

# North Kent Lotus Group



## Editorial.

The main event of the last month was, of course, the AGM. This was one of the best-attended over recent years, which was good to see, and all the points of business were swiftly processed. The headlines being that none of the Steering Group positions were challenged and the current incumbents were therefore re-elected, and there was some fine-tuning to the Toolshare scheme, with the addition of a couple of new 'rules'. These are that a would-be borrower needs to have been a member of the Group for at least 12 months, and that a £25 deposit shall be paid to the lender, neither of which should seem unreasonable to fair-minded people. There had also been some concern regarding the on-line security of the scheme, however since this is limited to a simple 'contact' mechanism, this was not deemed to be a significant concern.

John P noted that one suggestion that got a good level of support in the Christmas meal 'vote for your favourite event' was the quiz night. This will be a winter event, so we have some time to get organised, but what it does need is an organiser! John did ask for a volunteer or two, but so far as I'm aware nobody stepped up on the evening, so this is a role yet to be filled. So *please*, can someone take this one on?

In my report as Newsletter Editor I called for, not for the first time, a volunteer to assume the role of Editor. I am sure you have tired of my noting that I took this role on on a temporary basis, in the belief that the newsletter is far too an important aspect of the Group to allow it to disappear. Since then, I have been thinking this through. Clearly that is my view, and perhaps I have a biased opinion on the matter, but in this electronic age am I maybe a little out of touch, and perhaps it's not as important as I think it is? I certainly think we are regularly entertained by interesting Lotus-related articles each month, but the day to day business matters of the Group are emailed to the Members and, for those who use the facility, published on the Facebook page. Equally, I do not receive any feedback on the newsletter, positive or negative, so working on the principle that no news is good news and I have carried on regardless. Maybe it's just that nobody's interested!

I did state, in my AGM report, that I was giving a year's notice to my giving up the Newsletter Editor's role. This is not because I don't think it's worthwhile, far from it, but because I find it difficult to find the time I think it deserves. This has perhaps been compounded over the last year by, in addition to work, building a garage and, through the winter, rebuilding the brakes and suspension on the Elise, but for whatever reason, I'm too tired at the end of the day to find time to attend to it. Alternatively of course, I may just be getting old.

I would be interested in any observations anyone may have on this, and I'd be even more interested in hearing from a volunteer .....

Finally, and as usual, my great thanks to the usual suspect for another excellent contribution to the newsletter.

## Contacts

**Meetings: 2<sup>nd</sup> Wednesday, The Moody Mare. Seven Mile Lane, ME18 5QY**  
**[www.northkentlotusgroup.org](http://www.northkentlotusgroup.org)**

## Better Brakes?

During my eleven-year ownership, my Elise S2 brakes have never had good initial low speed “bite” and during a recent visit to Roger Day I looked closely at two new front disk’s he had purchased from Elise-Shop.com and wondered if it was time for me to do the same. I had already started to refurbish my brakes by replacing all the original flexible brake pipes for stainless steel braided versions.

I had been forewarned by Paul Matty’s Chief Mechanic that if the hydraulics were drained, it is not easy to eliminate all the trapped air due to the layout of some of the interconnecting pipes. In fact, it took 2.5 L of Pagid Dot 4 fluid and a combination of a Gunson Eezibleed pressure system and good old-fashioned foot pumping (thanks Diana) to eliminate the trapped air bubbles from the fixed pipes. The S2 brake capacity is only 1.5 L. *(I can vouch for that, I’m still pumping! – Ed.)*

My Elise had front pads, of unknown origin, fitted by Paul Matty some ten years ago and they do not appear to have worn down much, but my front disk surfaces seemed to be rather discolored / blued which suggests that the fitted pads were much too hard. Obviously, Lotus specify pads capable of meeting the maximum performance of the car but just how often will it be driven at its maximum on the road, hence softer pads for everyday use may be better, well that’s my hope!

There are also many possible replacement disks for Elise’s on offer, some of unknown origin (eg, E-Bay - to be avoided) and some up-grades are offered at exorbitant prices (eg. Oversize or even floating Bell versions).

The Elise S1 and S2 have very different disk designs and are not interchangeable. The S1 has Lotus designed alloy uprights and the more recent disks available are by necessity copies of the original MMC disks and have short straight ventilation vanes, where the S2 has what I believe are cast MGF uprights and long curved internal vanes.



Cross drilled S2 disk.

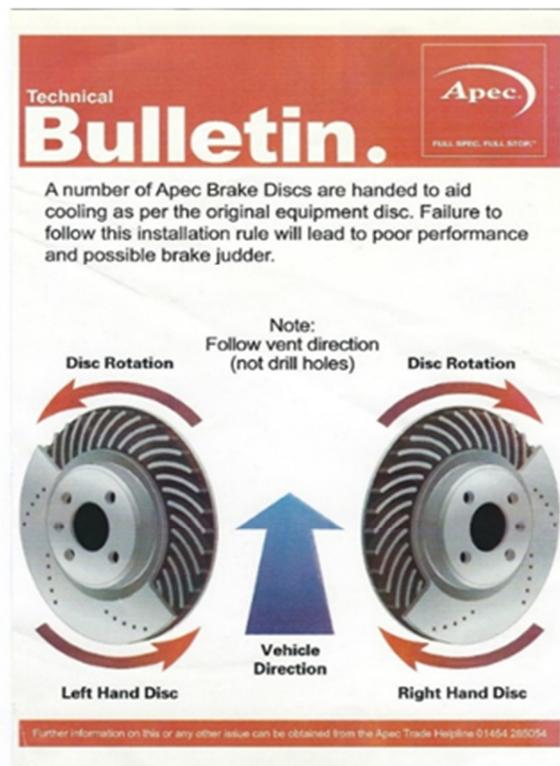
Upgraded S1 disk

Looking at the S2 curved vane type only, according various articles I have read, the air enters the disk void at the center (inner side) and is “centrifugally pumped” out of the periphery by the action of the curved vanes. According to one published paper the “*air flow is directly proportional to the rotational velocity of the rotor disk (Galindo-Lopez & Tirovic - 2008)*” which seems to make sense to me.

The air flow is assisted by the vanes curving in the opposite direction of disk rotation BUT searching the Internet revealed that most replacement S2 disks sold **ARE NOT** “handed” eg. Direction of the curves is wrong on one side and is a cheaper way to manufacturer them, which seems to me not to be right.

Elise-shop sell S2 NON-HANDED cross drilled disks for about £110 PER PAIR inc Vat and PP (but make unknown).

However help was at hand as “Seriously Lotus.com”, sell cross drilled and handed disks at £119 PER PAIR inc Vat and PP which are made by Apec of Bristol (01174 288100). On receipt of my new Apec disks the following bulletin was included which makes fitting very clear.



As can be seen in the bulletin, the curved vane outlets should be directed in the opposite direction to the forward rotation. According to Apec, if the flow direction is not the same on both sides of the car, then “hot spots” can occur on disks with vanes curving in the wrong direction effecting braking performance eg. greater heating on one side due to less air passing through the curved vents if facing the wrong way. The straight S1 vane disks do not have the same problems and rely on pressure differential or so I believe.

Replacing my new handed disks required the removal of the calipers, lots of cleaning and a small amount of thread lock solution on the caliper retaining bolts upon reassembly. S1's requires an alternative locking compound as the uprights are made of aluminum.

EBC Greenstuff pads completed my refurbishment and I now need some nice weather to bed everything in and see how good the braking is.

By the time you read this article I will have found out!

Vaughn