



cam journal

The Official Newsletter of the
Lotus Car Club of British Columbia



Lotus Car Club of British Columbia

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Advertising :

	<u>Single Issue</u>	<u>One Year</u>
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Half Page	\$50.00	\$150.00
Full Page	\$70.00	\$200.00

Cover Photo – Ron Solomon

(more photos next issue...)

Meetings: The First Wednesday of Each Month at 7:30PM

November 1, 2006 – Wednesday – 7:30PM	December 9, 2006 – Sunday – 7:30PM	January 3, 2007
Ian Green – Annual General Meeting	Dave Rush – Christmas Dinner	TBA

The Cam Journal is the official newsletter of the Lotus Car Club of British Columbia. The Cam Journal is published bi-monthly and is supported by membership dues and advertising revenues. All opinions expressed in the Cam Journal are those of the individual authors and does not necessarily reflect the opinions of the Cam Journal staff, the club executives or members of the Lotus Car Club of British Columbia. Others clubs are welcome to use material printed in this newsletter, provided the Cam Journal and the Lotus Car Club of British Columbia is duly credited. All contributions to this newsletter should be submitted to the editor by the published deadlines. The editor reserves the right to edit in whole or in part any and all contributions.



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LCCBC Main Web Site: <http://geocities.com/lotusclubofbc/>

LCCBC Members Only: http://groups.yahoo.com/group/lotus_car_club_of_bc/

Calendar

Nov

- 1 Monthly Meeting-AGM 7:30PM: Ian Green
- 1-3 [2006 SEMA Show, Las Vegas](#)
- 3-4 [Ladner - Bellingham, Old English Car Club](#)
- 23 Thanksgiving (USA)

Dec

- 9 LCCBC Christmas Dinner: Dave Rush
- 25 Christmas Day
- 26 Boxing Day
- 31 New Year's Eve



Karen and Dave Whitworth's Elite. Filberg, August 2006. Photo: Bob Wilson

Dave Rush – Europa S2 – President's Point of View

So here we are in the twilight of another sports car season on the coast. I think it has been a good summer for our type of vehicles: a sighting of an Elise is a common event, fuel prices spiked to a level where new auto buyers are having second thoughts about purchasing an offensive weapon and best of all, our beloved Cam Journal has gone full colour and more or less instant, thanks to the virtually solo work of Ian Green. Being the Luddites that we pride ourselves as being, it took a long time and we had lots of reservations, but now that it's online, we're convinced.

The club would like to welcome Philip de Freitas who has been around sports cars for a long time and has bought an Elise and welcome back Mike Johnson who has also just bought an Elise. Both Mike and our editor, Ian Green have forsaken their vertebrate Lotus for Exoskeleton Elises. In retrospect, it seems rather odd that Lotus stuck with the backbone frames for so long when they were at the forefront of monocoque chassis racing cars back in the 60's.

We can't object to that style of frame though, as they are ideal for all the frame-off restorations that go on in the club. As a current proprietor of a multi-decade restoration, I think a great deal about the reason for the long, long term auto projects that are so popular and I am coming to believe that they give us a subtle comforting stability in our life as it is always there while so many other things come and go so quickly. That and the problem of unearthing the thing from garage debris every time we decide to work on it.

The last GP of 2006 was just aired and TSN delayed it's broadcast in favour of a bunch of cast iron pushrod 4 barrel pretend race cars turning left. Again, it seems odd that global manufacturers are duking it out with military budgets and the very highest level of technology but the marketing department somewhere figures a procession of tube frame stock cars on a giant skid pad is a higher priority.

My Europa's plate expires in 3 hours and I just went over and filled the tank up. All in all it was a good season for the S2 after I got over the engine rebuild and tidy-up-the-engine-bay teething problems. The elegant solution for locating the heater valve never did come to be and that seems to be the most pressing issue so I can only conclude that the car is finally sorted out.

This year, the Christmas party will be at Heather and my home on December 9 @ 7:30. It will be a potluck supper, BYOB and snacks, pop/coffee etc. provided by the Club. **All are welcome, but I would like a rough headcount to know how many to expect.** As we have done for the last few years, the Pacific Jaguar Enthusiast's Group will join us and in a home environment, there should be much more opportunity to socialize instead of the more regimented environment of a restaurant.

Hoping to see you at the Christmas Party – Dave Rush



Ian Green – Elise 111R – Editor's Expletive

In the middle of October, I sold Skateboard, #3115R. It's gone, the new owner picked it up on October 21 and trailered it south to Seattle. Wife is dreaming of a new kitchen and I'm sort of depressed. Skateboard and I were good friends, both of us somewhat ragged and occasionally grumpy, but we kept pushing, ignoring that we were getting old.

Why did I sell? I don't believe that we actually own these cars, rather that we are simply a caretaker, one who looks after them for 5-10-20-30 years, then hands over the responsibility to the next caretaker. There are basically two types of owners; constructors and drivers. It became apparent during the past six years that I am not a constructor.

For a few years in the 1970's, I drove a 1968 Europa S2, did some work on it, then the S2 was written off in an accident. Marriage and kids came soon after that. In 2000, I bought a 1967 Europa S1 (my dream car), and began stripping it, bought a new frame, then the project stalled. In 2003, came Skateboard, a 1973 Europa TCS which was a driver. And still the S1 project continued to sleep and patiently wait for me. Last year I reluctantly gave up on the S1 and sold it to Jim Blair, who has made excellent progress in his first 12 months.

Then in February of this year, I bought a new Elise. The Europa TCS sat untouched virtually for six months while I drove the Elise daily. Skateboard deserved a better owner than me and I knew it was crying in neglect. I decided to list it on eBay, six days later, 24 hours before the auction's end, I pulled it off. Then I began to receive emails, three were serious offers. One was too low, two were acceptable. It's been a trip and I will miss both the S1 and the TCS. But it was time to let go. I know I will regret this decision, however maybe the new owner will give Skateboard a new lease on life. But, don't believe that I'm out of the Europa game, because I have found...



S1 to Jim Blair, TCS to Seattle
Photo: Ian Green

Ian Green – Elise 111R – C0nsum3r's R3p0rt

Overall score 58? Agility equal to that of a Miata? Car is unforgiving when you go past its limits? Now wait a mintue here; A Ford Explorer enters corner "A" at 40mph and rolls over into the ditch: Predictable handling? Lotus Elise enters corner "A" at 100mph and spins. Unforgiving? Next they will be telling me it's a toy car with no luggage space. Oh, they did... Bunch of wimps. Check out the competition...

Porsche Boxster: Overall score 100. Handling fun, forgiving. Ride not punishing, engine sound is a thrill.

Mazda Miata: Overall score 99. Handling super agile, balanced behavior at all times.

Honda S2000: Overall score 88. Uncompromising. Handling precise, predictable.

BMW Z4: Overall score 87. Imprecise steering, ride choppy but not punishing.

Pontiac Solstice: Overall score 53. Handling faily nimble.

Lotus Elise



The Elise is a quick, lightweight, mid-engined roadster. Its 4.6-second 0-60 mph time is the quickest we have ever recorded. Power comes from a 190-hp, 1.8-liter four-cylinder supplied by Toyota. The engine needs to be revved to deliver real punch. The Elise is agile but no more so than the Mazda Miata or Porsche Boxster. Cornering limits are very high, but the car is unforgiving once past them. You also have to put up with a harsh, noisy ride; a tight, spartan interior; a clunky shifter; and difficult cabin access. The canvas top is a nuisance to fold. The Exige is a coupe version of the Elise.

OVERALL SCORE		58	
Roadsters	P F G VG E		
Highest Rated convertible 4		58	
Lowest Rated		53	

Tested model: 2005 convertible, 1.8-liter Four, 6-speed manual

Base price: \$42,990-\$50,990
 Body styles: convertible; coupe
 Trim lines: Base, Exige
 Drive wheels: Rear
 Seating: 2 front
 Engines: 1.8-liter 4 (190 hp)
 Transmissions: 6-speed manual

REPORT CARD	
PREDICTED RELIABILITY	NA
PREDICTED DEPRECIATION	NA
OWNER SATISFACTION	NA
ACCIDENT AVOIDANCE	NA
CRASH PROTECTION	NA/NA
FUEL ECONOMY	NA


RELIABILITY HISTORY	
TROUBLE SPOTS	98 99 00 01 02 03 04 05
Engine	
Cooling	NOT
Transmission	
Drive System	ENOUGH
Fuel	
Ignition	
Electrical	DATA
AC	
Suspension	TO
Brakes	
Exhaust	RATE
Paint/Trim	
Body Integrity	
Power equip.	
Body Hardware	

FACTS & FIGURES	
Exterior dimensions	
Length (in.)	.149
Width (in.)	.68
Height (in.)	.44
Wheelbase (in.)	.91
Weight (lb.)	.2,000
% weight front/rear	.38/62
Cargo measurements	
Max. load (lb.)	.550
Cargo volume, cu.ft.	.NA
Towing capacity (lb.)	.NR
Fuel	
Premium	
EPA city/hwy, mpg	.23/27

USED CAR VERDICTS
 NEW CAR PREDICTION NA

Expert • Independent • Nonprofit

Porsche Boxster



The Boxster's agile handling is fun and forgiving with excellent tire grip and precise, communicative steering. Braking is top-notch, with the shortest stopping distances we've ever measured. The ride is firm and well controlled, yet not punishing. The horizontally opposed boxer engine uses a five-speed manual transmission in the standard Boxster or a six-speed in the S. Throttle response is sharp, and the unique engine sound is a thrill. The two fore-and-aft trunks are both small but add some practicality. The power top is easy to operate and works at up to 30 mph.

OVERALL SCORE		100	
Roadsters	P F G VG E		
Highest Rated convertible 6		100	
Lowest Rated		53	

Tested model: 2005 Base convertible, 2.7-liter Six, 5-speed manual

Base price: \$45,000-\$54,700
 Body styles: convertible
 Trim lines: Base, S
 Drive wheels: Rear
 Seating: 2 front
 Engines: 2.7-liter 6 (240 hp); 3.2-liter 6 (280 hp)
 Transmissions: 5-speed manual; 6-speed manual; 5-speed automatic

REPORT CARD	
PREDICTED RELIABILITY	NA
PREDICTED DEPRECIATION	NA
OWNER SATISFACTION	NA
ACCIDENT AVOIDANCE	NA
CRASH PROTECTION	NA/NA
FUEL ECONOMY	NA

RELIABILITY HISTORY	
TROUBLE SPOTS	98 99 00 01 02 03 04 05
Engine	●●●●●●●●
Cooling	●●●●●●●●
Transmission	●●●●●●●●
Drive System	●●●●●●●●
Fuel	●●●●●●●●
Ignition	●●●●●●●●
Electrical	○●○●○●○●
AC	○●○●○●○●
Suspension	○●○●○●○●
Brakes	○●○●○●○●
Exhaust	○●○●○●○●
Paint/Trim	○●○●○●○●
Body Integrity	○●○●○●○●
Power equip.	○●○●○●○●
Body Hardware	○●○●○●○●

FACTS & FIGURES	
Exterior dimensions	
Length (in.)	.172
Width (in.)	.70
Height (in.)	.51
Wheelbase (in.)	.95
Weight (lb.)	.3,015
% weight front/rear	.47/53
Cargo measurements	
Max. load (lb.)	.420
Cargo volume, cu.ft.	.9.0
Towing capacity (lb.)	.NR
Fuel	
Premium	
EPA city/hwy, mpg	.20/29

USED CAR VERDICTS
 NEW CAR PREDICTION NA xx

autos.ConsumerReports.org

Bob Leonard – Elan +2 – Lumbago

Some of you in this distribution are NOT old enough to remember all of these; but a few, perhaps? And since this is totally 'clean' (a rarity...) the circulation is wider...

I came across this phrase in a book yesterday "FENDER SKIRTS". A term I haven't heard in a long time and thinking about "fender skirts" started me thinking about other words that quietly disappear from our language with hardly a notice. Like "curb feelers" and "steering knobs." Since I'd been thinking of cars, my mind naturally went that direction first. Any kids will probably have to find some elderly person over 50 to explain some of these terms to you.

Remember "Continental kits?" They were rear bumper extenders and spare tire covers that were supposed to make any car as cool as a Lincoln Continental.

When did we quit calling them "emergency brakes?" At some point "parking brake" became the proper term. But I miss the hint of drama that went with "emergency brake."

I'm sad, too, that almost all the old folks are gone who would call the accelerator the "foot feed"

Didn't you ever wait at the street for your Dad to come home, so you could ride the "running board" up to the house?

Here's a phrase I heard all the time in my youth but never anymore - "store-bought." Of course, just about everything is store-bought these days. But once it was bragging material to have a store-bought dress or a store-bought bag of candy

"Coast to coast" is a phrase that once held all sorts of excitement and now means almost nothing. Now we take the term "world wide" for granted. This floors me.

On a smaller scale, "wall-to-wall" was once a magical term in our homes. In the '50s, everyone covered his or her hardwood floors with, wow, wall-to-wall carpeting! Today, everyone replaces their wall-to-wall carpeting with hardwood floors. Go figure.

When's the last time you heard the quaint phrase "in a family way?" It's hard to imagine that the word "pregnant" was once considered a little too graphic, a little too clinical for use in polite company. So we had all that talk about stork visits and "being in a family way" or simply "expecting."

Apparently "brassiere" is a word no longer in usage. I said it the other day and my daughter cracked up. I guess it's just "bra" now "Unmentionables" probably wouldn't be understood at all.

I always loved going to the "picture show," but I considered "movie" an affectation.

The ultimate in Fender Skirts...?

Lotus Eleven Drawings: <http://www.lotuseleven.org/>



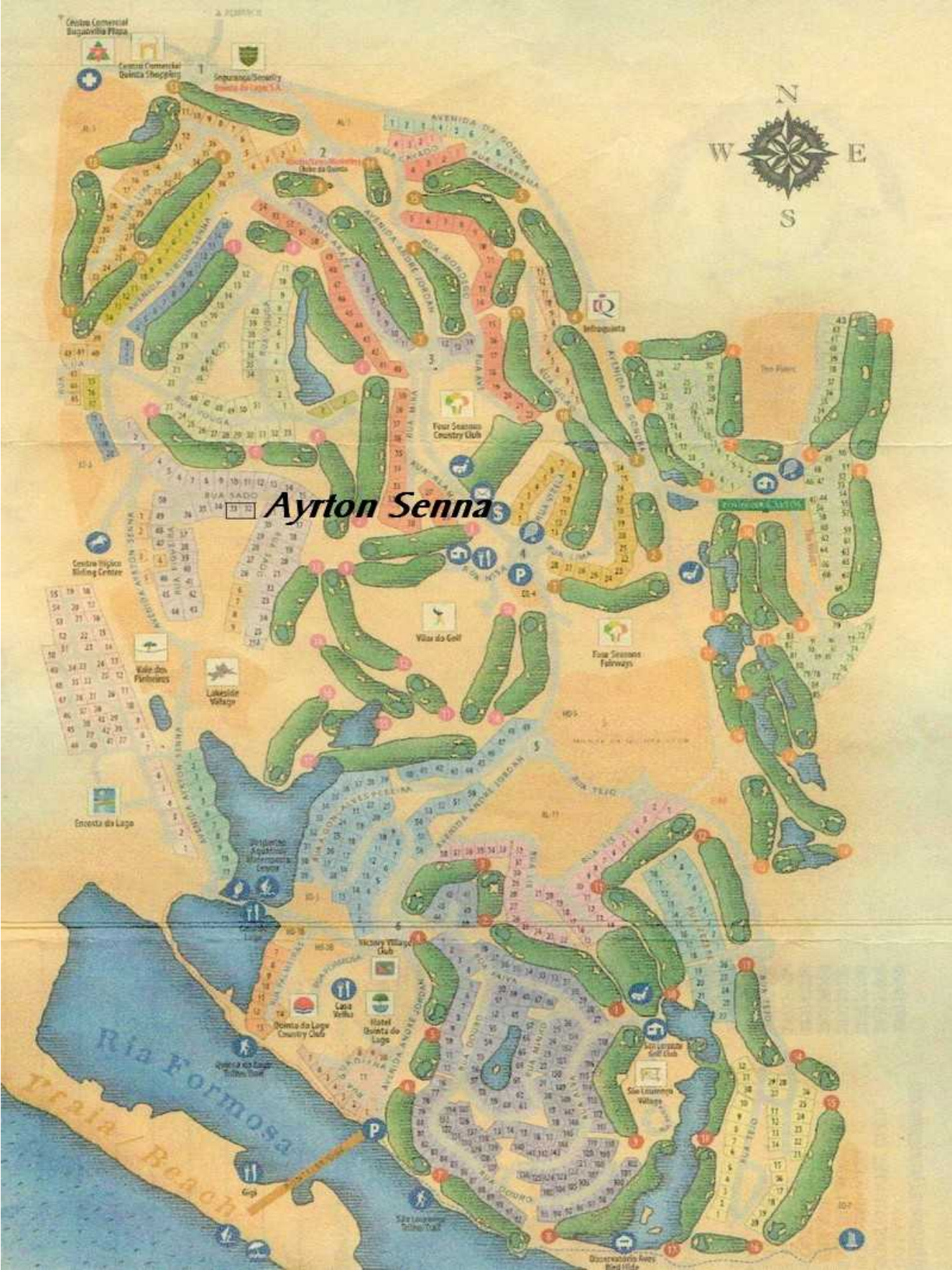
Dave Rush – Europa S2 – Ayrton Senna

I was in Portugal last May near Faro and went looking for Ayrton Senna's Villa. It took a while as my Portuguese was non-existent and although most people seemed to know of Ayrton, few knew where the villa was. The local go kart track said he used to come in and the general opinion was that the villa was likely in the Quinta do Lago neighbourhood but that was as close as I got until I tried the equestrian center in Quinta do Lago. The lady running the place knew everything and told me exactly where it was. It is on lots 32 and 33 on Rua Ado, just off Avenida Ayrton Senna. There is no indication whatsoever on the villa that it once belonged to the World Champion. Pity.



Photos: Dave Rush

Dave Rush – Europa S2 – Ayrton Senna



So you were Thinking of Making a Super Seven Kit Car, Hey !!

How did I go about it?

Well, I already had one Se7en under my belt. I had completed a Sylva Striker Mk 11 with Toyota 4AGE 1600cc engine and 5 speed transmission. I used these and the Toyota alloy wheels and hubs and spindles and the 4 wheel disc brakes from the donor Corolla GTS twincam with EFI. To this I added a trick cylinder head, short intake manifold and road cams, which gave a wonderfully useful 145bhp. Remembering my few complaints about the original Seven I owned, I added a brake booster to reduce effort on the pedal, and carefully sealed the occupants' legroom from the road grit and dust that seemed to be attracted up one's pants! My Striker also had a fabric hood that could be simply attached, ostensibly for wet weather! Ha, Ha! Without side screens, this was merely a mobile water scoop! All water from rain, passing traffic, especially trucks, and even water from the front wheels themselves were scooped up by this parachute, drenching and drowning any occupants! There was so much water inside that one needed windshield wipers on the inside of the window more than wipers on the outside!

The vehicle was no longer easy to get through the 2000 year aircare requirements, what with the cams and original ecu, even though equipped with catalytic converter, and really cried out for a positraction differential and better control of the transfer of power to the road, even though the unique Striker solid rear axle design was one of the most admirable systems available.

The latest Toyota 4AGE "black top" engine in Japan now had a 20 valve head, 4 butterfly intake and variable valve timing, making a most tractable, fuel efficient and sporty engine in one, with about 170 bhp. I took advantage of the opportunity to get one, complete with it's wiring harness and ecu. However, when it arrived, common(?) sense tried to interfere.

First, why throw out a perfectly great power plant for a few extra horses? Second, the only effective way of improving power transfer was through independent rear suspension!

So, before taking practical stock, an advert was filled out, and two days later the car was sold! Now, I had a handful of ready cash, and a beautiful modern 4AGE motor, but no sports car.

Favourites in the Se7en field were again researched, but IRS was a pre requisite. The new rage of Bike engined units were everywhere, but I had used my Striker everyday throughout the summer, and I did not fancy the buzzy bike engine there all the time, and the problems with reverse gear that were not yet satisfactorily overcome. My choices were the Tiger and the good old Striker, which eventually won out due to good experience with the initial kit, and confidence in the engineering capabilities of the Founder. Strikers had won so many of the 750 championships in the UK that they HAD to be good!

The order was placed; Complete LHD chassis for IRS, a good LHD Ford Escort steering with mountings, tie rods and ends (I had previously used a Chevette rack, but the Escort ratio was a better 2.5 turns lock to lock), IRS with all control arms , Sierra diff. and drive shafts, hubs, brakes, 4 shocks and springs, front control arms, Sierra spindles and brakes, the new ball joints, a pedal set, the pre coloured fiberglass body panels and clamshell fenders that could be attached (I prefer this look even though aerodynamically questionable) and the correct aluminum sheets for fabricating, a windshield frame, a tonneau cover and sidescreens. While the order was being shipped, I found a fairly good 1987 rear wheel drive Toyota Corolla GTS, and stripped out my donor parts, surprisingly few! All I really needed was the transmission, driveshaft, wiper assembly, complete wiring harness, dashboard gauges and sender units. I also stripped the front seats to reshape and reuse part of the covering material. Fortunately GTS parts are in very high demand, and it was quite easy to dispose of the rest. In fact, I probably made a healthy profit!

You cannot conceive of the work involved in merely getting such a kit car on the road.

First, the engine and transmission mountings and mounts had to be fabricated, tested and attached. Also a system for the brake booster to fit and operate. Then the wiper motor and operating gear attachments. I settled on a Toyota Tercel steering column which had occasional wipe, intermittent, and two speeds, a horn, and lights with flash, turn signal, side, lo and hi beam on stalks, and 4 way flashers.

Wire coding was similar, and I did not like extra dash switches. The steering required brackets and mounts and proved quite a tight squeeze trying to include the shafts, steering joints etc. and did not get into a knot with the lovely 20 valve exhaust header.

Another fair sized problem was trying to get the RWD 4AGE starter under this header, as the engine was made for FWD where the starter was on a different side. The damned factory seemed to have engineered it so this conversion would NOT be done! I had to find and fabricate a suitable radiator, and electric cooling fan control, and mount, devise mounting brackets for the front fenders, and then design, make temporary fabrication of and mount a fuel tank. Fortunately, seat belt mounting brackets were included in the chassis. I found the scuttle a little ugly in the Striker design, so removed 2 inches from the top of the dashboard, which improved overall ergonomics.

The next trick is a complete dummy assembly, to make sure everything fits. I choose the word “dummy” wisely. This cannot be overemphasized, because, if it all fits, the chassis can be sent for powder coating. Nothing looks worse than welded brackets on top of a beautifully powder coated dayglo finish because something did not fit or was forgotten! Also, a tradesman with a license for certification of “rebuilt” vehicles must sign off the newly altered chassis.

With the chassis and beautifully coloured suspension components back from powder coating, find four 3foot high padded stands, and the WORK can commence! Forget going to the gym evenings!! By the time you finish cutting out and riveting the aluminum panels to the frame, your right hand will have a handshake to terrify, and you could recover expenses with your arm wrestling capability.

Some of the work goes better than expected, but there are always unexpected pitfalls. An aluminum fuel tank is a good idea, but don't forget baffles and a swirl pot for recirculating efi systems. Also, there is the fuel pump mounting in the tank, the filler system, a fuel level sender unit (which will have to be calibrated) and the charcoal canister system. And a clutch operation, throttle control and the newly devised brake and booster operation. The differential will have to have some positraction device fitted, and the ratio might have to be altered to one that benefits a first gear in a vehicle of little weight, and the speedometer needs the correct input. Mine still used mechanical drive, so I needed to alter transmission speedo drive gears.

Light selection also requires more time than envisaged, as there is little that caters to the kit car builder. Most marker lights are large and UGLY. You will have to persuade somebody at your favourite glassworks to cut you a windshield, so you need an exact pattern, preferably made from plywood.

You have to also fabricate the propshaft, mating the Ford and Toyota parts

And there is the exhaust system and mufflers which require fabrication. Fortunately the original header fitted, as make up is painful and not really fun.

Seat fabrication required just time and patience. Dismantling the old seats, measuring, cutting foam to shape and trimming outer cloth to match. A wife or girlfriend (or both) with strong fingers and a penchant for sewing thick cloth/leather helps.

Templates help for cutting the dashboard for the Corolla gauges.

Then wheels. Not easy. Ugly Ford Tempo wheels fit! The Focus needed spacers. I eventually found Peugeot alloys, though Minilites or Caterhams would have been better.

One fairly arduous part is getting the wheel alignment correct. You need a 4 wheel setup, first to get the rear end right, then move to the front. I was also very fastidious about the bump steer, so this event took a full two days of careful measurement and work.

Then, there is the wiring. Don't think hours! Don't think days! Think weeks. With 1987 Corolla, 88 Tercel and 1998 20 valve vvt 4AGE parts, it is imperative that wiring diagrams for each vehicle are obtained, unless you want to let the smoke out the wires. The original harness has to be stripped of all the unnecessary components, too.

You have power and heated mirrors, air conditioning, heating, seat belt warning, courtesy lights, cruise, defoggers, door and door light switches, rear wipers, rear washers, remote door locks, sunroof, interior, glove box, trunk and hood illumination, headlamp retract circuits etc. to remove, with their relays and fuses. Unless you're thinking of using these components on the Se7en!

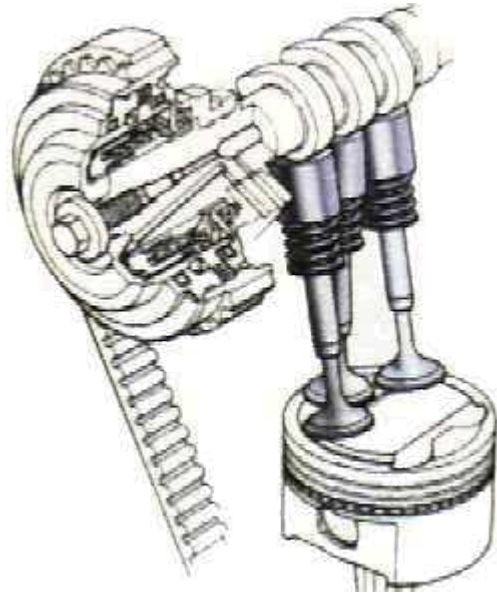
Of course engine warning, brake and hand brake, low fuel, alternator and check engine lights with diagnostic codes are retained. Mounting the fuses and circuit breakers are also a challenge, as room comes at a premium with everything assembled, especially now that a battery is also required.

Double check, cross fingers, add all oils and fluids and hope it starts. While it warms up check for leaks and keep an eye on coolant for proper warm up and coolant fan operation.

Then, if lucky, emissions are well below limits, so a run and mechanical inspection.

So, what are you going to do for an encore? An IRS Cobra or Ford GT40? A Sylva Mojo?





Photos: Eric Alder

Jim Blair – Europa S1 – Progress Report

46/0363 is progressing slowly, but consistently. After an entire summer of repairing cracks, she was finally ready for primer in early September. Glenn from DevilsTail Unique Graphic Art has been overseeing the body and paint work, and arranged to prime 363 in my carport.

Three coats of high solids primer were applied, which gives us plenty of bulk for blocking the contours. It also revealed many small imperfections and pinholes. These only took a few days to fix, and we are now ready for blocking.



Photos: Jim Blair

Jim Blair – Europa S1 – Progress Report.

Hopefully sanding will be finished, and we can get one more coat of primer on before the winter weather hits.

On the mechanical side, all suspension bushings have now been ordered (from JAE in California). I also ordered new motor mounts, as the old mounts were pretty rough. Even though 363 is getting a Toyota 4AGE, the "chassis-side" of the original mounts are still used.

I've also purchased a new clutch disc (82 Fuego Turbo), and a release bearing from a Corolla GTS, which will mate to the original Renault bearing mount.

I was recently given a new master cylinder. A very kind former Europa owner had two new 1980 Dodge Colt dual circuit cylinders, which apparently are a direct replacement for the original single circuit. After an initial comparison, there are a few differences. The mounting holes will need to be widened by about 1/16, and the bore seems to be .80. So, if I understand correctly, that's close to half way between an S2 mc and a boosted TC, leaning a bit towards the TC bore.

As always, updates can be viewed at <http://www.artoftherace.com/europa460363>

Editor – Miscellaneous Ramblings

The Europa had a challenged history trying to clear DOT – NHTSA standards in the late sixties. The front of the car was simply too low, bumper and headlights below minimum height. A few early Europas arrived in the USA with the lower front a-arms installed upside-down. The dealers would swap the arms back, prior to the car being sold. NHTSA issued a recall of 400 Europas due to headlight height in 1969. If you brought your Europa back for the fix, what you got were pods to raise the headlights. When Lotus redesigned the body, Type 65 had a higher fender line. This allowed the headlights to be marginally higher. But still the front springs were too tall.



Mike Boyle – Europa TC & Esprit S4 V8 – Langley Cruise-In

The 10th annual Langley Cruise-In was held on September 9th of this year. This event is becoming one of the premiere meets and car shows in the Pacific Northwest - if one is a devotee of the all-American, cast iron, pushrod lump. It's not the first show you think of for Lotus. But I did get an immersion in muscle-car culture while growing up in Langley and the Esprit does have a V8 in it, so off I went to join the hotrods and rumbler. Kind of like bringing civilization to the heathens.

The Cruise-In has an interesting way of arranging the cars. Check-in was at Kwantlen College and then we were taken, in groups of about ten cars, by police escort to a display area in the downtown streets. From there, volunteers took over to direct individual car placement. I dutifully waited my turn to park, and as soon as I looked in the mirror for directions to back up to the curb, there was my brother-in-law grinning back at me. I guess Langley still is kind of a small town.

Anyway, once parked I was into the usual car show routine of giving the car a quick touch-up and then figuring out how to fill in the next eight hours until I could leave. Kind of like the VanDusen show but with fewer trees. While I spent most of the time hanging around my car, I did take two or three laps to see the cars on display. It is a big show, with something over 1000 entries. The approximate split is about 60% muscle-cars (ranging from pristine to scruffy), 35% hotrods & modifieds, and 5% others. It is actually quite interesting to see the amount of work that goes into these cars.

As a general comment, I can certainly appreciate the owners' enthusiasm and admire their craftsmanship although I have to admit that I sometimes think they have rocks in their heads when I see the end result. A prime example of the last thought was the organizers' "feature car" – the front end of a Studebaker grafted onto the back end of an El Camino and the resulting chimera painted purple. Kind of like a bad trip from too much burning rubber.

I don't mean to slag the muscle cars and rods in general. While not really to my taste, there were a lot of well turned out cars and I find that I can actually appreciate cars that I would not want to have. Must be a sign of advancing age; kind of like discovering that broccoli isn't toxic after all.

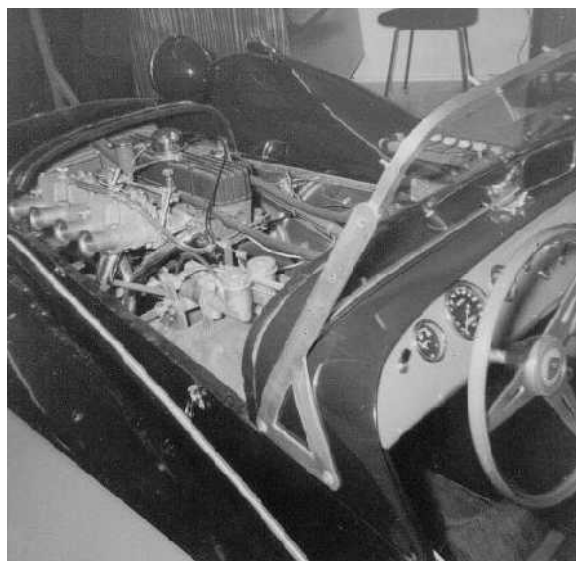
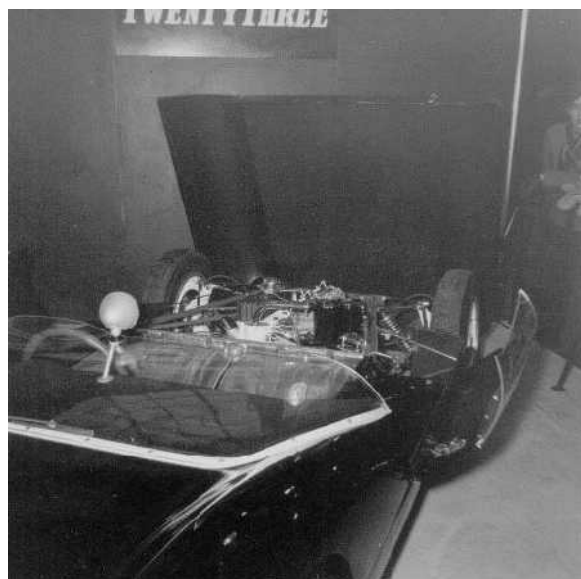
As for the Esprit, it turned out to be a hit with the crowd and drew a lot of attention. I was a bit surprised at how many people knew what it was, or more accurately, I was surprised at how few people misidentified it. I did hear one young fellow tell his friends that he had found a Ferrari and one other guy asked me if it was the kind of car that Magnum drove, but that was about it for real clangers. Kind of like discovering that the heathens aren't quite so dumb after all.

All in all, the Cruise-In is a worth attending at least once. The show is well organized and there are some cars like ours, with a group display from the Langley Area Mostly British club that included our old friend Dave Barron's 1948 Bentley. I think it is useful to occasionally go beyond the specific horizons of Lotus, or even the somewhat broader horizons of sports cars, and can recommend it to others in the club on that basis. While I may have had a bit of an advantage in "returning to my youth" in Langley, it was a good event. Kind of like finding a little bit of enlightenment.



Keith Robinson – Elan +2 & Europa S2 – Earl's Court

Found these original photos taken by yours truly at the 1961 Racing Car Show (Earls Court, London). I had to use my Lotus Book to identify the type 20!! I also found a picture of a Deep Sanderson (I think) a rear engined mini special.



Photos: Keith Robinson

Sacha Fassaert – Esprit Turbo – 25 Days on a Bike Part 1 of 5

I'm a motion picture camera assistant, underwater specialist, guitarist, Honda VFR and Lotus Esprit enthusiast from Vancouver BC. Earlier this year I was shooting a Jet Li feature called 'Rogue' where I was employed as the lead assistant on the second filming unit. We shot all of the martial arts/fight scene footage as well as a few bits of dialogue here and there. The camera operator I assisted on this project is my friend Jeff, who suggested I come to California and visit him after the shoot, as he knew of a bunch of places I could stay for free, either with him or his friends-and I could make it a business trip by visiting some suppliers down there. Sold. My riding buddy, the inspired guitarist Daryl Jahnke, managed to get a few days free to join me at the start of my trip.

This is a day by day travelogue of that trip-May 2006- from Vancouver BC to Winslow Arizona and back, through 6 states. I was 25 days on the road; rode 10368km (6442 miles) collected 0 speeding tickets, suffered only one real day of rain, and had an amazing time.

Day 1; Vancouver to Astoria

Daryl and I left at about 8 am in order to catch the 10:30 ferry to Port Townsend, and after stopping for gas, passing the border, and general fiddling around we wound up almost missing the ferry.... Got there at full throttle just as they were about to bring up the ramp...never made a ferry with so little time to spare. Our goal was to avoid Seattle and go down the west side of Puget Sound, with it's much quieter and more picturesque roads. The boat ride was only about \$4 each. Stopping for Starbucks in Port Townsend, we met a guy with a unique 3 wheeled, 2 wheel drive Russian motorcycle... he was quite the fanatic about his bike, and even had brochures. The day was bright and clear, giving us some great views of the Sound and the Pacific. Our route took us through the oyster capital of Raymond, as well as the forestry town of Aberdeen and a couple of good sets of twisties, amply handled by a guy on a GSXR that passed us at twice our speed. Talk about raising the bar... We visited Long Beach in the late afternoon, windy, deserted, and apparently a place you can drive your car on the beach, depending on the season. There was a skeleton of a whale on display, apparently under constant scrutiny by webcam. Soon after, we crossed the spectacular 4 miles of the Astoria bridge, finally making it to the Astoria dunes motel(\$63), complete with hot tub and indoor pool, around sunset. Ahhhh, time for some cold ones. Dinner was a greasy blue cheese baconburger and fries at the historic Portway pub, about a block away.

[View Day 1 Slideshow](#)

Day 2; Astoria to Bend

Waking to the sight of a fog drenched Astoria bridge, the first order of business had to be finding coffee, so we rode across the bridge to Warrenton, where we found a Starbucks in the Fred Meyers'. We decided to double back and head east along the north side of the Columbia, back in Washington. Daryl was only going to be able to squeeze a couple days from his schedule, so this route allowed us to get most of the day in before he had to head north. We followed the river over to Longview where we had brunch at Rosie's restaurant, and got some directions from a very friendly woman whose husband had taken her over 'this great road' over by Mount St Helen's on his Harley. The route took us over a few mountains and past some nice lakes and a glimpse of a deer and her fawn before we wound up back at Carson, on the river, to continue east...great choice, it turned out, as a deserted, fabulous, occasionally snow lined road through the forest replete with fantastic mountain views and a great set of twisties was our reward for taking her advice. The river was our companion for the rest of our day as we wound east over to The Dalles (a subway employee there once told me it was an Indian word for 'armpit of the world' or something) where we stopped for another coffee before finally splitting up at Biggs, where I headed south on HY 97, entering an area of high plains. I passed through the sleepy farming villages of Grass Valley and Kent, stopped for a peek at a desolate roadside where the sign 'Mountain Identifier' attracted my attention to a 180 degree guide to all the mountains looking west...almost stopped in Madras for the night but kept moving when a guy on a chopper seemed angry when I gave him the 'wave'...and wound up in Bend, Oregon, at probably the least expensive motel of my trip, the appropriately named Econo Inn, which was \$34.10. Dinner was KFC.

[View Day 2 Slideshow](#)

Sacha Fassaert – Esprit Turbo – 25 Days on a Bike Part 1 of 5

Day 3; Bend To Susanville

I really needed to find some chain lube before I headed out this morning...Initially I wanted to buy a small can before I left Vancouver, but then decided that it would be way cheaper in the States. I wound up stopping at a desperately needed Starbucks before a Harley shop pointed me to the Honda dealership, and I got a can for a reasonable price. The parts guy recommended staying south on the (Very-boring-at-this-point-HY97) just long enough to get to HY31, which was much more interesting, as it enters the desert and actually has some turns. Fort rock was my first glimpse of anything resembling the desert followed by Silver Lake, a lonely farming town with some photogenic buildings, and about an hour later these guys told me of the hot springs at Summer lake while we waited for a pilot car to take us past a road construction site. At first it looked like dust being blown up off a dry lake bed... like a car doing speed trials on salt flats...but later I realised that all through that valley you could see the steam of the volcanic lake billowing up-sometimes hundreds of feet-in the air. There was a primitive looking resort that offered access to one end of the lake, but I was content just to take a whiff of the sulphur and shoot some pics. Turning at Lakeview onto HY 395, I stopped briefly at the ghost town of Willow Ranch, alongside Goose lake. ...Pleasant rural countryside morphing to tumbleweed desert made up the rest of the day past Alturas, Likely, Madeline and Litchfield, stopping now and then for a rest, finally driving straight into blinding sunset before reaching the Susanville River Inn motel for the night, at \$48. Dinner was at an otherwise unremarkable but noisy Mexican restaurant, south, down the street, that made a perfect, lime, frosted, salted glass Margarita. Sublime.

[View Day 3 Slideshow](#)

Day 4; Susanville to Reno

I had hoped this day would not have come as fast as it did, but it was becoming obvious that I needed a new rear tire pretty soon-and my chances of finding one past Reno were pretty slim considering I was headed towards the desolation of the desert, so after a quick espresso and a couple phone calls home for business, I headed to Reno. The trip past Honey lake was not particularly memorable save for a brief wait for another pilot car escort through some road construction. I was met at Renos' city limit by an angry local that stung me a few times after flying up my left sleeve... it was sufficiently hot that I had been riding without gloves...never again. Reno Powersports' yellow pages ad claimed to have a huge inventory of tires but didn't carry the tire I wanted, the very Vancouver rain-approved Bridgestone BT 20 (doesn't rain here much in Reno, they said. Yup). They said they could have one delivered for installation first thing next morning so I spent the day driving a loop, visiting Virginia City and Lake Tahoe on what remained of my rear tread. HY 341, The road up to the historic Virginia city over Geiger Summit (5678') was nothing short of fantastic as a superbike road, with fast banked twisties on very new asphalt and light traffic with spectacular views of Carson city and Reno in the mirrors. Dozens of parked Hogs marked lunch for the Harley set in touristy V.C., and equally twisty was the way down past Silver city to the floor of the valley. Going through downtown Carson city was the only way to get to Tahoe due to some highway construction, so I met my first traffic jam. The climb to Lake Tahoe, at about 6200' felt a bit like an interstate and the east side of the lake was littered with expensive looking touristy rustic ski hill development...for miles and miles. The lake itself is the second deepest lake in the US (after Crater lake) at a depth of about 1600', and was a spectacular jewel, surrounded on all sides by still-snowy mountain peaks. After passing back into California, the best riding, albeit a bit gravel-y, was on the west side, as the highway narrowed significantly and wound it's way along the tops of the hills, yielding great views and corners, ultimately leading back to development and the road back to Reno, near the state line. The mountain pass that led over to Reno, HY431, was surrounded on both sides by snow and was a bit chilly on the way home. I wound up staying at a Super 8 Motel, for probably the steepest price on this trip, \$69.56- but it was the only motel on that particular strip that looked even remotely decent. Dinner was at a horrible Mexican fast food restaurant called Del Taco across the street. What did I expect for 5 bucks? Picked up a bottle of "Downtown Brown" ale at a liquor store nearby which more than made up for it. Delicious stuff, made in Eureka, California by the Lost Coast brewery, with a brilliantly Picasso-esque label to boot. Went for a dip alone in the outdoor hot tub, then the freezing Pool, and made it an early night.

[View Day 4 Slideshow](#)

Photos: Sacha Fassaert (Mandatory Lotus Content in Next Installment)

James Armstrong – Elan +2 – Interviews Mark McClure

Mark, could you please give me a brief description of your car: Age, power train, modifications.

My car is a Caterham Super 7 that is the Spec Racer that Caterham USA put together in close cooperation with SCCA for the E Production class. I had the kit shipped from the Caterham factory through one of their US dealers in 2002. The power train was supplied by the US dealer and is a 2.0 liter Ford Zetec. In order to run in the E Production class, it has to be the Zetec engine out of a 1998-1999 Ford Contour, not the new Cosworth.

How successful have you been with it? What does it do particularly well?

The car has been very successful. The first year I had it out, I was reasonably successful, but the faster cars I competed with had too much on me. I was running a stock Zetec at that point. So, after the first season, I sent it to Loyning in Portland who built the engine to E Production rules. After that, it has been in the hunt for first or second place consistently. This year has been particularly successful. We have run four races. Out of that, we took three first places. The fourth race was the Conference 8 hour Enduro at Portland International. We had four drivers, two from the U.S. (Chris Romney and me) and two from Canada. (Jeff Remfert and Doug Yip) We ran the P2 class, which was 650 cc to 2499 cc. After seven hours, we were first in class and fourth overall. We miscalculated the fuel we needed and ran out the lap we were coming in to switch drivers and re-fuel. After about 25 minutes of down time to get the fuel out of the car, we came into the pits to re-fuel, switch drivers, and finish the race. At the checkered, we finished 7th in class and 16th overall. Needless to say, I am currently researching different sized fuel cells that will increase capacity over the current 10 gallons.



Why did you choose the Caterham? What else did you consider before buying it and what had you raced prior to the 7?

I raced a Mazda Miata for years prior to choosing the Seven. I loved the Miata because of its handling, simplicity and low maintenance. Basically the car was bulletproof. When I looked to upgrade, simplicity, low maintenance and competitiveness were the most important criteria. When I saw a picture of the Caterham Spec Racer in Sports Car, I immediately fell in love with it. I did my research and found them to be very competitive, easy to run cars. Believe me, I have not been disappointed.

As much as you would be comfortable sharing, what did the 7 cost, how much is invested and how expensive is it to keep going?

I have no problem sharing costs. I bought the kit for around \$28,000 U.S. The engine and transmission package was another \$7500 once I got it over here.

James Armstrong – Elan +2 – Interviews Mark McClure

By the time I paid someone to put it together, I was into the car around \$41,000 ready to go on the track. After the first season of being slightly out of the hunt for first place, I paid Loyning about \$5,000 to build the engine and dyno it. I have run the Loyning engine for two seasons. It is still running strong, but I am going to have them freshen it over the winter to make sure everything is set for next season.



Describe your race support team - number of people, what they do to keep you on the track.

My pit crew is my brother, (Mike McClure) and another friend. (Jeff Schneider) They are general support at the track for routine things such as fueling, changing tires, set up changes, and all the stuff that always comes up during a weekend at the track. In general, there is not much to do with one of these unless something goes wrong, which it always does in this sport. I remember running the Vancouver Indy with our Miata. We would come in at the end of the day, park the car and head to the beer garden. Everyone else was thrashing on something for the next day's race. The Caterham is similar to the Miata. Usually there is not a ton to do.

Your opinion of the River's Edge track at Mission, competition here, how it might be improved.

I love the Mission track. In fact, it's one of my favorites. My crew and I are always excited to visit Canada and run at Mission. It's especially a good track for the Caterham because of the tightness. We have the Conference E Improved Production race record there. (My friend and co-Enduro driver Jeff Remfert has the qualifying record) If I was to change anything on the track, it would probably be the straightaway. The kink is a bit dangerous and probably should be straightened. Clean restroom facilities are a must somewhere along the line. The close proximity to Mission is great because of the services it provides and the crowd it draws. The track gets more local participation than any other track we visit during the Conference season.

The Hayabusa 7 is familiar to some here in BC, how does the Zetec compare?

The Caterham that runs the Hayabusa is one great car. It is faster than the Zetec because of the power, less weight, and the sequential shift. You are talking two very different cars. The Hayabusa would not be legal in SCCA E Production or Conference E Improved Production. I chose the class because of the tight competition. What I have seen of the Hayabusa Caterham is very impressive and takes most of it's competition to the cleaners. I understand they may be running the Portland Enduro next year. I can only hope they aren't in my class !!

Photos: James Armstrong

Malcom Muir – Ford Cortina Mk 2 GT – Odds & Sods

I made a trip into Wilkinson's Automobilia in August as I had ordered a book and hadn't visited the shop in quite sometime. Ted has used every square inch of the store with shelves stretching floor to ceiling with books, magazines, car brochures, shop manuals, diecast models and numerous other auto paraphernalia. The current selection of die-cast models varies from 1/87th scale up to 1/18th scale with some extremely detailed 1/24th Lotus formula models.

You can also browse the store's inventory online at <http://www.eautomobilia.com/>

In the previous Sept-Oct Cam Journal under Tin Top Tales I wrote about a fourth and (hopefully) last go round with the brake hydraulics. A couple of frugal toolbox items came out of this last project.

Steel brake lines work-harden once they're bent, so if you don't quite get them bent right, your stuck and the lines end up pretzel-like. Try using some 16 AWG solid core copper wire as a template; pre-bending the wire to the desired shape before bending the actual brake line allows getting the shape just right. Because the system is dual diagonal, I painted the brake line fittings red and green (port and starboard, or left and right for the non-aeronautical folks) prior to mounting so I'd know which port on the diverter valve to plumb to. You can also use the red and green paint dot scheme for suspension components and wheels for correct re-assembly on your restoration. For small parts and components, which need to be painted, use wooden clothes pegs to hold the part. This makes the part easier to paint and keeps paint off you fingers. The peg can be clamped in the vise to hold the part until it's dry.



Photo: Malcolm Muir

Lotus News – Kimberley confirmed as Lotus CEO

11th October 2006

The confirmation of Mike Kimberley's appointment as Group Lotus CEO was made by the Lotus Group International Limited (LGIL) holding company board on 20 September at the same time as Mr Kimberley was outlining the sports car maker's new strategic five-year business plan.

A highlight of the plan, which has the holding company board's full support, is the introduction of a new mid-range Lotus set for launch in December 2008 and a Lotus/Proton high performance model, due in May 2008.

Mike Kimberley was the managing director of Lotus in the Colin Chapman era and took over as CEO after Chapman's tragic death in 1982. The holding company invited him to return to Lotus in May this year as acting CEO to review the Group business and operations.

Kimberley said: "I'm honoured that the main Proton holding board has put their faith in me. Lotus has always shown great innovation and vision; as a team at Lotus, we are all determined to realise the company's full potential and justify Proton's confidence in us."



Is this photo the real thing?

<http://www.worldcarfans.com/>

Photo: Lehmann Photo-Syndication

Feature

British, racing and very green

Can saving the planet be fun? Well if you work at Lotus the answer is yes.

A cornerstone to Lotus Engineering's future plans is a deep involvement in applying and developing technologies that reduce CO₂ and reliance on fossil fuels.

There is a great deal of discussion and debate regarding the contribution that motor vehicles emissions have on the environment and global warming; this has sometimes spilled over into open criticism of the use of vehicles for anything other than important transport needs and the debate as to what type of vehicle is suitable.



Biofuel Exige 265E

This at first appears to be in conflict with the desire to own and drive a sports car, even more so when the vehicle is used for track days and pure enjoyment. The Lotus philosophy of performance through light weight has already embraced the concepts of downsizing powertrains whilst maintaining maximum driving pleasure. The current Elise R has a 1.8 litre 189bhp engine, performance is 0-60 in 4.9 sec and fuel economy is 41.4mpg

Against this backdrop and with the announcement of increasing biofuel infrastructure Lotus decided to look at ways to demonstrate its understanding of what alternative fuels could achieve and the techniques and technologies required to produce production vehicles that are both fun to drive and environmentally friendly.

As an engineering consultancy we have a desire to promote these ideas not only internally at Lotus, but also to a worldwide audience.

The obvious choice for our research was one of our own vehicles. We recently launched the Exige S, which produces 220 bhp using a 1.8 litre supercharged engine. It made sense to try and use this vehicle and to match or better the performance using a biofuel. The fact that the vehicle is pressure-charged provided even more opportunity to exploit the performance characteristics of a high-octane fuel.

The next question was: which fuel? The area of alternative fuels is currently very exciting and fast-moving. Our fuels experts highlighted a number of potential avenues which included methanol and biobutanol.

We concluded that using biobutanol would not stretch our engineering team as it has similar characteristics to gasoline and would deliver similar performance to the standard vehicle. This and the current lack of availability led us to decide not to proceed with this fuel for the time being. Methanol has for many years been the preferred fuel for some racing series, primarily due to the high octane rating, allowing significant performance increase. It can be produced in a number of ways and the fact that it can be synthesised from methane (natural gas) means that it could be available in a number of territories across Europe and the World. This was considered an area for future research and coupled with the fact that it had no proposed manufacture or supply infrastructure methanol was rejected as the initial fuel for this vehicle.

The growing infrastructure for E85 bioethanol coupled with its combustion characteristics made it the obvious choice as it allowed our engineering team to enhance the engine performance. Coinciding with our review process, Morrison's, the supermarket chain, announced a new initiative to locate E85 ethanol pumps on a number of their supermarket forecourts.

The fuel decided, we started to computer model the engine performance. Our CAE (computer aided engineering) group ran some performance calculations with various injector and intake configurations. The initial calculations looked very promising. The standard powertrain could be enhanced from 220bhp to above 260bhp with little modification to the base engine. In fact, with certain configurations we could achieve even higher performance.

Vehicle performance calculations then showed vehicle performance improvements across the board.

Armed with this information, an enthusiastic team was assembled and tasked with building a one-off engineering demonstrator vehicle to showcase the potentials of the chosen technologies and biofuel.

Lotus has already undertaken a number of alternative fuel projects for clients, but had never focused its attention on promoting the fun aspect of biofuels. The enthusiasm for this project was enormous. It quickly gained senior management support and approval to make it a reality.

The vehicle was taken into the workshop and the engine removed and fitted to the test bed so baseline performance could be measured.

Lotus Engineering

Change the rules



6

Feature

In parallel, the revised intake was designed and fabricated in line with our computer predictions and then fitted to the engine. Our engine management group recalibrated the engine and further performance tests were undertaken. The engine performance met the computer-modelled predictions almost immediately and there then followed a period of further optimisation. The engine was finally removed from the test bed and installed in a modified vehicle. In final trim the engine produced 263 bhp, some 43 bhp more than an Exige S and 74 bhp more than an Elise R.

There was a great deal of excitement and a little trepidation when the day came to start the vehicle for the first time. This soon passed as the engine started immediately and then, after some further calibration tweaks, was taken out on the track for a shakedown.

Safety checks completed, the vehicle was ready for evaluation and sign off. A small group of Lotus personnel were then invited to drive the vehicle and confirm its acceptance, showing that working at Lotus does have considerable perks.

The baseline track drive in a standard Exige S would be exciting enough for most drivers – bordering on ultimate performance. However, the initial impression of the ethanol-fuelled Exige 265E, as it was quickly christened, was a crisp responsive powerful vehicle that universally brought increasing broad smiles from the returning drivers. The performance is awesome!

The final sign off test drive was completed just five weeks after the project was instigated and has resulted in a demonstration vehicle that not only excites the driver but also is at the forefront of environmentally friendly vehicles.

We are planning to develop the vehicle to run on multiple fuels not just E85 ethanol and gasoline.

This avenue of research is very important as further fuel infrastructure could mean that differing countries or even areas within a country will have differing environmentally friendly fuels available. To be able to drive a biofuelled vehicle for long distances in the future, the ability for it to be able to run on different fuels could be crucial. At the moment the limited number of flex-fuel vehicles available default to gasoline. The market is growing rapidly and there are a number of alternative solutions. It is likely the usage will be localised and result in niche markets. Even if overall market penetration remains low there could be almost 100% penetration in a particular region. This is an additional reason why the area of renewable fuels cannot be ignored.

We are pleased that this vehicle demonstrates our engineering capabilities, understanding of flex-fuel vehicles and knowledge of emerging fuel technologies. It also promotes bioethanol as a fuel of choice for the enthusiastic driver as well as the environmentally conscious driver. Optimum performance can be achieved with a pressure-charged engine, although most modern vehicles can be adapted to run on E85 ethanol.

What are we considering in the future? Well, our internal research continues and we are now even better placed to support our engineering customers with flex-fuel solutions and applications of alternative fuels. Lotus is actively pursuing technologies that will improve the efficiency of powertrain in the future. CO₂ reduction is a priority together with technologies that can reduce our reliance on fossil fuels. The problems facing the automotive industry at the moment are challenging. Lotus philosophies, experience and culture are allowing us to play a significant role in supporting future solutions.



The 265E again, from the rear

Will there be further developments in the industry? Definitely, and Lotus is positioning itself to support, develop and innovate solutions for the automotive industry. The subject area is vast, and forming strategic partnerships with manufacturers, Tier 1 suppliers, research institutes and the wider environmental infrastructure is vital.

Geographically, our headquarters in Norfolk are well placed. East Anglia has a unique blend of industrial, academic and agricultural bodies with the potential to significantly contribute to the advancement and promotion of environmentally friendly solutions for the automotive industry.

There is some realignment required in both the auto industry and more importantly through legislation. In these types of vehicles, the quantity of carbon dioxide emitted should be balanced with the consumption of CO₂ in the feedstock. Current tailpipe emission legislation does not account for this. By short-sightedly measuring only the exhaust emissions, we risk restraining a huge opportunity to improve our environment through the use of biofuels. If we can have fun at the same time, that seems like a good thing!

Now, where was that Morrisons supermarket forecourt?

Geraint Castleton-White, Lotus Engineering

Lotus Engineering

Change the rules



7

Graham goes nap

Last-year Lotus wins wingless Monaco



One of the brightest suggestions about the Monaco GP comes from French motoring journalist Edouard Seidler. Why not, he asks, let Graham Hill give a one-man two-hour demonstration run round the Principality, and then give him the money?

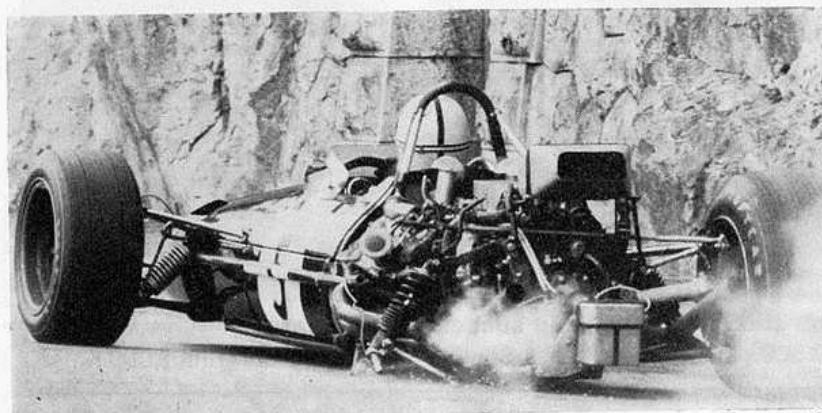
Certainly Graham and Monaco are becoming almost a foregone conclusion. He had a hat-trick of victories there in 1963, 1964 and 1965, was third in 1966 and second in 1967, won again last year, and now has won again. Motor racing history, for no-one before has ever won a grande epreuve five times. And to do it at Monaco, the great car-breaking circuit, is incredible.

Graham modestly suggested he had been lucky this time. In a sense he was, for he took the lead on lap 23 of the 80-lap race after Chris Amon's Ferrari and Jackie Stewart's Matra MS80 had fallen by the Monte Carlo wayside. Surely, though, the current world champion possesses that special something—a melange of utter concentration and mechanical sympathy—which enables him to keep up the pace on this punishing circuit *and* preserve his car in one piece.

And he had to keep up the pace, for Piers Courage never relaxed the pressure in Frank Williams' immaculately-prepared Brabham-Ford (thoughtfully provided with GT40 doughnuts and UJs for this race). Graham averaged a record 80.18 mph—faster than Dick Attwood's last-year lap record—and finished just over 17 seconds ahead of Courage, letting up only on the final lap when he was convinced, quite wrongly, that something must break before he got to the chequered flag.

'Porage' drove the race of his life. He had a terrific dice with Jacky Ickx, in one of the works Brabham-Fords, which waged for over half of the race, until Jacky broke a rear upright (a recurrence of practice trouble). This was Porage's third Monaco, and the first time he'd finished. Before it began he wondered whether he would have the stamina, but he came through splendidly, despite losing fourth gear at quarter distance and then having his feet cooked towards the end. (He was still limping when he turned up at the Hotel de Paris for the after-race junket.)

How splendid to see a privateer doing so well. And he wasn't the only one, for Jo Siffert came third in the Walker-Durlacher Lotus 49B, in spite of a recalcitrant engine which never sounded on more than seven cylinders and which seemed about to go bang any minute. Seppe was 600 rpm down throughout the race, and Rob Walker was clearly relieved about that third place, since his latest '9' series engine, rebuilt after going bang at Barcelona, had gone bang again in practice. Perhaps it was as well, Rob remarked thoughtfully afterwards, that the engine had been down on revs, because if it had been on full song Seppe might have broken a gearbox or a drive shaft!





1 Last year Graham's winning Lotus was a near-wedge, and with the sudden ban on wings this year the same car didn't look so very different.

2 Jack Brabham emerging from the tunnel, after colliding with John Surtees' gearless BRM before entering it. And there's a corner in there!

3 Jo Siffert, who finished a good third in a car that was never right, passes the abandoned machines of Surtees and Amon, both of which were put out by transmission trouble.

4 Piers Courage drove a magnificent race to finish second with the beautifully-prepared Frank Williams Brabham-Ford.

5 Stewart and the Matra MS80 were still the quickest without wings. Jackie had pulled out a considerable lead until a universal joint let go.

Brought in to replace the injured Jochen Rindt at the last moment, Attwood confirmed the wisdom of Colin Chapman's choice by finishing his Lotus in fourth place. Unusually for Monaco, the first four cars all completed in the full race distance. After cockpit modifications to prevent arms and legs getting all mixed up with steering wheel and gear lever, Attwood showed in practice that he regards Monaco as his favourite circuit, and first and fourth for the works Lotuses did something to make up for those Barcelona disasters.

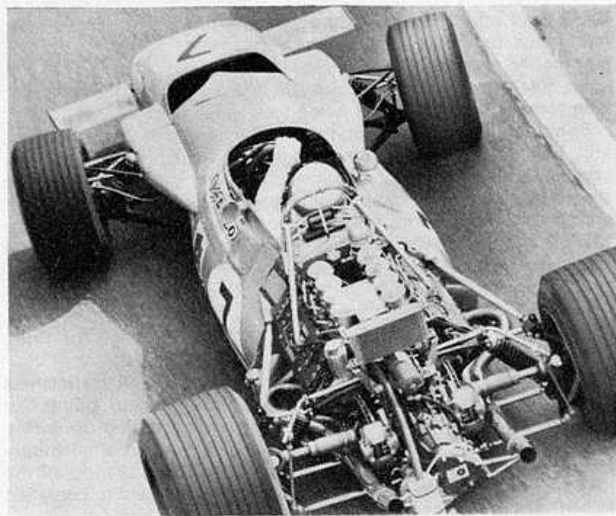
That double shunt at Barcelona caused some rapid rethinking and a lot of midnight oil was burned as the boys at Hethel strove to get a couple of cars ready for Monaco. All they had left in stock was a brace of machines back from the Tasman series, both well worn. For Graham they burnished up the car number 49/10—the very machine he had used to win Monaco last year—which figured in that dramatic rush job when it was flown out as a replacement for Jochen Rindt in New Zealand. For Attwood there was car 49/8 which Graham drove in the Tasman. Both cars had last year's engines.

The results indicate how well the Lotus spanner-pushers worked. To get first and fourth with year-old cars screwed together in such a hurry is a fine tribute to their skill and devotion to duty.

This year there was perhaps even more socialising in the Principality than usual, and certainly more exotic road machinery, with Lamborghinis everywhere and Ferraris two a penny. The Duke of Kent was there, along with brother Michael, being shown the rounds by BRDC Secretary Tony Salmon. Our ambassador to France, Christopher Soames, was seen around the pits (diplomatic pass?) and of course on race day we watched Prince Rainier and Princess Grace open the circuit. The list of those present was like a motor racing who's who, and with Paul Frere acting as clerk of the course instead of Louis Chiron (who still managed to dash around as though he was in charge), things were less frantic at the start.

But on first practice day things were less gentle, with the organisers asking competitors to please take off their wings . . . and the entrants refusing. So the big-wigs of the CSI held solemn conclave after the first training session, banned wings on the spot (something they should have done far earlier if they intended doing it), and started a howl of protest, particularly from Ken Tyrrell who argued with some justification that his Matras were designed specifically around those controversial aerodynamic devices. Interesting thing was that in the succeeding sessions everyone, but everyone, went quicker than when they had with wings. Mind you, it's likely the boys weren't really trying the first day, and so we'll never know whether wings made all that difference. Certainly the wings made the cars easier to drive, and according to Jack Brabham (who turned up with his former rear wings transferred to the front and even bigger aerofoils at the back) the effect was noticeable going up the hill to the Casino and through the tunnel.

Jack made a further involuntary experiment in the tunnel during the race, when he went through on three wheels and without brakes following a pre-tunnel fracas with John Surtees' BRM, after Big John had a recurrence of gear selector trouble which dogged



him in practice. But at least John managed 9½ laps with his BRM, whereas Jack Oliver, in the other 48-valver, only got just past the first corner before parking it on the hill with collapsed front suspension; seems he got rather amorous at the start and got somewhat entwined with the rear of Attwood's Lotus when Attwood was slow away. Poor Oliver. Perhaps next year he'll manage a whole race lap at Monaco.

While Jackie Stewart was scudding off into the distance and gradually pulling away from Chris Amon's Ferrari, the rest of the field quickly strung out. Jackie had dominated every practice, and got pole position with a sans-wings effort in 1m 24.6s (former race record 1m 28.1s). His race times with those bulbous Matra tanks full of fuel were something to shout about. After only a few laps he was down to 1m 27.9s, and this came down consistently until he left it at 1m 25.1s, 82.0 mph, before leaving the race with a fractured outer UJ on lap 23. The end to a glorious effort, during which he had shown who was master.

With Amon a mechanical casualty on lap 17 when the differential went (for the second time), and Beltoise the victim of another UJ breakage—this time the inner one—Hill inherited a 12-second lead over Ickx and Courage, who were having a no-quarter battle. Both boys were enjoying themselves, and Courage's loss of fourth gear made little difference since fourth and fifth were close ratios. While Hill went serenely on surrounded by his new all-enveloping crash hat, that battle for second place roused the crowd. Courage got by Ickx on lap 27 (when the Belgian was having a few moments of finding only neutral). Ickx retook him on lap 32, and Courage found the problem solved on lap 49 when Ickx had that upright go. A pity it ended like that, for it was a stirring match.

Silvio Moser, in a beautifully prepared Brabham-Ford—the BT24 ▶

Monaco Grand Prix



They're now good friends. Graham goes up for his annual chat to Prince Rainier and Princess Grace.

Courage used in the Tasman, but now fitted with outrigger side tanks—gave up after 16 laps with yet another UJ breakage. Pedro Rodriguez had also gone out on lap 16, when his older V12 BRM gave up in protest, with an engine bill for Tim Parnell and mutterings by Pedro that he didn't want to drive that antique automobile ever again.

So, just after quarter distance, there were only eight survivors, later to be reduced to seven when Ickx walked home.

Behind the leading quartet, the two McLarens of Bruce the boss and teammate Denny Hulme plugged on manfully, neither car apparently sufficiently competitive and Denny with an infection that left him dangerously short of breath. Bruce finished a lap down with his M7C but Denny was a couple of laps adrift in his last-year M7A/2 after what was obviously an exhausting drive, and he was completely flaked-out at the end.

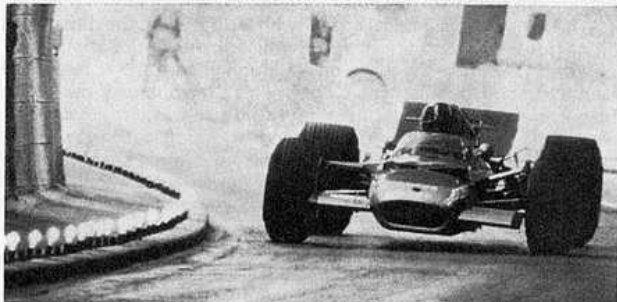
The only other finisher was Vic Elford, in the elderly Cooper-Maserati T86B. Vic was inevitably slow, but polite to overtakers, and was six laps behind while he thought longingly of Colin Crabbe getting him a McLaren for Zandvoort.

So it was three Lotuses in the first four places, and all the finishers but Elford had Ford power. Still no championship points for Chris Amon, who displayed his enthusiasm by turning up with a couple of Ferraris 'on loan' since Enzo didn't want an official entry after Bandini's death there two years ago. Official or not, all the Ferrari team was there, though one of them was heard to complain that they had turned up with only two half-cars. Irony of Amon's retirement was that the new car he used in the race (chassis 0019) was fitted with a very special diff made in Germany to match the gruelling demands of Monaco.

Shorn of their wings, Hill and Amon had spoilers mounted over their engines, but no-one complained that the absence of rear aerofoils marred the spectacle of the race. In fact, apart from that Ickx-Courage dice, it wasn't all that much of a spectacle. But it was fun in Monaco for several days, and by the end of the GP 'holiday' even Rosie, at the Chatham Bar, was encouraged to learn there might be a possibility of finding substitute premises when the authorities pull down that famous establishment to make way for a new road.

Last word on those wings and things from Rob Walker. When Ken Tyrrell suggested he might have to protest Seppe Siffert's front spoilers for being too wide, Rob retorted, 'If you do, then I'll protest Stewart. With his hair that long no-one can see to get by!' Get by Stewart? He was joking, of course.

Into the tunnel and all on his own. It was Graham's fifth Monaco win.



18 Motor Racing and Sportscar July 1969

The grid

Jackie Stewart (Matra-Ford) 1m 24.6s	Chris Amon (Ferrari) 1m 25.0s
Jean-Pierre Beltoise (Matra-Ford) 1m 25.4s	Graham Hill (Lotus-Ford) 1m 25.8s
Jo Siffert (Lotus-Ford) 1m 26.0s	John Surtees (BRM) 1m 26.0s
Jacky Ickx (Brabham-Ford) 1m 26.3s	Jack Brabham (Brabham-Ford) 1m 26.4s
Piers Courage (Brabham-Ford) 1m 26.4s	Richard Attwood (Lotus-Ford) 1m 26.5s
Bruce McLaren (McLaren-Ford) 1m 26.7s	Denny Hulme (McLaren-Ford) 1m 26.8s
Jack Oliver (BRM) 1m 28.4s	Pedro Rodriguez (BRM) 1m 30.5s
Silvio Moser (Brabham-Ford) 1m 30.5s	Vic Elford (Cooper-Maserati) 1m 32.8s

Monaco Grand Prix, May 18, 80 laps, 156 miles

Place	Driver	Car	Time
1	Graham Hill	Lotus-Ford	1h 56m 59.4s, 80.18mph
2	Piers Courage	Brabham-Ford	1h 57m 16.7s
3	Jo Siffert	Lotus-Ford	1h 57m 34.0s
4	Richard Attwood	Lotus-Ford	1h 57m 52.3s
5	Bruce McLaren	McLaren-Ford	79 laps
6	Denny Hulme	McLaren-Ford	78 laps
7	Vic Elford	Cooper-Maserati	74 laps

Fastest lap: Jackie Stewart (Matra-Ford), 1m 25.1s, 82.0 mph (new record)

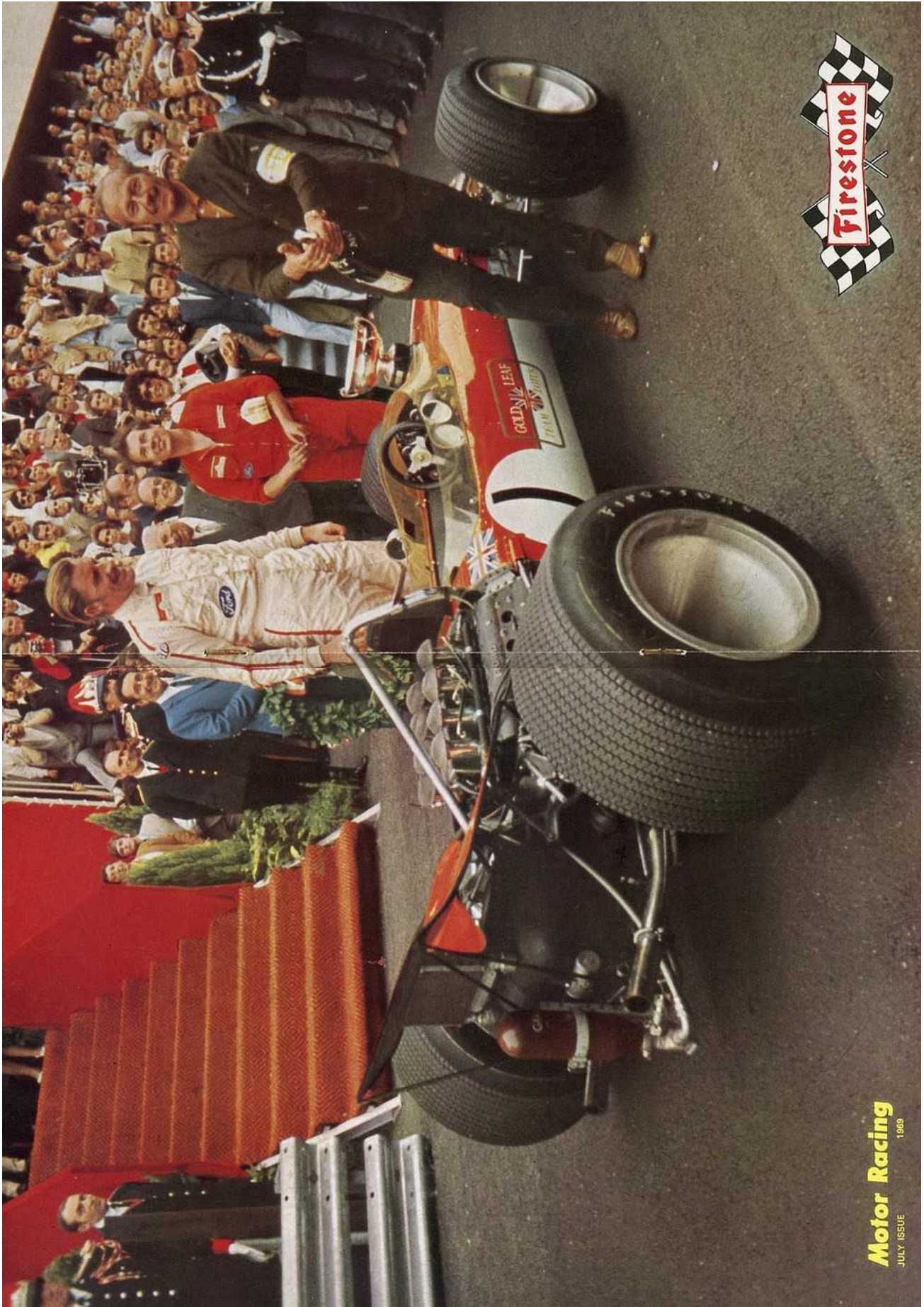
Retirements

Jack Oliver (BRM), on lap 1, collapsed front suspension.
 Jack Brabham (Brabham-Ford), on lap 10, accident.
 John Surtees (BRM), on lap 10, accident.
 Pedro Rodriguez (BRM), on lap 16, engine.
 Silvio Moser (Brabham-Ford), 16 laps, drive shaft.
 Chris Amon (Ferrari), on lap 17, differential.
 Jean-Pierre Beltoise (Matra-Ford), 20 laps, universal joint.
 Jackie Stewart (Matra-Ford), on lap 23, universal joint.
 Jacky Ickx (Brabham-Ford), on lap 49, rear upright.

Practice times

Driver	Car	1st session	2nd session	3rd session
Stewart	Matra-Ford	1m 24.9s	1m 25.6s	1m 24.6s
Amon	Ferrari	1m 28.0s	*1m 28.8s	1m 25.0s
Beltoise	Matra-Ford	1m 29.1s	1m 26.3s	1m 25.4s
Hill	Lotus-Ford	1m 25.6s	1m 25.8s	1m 25.8s
Siffert	Lotus-Ford	1m 26.5s	1m 56.6s	1m 26.0s
Surtees	BRM	1m 30.2s	1m 27.9s	1m 26.0s
Ickx	Brabham-Ford	1m 26.0s	1m 26.3s	1m 26.6s
Brabham	Brabham-Ford	1m 31.0s	1m 26.4s	1m 26.5s
Courage	Brabham-Ford	1m 27.6s	1m 26.4s	1m 26.4s
Attwood	Lotus-Ford	1m 30.6s	1m 28.0s	1m 26.5s
McLaren	McLaren-Ford	1m 27.6s	1m 29.2s	1m 26.7s
Hulme	McLaren-Ford	1m 29.0s	1m 27.8s	1m 26.8s
Oliver	BRM	1m 29.4s	1m 29.5s	1m 28.4s
Rodriguez	BRM	1m 31.2s	1m 34.6s	1m 30.5s
Moser	Brabham-Ford	—	1m 30.5s	1m 31.5s
Elford	Cooper-Maserati	1m 38.7s	1m 38.0s	1m 32.8s

* Spare car



Lotus News – 2008 Esprit Testing



Spotted in Germany, following a BMW X5. Suggests maybe a Bimmer V8 engine in the rear of the Esprit?
Sauber BMW Lotus Esprit..???

Photos: Auto Express

For Sale – Swap – Fancy

For Sale - 1975 Lotus Elite s/n 75 / 080353B

Car is complete, rear end disassembled. Some new brake parts included. Comes with factory Workshop Manual, original Owner's Manual, 5 original wheels. Stored last 7 years. Asking \$5000. Car is located in Powell River, British Columbia, Canada. **Martin Stretton: 604-414-8146. martinstretton@shaw.ca**

For Sale - Richard Chong's 1982 Lotus Esprit

Black 1982 Euro Turbo Esprit, Dry sump, really rare factory system, with tan interior, 77000 kms, new Dunlop Sport 8000 tires. Motor has been redone, new crank, dry sump pump, pistons & liners, trans has been rebuilt with new ring and pinion, clutch and syncro rings. New factory carbs and turbo has been rebuilt, new waste gate diaphragm and spring, blow off valves, ac works, will convert for new owner, drivers seat has been redone on side bolster. Just added a variable boost controller inside, great for blowing off pony cars yet trackable in town. Needs the dash repaired, has pulled away in the corners and need a clock, missing when I bought it and has not been a priority to replace. Most of the work and repairs were done when I purchased the car 11 years ago and I have driven it for maybe 5000 kms. It's been in dry storage for years and I take it out and drive it for a few weeks every year. I just feel that it's time for some one else to really enjoy this car. It is now sitting in my garage at home, cause my storage area is full. You can also get vintage plates for the car as there was only 200 produced this model year. I know for a fact that this is a Euro car because I knew the original owner, he traveled to Europe for a year and ordered the car through MCL and picked it up at the factory and drove it through out Europe and shipped it back. I was involved in the certification for the Canadian market. I can tell the purchaser the whole history of the car. \$24,500.00 Cdn. **Richard D. Chong: Richmond Auto Clinic richmondauto@telus.net**

For Sale - 1974 Lotus Europa TCS with Cosworth YBB

All custom-engineered for a naturally aspirated 2L+ Cosworth YBB motor which was built by Dave Dixon, before he went to work for Ilmor. The engine was run on his shop's dyno, the day he closed his shop. The transaxle is a brand new Hewland Mk9 with special, heavy duty "rally gears" and has a Quaife diff, as well as fittings for external oiling/filtration. It was custom built for this car by PDS racing in the UK, with extra work done by Taylor Engineering, here in the US. The chassis was specially built for this engine/trans combination by Spyder and utilizes an upper/lower ball-joint arrangement (no trunnions) for the front suspension and upper/lower A-arms for the rear. All of the chassis was completely reworked by a specialist race-car fabrication shop here locally to make all the suspension work and fit into the car as it should; what it means is that I have about two or three times the cost of the complete, custom-built Spyder rolling chassis into getting everything exactly right. The entire exhaust system is stainless steel, with a Borla stainless race muffler and all the tubing used is "321" stainless, which is at least double the cost of the normal "304" stainless, because it has higher titanium content. The brakes are also custom-done by the same shop, since the Spyder supplied four wheel disc arrangement would not fit, so we came up with 11.25" discs all around with Wilwood calipers front and back. All hard lines are stainless with AN fittings and stainless, braided flex hoses. There is a separate, lightweight parking brake disc, if you want to use it. The racing shop also made up a front and rear braced roll bar that fits tightly into the interior. The clutch is activated by a hydraulic, concentric slave throw-out. The race shop also custom mounted front and rear Addco sway bars and there are Carrera shocks fitted all around (the Spyder supplied Spax shocks and springs were not at all right for the car). The body was completely done (at no small expense) by a very high-end paint shop here that normally paints cars like Cobras and GT40s. There is also a custom Griffin aluminum radiator specifically built to replace the original, but I also have another Griffin Chevy radiator, if more cooling is needed, as well as the original radiator. \$20,000.00 US. FIRM. This is about 1/4 of what I have invested in this car. I am looking for a buyer who is serious about completing the car. I want it to go to a good home and be enjoyed for the very high potential that it has. I bought the car, complete, running, and in stock form from the original owner in Dec. 1988. **Pictures at: <http://www.europa24fps.com/fdalton/TC.html>**
Contact Frank at W: 734-710-4479, H: 313-294-3907 ersatz47@yahoo.com

Lotus Car Club of British Columbia

Membership Application / Renewal Form

Application Type: Please check one.	New: \$40.00	Renewal: \$35.00
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Name:	
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Spouse / Partner:	
Res. Telephone:	
Cell. Telephone:	
Bus. Telephone:	
Email:	
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Vehicle #1:	
Year:	
Colour:	
VIN:	
Modifications:	

Vehicle #2:	
Year:	
Colour:	
VIN:	
Modifications:	

Interests:	
Skills:	

Signed:		Please complete this form, and mail with your cheque payable to: Lotus Car Club of British Columbia P.O. Box 125, 3456 Dunbar St. Vancouver, B.C. V6S 2C2
Date:		