

# Lotus Enthusiasts Organization

NY-NJ Area

**Dateline: September 9, 2002**



The worst of the dry, hot summer of 2002 is behind us. Time to give those air conditioning systems a break! (For those with older Loti, that means you don't have to get as wind-blown to stop the sweating....)



Atwell Haines' '88, Shane de Burca's Caterham, Joe Saturnia's '99 at Jockey Hollow Park.

But back in August, it was a nice LEO turnout at the **Salute to Horsepower** show at the Lord Stirling Stables in Basking Ridge. It was a very hot, dry day and the field was a dust bowl...so after we went on our short drive from the Saturnia's place (through the Jockey Hollow park) we arrived at the Stables. We promptly commandeered a semi-shady spot off the paved parking lot and hung up "Lotus Parking Only" signs...with a canopy for shade. That's the way to attend a car show!

In addition to Shane, Joe, and myself, Mike Orenstein was there with his Elise, and Lee

Weinstein was there (but with his very nice Cobra). They had enough of our cars that the class was split to give the Alfa guys a break (really, that's what they told us!). I was a bit crazy from the heat (several of us were unable to take pictures), but Lotus took two of the three trophies (I think Mike and Joe's cars got the hardware).



More than one LEO member had adventures at the **Watkins Glen Track Day**. Jim Cummings, David Nagler, and Bob Jasek participated. Bob's turbo seal blew out, and David had his turbo fail too – in a most spectacular way, according to eyewitnesses. Here is David's story:

As you know I modified the suspension of my '85 Esprit after talking to Ralph Stechow of RS Motorsports, and Lotus engineers Dave Minter and Alastair McQueen. I collected all my suspension parts (another long story, as all the stuff that Ralph recommended as an "upgrade" wouldn't fit) for the car and had Ralph install them before the Watkins Glen event. The Esprit seemed great.

Had a great first day.

So on the morning of the second day at the Glen, I was full on the throttle passing an AAR 'Cuda on the back straight when I heard a "pop" and felt a sudden loss of power. Still had some power, but no boost. "Damn, blew the turbo!" By the time I was in the "boot" I started killing mosquitoes. By the time I got back to the pits it sounded like there was loose change in the turbo.

Car was FANTASTIC up to that point. Quite inspiring after [the Lotus Driving Experience] at Hethel. Brakes (the Willwood conversion from Lotus by Claudius) were phenomenally strong, as was the engine.

Take turn 11 leading onto the pit straight for instance...brake hard for the turn-in point, the rear gets a little squirrely as the front loads, turn in just as the brakes are being released and "BAM!" the car rotates immediately and accurately towards the apex allowing an early squeeze of the throttle and "whoosh" right out onto the front straight at terrific speed! Inspiring, until it all went up in smoke!

I need a trailer, big time!



**More “Nagler News”:** Now that he has that nice big garage to fill, David is not wasting any time filling in the blank spaces! He has added TWO more Lotus cars to his fleet...an Elan +2 and a 94 S4. Well done! Here’s the story of the acquisition:

It all started the Saturday after we returned from the Lotus Trip to the UK! I was on Tony Vaccaro’s site and figured I’d check out the classifieds...mistake #1.



Plus 2 (foreground), '85 TurboEsprit (background)  
Somebody has to rein this boy in!

There was an Elan +2 looking pretty damn good, located in Manhattan. Ad said car maintained by RS Motorsports with motor and tranny recently rebuilt by him. I just had to bite...hell, I need a Lotus that I can get (wife) Sandy and (daughter) Allison into at the same time!

Long story short...I went down to the Big Apple on Sunday, and we couldn't get the car started. It had been sitting for 6-months and the guy's super had put a wheel boot on it, so we couldn't

move it either. I told the guy he'd have to get it running if I was to buy it at his asking price. As you may remember, I already had an appointment for Ralph to look at Rob Grady's S4S. That was the next day Monday. Long story short, the +2 owner had the car flat bedded to Ralph's on Monday and I bought BOTH cars.

Anybody else have any new wheels? Let us know, Lotus or not!



Ever wondered just how much that dainty Elise weighs? Has your car lost weight because parts have been falling off (see Turbo story above...) and you want to know how much? Just repainted your car with 20 coats of hand-rubbed lacquer and think it's a bit heavy? Well you could find out exactly how much your car weighs courtesy of Lee Weinstien. His business in Union, NJ has the facilities to weigh autos.

Let me know if you are interested in weighing your car...if so, we could have an October Drive and end up there!



I've been working on my Lotus this month too. Following is how I replaced **the rear inboard rotors** on my '88 Esprit. (*I encourage anyone who has done any work on their cars to write up your procedure, with your own tips that make the job easier, and we will publish it. As usual, all technical pieces are to be used at your own risk...we take no responsibility for that wrench that falls on your head, or any mistakes you or we may make in the write-up.*)

## Replacing Rear Rotors on Esprits with Inboard Disc Brakes

Eventually you will need to remove and replace the rear brake rotors on your Esprit. While the outboard front brakes are just like any of a thousand makes of cars, the inboard rear setup makes the job seem a bit daunting to the novice. The following are my experiences with the repair. It's not really a bad job at all as long as you know a few tricks. As usual, the Lotus Service Notes only mention the procedure in passing.

My rotors were originals, and I had warped them by applying the parking brake after a lapping session at the racetrack. <tsk-tsk> NEVER do that...always let the brakes cool before applying the parking brake! So, I decided to replace them with a pair of cryogenically frozen rotors from Diversified Cryogenics ([www.frozenrotors.com](http://www.frozenrotors.com)) to match the front set that I installed last autumn.

Tools needed:

8mm Allen Key or socket  
Penetrating Oil (I use Armor-All)  
Coat-Hanger Wire  
Wrenches  
Ratchet and sockets  
Spray Can of Brake-Cleaner  
Anti Sieze



The driveshaft. Note the allen-head capscrews on each end. Inspect the rubber boots carefully.

I put the car on my parking lift for this procedure...if you don't have one, lift the back of the car with a floor jack on the rear frame hoop, then let the car rest lightly

on jack stands placed under the rear jacking reinforcements on the body sills. Be safe!

The first thing to do is to make your life easy by spraying the hardware with a penetrating release agent. As I use Armor-All, I killed some time waiting for it to do its thing by cleaning and soaking the axle's rubber constant velocity joint boots. These should be inspected carefully! If they are cracked get some new ones, as it is convenient to change these while the axles are out.

Next, release the six 8 mm allen head capscrews that hold the inboard end of the driveshaft in place. (I marked the position so that I could put everything together the same



The rotor and caliper

as it was, although the shop manual doesn't mandate it.) I was using an allen wrench so I had to apply more breaking torque by putting a pipe on the end of the wrench for more leverage. Some of the capscrews could only be turned a flat at a time due to the position of the suspension. This was the most tedious part of the procedure. Luckily only the inboard set of screws, nearest the brake rotors, need to be removed. Once the axle was free it was wired to the trailing arm to keep it out of the way during the rest of the procedure.

The three 17mm nuts on the brake rotors should be loosened two turns next. It helps to have the parking brake applied here to prevent everything from turning while you are breaking the nuts free. Don't remove the nuts at this time.



The inboard side of the axle wired out of harm's way. Rotor to left.

Next the two brake calipers would be unbolted and moved aside. There are only two 19mm bolts on each caliper and they can be reached with various combinations of sockets and wrenches. (Once again I found that my set of Gearwrenches™ made the job go MUCH easier...) Hang the calipers out of harms way with a length of coat hangers. Don't put stress on the rubber brake line!

After both bolts are withdrawn, the calipers should be wiggled back and forth to spread the calipers a bit. (Remember the new rotors will be wider than the old ones!) Opening the cap on the brake master makes it a bit easier for the fluid to return to the reservoir.

Then the three bolts on each caliper may be fully removed. You may find that the studs come out with the nuts. That is OK. In fact, if one stud comes out it makes removing the rotors easier. Rotate this position to be at the top. Then remove the old rotor.

Clean up all the mounting surfaces so that you get a nice flush mount before fitting the new rotors. And don't forget - new rotors come treated with an anti-corrosive coating, so be sure to remove this with Brake Cleaner. I coat the mounting surfaces of and all threaded areas with anti-seize before reassembly.



Note the caliper wired out of the way, now the rotor nuts are fully removed.

I replaced the rear pads with new Mintex Formula 1144



Close-up of the face of the brake caliper. The middle slot is 1/4" wide, the line indicates the top of the caliper.

race/street binders. This required

that the caliper pistons be retracted into the caliper. A 1/4" inch ratchet extension does the trick here. Make sure you orient the slot properly according to the instructions in the Service Notes.

Now came the tricky bit: repositioning the new rotors onto the hubs. If the top rotor stud is missing, the job is a lot easier. (I keep stressing this because I found this out on the SECOND rotor!) Once the rotor is loosely nuted in position, the caliper can be mounted next. Now you will know if you retracted the caliper enough. The loose rotor allows you to angle the loaded calipers into the proper position to slip over the rotors.

You can then loosely start the caliper mounting bolts. Then you can tighten the rotor nuts. (Do any studs you have removed first, simply double-nut the long (rotor) end of the stud to crank them in.) Torque everything according to the manual. This is especially important on the rotors, as you don't want to warp them!

The last thing is to replace the driveshaft into the inboard rotor. Torque the allen capscrews to 60 Ft-Lbs. After a few miles of driving I re-checked all the hardware to make sure it was still tight.

The other side rotor is nearly the same as the first. Some of the approach angles for the tools were different, but it wasn't any harder.



Lastly, we **MUST** mention the ultimate gathering for any Lotus owner in any given year: Lotus Limited's **Lotus Owner's Gathering**, to be held September 20 – 23 in Lake Geneva, Wisconsin! I haven't missed one since 1994, and it's a real treat to get together with fellow Lotus owners from all over the country, whether you drive out there or not.

Several LEO members are making the trek, both on their own or in the official LOONY caravan, which brings the safety of numbers to those travelling the northern route (through Buffalo, NY, then across Ontario and Michigan, then onto the SS Badger to cross the mighty Lake Michigan). Our trip will be more southerly, making a beeline across Route 80 then swinging North just past Chicago --- about 825 miles.

If you want to join us last minute, contact me before Friday and I'll get you connected with someone who is going your way. Remember that full details are on the Lotus Ltd web site [www.lotusclub.org](http://www.lotusclub.org).

Next months Newsletter will have pictures and write-ups on how it went!

Later,

Atwell Haines  
'88 Esprit  
Succasunna, NJ  
973-927-3765



Another New Naglermobile