



# LotusLines

September/October 1990

6th Year of the Club ... 39th Year of the Marque

## Chairman's Ramblings by John Daniels

Once again I'm beset by that strangest of all ailments, called grinning foolishly from ear to ear. I very rarely had this problem prior to my falling in with the present company I keep, namely the Evergreen Lotus Car Club. This latest outbreak was caused by one Peter Wolf. He brought on this attack by calmly stopping by my house the other night in his new, to him, Catterham 7. This was the first element in the necessary string of events to bring on the dreaded ear to ear grinning attack. The second almost necessary element was the weather. On this particular night it was about 68 degrees at 8:00pm. The final element of course was when we went for a spirited ride on a few of the many fine back roads in our neighborhood. This is one fine piece of equipment and extremely tight. The direct and immediate result of this ride was for me to go in the house and announce once again that we needed to get busy on our Seven. Nikki, as usual, agreed and changed the paint color once more.

With the above out of the way I feel obliged to proceed to club business. Welcome to new member Jim & Kathy Anderberg. They are presently looking for an 83-87 Turbo Esprit. Jim lists his hobbies as restoring a Ford model A Ford and collecting Lotus models. Hopefully we will see him at one of our coming activities. Speaking of activities I want to mention the Technical seminar recently hosted by Lotus Car Club of B.C. Several Evergreen Lotus Club members were present at the seminar and all of us agree that it was well worth the time and money. The seminar consisted of presentations by Graham Arnold, previously with Lotus several times, and Pat Thomas, presently a Lotus dealer in England. Both gentlemen are extremely knowledgeable and enthusiastic Lotus supporters.

Several items I feel worth repeating are: The new Elan is now delayed until at least next March. This latest delay is due mostly to the need to install an air bag for North America. This air bag may result in a redesign of the nose. A four-wheel drive Elan is still very much a possibility as is ABS. As a side light to all this the Geo Storm is available with the same engine and transmission used in the Elan, but sporting 190hp and four-wheel drive. If you like the looks of the new MR 2 or think it looks familiar, you are right. It apparently is a direct descendent of the Lotus M100 design exercise.

Other points of interest are that Monroe has bought Armstrong and it is possible that this may result in either a shortage or high prices for specialty shock absorbers in the near future. One last tip is that if you are buying parts or cars directly from England be sure of your contacts. It has become a very big business ripping-off foreign purchasers in England. It is recommended that you contact Lotus or Club Lotus prior to purchasing anything directly from England. We were also

reminded once more that many Lotus parts for older cars are available from Lotus and that many look alike parts may fit but are not always up to Lotus standards.

We are currently trying to put together a joint drive in the Mount Baker area with the BC Lotus and Morgan Clubs. If you wish to participate please give me a call so I can notify you when we get the drive put together.

As much as I hate to do this, I feel it is time for the club to elect a new chairperson. I have really enjoyed this position but feel I am running short of ideas and that the club could benefit by having new leadership. Please come to the January meeting prepared to volunteer either yourself or someone else as a candidate for the position.

1959 Lotus 18 F jr Complete, Original. New brakes & Primer. \$75,000.  
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1984 Lotus Turbo Esprit, Road and Track cover car Sept. 1985. We have the exact edition with photos. Lotus yellow 11,000 miles. One owner. Pristine condition! Also red/tan 84 Turbo. Flawless \$27,900 or better idea. Trades gladly accepted. Kurt Hansen (415) 945-1067

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#### Calendar of Events (Past, Present and Future)

August, Sat 18th, Annual picnic at Terry and Lezlee's.

September 1st thru 3rd, All British Field Meet at PIR

September, Sat 22nd, meeting at Bayside Lotus.

September, Sat 22nd, a static display put on by AutoGear at the Sears Overlake mall. If anybody wants to display something, give John a call.

October 21st, meeting will be held at the Lakeside Deli in Kirkland with a cruise to wherever on the backroads around Monroe after we eat some of their famous chili.

November, no events currently scheduled

December, combination November/December meeting and Christmas party at Noel and Bobbie's house. Date and map will appear in the next Newsletter.



## The Dreaded Emissions Test by Frank Grabner

By now, it's apparent to most of you that our beloved state is getting to be pretty tough on exhaust emissions these days. If you've had the experience of going through this process recently, as I have, you know what a painful exercise this can be. For those of you who haven't, eventually your day will come. I thought I'd add a little bulk to this month's newsletter and relate my own personal experience for your entertainment and possibly pass along some pointers. Since there are so many Series I Esprits in this club, I expect this will be widely read!

The car: 1978 Lotus Esprit Series I

The Federal version: Air pump, fuel cannister, catalytic converter, Zenith-Stromberg carbs, 140 hp.

My car: None of the above, 160 hp.

Having modified my car to European configuration with the much better Dellorto 45DHLA carburetors and other minor changes, I have always found the emissions test to be a dreaded experience. With the new laws in effect requiring a "cruise" speed as well as idle test, and the lowering of hydrocarbon limits to 600 parts per million from last year's 800 ppm, this year had every promise of aggravation. I was not disappointed.

After having carefully noted the idle screw settings from last year's successful test, I began by adjusting these as before and entered the test station. It was a weekday at 6:30 P.M. I read the sign that said "new station hours 9:00-6:00 Mon-Fri, 9:00-1:00 Sat". I readjusted the mixture screws and went home.

I tried again during my lunch hour a couple days later. I didn't pass. No surprise. I asked around work for some advise. A fellow who is well experienced in automobiles recommended I seek out the gang at Aurora Carburetor.

I called and made an appointment for Saturday at 9:30. After the usual waiting around for all the other "cars ahead of you", I finally got my turn at the emissions machine. Lee, their expert emissions specialist, took one look and muttered something about "I ain't touching it!" but permitted me to do a little tweaking of my own. After about 45 minutes, I thought I had reached a setting that would pass. Lee advised me to let off the throttle slowly after the cruise test and return to idle gradually. This reduces the burst of hydrocarbons that usually accompanies this transition. I drove to the test station for my second test with confidence that, with a little controlled footwork, I could make it. I arrived at noon and reran the test. So close. Missed the CO at cruise by a paltry 0.05%! I stopped back in at Aurora Carburetor. Lee suggested I try again next week. "What could I do to improve my chances?" I asked. "You mean besides moving to Cle Elum? Get yourself some leaner jetting". Somehow it felt much like asking a woman out for a date and, after she declined, asking her what I could do to improve my chances! Some things are destined to be hopeless.

The following Saturday was the Bellevue ABFM which did not permit any time to pursue the problem. It was a record 94 degree day. There's

nothing like the sight of dozens of British cars emptying their radiators all at once like that. I had obtained from our friends at Dave Bean, some smaller main jets and installed them. The car ran horribly but it didn't matter. This was only temporary!

I called for days to fix up a time with the boys at Aurora Carburetor and they were always booked up. Finally we agreed that I could try the following Saturday. On a whim, and having a great deal of misplaced confidence, I thought I'd risk another test at the station. I gave up another \$16 and failed. The test technician, observing that it was my third test suggested I go for a waiver. Of course, the only receipts I had were for the purchase of jets which isn't sufficient evidence. Besides, now if you request a waiver, they pop the bonnet and look at your setup. If you are not stock i.e. equipped per the list above, you "pass it or park it!"

The third test was my worst yet, so I changed my idle jets and kept my appointment at Aurora Carb. I did some more tweaking but couldn't come up with anything that even looked close. I went home dejected and waited until Monday to order more jets and consult with Dave Bean. They said to try retarding my ignition a few degrees and recommended more jet combinations. The parts were on the way. The month-end clock kept ticking.

A few days later with adjustments made and new jets installed, I tried again to get an appointment with Aurora carb. They were busy as usual and time was running out. My thoughts were to try a few other "recommended emissions specialists". I spent a day driving around following the list. Everyone took one look at the car and expressed a clear desire to avoid it altogether. A couple even had the nerve to chew me out for waiting until the last minute! Yeah, like I had just been ignoring the whole thing to this point! I gave up and drove to the test station. I thought the one more free test I had coming might just pass and I could be done with it.

I got myself in a rather lengthy line at the test station since it was now the 31st. When my turn finally came, the test person requested \$16. I explained that it was a retest and she explained that you are permitted only one free retest, that is, test two. All subsequent tests had a \$16 charge attached. I explained to her in a tone that was partially affected by the circumstances, that I wouldn't pay \$16 to once again find out what impact my latest modifications had made. She suggested I discuss the matter with the guy inside the office.

I told my story to the station supervisor who said, "Yeah, you've got a real problem there". He gave me an 800 number for a Department of Ecology hotline to call before noon the following day. I pointed out that today was the deadline and he provided me with a 30 day extension. I also had to sign a form stating that I would resolve the situation in 30 days or they would have all my relatives shot. At least I had permission to acquire my tags.

The next day I contacted Bruce at the 800 number and he referred me to Fritz Merkl at the eastside office. (It's located near the Nintendo

offices at 4350 150th Ave NE, Redmond). Fritz heard my story (poor guy) and we made an appointment for noon the following day to resolve the matter.

I arrived with my barely running Lotus and met with Fritz. I had told him that my Lotus factory manual had recommended the CO level to be set at 3.5-4.5%. The state of Washington was asking me to achieve a level that the car was never designed to do (even with all the add-ons). He made copies of the pertinent pages of my manual and we adjourned to the back of the building where he was set up with a tester. He wanted to see where we were before we started to change anything. I went through the test per the usual procedure and, lo and behold, I PASSED! I also passed with considerable margin, so my last set of changes had done the trick. In hindsight, I could have paid the \$16 for my last test and made it. At least I had the benefit of this test being free. Fritz was prepared to let me pass based on the levels recommended by my shop manual but it proved to be unnecessary. He also said I'd have been welcome to stay and interchange jets to my heart's content using his analyzer until I was able to make my car pass. I was very pleasantly surprised at how helpful and positive his attitude was. He closed by telling me to take one test next time and, if I fail, go directly to him.

So what was the magic formula that worked? I am sure there are other ways to get there but, what worked for me was:

|                    | Test           | Stock           |
|--------------------|----------------|-----------------|
| Main jets          | 140            | 160             |
| Idle jet           | 55             | 58              |
| Idle emulsion tube | 7850.7         | 7850.9          |
| Ignition timing    | 2 degrees BTDC | 10 degrees BTDC |

The Air emulsion tube is the assembly that holds the idle jet. In general, the trick is leaning and achieving the most efficient combustion you can. My final emission stats were:

|                        | CRUISE | IDLE | LIMITS   |
|------------------------|--------|------|----------|
| Hydrocarbons (HC ppm)  | 40     | 110  | 600      |
| Carbon Monoxide (CO %) | 1.6    | 1.2  | 3.0      |
| Carbon Dioxide (CO2%)  | 14.0   | 13.5 | 5.0 min. |

I hobbled home in my barely running Esprit and promptly set everything back to normal. It's a relief to know that I won't be faced with this for another two years. I'd recommend contacting Fritz (867-7113) for help when it's your turn. He's a very nice guy and has an enthusiasm for the car. He's also realistic. He even went so far as to say, "What if every Lotus Esprit in the state of Washington had excessive emissions? We'd only be talking about the pollution contributed by about a dozen or less cars. How many cars do you think are on the road that are older than 1968?"

Western Washington All British Field Meet - a postscript by Terry Elmore

For the benefit of those club members who didn't attend this event in July, a few words on this year's event and on plans for next years Meet, both in general and our Club's plans.

Lotus attendance was down a little from the premier Meet in '89. I believe we went from 21 cars to 15 or 16 cars this year. More to the point, the out of state attendance that I had projected did not materialize as we had no cars from either Oregon or British Columbia. We can only put this down to the combination of record high temperatures and the fear that coinciding with the opening of the Goodwill Games would lead to great traffic and hotel hassles for out of towners.

Our club display was well put together and all credit must go to Bob and Shari Crichton. They assembled the tent, table and chairs, set off by some nice shrubbery, making for a great place to get out of the sun. A number of club members became fixtures here, we had no trouble keeping someone available to answer questions! Jim Taylor's rolling Europa chassis, which served as our main display fixture, was the object of much interest and he received several offers to buy it from him.

I attended a post-Meet gathering of the club representatives, the week after the event, and thought you might find some of the comments and ideas for next year interesting. The one unanimous criticism or complaint was the extreme of temperature, but of course the organizers have no control over that. The announcing of the awards came under fire, although it was pointed out that this year was unusual in that it was a one-day event, with no awards banquet, a feature which will return next year.

Ken Bottini, President of the MG Car Club and the man most responsible for this year's Meet, and he insists will not be responsible for next year's, presented an idea to me which I think is great and I would like to see Evergreen Lotus take it on as our contribution to the Meet. The organizers have stayed away from doing anything like choosing an "honored marque", as they quite rightly have wanted to establish a separate and distinct identity for our Meet in order to distinguish it from the Portland and Vancouver BC All British meets. Instead, they would like to have displays set up around a common theme and Bob suggested a competition theme, setting up a circuit of hay bales and having a line of British competition cars snaking through them. Lotus is the obvious marque to feature here and this could also be a good tie-in to get some of the members of SOVREN with British racers to display their cars. We'll discuss this further at upcoming meetings.



## Stripping - How to Have More Fun

reprinted from The Chapman Report,  
Newsletter of the Golden Gate Lotus Club  
by Joel Farber

Maybe your Lotus could use paint and you have time on your hands and you need a challenge. It is generally accepted that if you want a "real good" paint job, you want to start by getting down to the naked surface. Additionally, getting all that old paint off reduces the weight of the car, aiding the performance.

Well, the following are some considerations and revelations discovered as I decided to strip the paint off my 1969 Elan+2 to prepare it for its new paint.

The historical wisdom and almost universal practice among the west coast professional glass painters I have talked to is: "grind it off". However, I was concerned about my skill and results, possibly ruining the gel coat or the shape, by using a power grinder. I will not discuss the pros and cons of the two approaches, which gets religious.....

Alternatively, according to Miles Wilken's book, "How to Restore Fibreglass Body Work" (Osprey series), the other method is chemical stripping, with care!!! This is the route I chose. It took me in the vicinity of 100 hours and about \$60.00 worth of stripper.

Many strippers say that they strip glass and do it, but soften the gel coat. A water soluble stripper, applied properly, is necessary. I used J. Scott Company's RFD stripper (175 Barneveld Avenue, San Francisco, CA, 415-824-1741).

They aren't enthusiastic about selling less than a case, however they are more pliable if you go and pick it up. This stripper worked well and left the gel coat hard as a rock, when the directions were followed. It was very safe in that the stripper could be left in contact with the gel coat for several minutes without damage.

One benefit of chemical stripping is that since the glass gets completely exposed, all the glass defects are easily visible, so none are missed as might happen if repairs are made only where the defects show through the paint.

One disadvantage of the chemicals is that once chemicals have been used on paint you are committed to remove all that paint. New paint will not adhere well to contaminated paint. So the worst case is needing to sand to remove "partial work". However, I had no such problems.

Let me note up front that there is some messiness involved in the process, and you absolutely should PROTECT YOUR EYES at all times. I also used black textured Boss brand gloves that I got at Orchard Supply for \$2.50 that worked extremely well and didn't dissolve. The stripper burns skin but is neutralized by water, so have some handy.

My car had four coats of paint when I began: an outer black coat over the car, sometimes below that was a red primer, below that was what I believe to be the original factory British Racing Green, below that a gray-white primer.

The effort to strip the paint was uneven. Sometimes the paint was stubborn (especially areas like the bonnet that were engine baked), other areas were a piece of cake. Your effort will vary depending on the specifics of the paint.

I discovered that there is no one technique for doing the stripping that works for all situations. Here is what I found by trial and error.

The black outer coat tended to respond best to a thick application, it bubbled quickly and came off best by scraping it with a putty knife.

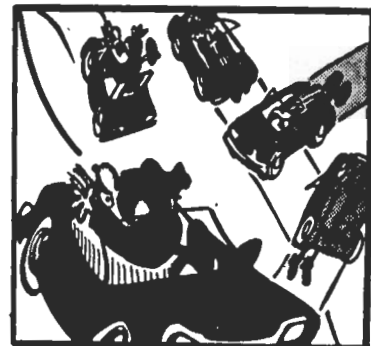
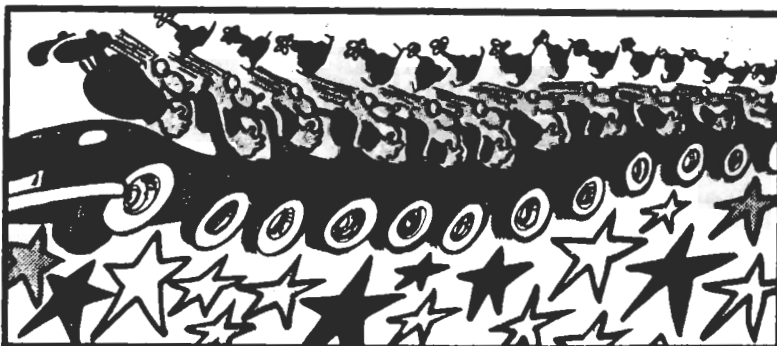
The green factory coat was very hard being 20 years old. Again after a thick application of stripper and waiting ten plus minutes, it scraped off with force. However, the two inch putty knife was still more effective than a wire brush.

The gray-white primer was thick and soft. Again, a fairly heavy application of stripper, 5 to 10 minutes time and a wire brush turned it into a slurry that got about 80% of it.

The next coat of stripper and #0 steel wool got the surface completely clean to the naked tanish gel coat. I then wiped the surface dry with another piece of clean steel wool.

I found that I had to push quite vigorously on the tools to get the paint off and was surprised that the amount of force used didn't harm the glass at all. The stripper didn't harm metal or ordinary glass at all, but be careful near rubber or synthetics. Again PROTECT YOUR EYES!!! My results were very good. At the point where I declared victory, I had removed the doors, windows and all other trim items. I did the door jams (necessary if you are changing colors), rocker panels, two inches down into the engine compartment, the boot channel, the light pods and down under the car to the front and rear seams.

Note: If any of our members tries the stripping method, please let me know how it turns out. Miles Wilkens book on restoring fiberglass body work is very interesting reading and very informative. If you are going to do some glass work, the book is worth reading first. Thanks, Ed.





Recent Lotus Acquisitions by Terry Elmore

A number of Lotus have changed hands recently, so you may wish to make the following additions to your club roster:

Pete Wolf bought the Caterham Seven which was advertised in Lotus Lines last year over in Spokane, and the car made its club event debut here at the Picnic. A very nice car, with a Big Valve TwinCam and a few oddities added by the previous owner which I suspect Pete will soon eliminate.

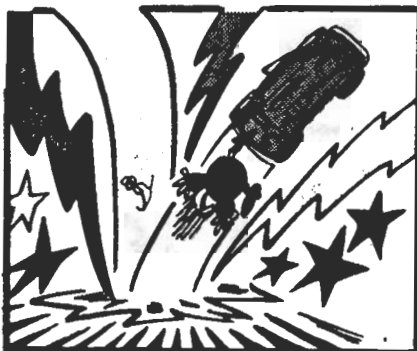
I bought the Seven Series 1 America that Pete bought a few years ago from Bill Boyer (yes, another project car). I am thinking seriously of restoring the car as a European Series 1, ie. with cycle fenders, all alloy body and 15 inch wire wheels.

Bob Morris has added a couple more Elans to his collection, which brings his Lotus roster up to nine cars. Will Bob be the first Evergreen Lotus member to hit double digits ?

It's been a few months now, but as we have yet to see the car at a club event, some of you may not be aware that Maury Montag has added an Elan S4 to his fleet, joining John's Elan S1 and their JPS Esprit and Elite (the later still in the body shop for some three years now).

If anyone else in the club has acquired or parted with a Lotus recently, please let us know so we can keep accurate records as to who has what. If you hear of any Lotus for sale, please do let us know as we quite often get calls from prospective Lotus owners looking for a car to buy.

You may have seen an Elan Plus 2S/130 advertised recently from Montana, a couple of club members are considering this car, but don't know yet whether we'll be adding it to the Evergreen Lotus roster.



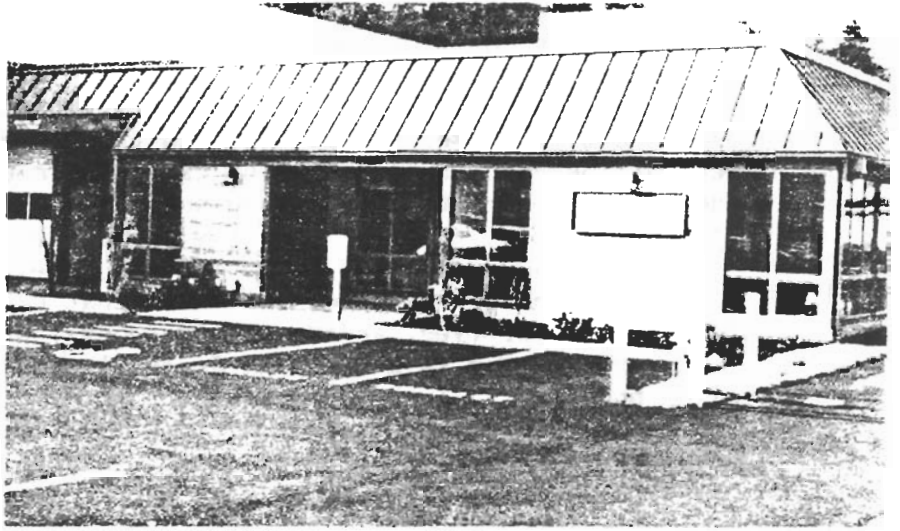
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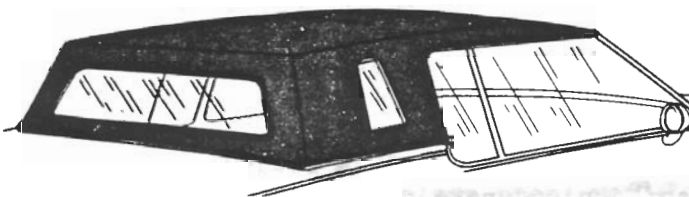
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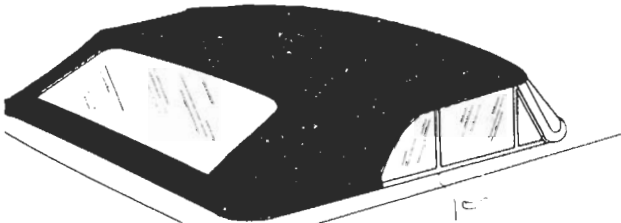
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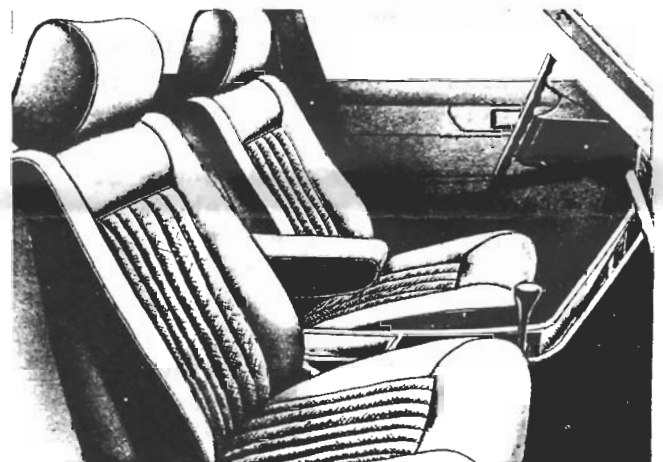
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Landau Tops

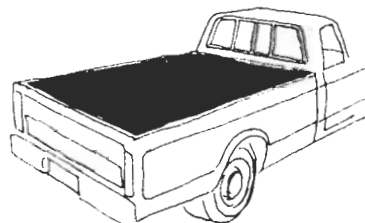
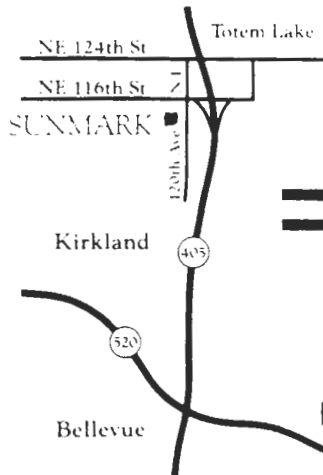


Convertible Tops

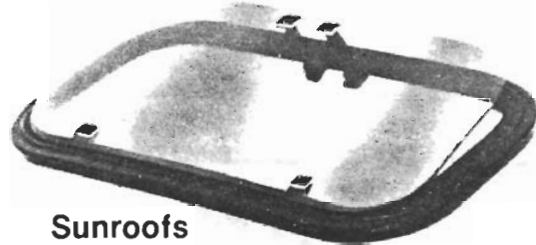


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## The Performance Cortina Modified by Lotus

reprinted from Autosport, January 25th, 1963

by John Bolster

The announcement of a new ultra-high performance saloon by Ford is exciting news indeed. The basis of the car is the 1500cc version of the Cortina, of which the engine, transmission, suspension, brakes and equipment have all been modified by Lotus and Cosworth for high speed road work and touring car racing.

The basic Ford 1500cc engine carries the Lotus twin overhead camshaft light alloy cylinder head that was designed by Harry Mundy and is manufactured by J.A.P. The camshafts are chain driven and operate the valves through inverted pistons, the sparking plugs being vertical on the central axis but set back or forward over alternate bores to clear the inclined valves. The crankshaft is specially balanced for high revolutions and the pistons are designed by Cosworth.

Two Weber twin-choke supply the gas and a built-in cold air supply carries an air filter. The exhaust system features four matched pipes which are first paired and then run in together under the car. The machine is properly silenced.

Special close ratios are fitted to the all-synchromesh gearbox. Alternative final drive ratios are available but with the standard 3.90 to 1 axle, the overall ratios are 3.90, 4.797, 6.396 and 9.750 to 1. Speeds around 115, 92, 69 and 45 mph are obtained at 6500 rpm. A short central remote control gear lever is mounted on a central console. Naturally, a special eight inch clutch is used with this transmission and the propeller shaft has a three inch diameter tube. The differential housing is in light alloy and special light alloy parts are also used for the clutch housing, gearbox extension and remote gear change.

A considerable use of light alloys also occurs in the body construction, the outer panels of the body, doors and bonnet being in aluminum. The shape is identical to that of the standard Cortina but the body is white with green flashes and a green-on-yellow Lotus crest. The interior trim is in black vyanide with racing-type heavily padded bucket seats and crash pads. Most important, the wood-rimmed steering wheel operates a special high-g geared steering box. The binnacle houses a speedometer, rev-counter, oil pressure, water temperature and fuel gauges.



*"The money you save on gas will more than pay for the frequent repairs!"*

The car is considerably lowered, the front suspension units being different and the front wheels without any camber. At the rear, the semi-elliptic springs have gone making way for helical springs. The axle is located on trailing arms each side and underneath the centre there is an A-shaped tubular member. Thus, the beam is located in both directions and the torque reaction is absorbed.

A vacuum servo is applied to the hydraulic operation of the brakes; 9-1/2 inch discs are fitted in the front and 9 x 1-3/4 inch drums at the rear, the linings being to competition specification. A stiffer anti-roll bar is fitted and the special wheels, which carry 6.00 x 13 inch tyres, have the very wide rim size of 5-1/2 inches for stability.

As supplied, the engine develops 105 bhp (net) at 5500 rpm on a compression ratio of 9.5 to 1. As much as 140 bhp has already been obtained in tuned form. Obviously, the potentialities of this car are very great indeed and it is understood that over 1,000 are already in course of assembly, so homologation is assured.

Team Lotus announce that "works" cars will be driven in touring car races by Jim Clark, Trevor Taylor and Peter Arundell. In addition, they will develop cars for the Competitions Department of the Ford Motor Company, which will be entered in rallies. It is certain that the demand for these cars from enthusiasts will be very heavy and for really fast road work or competitions these machines are very desirable indeed. In spite of the very high performance available it is impressive that standard Ford parts figure largely in the specification, which is a great advantage from the point of view of service.

|                             |   |                                 |
|-----------------------------|---|---------------------------------|
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SHIFTING TECHNIQUES by Ross Bentley,  
Chief Instructor, Performance Advanced Driving School Inc.  
Reprinted from the Cam Journal,  
the Newsletter of the Lotus Car Club of British Columbia

You can tell a lot about a driver's abilities and skill by the smoothness and finesse of his or her shifts. The first rule in shifting is: speed is not as important as a good clean shift. You won't gain anything with a real fast shift other than possibly a broken transmission. Smoothness, precision and finesse are the keys. Treat the shifter like it is an eggshell - be gentle and firm with the movements.

Three very important rules to remember here: First, when finished making a shift, get your right hand back on the steering wheel! Don't ride the shifter. If it's not shifting, it should be steering. Second, don't ride the clutch pedal with your left foot! Use the dead pedal to actually brace your body when not shifting. And third, don't slip the clutch! It's better to bang out the clutch than slip it. It will last much longer that way.

Proper downshifting is a must for extracting the full potential of your car. It is not easy - it requires timing, skill and practice - but once mastered, smoothness and improved car control will result. It is also something you can practice every time you get behind the wheel.

Most drivers think the reason for downshifting is to use the engine's compression braking effect. Wrong! In fact, by doing so you can actually hinder accurate brake modulation and balance. The High-Performance Driver downshifts during the approach to a corner so that he/she will be in the proper gear, at the optimum RPM range, to allow smooth, balanced acceleration on the exit.

The objective then, when approaching a corner is to shift down to a lower gear while maintaining maximum braking, smoothly, without upsetting the balance of the car. If you simply dropped a gear and let out the clutch while braking heavily, the car would nose-dive - upsetting the balance - and try locking the driving wheels because of the extra compression braking effect. So, what is required as one downshifts is for the engine revs to be increased by stabbing the gas pedal with the right foot. This is called "blipping" the throttle. What you are doing is matching the engine RPM with the driving wheel RPM.

Now, to continue maximum braking and blip the throttle at the same time requires a technique called "heel and toeing". The best way to learn and practice this technique is to try it before the car is even started. If you can't do it properly sitting still, then you won't get it right with the car moving.

Here is a step-by-step explanation of how to heel and toe:

- 1) Begin braking, squeezing the pedal with the ball of your right foot.
- 2) Get your left foot in position to depress the clutch - but not yet.

- 3) Continue braking, increasing pressure to maximum braking effort.
- 4) Depress the clutch pedal and gently move the shift lever into the next lower gear.
- 5) Continuing braking, and with the clutch still depressed, pivot your right foot at the ankle and let the right side of it squeeze the gas pedal, blipping the throttle (revving the engine).
- 6) Still maintaining your braking, pivot your right foot back, and ease the clutch out.
- 7) Continue braking.

One of the most important aspects of heel and toeing is blipping the throttle. You must match the speed of the engine with the speed of the gear you are selecting. When doing this, don't watch the tachometer - the eye must be looking ahead. The correct blipping of the throttle and matching of revs depends on practice and input from the ears and the forces on the body. If you don't blip enough, the driven wheels will lock up when the clutch is re-engaged. A major no-no! If you blip too much, the car will attempt to accelerate - you are supposed to be slowing down. The best way is to rev the engine up slightly higher than required, select the required gear as the revs drop and quickly engage the clutch.

Remember, it takes practice - constant practice. It may seem like there are a lot of things to do all at once, but once you get the hang of it, you will be able to complete a heel and toe downshift in about a second. Now, obviously to do this properly your car must be set up correctly. When the brake pedal is depressed fully, it should still be slightly higher and directly beside the gas pedal. Most cars are set up pretty well. Still, you may want to bend or add an extension to one of the pedals to suit yourself.

Now that you know how to shift, what about when to shift? Rule number one in downshifting: "brake first, then downshift". If you don't follow this rule, you will end up badly over-revving the engine. Think about it. If you are at maximum RPM in fourth gear and you downshift to third without slowing the car - BANG - there goes the engine and you. And remember again, downshifting is not a means of slowing the car - unless you have no brakes.

Now, what about skipping a gear when downshifting - going directly from fourth to second, for example, when approaching a second gear corner. We definitely recommend it as long as you are proficient at good, smooth downshifts, and realize you must then slow the car down even more with the brakes before dropping the two gears. And, in fact, the less downshifting you do while approaching a corner, the less likely it is you will make a mistake, and it will be easier to modulate the brakes smoothly.

As you can see, High-Performance shifting is not quite so simple and easy as you once may have thought. But the good thing about it is, you can practice it in everyday driving. And that's what makes a High-Performance driver.

Editors Notes by Jim Taylor

I concur with John and the others in attendance, the Lotus technical session in Vancouver BC was extremely interesting. There was lots of trivia and information about Colin Chapman and Lotus in general. I had no idea what an impact he actually made, not only in auto racing and manufacturing but also in obscure everyday things that have nothing to do with cars (none of which I can remember at the moment). I also think that there was not that much technical information disseminated in the session. Anybody interested in Lotus but non-technical, could have attended and gotten a lot of enjoyment out of the seminar. When it comes around again, I recommend skipping the "shopping trip" and actually attending.

At the BCC All British Field Meet one guy wanted to buy the Europa chassis and body asis and another wanted it after I had it finished. I told both of them that I bought the car in parts and have never even driven it and I had absolutely no intention of selling it after all the time and effort that I have been putting into it. There was lots of interest in the chassis, especially by other Europa owners. Next year I'll be bringing the whole car in one piece and running! Yeah I know, you've heard that before.

I have been kind of curious about the Lotus Cortina. What's the scoop on why this car is so special? So, just in case there are other curious members out there thinking the same thing, I included an old article from a British publication that deals with the differences between a stock Ford Cortina and the Lotus Cortina. My curiosity is satisfied, for now.

There is one more car I would like to mention for the Evergreen Lotus roster, except this one was already there. The car is just moving from the "dead and I don't know when it will run again" column into the "it's alive and there's still hope for driving it again this year" column. After the Club Picnic at the Elmore's, a few of us decided to make one last ditch effort to get their Elan+2 started (it hasn't run for about two years). Mike Shaw, Andy Shipp and myself talked Terry into letting us have a go at it. We started with making sure that the basics were there: compression, vacuum, spark and fuel. Then about an hour or so of diagnosing why it still wouldn't start, we got it figured out and VRRROOOOMMMMMMM. Of course it still didn't run too well, what with one carb that wasn't participating in fuel delivery and two year old gasoline, but it sounded pretty good anyway. Since then, Terry has driven it to the end of the road and back. I'm looking forward to seeing them drive it to one of the Club meetings soon.

Last, but certainly not least, I would like to thank Frank Grabner for another very interesting and informative article. This time it's on emissions testing, I'm sure that everyone enjoyed it. On the other hand, I chickened out and registered my Europa at my parents place in Olympia so that I wouldn't have to worry about passing the emissions test, at least for a little while longer.

Meeting Locations

September Meeting

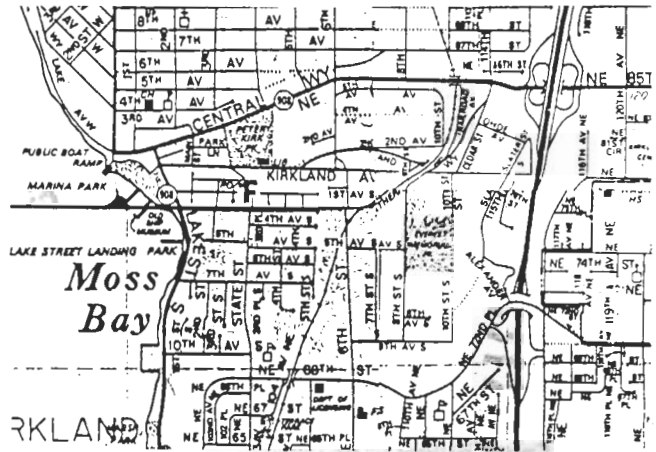
Saturday the 22nd at 1:00pm  
Bayside Lotus  
517 East Pike  
Seattle, WA  
(206) 324-8488



October Meeting

Saturday the 21st at 1:00pm  
Lakeside Deli  
1006 Lake South  
Kirkland, WA  
(206) 822-5583

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**Club Officers: John Daniels, Chairman, 788-2729 - Nikki Daniels, Membership  
Terry Elmore, Club Liaison, 334-5768 - Jim Taylor, Newsletter, 232-2237**

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