

**THIS IS** one event that didn't really have a purpose to start with. It was simply an introduction to the new PR team, in-house and external, looking after Castrol. What happened however was a fantastic day with some great cars and the opportunity to find out more about the company's connections within the automotive industry.

I've been to the Millbrook Proving Ground for a variety of events, however the one held on a cold Thursday in early October will go down in my mind as one of the most fun, and most informative days there. The lubricants company has been running a competition throughout Europe in conjunction with Top Gear magazine in order to bring winners over to the UK for a unique driving event. The idea was to reengage with customers and reignite the passion the brand has throughout the continent. I was invited along to meet the team and to have some fun as well.

## Driving pleasure

On the agenda for the day was a self-drive session with a Ford Focus ST around the famous Millbrook alpine track, a passenger ride around the high-speed bowl and a circuit around the edge of the test facility, and a 'Paddock Attack' where visitors had to drift and complete donuts in a new Ford Mustang.

For the passenger drive, I chose a 1969 Ford GT40, while also on offer was a 2005 Mustang Shelby. The GT40 however is one of my absolute favourite cars, a classic Le Mans winner, taking the title three times in the 1960s. This particular model is a Mk1 'wide body' recreation using as many original parts as possible. With a top speed of 180mph, 485bhp and 475NM of torque from its 5.6-litre normally aspirated engine, it is a monster.

Thinking the driver may want to take it easy in the old girl, I was certainly in for a shock! Entering the bowl, we were soon up to 130mph for two laps of the two-mile circle, which were over in a flash. The driver then threw the GT40 around the track section, hurtling into corners faster than I could blink. He seemed to have great upper body strength and he certainly needed it, with the non-power steering car handling like a dream. It was certainly an experience to remember and I certainly will. There is also a video of me in the car, available on the Aftermarket YouTube channel.

Following this, it was time for my self-driving experience in the Ford

Focus ST. I took the diesel model out, having driven the alpine course in the petrol version earlier this year. The car doesn't have the punch of the petrol; acceleration is slower but the torque still gives it enormous pull. With an instructor by my side I was soon throwing the car around the track, a rollercoaster of inclines and drops, taken mainly in third and fourth gear thanks to the engine.

## Thrown about

If I thought the day couldn't get any better I was wrong. The final event for my group was Paddock Attack. Using a new 5.0-litre V8 Mustang, we were taught to throw the car around a section of the Millbrook steering pan, with a slalom course followed by cones to drift and donut around and finally a 'garage' to stop in. This is something I'm not naturally good at, despite having been born and bred in Essex.

My Italian instructor was certainly flamboyant, throwing the Mustang around with ease. Then it was my turn. Keeping it in second and using the car's power to help steer between cones, it was then time to turn sharp in while hitting brakes then going full throttle to get the rear wheels spinning and the tail sliding out. Then, to prevent a full spin, it was time to blip the throttle to keep control, spinning the rear wheels



in the process. The instructor was so pleased by my first attempt that in the second he tried to get me to complete a series of donuts around the cones! I'll admit to stalling in the garage however – after all the brake and throttle work, I completely forgot about the clutch in the excitement...

## Hard work

While I was there, hooning around in cars and having lots of fun, I was also there to speak to the team at Castrol about their products and the development. The Ford GT won the Le Mans GT Pro class this year, with all three cars making the finish in their first attempt back in the endurance race. All the cars ran the Ford EcoBoost engine and all featured Castrol engine oil and lubricants.

I sat with Paul Beasley, Technology Manager at Castrol, to ask about the development of lubricants for this engine in particular, as well as others in the Ford EcoBoost range.

I wanted to find out more about the work Castrol does with Ford and how a strong relationship with an engine manufacturer can help to build a better product. Paul told me: "From a technical side, we have a strong relationship with Ford, probably stronger over the last ten years. We work together on co-engineering, so as they start to develop something new for example the EcoBoost engine, we will work with them on prototypes, trying to come up with the oils they need. The reason they have produced EcoBoost is due to legislations for more efficient engines. However, customers will not accept reduced power and driving pleasure and so the engines are getting smaller with more turbocharging with a better power-per-unit-size, and for them to be capable to do what they need to do, they need an oil that can let it be capable of doing that.

"If you start working together at an early stage of development at both sides, then the product you get is better than it would be if both companies work seperatly and at different times. We have evidence that the fuel economy was better with what we developed together during research than it would have been if we offered them an oil developed for something else and adapted."

## Product development

I then asked how long before the EcoBoost engine was launched did the team at Castrol start working on it. Paul responded: "From what I understand, we were working on prototype engines at least three years before the launch of the EcoBoost and we would have been talking to them about it before then. It was probably the first example of deep coengineering. Ford have a requirement of what they need to achieve and



it couldn't be reached with what was already available. Oil provides an essential part of what the engine does in terms of its eco credentials and it is more than just reducing the viscosity, adding some friction modifiers and making it more efficient. It's as much to do with how the oil and the engine react, the various places the engine and the oil interact and the impact on both. It has to run at certain pressures and temperatures and stay together to get the best out of both.

Finally, I wanted to get a better understanding of the difference between the road cars and the oil Castrol produces for the Le Mans winning GT. Paul told me: "If you compare this to a Ford Focus RS, both are using the Castrol Edge with Titanium FST. However, there are different demands on the road and on the track. The analogy I use is a bit like when you take a road car and turn it into a race car. You take something road-going, meeting all the regulations, then you modifying it to meet the demands of the track but no longer suitable for the road. We start with an oil that is suitable for road cars and then we talk to the team, understand their demands and needs, that the oil doesn't need to last for 15,000 miles but does have to cope with higher demands. So the oil in the GT is a modified oil that we have, making it stronger and more durable while using the same fundamental development and research but with an eye on delivering what that particular end-user is looking for in terms of the engine being reliable and powerful."

The day was both informative and fun and everyone left Millbrook with a smile on their face. I had to remember to go easy on the MG as we left, and it certainly was a day I will never forget.



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