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moleracing 2020 season - first report

2020 started with so much promise, but then the Corona Virus global pandemic showed us that there are more important things and put everything into perspective. So, while we cannot enjoy our sport and passion for a bit, I thought I'd share what I've been up to over the winter, action so far and what is planned for the rest of the year and where.

Winter Upgrades

The engine, a 2 litre Duratec from a range of average Ford cars had clocked up over 40 hours of running over the last 3 seasons and needed a '40 hour rebuild' – as this is no average engine after SBD Motorsport have worked their magic. If you look at your road car red line on the dashboard rev counter, you will see a limit general around 7000 rpm and you need to change up to the next gear on a petrol engine car. My normally aspirated, engine develops 307bhp and runs to 9200 rpm in normal operation (but I am allowed to take it higher on a temporary basis). In fact, when I change up to the next gear and the revs start to rise again, that start point is 8000 rpm! By keeping the engine in this range – think about that, the piston is going up and down 155 times a second – you get this horsepower, but that comes at the expense of special components and engine life. Hence the '40 hour rebuild'.

So the week after the last event, I took the engine out – always a messy job with oil and water lines, and then with the aid of some local muscle, we used a suitably padded wheel barrow to take the engine through the house and put it in the boot of the car to take to SBD in Surbiton.

It was tested and stripped down to a component level and a lot of parts were replaced that were worn or showed any sign of potential failure and collected again before Christmas. It stayed in the boot for quite a while until Kon from work was able to assist me in the reverse move – using ramps and a parcel truck as the wheelbarrow technique was dubious at best!



To protect this new beauty longer I have installed from SBD an engine oil pre heater. So, in the morning at an event, I just plug mains electricity into the car and the oil is warmed to 70 degs C before it has even fired up.



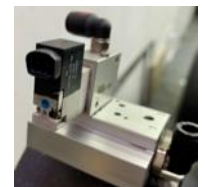
After double driving the car at Anglesey last October, the oil sump tank also showed up as being a little on the small side, being design for a Zetec engine, the Duratec needs an extra few litres, so a complete new tank was designed with guidance from SBD and fabricated by Alloy Racing Fabs in Newark and duly fitted gaining an extra 2 litres of capacity.

The seat belts on the car are 'lifed' meaning that after a certain number of years you need to replace them, Demon Tweaks did me a good deal and I went to black from the previous red just for a change.



Over the years I have been using a mix of wheel sets, and these are a right pain to change quickly due to wheel nuts being a different size and type, so I ordered another set of rims for my wet tyres and I finally have 3 matching sets of rims from Force Racing – one each for best slicks, practice slicks and wets. A new set of Pirelli slicks for 2020 completes the set up!

The pneumatic gear change valve block mechanism also needed some love and attention and SBD quickly turned this round and got it reliably working again.



Earlier in 2019, I had commissioned a new set of custom made brake discs, these were larger and making full use of the calliper rather than wasting the outer 20%. I also took the opportunity of getting some better second hand but identical callipers and sold my current ones. A new rear brake Aeroquip hose with brake pressure sensor to aid datalogging was also fitted. To compliment the new larger discs, I bought new brake master cylinders and went for a better quality from AP compared to the old Girlings. We also changed sizes to give a shorter stroke but firmer harder pedal as advised by Alan Mugglestone of Triple M Motorsport who shared, engineered and beat me comprehensibly driving my car at Anglesey last season. This should give a 25% upgrade in braking capacity – now I need the courage to use it!

A key gain from the car share with Alan was his skill in transforming the handling of the car during the weekend, but he wanted to go further and left me with some winter modifications to allow a greater

range of antiroll stiffness front and back, so this required re-engineering pick up points for the current bars which was also done.

The rear wing structure was an emergency spare following the Llandow crash last summer, so John Hansell of Carbon-fibre.com made this stunning new one, including the above rear antiroll stiffness change and of course the opportunity to fit a 'monkey seat' in was too good to miss.



I also commissioned John for 4 new body panels that were delivered in October and these look superb after many hours of T-Cut and polish! It sounds simple 'put new sidepods and sides on, but in reality, to get these to fit and then make all the new dzus fastener and spring fittings perhaps took 40 hours or more, whatever – the car looks great.

This then was finished off with a new set of principal sponsor graphics – showing Telsonic Ultrasonics off in a good light on the main body panel and LAC Conveyors & Automation on the engine cover!



All this work meant – as usual in motorsport - I went right up to the wire for the test, but I had the car running and ready in early March 2020. At this session, I had a detailed plan for bedding the brakes disc and pads in, then getting a front to rear brake balance and then hopefully testing and driving practice.

The schedule went slightly wrong when I got the trailer stuck on the wet grass and had to get towed out back onto tarmac. The day however went very well, apart from a clutch issue, which was surprising as nothing had changed in this area apart from strip, check and rebuild. We bypassed the problem and worked around it during the day and it didn't stop me functioning but was worrying. Subsequent post shakedown tests and new clutch stops seem to have cured the issue and a small garage start/drive/stop test went well.

Castle Combe here we come.....

With this successful shakedown sorted, 155mph/248kph gear set in, only a week to go for the first event, excitement was fever pitch to say the least as several of my competitors had not tested or even ran! Then with 4 days to go, due to Coronavirus escalating the Government quite rightly announced an UK wide lock down and that was it for motorsport until July earliest as we all confined ourselves away for 16 weeks or so.

Attention went to the trailer – brakes, a good clean, sort out the interior, all storage, the inventory, the lash down technique, in fact all those jobs that are not that important and you never have enough time to do!



So I now turned my attention to the front anti roll bar – a job from Alan after Anglesey and designed welded and fabricated some new pick up points. The initial mk1 arm extensions, kindly fabricated and disinfected for me from David Hunter Motorsport were great but bound up on the rocker at full soft setting. The mk2 versions I spent a day fabricating and welding, turned out to not offer the reduction I was looking for – design error! So, the mk3 were properly made in cardboard, then measured before fabrication and also have a range of adjustable in situ holes should I need to change range during the day.



Despite working from home all this time, with half the race season cancelled and with lockdown meaning we couldn't go away I had time on my hands at the weekends, so attention turns to those small jobs such as the oil catch tank overflow collection bottle – also known as an empty Lucozade 330ml bottle that didn't really fit but was functional! So, a sketch was sent to James at ARF again and this little beauty turned up in a jiffy bag!

James at ARF work, showing new oil sump tank and catch bottle

Testing first time round revealed a slight brake calliper piston drag issue so this was removed, measured and eventually turned 180degs and this has cured the drag!

At the end of June, Motorsport UK has announced a plan to return to competitive sport in a covid-19 secure environment from July inwards. This means no exchange of paperwork, no licences to be inspected/touched, no scrutineers touching your race suit, gloves and helmets, no spectators, no inside briefings, no marshals touching cars, in fact lots of measures to allow us to compete and everyone involved to be safe. Credit to every club and the MSUK for pushing this.

With the loss of some many meetings, all the championships have been cancelled for 2020, but some clubs are still trying to run events, including Nottingham Sport car Club, of which I have been competition secretary for many years, mainly as a means to try to give something back to the sport which I love.



Photo by Paul Screen - ScreenPhotography.co.uk

My first event is now a single lap at Castle Combe on July 18th and I can't wait! Again in preparation, I tested at Blyton this Tuesday 30th June, see above, and all went very well.....

Let 2020 season commence!

Steve



Both photos by Paul Screen - ScreenPhotography.co.uk

Events 2020		
18 July	Castle Combe	Wiltshire
1 August	Goodwood	Sussex
15 August	Llandow	S Wales
16 August	Pembrey	S Wales
5 Sept	Aintree	Liverpool
6 Sept	3 Sisters	Wigan
19 Sept	Blyton Park	Gainsborough
20 Sept	Blyton Park	Gainsborough
3 October	Anglesey	N Wales
4 October	Anglesey	N Wales

Telsonic – www.telsonic.com
LAC – www.lacconveyors.co.uk
SBD – www.sbdmotorsport.co.uk
Alan – www.triplemmotorsport.co.uk
John – www.carbon-fibre.com/
James – ARF - www.alloyracingfabrications.com