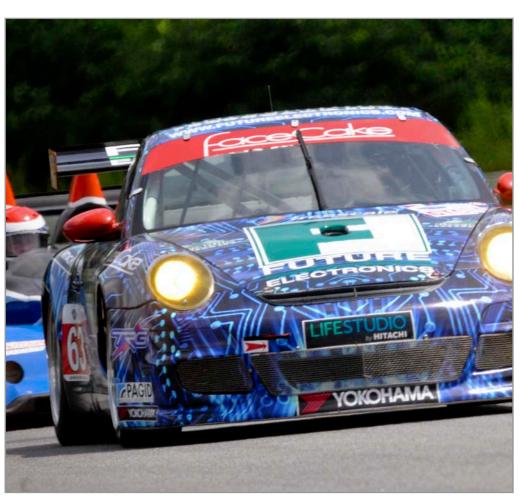
Already during the very wet qualifying, Patrick Long made the most of the grip advantage of his 911 GT3 RSR's rear-engine configuration to achieve the first GT pole position since the season-opener in Sebring. With a convincing performance and the right team strategy, he and Joerg Bergmeister held off the strong

opposition from BMW, Ferrari and Chevrolet. In high summer temperatures, fans, who traditionally make themselves comfortable on the grassy hills around the track, witnessed fierce fights for positions in the excellently-supported GT class and many changes in the lead. In the final lap, as Patrick Long defended his narrow lead from his pursuers' vehement attacks, hardly an on-looker was left sitting in his camping stool.

"After our hard-earned victory in Laguna Seca I thought things couldn't get much closer, but I was wrong," said Patrick Long. "We had to give 100 percent until the last lap to beat the BMWs. And the Ferrari wasn't far behind either. Our pit strategy helped put us ahead. Then it was up to Joerg and me to make the most out of the situation and bring the car home safe and sound. Our Michelin tyres worked perfectly both in the wet qualifying and the dry race."

Fifth Lime Rock Win in a Row

For the title defenders this success marks the third win of the season after Long Beach and Laguna Seca. Joerg Bergmeister set a new record: "If someone





asked me how you go about winning in Lime Rock five times straight I'd say just one word: patience," he said. "On the short track there are so many cars competing in different classes that you have to wait for the right moment to overtake or make room for faster competitors. The BMWs were faster than us on the straights, but the straights are very short and we had the better grip. Thanks to our extra pit stop in the earlier caution phase we had a little more fuel at the end. This stop didn't cost us any positions. The way Patrick fought off Bill Auberlen in the last lap – that was brilliant."

RS Spyder Continues Success Streak

The victory for Klaus Graf and Greg Pickett, who held off the LMP sports prototype points' leader Honda despite a stopand-go penalty in the final phase, was the first for the privately-run team with the Porsche RS Spyder in the American Le Mans Series. With this, the Muscle Milk Team Cytosport squad continues its success streak this season, which began with a clear class win at the Sebring 12 Hours, followed by podium results at all subsequent races. "During the first 45 minutes of the race, Greg kept up with the leaders and that was great," said Klaus Graf. "For me it was clear that I had to keep our rivals under constant pressure during my two-hour stint. Our team's pit stops were fantastic. The key to our success was most certainly the support from Porsche and Michelin."

After posting second in qualifying at the wheel of the Porsche 911 GT3 RSR fielded by Falken Tire, Porsche works driver Wolf Henzler (Germany) and Bryan Sellers (USA) secured eighth in the GT class. In the second 911 GT3 RSR run by Flying Lizard Motorsports, Americans Darren Law and Seth Neiman saw the flag in seventh. **AA**











