



## *Circuit Car News Letter No. 01*

*September 2005*



I've been asked to put together a few words to keep you all up to date with how the development of the Circuit Car is progressing. As you will probably know the car made its debut at the Shelsley Walsh Centenary Hillclimb meeting, driven by the Head of Product at Lotus, Tony Shute. We were delighted with both how well the car ran and how well it was received by everyone who saw it, in fact at times the level of attention we got made it difficult to get through the crowds to work on it! Over the weekend we made five runs up the hill; two practice runs on the Friday and one practice and two competition runs on Sunday. Because this first car is a prototype the event organisers elected to place us in the Sports Prototype class which meant we were up against some very exotic machinery, mostly with 3.5 litre Judd ex-F1 engines! The initial practice run returned a time of 34.55 seconds, which was very encouraging in comparison to the cars that production versions will run against like Caterhams and Radicals.

Tony reported that the car was understeering through the first corner (Kennel) due to suspension settings or possibly tyre pressures. This was preventing him getting on the throttle as early as he would have liked to get a good run up the main body of the hill. We therefore revised the damper settings and front geometry a little and saw a small improvement on the second run. On the Sunday morning we made a few more changes, including a tweak to the rear wing setting, but the practice run only gave us a time similar to that we saw on Friday, highlighting the difficulty of fine tuning a car with long time periods between tests. With



understeer through the first corner still the main issue, we returned to something closer to the previous set-up and also made a few changes to the launch control system to capitalise on what seemed to be a grippier start-line than when we had run on Friday. This obviously worked well as Tony returned an excellent 33.13 second run and reported the balance of the car felt significantly better. For the second run we decided to try running with even less down force from the rear wing which in hindsight was a step too far as the final time of the weekend was slightly slower than the previous run and we just failed to break into the 32's. Over the whole weekend the car ran perfectly, which was very pleasing when you consider that it went from a design sketch to running in the event in just eleven weeks!



On our return from the event we immediately started a programme of weight reduction together with detail improvements to areas where lack of time prevented us from achieving an acceptable solution at the first attempt. We are currently fitting revised front upper wishbones and steering arms to correct the steering geometry in relation to the extremely low ride heights we are running the car at, which will give us more scope to resolve the understeer issue and also improve the steering response and feel considerably. We are also working on the development of a revised high capacity baffled sump which should eliminate concerns with oil surge at high lateral acceleration. Once we have completed a suspension and tyre set-up programme

with the revised geometry front end we will embark on a brief wind tunnel session to confirm the aerodynamic balance of the car with the various optional wing combinations and also to understand where we might make some improvements to the drag co-efficient without negative impact elsewhere. The work we have done since Shelsley is already reaping rewards, prior to the event the fastest speed we saw down the main straight at Hethel was 128mph, we are now regularly hitting 145mph before the Chicane and are confident of improving on that before much longer! Anyway, nice as it is to sit here and chat with you all, I really must be going so I can get on with the next set of tweaks. I would be very interested to hear your thoughts on the car and suggestions for optional parts or accessories you would like to see, so please feel free to drop me a line at <mailto:circuitcar@lotuscars.co.uk>



All the best,

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