

Lotus World

The official newspaper of Club Team Lotus and Lotus Cars Limited

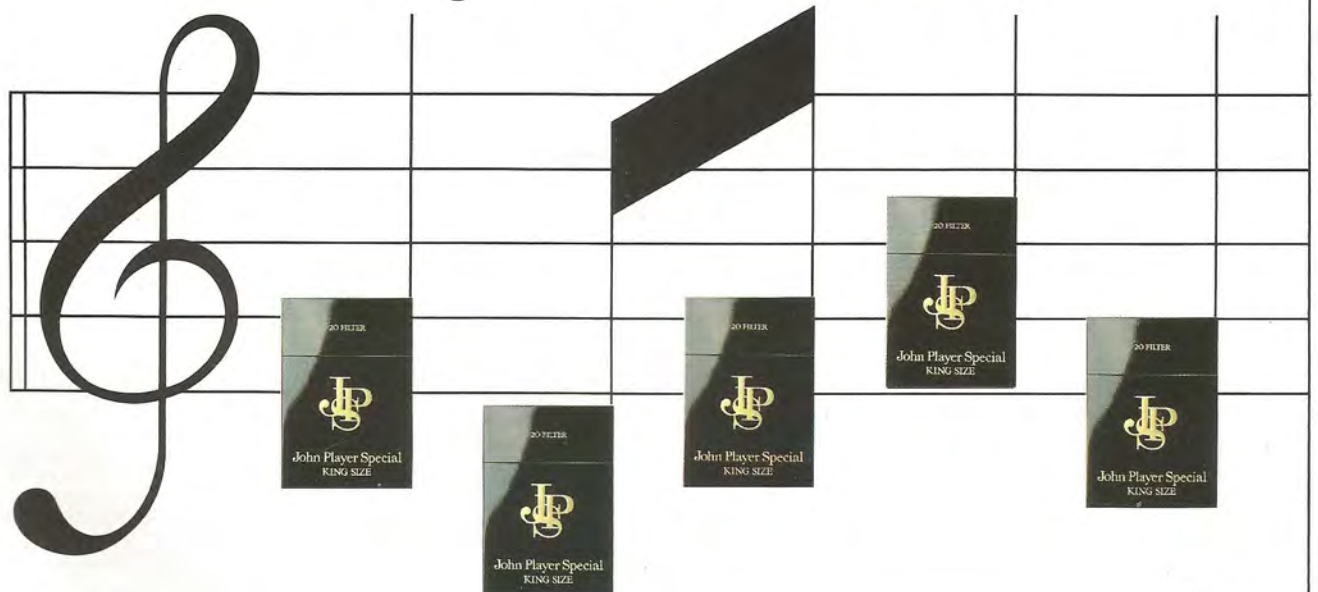
OFF TO THE U.S.A.!

There was news aplenty emanating from both Lotus Cars and the Team at the end of May. Lotus Cars received U.S. certification for the Turbo Esprit and immediately six cars were air freighted to the States so their new owners were not kept waiting. (Story on Page 13.) In the same week, one of the world's most talented motor racing engineers, Gerard Ducarouge joined the Team as Chief Engineer and was working at our Race Headquarters throughout the May Bank Holiday. (Story on Page 2.) Then the organisers of this year's British Grand Prix confirmed they would like Club Team Lotus to arrange a parade of Lotus' at Silverstone on the day of the Grand Prix as an international tribute to Colin. (Story on Page 14.)

As soon as the ink had dried on the U.S. certification of our Turbo Esprit, the first cars were on their way to the States. Here the first batch of six are loaded on the Flying Tigers freighter at Heathrow at the end of May.



Play it Black



JPS6ALW

MIDDLE TAR
As defined by H. M. Government

DANGER: Government Health WARNING:
CIGARETTES CAN SERIOUSLY DAMAGE YOUR HEALTH

Lotus World

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... WORLD NEWS ... WORLD NEWS

NEWS FROM LOTUS CARS

H.R.H. PRINCE MICHAEL'S VISIT

Our Chairman, Mr. Bushell, has received an extremely pleasant letter from His Royal Highness thanking Lotus Cars for a thoroughly informative and interesting visit.

FACTORY VISITS

Frank Wilder, after six years of loyal service as the Factory guide, has decided to retire properly and move home. Potential candidates for Frank's vacancy are being interviewed and it is hoped normal service will have been resumed by early June.

CAR MAGAZINE

Based on the very successful Turbo Esprit Competition that Car Magazine ran last year, our production factory will be co-operating once again on a major competition featuring the Excel as the first prize, commencing September of this year and running right through to February/March 1984. In addition to the publicity of the competition itself there will be four major colour articles on Lotus supplementing the competition during that time. These articles will cover body process, production line, road test and subsequent handover of the Excel to the prize winner. To create further visibility Lotus Cars has started advertising the Excel in full colour, as from April.

Trumph Nibbling Machine in Fabrication

A Press Visit on 18th May resulted in an industrial story on the applications of the Trumph machine in Lotus Cars, explaining in detail the versatility and importance of that equipment in the making of our current road cars.

Motor Sport Magazine

Alan Henry will be visiting Lotus in July to do an up-date story on the Company and will, like Maxwell Boyd, be taking away an Excel for a road test article in Motor Sport Magazine.

STOP PRESS!

DUCAROUGE JOINS JOHN PLAYER SPECIAL TEAM LOTUS

On May 27, John Player Special Team Lotus were delighted to announce that Gerard Ducarouge would be joining the team as Chief Engineer from June 1st and working with our Team as from the Canadian Grand Prix at Montreal.



Gerard Ducarouge - we were delighted to welcome Gerard who was hard at work immediately following the announcement of his new appointment.

Ducarouge brings to the Team over 18 years experience in top-line motor racing, and is highly regarded within the sport as one of its most talented engineers.

Gerard comes from a background in the high technology world of missiles. He was trained at France's National Aeronautical Institute and then worked on government missile programmes before joining Matra in 1966. He quickly switched to their motor racing department and, in 1968, became an engineer with their sports prototype team.

Growing in experience, he was involved in Matra's victories in the 1972, 1973 and 1974 Le Mans 24 hours. In the latter two years, the team also won the World Sports Car Manufacturers' Championship.

In 1975, when Matra disbanded their racing operation, he moved to the new Ligier team. Working closely with Jacques Laffite, the little team produced their first win in the World

Championship by taking the honours at the 1977 Swedish Grand Prix.

1979 was the year of the Ligier, as the Team's new chassis won the first two rounds of the Championship in Argentina and Brazil in convincing style. In fact, Ligiers won seven Grand Prix between 1979 and 1981 - a superb record by anybody's standards.

In 1981, he moved to Italy to join Alfa Romeo, but following a recent change of policy by the Italian company, he left them in April this year. However, the fruits of his labours were beginning to show as was proved with the speed of the latest Alfa Romeo Turbo car designed under his supervision.

Forty-one year old Ducarouge, who is married and comes from Paris, said, "I have always had a great respect for Lotus and the late Colin Chapman, and joining the Team is a very good opportunity for me".

Peter Warr, our Team Manager, added, "I have the greatest respect for Gerard's achievements in top class motor racing and I am sure that his contribution to the Team will soon be evident".

Tony Rudd, Team Lotus Director of Engineering said "I am pleased that our engineering strength has been reinforced with the agreement of Gerard to join us".

The announcement was made on May 27. The next day, Gerard and his wife, Colette, flew into Norwich for a weekend get-together with Peter Warr and his wife, Yvonne and together they visited Ketteringham Hall. Thus familiarised with his new home, Gerard was hard at work in our Design Office first thing on May Bank Holiday Monday where for the next week he was to institute a revised work programme for everyone before flying to Montreal for his first Grand Prix with our Team.

JOHN PLAYER

John Player began a national campaign in May which runs through to August, first prize being a black and gold S3 Esprit. They are distributing through top quality retailers over a million black and gold wallets containing details of the competition. This wallet contains a very nice colour leaflet extolling the virtues of the S3 Esprit with a couple of excellent photographs of the motor car.

SINGAPORE

A senior journalist from a Singapore motoring magazine visited us in May to do a walk-about story on Lotus.

SPORTING CARS MAGAZINE

Sporting Cars Magazine (who were awarded by the Guild of Motoring Writers the 'Accolade of Excellence' Award for 1982) will be visiting Lotus in June to do a full colour feature on the Factory and Production Line. They will be further featuring a road test on the Excel towards the end of the year.

ALTERNATIVE CARS MAGAZINE

Their May issue carried a splendid full colour road test and extremely favourable appraisal of the Turbo Esprit.



John Player Special

THIRD TIME LUCKY

It must have been the longest trip in our history for it took us three years to get to Imola! F.O.C.A./F.I.S.A. politics had intervened on both the previous occasions although we had managed a dummy run last year only to have to shut up shop almost as soon as we had opened it, and return home again. This year though the politicians had run out of breath which is never a bad thing and the race scene was set.

Caught Short

Our own scene was not so bright though. We had finished the French Grand Prix, done a test at Imola on the following Tuesday rushed off to Spa Francorchamps for running the following Friday and completed a long tour only by the Saturday evening. Just a few hours remained to us for preparation before leaving for Italy on the Monday so it will come as no surprise to learn that of the four race cars we took two were complete and two in kit form. There are certainly no medals to be awarded when this happens as you then commence the race meeting considerably out of step and although everyone works furiously to catch up during the three days (which are hectic days in any case), miracles are few and far between. Not only this but we were now into refuelling and the brand new systems and additional items of equipment were on board that needed extensive testing and practice prior to the big day. The Volvo also made its customary handling stop at Renault on the way down to collect more engines and our crew worked until 3 am., of the night leading into first practice.

Peter Warr and our engineers on their final hop by road from Milan to Imola found a long hold up on the Bologna - Imola autostrada which delayed them considerably. The cause was a huge shunt involving three lorries, one of which caught fire in the mêlée which filled the road with fire engines and ambulances together with tons of fresh fruit and vegetables, the traffic snarl up stretching back over 15 miles (25 kms).

Practice Opens

The weather was similar to that in England and was decidedly cool and with rain clouds overhead. Practice opened with the majority of cars running with what could now be termed full tanks but which were of course only half full in practical terms. In other words the cars would be starting the race

in their heaviest form of only half fuel loads but with a pit stop on their schedule.

It was raining as running got underway so we initially ran our spare or "T" cars to check them out and keep our race cars ready for the serious stuff that lay ahead. The cars ran without a hiccup and we tried sets of quallies towards the end of the untimed first period just to check car balance. Times from this session were:

1st.	de Cesaris	1.34.413
2nd.	Prost	34.788
3rd.	Cheever	34.975
4th.	ELIO	35.101
5th.	Tambay	35.322
11th.	NIGEL	36.325

Nigel's time was third fastest of the normally aspirated cars behind Alboreto and Surer (35.918 and 36.103 respectively).

The official session that followed was a huge disappointment as Elio could only manage a 1.35.091 which dropped him to 9th behind Baldi and Winklehock, Arnoux taking pole with 1.33.419. At the previous test period he had done a 1.34.1 with a misfiring engine and now with everything functioning correctly he was nearly a whole second slower.

Nigel's scene was more encouraging as he was closer to Rosberg than he had been all season with 1.36.391 (16th) to Keke's 1.36.145 (14th), Surer and Alboreto still staying in front of both of them but in reverse order to that of the first session, Surer being 11th and Alboreto 13th in general classification.

Pit Stop Practice

Immediately the session ended at two o'clock engine changes commenced and by 5.30 we made preparations for serious pit stop practice which started at 6 and went on until 8 pm. The engine changes and preparation of the cars was greatly aided by the Imola pit garage block which is a really magnificent affair and easily the best on the year's tour. Upstairs there is an attractive office section, nice clean restaurant, telephone booths and toilets,



Line astern - unusual and striking picture of our cars running one-two at Imola.



Peter Warr at Imola - the grey hair indicates the ravages of the motor racing world - even on the young.

whilst downstairs the team garages were freshly painted with tiled toilets, individual wash basins and showers and electrically operated garage doors. Built into the structure is a huge R.S.J. beam running the full length of the garage ceilings incorporating an electrically operated hoist that enables even tired mechanics to complete engine changes in record time.

As preparations for pit stop practice were made the new fireproof gear was tried for size and this produced some laughs as our regular comics within the team characteristically found they had the wrong sized boots, gloves and fireproof suits. The joviality was increased by the huge crowd of wildly enthusiastic spectators that had come in droves, those in the stands opposite the pits jeering, cat calling and clapping in unison as they either disapproved of or loudly appreciated the times of "stops" they were themselves monitoring closely.

The race organisers were expecting 200,000 (yes two hundred thousand!) on the day and with 60,000 watching

practice this seemed a very likely possibility on the big day. Their hero was still Gilles Villeneuve whose spirit they very obviously felt was still the main ingredient in the atmosphere and his name was everywhere. As the whole garage area lit into life for practice "stops" the huge crowd that still remained loudly jeered a first "stop" bog-up by the Brabham lads who then retreated into their garage and closed the electric door to even greater cat calls. In double quick time the door re-opened with the first sight to meet the onlookers eyes being a row of bared mechanics posteriors in a line of regimental orderliness, their fireproof suits coiled neatly round their ankles. From the answering response of the crowd it became very clear this particular stance is regarded as an insult in this part of the world.

New Faces

Our own pit crew had several new faces; Mick Norman who was a race mechanic with us years ago and who has since

RACE REPORT

covered a prodigious number of miles as one of our van drivers was on hand as it was he who had driven our Leyland transporter to Imola. Frank Seal our gearbox man was roped in, Colin Watts was brand new and Chris Dinnage was experiencing only his second event. Clive Hicks our tyre man was now a "Gun" man and standing in for Paul Simpson who as a serious marathon runner had returned to England for a 26 mile event taking place in Norwich.

Now all this might sound like the ingredients for a hotch potch result but spirit and enthusiasm was there in plenty and from Peter Warr's first push of the car to simulate it coming to rest the whole operation was extremely slick. Both Cosworth and Renault engined cars were used as their individual requirements are different and our crew's times varied from 14 seconds for fuel and 4 new wheels on the Cosworth to 15 seconds for similar top up and 4 new boots on the Renault, the fuel requirement being by far the longest time consumer in each operation.

Saturday

Saturday saw an improvement in the weather. Elio did "full" tank running, Nigel using his spare car for the first 45 minutes until he ran into mechanical trouble. Initially his clutch failed and our crew bled the system but when this did not cure the problem it was obvious the gearbox would need removal for a survey of its internals. Ferrari's efforts were really coming on-song now no doubt due to the fact they were performing on a circuit called the "Dino Ferrari" for a start, they had the Villeneuve tradition to live up to and let's all be honest they were the top attraction for a crowd that would have turned up even if all the rest of the teams had stayed at home! As their National back-ups the Alfa Romeos were going well but were still very much in second place in the crowds affections. Their passionate love affair is with the cars themselves regardless of the driver nationality and their homespun countrymen driving for other teams come in for relatively scant attention. No doubt Alboreto (down in 13th place) would have moved up a couple of places if the situation had been otherwise?

Nigel's gearbox spigot tube was found to be broken (a rare occurrence) so the unit needed a complete rebuild; the question of doing a swap of the gearbox and suspension unit with his other car was quickly discounted as the two suspension systems were substantially different and as time was now running short a temporary "5 lap special" repair was done. Pirelli had successfully completed another mammoth task in producing new tyres; on the Friday we had used 15" rears but now we were able to try new 13". These were understandably in short supply and of the eight in total four came to us and four

went to Toleman.

With truly commendable team spirit Nigel immediately gave his two to Elio as he knew he was likely to get into trouble with his gearbox malady and his team mate was after all performing in front of his home crowd. Clive Hicks immediately and clearly marked up all four tyres (see accompanying article on Clive) to ensure there would be no last minute snarl up.

Qualifying

The last official eyeball to eyeball session on Saturday saw Nigel over half a second quicker than his previous official best with a 1.35.703 but for all this only moved up one place to 15th, but he was keeping Rosberg in sight being only just over half a second in arrears of the Finn. Elio was again experiencing a disappointing lack of performance even though on the surface it appeared he had everything going for him. His engine was at high boost, he had the best tyres, cold fuel and dry track and yet his best was a 1.34.332 still short of his test time of 1.34.1. This gave him 9th spot – the other Renault engined cars placing 4th (Prost) and 6th (Cheever). Arnoux had now well and truly put the Ferrari honours on the map with a pole time of 1.31.238 over two seconds quicker than his previous day's best.

Grid Positions

1st.	Arnoux	1.31.238
2nd.	Piquet	1.31.964
3rd.	Tambay	1.31.967
4th.	Prost	1.32.138
5th.	Patrese	1.32.969
6th.	Cheever	1.33.450
9th.	ELIO	1.34.332
15th.	NIGEL	1.35.703

Immediately practice was over more pit stop rehearsals took place with the even larger Italian crowd giving the bird whenever a poor time was noted, but cheering and clapping loudly when split fractions of time were chopped off. After our best time of all a thunderous round of applause erupted with our crew simultaneously giving a football style "thank you" in return.

On leaving the circuit that night those members of our crew who planned to catch flights home the following evening noted apprehensively the really huge hold ups on the approach roads to the circuit; these were now lined with cars parked in less than tidy fashion on both verges up to five kms from the track, and race day was still to come.

The Race

Race warm up half hour was a frantic period for our tyre men Clive Hicks and his assistant Kenny Szymanski, as with our planned pit stops we now had double the number of tyres to prepare and "run in" briefly prior to the race. These tasks cannot be completed during the days of practice as weather and track conditions can change quite radically over short

periods of time (as you will have read in our previous race reports) as do driver's thoughts and final requirements. Now we set about scrubbing in a set of first half race tyres for each car then the two car sets for the second half of the race. The remaining sets we used for the time remaining in the warm up; we would keep these in readiness for any second stops that came about. As all this activity was going on, our brake man was busy assembling the pads that were bedded in to the same plan i.e. one car set for the first half of the race, a set for the second half and a third for the dismal second stop supposing it happened. Peter Warr attended his first meeting of managers to agree which cars came in when so as to keep chaos in the pit road to the minimum.

Elio likes to do two warm up laps immediately prior to a race getting under way but he did not complete one at Imola. Keke returned to the pits after his exploratory lap and beckoned to Peter who thought the gesture was not directed at him so stayed where he was peering up the road in the vain hope of seeing Elio appear. Eventually Keke very considerably at this point of high tension unstrapped himself and came across with the news Elio's car was apparently in turbo problems and slowly creeping round trailing clouds of smoke. (Keke's act was in even more commendable if you remember that everytime he came into recognisable view of the crowds a huge jeer went up

accompanied by voluminous cat calls – the current issue of the Italian magazine 'Autosprint' had published a large picture of him thumping Tambay at Long Beach and it was obvious only a few members of the crowd had not bought a copy...)

Big Effort

Immediately great commotion ensued to get Elio's spare car ready – its nose and wings had already been removed to be the race spare – as this was going on Elio returned in a huge cloud of smoke and spewing hot oil everywhere which very neatly obliterated our pit stop marker points we had placed on the pit road! With only a little under two minutes to go before the circuit closed our lads sprinted to get the spare car out on the grid with Elio calmly waiting for the race to start so he could have some peace and quiet. One important task that we were compelled to forget in the rush was to lighten the fuel load – coupled with this Elio had expressed himself as not happy with this car's characteristics so things had changed drastically for us within the space of mere minutes.

As the lights changed to green Elio jumped from ninth on the grid to seventh in the race and held this through lap one sandwiched between Winklehock and Cheever. Nigel's start was

continued on page 7



Interesting view of Elio negotiating the last corner before the pits that will bring him into full view of his appreciative countrymen.



Nigel with the ill-fated four tier "bookshelf" rear wing. (see story).

CLIVE HICKS ...our race Tyre Expert



Clive Hicks (far right) waits for Carlos Reutemann to come in for a change at Silverstone 1979. With him, left to right, are Bobby Clark, Phil Denny, Bob Dance, our Chief Mechanic, and Kenny Szymanski (American Airlines steward believe it or not!), Clive's right hand man.

The British are well known for their love of pets but our subject this month actually went as far as to change his telephone number and have his new one unlisted just to stop his parrot being pestered by obscene telephone calls! When Clive originally joined the circus one of his first thoughts was that as he would be travelling all over the world including visits to countries where parrots abound this would be an ideal opportunity to realise his long held wish to acquire an African grey. After many hints and enquiries to pit garage hangers on, he met with just as many blank stares and eventually secured "Nelson" from a bird sanctuary only fifteen miles from Norwich! The name has no connection with the famous admiral who also stemmed from our area, by the way. When they got Nelson, Clive and his wife Judy decided they would christen their feathered friend with the name of the next winner of a Grand Prix and so Brazil's Mr. Piquet not only got a first place in a Grand Prix one weekend but a parrot named after him that now spends his time giving everyone the cold shoulder until his master returns home briefly between trips abroad.

Nelson was only a year old when he came to his new home and when the interviewer remarked he could probably long outlive his owner Clive said "Yes I know he knows this himself whenever he sits on his perch looking at me!"

Mayday Call

In an attempt to lower his Vet's bills for regularly clipping one of Nelson's wings Clive instructed Judy to keep a close eye on the Vet's scissor technique so they could do it themselves - unfortunately Nelson caused a bit of a shindig halfway through the first in-house session and after the chaos of catching him again they snipped the other wing in error. On his next take off for a room encircling flight Nelson prompt-

ly plummeted to earth so perhaps this event also has a bearing on his habit of staring out his owner?

Clive joined us one Friday in 1978 and the same night found himself going to bed in Spain! This was the opening to a glorious season of eight Grand Prix victories by Mario and Ronnie, and within just hours of his arrival Clive was enjoying the victory celebrations of a resounding first and second place.

Clive was born in Highbury, London in 1947 and appropriately became a devout Arsenal football supporter like the rest of his family and has remained so ever since. His father was General Foreman with a construction company at the time and Clive was one of four sons (Mick, Barry and Paul) Jennifer

being the family's only daughter. Clive's brother Mick, joined Lotus at Delamare Road, Cheshunt in 1960 as a production mechanic and later was a member of the Lotus Cortina department, moving to Norfolk with the company in 1966. Later their father thought a move to Lotus would be a sensible thing to do as there was now a grandson in Norfolk as an added bonus and so two Hicks joined the payroll. Clive was still in London at this time; he had started as an apprentice welder with Simmonds Engineering on leaving Cheshunt Secondary Modern school in 1963 and stayed with them until 1970. With the main base of the family obviously enjoying Norfolk he decided to join them and became the third Mr. Hicks on our payroll when he joined the Rectification Department of Lotus Cars where he stayed for two years later moving to the fabrication shop. From 1974 to 1978 he was with Bonollacks (truck chassis and body company) in Norwich, but when his brother Mick told him our Team needed a tyre man he moved back to the Lotus empire. In 1980 during a brief spell at home, he met his future wife Judy (a cost clerk at Jarrold's) and eight months later they were married and now live just a short distance from Race Headquarters complete with 'Nelson'.

140 Wheels

Clive's job runs at a fast and furious pace not only at races and tests but also during the Team's brief stops at home. He now has around 140 wheels to care for (nearly £60,000 worth by

the way without tyres).

Prior to leaving for a circuit he thoroughly cleans every wheel with petrol and then polishes them with Auto Solvol giving rims and centres a close visual examination as he does so. Every second race he also dismantles every one (front wheels have 12 bolts and rears 16 so this makes it a 2000 nut and bolt operation) and crack tests the centres. In this operation, Clive gives the centre (or spokes) a complete spray coat of 996P Hydrox penetrant and washes this off with solvent. A quick spray with 9D6 developer comes next which dries a pinkish white almost immediately and Clive then looks for any hair-line cracks which if present are not hard to find. They usually start at bolt holes or across the spokes of the centres; they are rarer on the rims themselves and these usually result from kerb banging and other misadventures. The tyre retaining safety bolts are on one side of the wheels only and these have a relatively short life span; Clive can usually use half their number a second time, but if threads get damaged or they are knocked out of shape in use, he throws them away. After the investigation is complete, Clive sets about putting the 2000 nuts and bolts together again.

All 140 wheels go to each race and test - this may seem a trifle over-indulgent but we shall soon see why all these are in regular use. Long tubular racks down each side of the Volvo's trailer hold the wheels, which leave here less tyres. The cars are on special travelling wheels in the transporter so all Clive's collection are hung on the walls. On arrival at the circuit Clive's



Clive's Pirelli associate Angelo balancing a rain tyre.

first hope is that the Pirelli trucks are parked near us to avoid long tiresome journeys back and forth. The little Honda runabout is not included in the transporter's load these days so Clive uses a collapsible trolley he designed himself that will carry three car sets of tyres at any one time.

Italian Support

As soon as the transporter doors are unlocked he starts moving the rims to the Pirelli crew. The latter are under the control of Pirelli's No. 1 tyre man, Mario Mezzanotte; Piero is the supervisor and the fitters are Virgilio, Angelo, Luigi, Archilli and Piederro. Martino is their chef who produces top-class spaghetti and conjures up quantities of "grappa" at the end of the day, but reserves this relaxing liquid for the end of each day at test periods only. They are a most co-operative and enthusiastic group and have two automatic tyre fitting machines working off compressors to aid them.

For the first day of practice they will mount up three compounds for each car from the collection of Y28, Y29, Y/14 or 85/91. There are two constructions for quallies but these employ the same compound, and are known as "74's" or "74 stars" – the latter being for eyeball to eye-ball runs. So Clive now has five car sets of different tyres for each car, and might for safety reasons mount up two sets of wets per car; these are "horizontal" (a reference to the groove angles) which are soft, and "deep grooves" which are of medium hardness and used for very wet conditions. This now makes seven sets of tyres per car or a total 56 wheels "mounted". Then for the front tyres the drivers will have "narrow" or "wide" race tyres to try which will be either 11" x 13" or 11" x 15" which is another two sets per car, and for the rear they will be 13" x 17" or 15" x 17" in either narrow or wide size which is another two car sets (including those we listed originally) so Clive now has 11 sets of wheels per car, or 88 wheels total. The crunch comes when you remember these are for the driver's "Number One" cars and their two spare cars still haven't got a wheel to run on! Obviously a full duplicate set isn't necessary, but they have to stand on *something* and if a car gets stranded on the circuit you can bet your life it is sitting on the most popular compound!

Wets Panic

For "wide" tyres, Clive has to fit one inch spacers in between the rims so the multitude of nuts and bolts retaining them come out for their insertion and are then replaced. Clive's nightmare is when everything turns to "ess atch one tee" and wets are required instantly – these need narrow rims and if the drivers have just been using "wides" the spacers have to be taken out before the wets can be fitted.

Clive leaves mounting the "quallies" that will be used for the official period until the last possible moment as regardless of the way rumours and thoughts are going if he

"mounts" them early someone will always change their mind at the last moment and then all hell is let loose in getting them changed in time. Once the decision is made, he hotfoots it to the official concerned and the two sets that can be used in the next qualifying session are clearly marked by stencil – these marks designed so as to be instantly recognisable for that particular event; for Long Beach, for example the stencil had the Queen Mary outline together with the usual practice of including the race number of the only car they can be used on. This stencil was one colour for the Friday and a different one for Saturday's running. They have to be easily recognisable as they are double checked and noted down by an official at the exit of the pit road.

Double Check

The daily routine at each circuit sees Clive anxious to have 70 to 80 tyres mounted ready to go – he checks with Peter Warr and the drivers that the decisions they made the previous evening still stand. At all times Clive has to remember the types of tyres that are mounted, those on the cars, how many rims Pirelli are fitting and how many rims are still available, perhaps just for short exploratory runs. Obviously the sets of "wets" are mounted and ready to go throughout the three days.

By the second day of running all 140 wheels are "mounted" in readiness and after the final debriefing of drivers the suggestions are made as to what will be used for race warm-up and the race itself. The final decision will be made the following morning.

The half hour warm up session on race day sees tyres being scrubbed in in readiness for the race itself. With fuel pit stops scheduled, sets of tyres for each car for both the first and second halves of the event are thus made ready, plus one more set just in case. The turbo engine car runs on a harder compound to those used on the Cosworth for obvious reasons. Race "warm up" might also find the circuit's characteristics have changed sufficiently for the drivers to choose a different compound altogether so Clive and his Pirelli counterparts have a fast and furious change over to make with only minutes to go before the chequered flag marking the end of the session goes out. The set used for the start of the race can be "brand new" as the drivers will be able to scrub these on the two or three warm up laps immediately prior to the race starting.

Three Programmes

At test sessions Clive has three programmes of running to adhere to, (a) testing front tyres, (b) testing complete sets and (c) testing rears only. Where tests are either fronts or rears on their own, the other tyres on the car (i.e. rears and fronts respectively) are known as "controls". These are long life tyres and merely act as the datum line by which to judge the various fronts or rears that will be fitted to the car for the particular section of programme being

undertaken.

At Grand Prix' Clive has a most able "No. 2" in Kenny Szymanski, our New Yorker American Airlines steward who since 1978 has arranged his working flight schedules so he can be at every Grand Prix we go to. This arrangement proved particularly valuable this year when Clive had to be at Ricard over Brands race weekend, and Kenny was able to do the race for us. Kenny's profile will be covered in a future issue of Lotus World.

Immediately a race or test is

continued from page 5

even better as he went from fifteenth to eleventh by the end of lap one leading Lauda, Alboreto, Warwick, Laffite and Surer but, more importantly, was right in behind Rosberg.

Elio slipped to eighth place by lap four behind Baldi but re-passed him on lap fifteen to regain seventh spot. However Piquet after a poor start was galloping through the field and passed Elio on lap twenty three. By now the important pit stops were taking place – Ferrari getting Arnoux away in 16.0 seconds, Renault dispatching Prost in 16.4, our lads seeing Nigel away in 16.4, Ferrari doing a temporary "pole" time of 15.0 evens for Tambay. Patrese caused confusion stopping in the wrong spot (24.2), but then Piquet roared in, stopped spot on the proverbial sixpence and was away in an incredible 11.2 seconds!

Back home our crew had a slow motion video of the pit stops organised so as to check out movements and actions and make any necessary changes for the future. Messrs. Stepney, Szymanski and Dinnage were found to be completing the wheel off – wheel on procedure in an average of eight and a half seconds. Enthusiasm was so high our man responsible for letting the car down off the rear jack got his arm angles mixed up and was shot two feet off the ground when he let the handle come up.

Excursion

Although told to give a signal before he came in Elio forgot this after having an off road excursion and gave more drama to the crew when he arrived out of the blue. His departure was equally dramatic as he got to the rev limiter in first, second and third gears before he exited the pit road.

Both cars now became less than competitive and Nigel stormed back in for another set of tyres. These were just the trick (he was instantly 6 seconds a lap quicker) but regrettably the time lost for the stop put him way down the field. It was obvious that our two lap scrubbing in session had mysteriously ruined the second set of tyres the drivers likening the hand-ling to driving on ice, the third set he now found to his liking was the warm-up "large mile-age" ones. Elio had rejoined the race in tenth spot but quickly slipped to twelfth and possibly thinking another change would have the same results un-strapped himself and called it a day (on lap 44 of the 60 lap race).

over all the wheels go back to the Pirelli crew and Clive retrieves all the rims for re-loading in the Volvo. Clive and the rest of the crew either go onto the next test or race or return to the factory but wherever the destination his programme starts all over again immediately he arrives.

Meanwhile back at home base Nelson continues to sit on his perch and ponder why his wings don't work. It's a familiar problem Clive can well understand.

Nigel was now going flat strap in an endeavour to get back to a decent position, but in the middle of a "flat in 5th" curve had a really heart stopping moment when at around 150 mph his four tier "bookshelf" rear wing (first tried at Brands) which he had previously reported to be highly efficient proved so efficient it collapsed the end plates and broke up. Some reports said he spun six times – whatever number it was he kept it all on the road and gave the rear end a comparatively gentle nudge into the armco as it finally came to rest. Nigel was visibly shaken by this most alarming event and took some time to recover.

Race Results

1st.	Tambay	4th.	Rosberg
2nd.	Prost	5th.	Watson
3rd.	Arnoux	6th.	Surer

Memories

So another Grand Prix was over, but it had been a memorable one for a variety of reasons – the wildly enthusiastic spectators who had gone delirious when their beloved "No 27" (Gilles' old race number) had taken victory; the cheering, the cat calls, the jeering – the whole event had been a truly Italian affair and highly enjoyable.

The first bureaucratic home of motor racing might have been established in France but no one can dispute that if visible and wildly enthusiastic fervour plays a part then Italy is the sport's true home! We could almost forgive Ferrari chalking up another victory.

For those members of our Team trying to get home that evening the challenge of completing the chaotic drive to the airport in time was a daunting one. Hire cars were suitably prepared for the "race" – this entails a simple alteration to the windscreen washers so they face outwards. The trick is then to come up alongside car loads of enthusiasts in the traffic jams, preferably with their cars windows open, make rude remarks about their beloved Ferrari team, give a quick squirt on the washer button and then make a quick getaway from your pursuers. It is of course essential you start your act as cars three or four ahead of you are seen to move otherwise you are likely to need the help of the British Consul.

Some of the Teams who left shortly after us were not so lucky and there were many vacant seats on the flight home. Some

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RACE REPORT



WHERE'S THE NEXT TURBO? MONACO REPORT

The Principality, home of this world-renowned Grand Prix since 1929 when that mysterious Englishman Williams (Bugatti) won the formula libre 198 mile race at 49.83 miles per hour, although geographically only a short distance from our previous race at Imola, has an atmosphere which is light years away from the Italian circuit. Gone are the passionately rapturous and knowledgeable hordes to be replaced by the human butterfly set who flutter in, leaving merely a monetary impression before they flutter out again heading for the next social event on their calendars. The intelligentsia are there alright, but their enthusiasm is sensibly tempered by the admission costs and are far, far away from the scene of action clinging to steeply inclined hill-sides (even the admission charges here would take your breath away) – their shouting and cheering only heard by the sea-gulls who

on the Sunday prior to the race, with two of the usual turbo engined JPS 93T's for Elio and two standard JPS 92's for Nigel on board. We stopped at Renault on the way down to collect two more engines and then made our way to Paul Ricard to set our cars up in readiness for the lottery of race practice. Just before arrival at Ricard came news that Elio had a 'flu bug and so Nigel was called on to test all four cars – not an unhappy task as he much enjoyed making comparisons between the two types. All this was completed on the Tuesday morning; then the transporter was repacked and continued its journey along the southern French coast.

Pre-qualifying took place between 8 and 9 on the Thursday and the Theodore-Ensign team had ample time to regret the loss of their spare car at Imola. Another car was shunted before the required lap time was recorded and their last contender was stranded on the



OPPS! Elio gets up on a street kerb in Monaco. Persistent turbo problems coupled with rain on the final day's qualifying saw him scrape onto the tail end of the grid in an effort that could not be matched by such veterans as Lauda and Watson.

are themselves too embarrassed to land on the floating palaces sitting in profusion like cars in a Sears Roebuck car park. In fact this year the intelligentsia were sadly reduced as only the early birds got across the border from Italy; when it was officially accepted that Monaco was full to overflowing, we got the report the Italian border was closed. One wonders what the queues of drivers would have resorted to if Nuvolari, Varzi or Moll were on the starting grid....

'Flu Hits Elio

Our story started when our transporter left for Paul Ricard

circuit so the team was excluded from the official qualifying sessions and were on their way home the same day. Of the five cars competing for the three available places, the two Tolemans and sole March were therefore home and dry.

Official qualifying then followed, and with it the extraordinary drama of both McLarens failing to get in, so they too packed up and left for home.

Pirelli brought along two more new tyres for us to try – an extra wide rear and a totally new 13" diameter front. Our plan was for Nigel to try the new fronts against standard rears, and for

Elio to try the new rears against usual style fronts but we met drama early on and the plan came to nothing, as you will see.

Turbo Trouble

Early in practice, Elio had another turbo blow up. Renault had installed a cockpit boost control which was not a device to give our young Italian another hundred or so horse power at a touch; the waste gate springs are inclined to get hot and then settle a little and this new control merely allowed Elio to ease them back up again. Now he reported seeing too high a boost registered which had oversped the turbo but it was impossible to know at this stage if there was a general design fault or the gauge itself was malfunctioning. As his spare car was readied, work started on changing the defunct turbo. Out went Elio in his spare and in no time at all that had also blown a turbo! Back to the pits he came to find his race car now ready to resume running – hopping into it quickly, he roared back into the fray and had his third turbo expire!

Unofficial session

1st.	Prost	1.26.539
2nd.	Rosberg	1.26.879
3rd.	Alboreto	1.27.685
4th.	Cheever	1.27.771
8th.	NIGEL	1.28.321
16th.	ELIO	1.30.090

(At this point, Lauda and Watson were 11th and 15th respectively.)

Elio's third turbo had really blown up in a big way this time, pieces of the compressor wheel had broken into numerous pieces, some of them going into the inter-cooler which also required replacing making the task a long affair. The tyre test plan was now thwarted – he had only tried 15" and 13" during the few clean laps he had completed, so the new wider rears remained unused and thereby kept their capabilities a secret.

In the afternoon qualifying session, Nigel changed his usual scheme of back to back qualifying runs and this time spaced them out so he could have time to think things over, but by the time he went out again conditions had become slower.

Tense Time

On his first run, Elio got caught in traffic so came in to wait for a better opportunity – by the time he went out for his final attempt he was understandably tense and although he made a huge effort his time was only 16th fastest and he was then forced to sit and watch the other lower placed men thrash round and round to record better times and perhaps bump him into oblivion! Elio's feelings at this time can be well imagined for when you have drivers of the calibre of Lauda and Watson in all out runs behind you it would be difficult to relax and a mesmerized Elio found himself going to 17th, then 18th and finally 19th place!

Official Times

1st.	Prost	1.24.848
2nd.	Arnoux	1.25.182
3rd.	Cheever	1.26.279
4th.	Tambay	1.26.298
14th.	NIGEL	1.28.721
19th.	ELIO	1.29.518

Saturday

Friday was free of practice and for Saturday's running, both cars had more rear wing – Elio having rather more than his team mate and he immediately lopped two seconds off his previous best. The difference this made to Nigel's times were extraordinarily good and he was a whole 2½ seconds quicker in the first unofficial session and took third spot, albeit on a slightly slower circuit that saw most times a second off the pace.

Unofficial session

1st.	Winkelhock	1.25.945
2nd.	Patrese	1.25.997
3rd.	NIGEL	1.26.289
4th.	Arnoux	1.26.693
5th.	Warwick	1.26.698
12th.	ELIO	1.27.569

Then the rain came! With it now impossible to improve our official times, we fitted our cars with their wet tyres in case the weather remained like this for the race, the one bright spot being that our latest rear wing set-up really proved itself in the wet. The race grid times were



Dramatic bird's eye shot of Nigel at Monaco, a circuit he thoroughly enjoys.

where it completely fooled the majority of our Guests and journalistic friends, who thought it was the genuine article brought over from Europe.

The deal with the owner included repainting it back to its original colour after the race, but he liked the new colour scheme so much he decided to leave it as it was so a replica of the Essex Lotus motorhome presumably still sits somewhere in the Rocky mountains!



This is the Long Beach "fake" of 1980! Sharp-eyed viewers will notice it did not have the rear door we specified for our own unit but nobody outside the Team noticed.



The original Travco that gave such sterling service to the Team, courtesy of John Player from 1973 to 1978. It was the first of the many units which are now universally seen in race paddocks throughout the world.

LOTUS WORLD ADVERTISING

We have recently been discussing various and exciting ideas with advertising agencies and clients who have put forward suggestions for working with us on a number of promotional schemes in connection with our Club. Our magazine circulation is now over 5000 per month and its up market image combined with its categories of readership obviously has a lot of appeal for advertisers. Incidentally the magazine will shortly commence a classified advertising section at a most competitive rate of £2 per line (complete and incomplete) and copy should be with us before the 25th of the month preceding publication, together with payment. If your company would like our Advertising Data Brochure please let us know.

QUESTIONNAIRE

U.K. readers will receive a short Questionnaire with their July issue of Lotus World, together with stamped addressed envelope for its return. We regret any inconvenience this may cause but would be most grateful if you would fill it in and return it to us as it will assist us and other promotional organisations in continuing to provide articles of interest to you.

YOUR LETTERS

NIGEL'S STORY

Please find enclosed the photos we promised you at Nigel's little incident with the Tyrrell at Dijon last year. Sorry that they were so long coming, but we had problems with the developing company.

We couldn't resist the opportunity to make a few comments about the photo sequence and trust that they will include the odd smile here and there.

To us the pictorial evidence supports Nigel's version (see enclosed copy of Fifth Column - Autosport) as we always thought it would. Incidentally, he asked us to provide him with his own set of photos, which we have enclosed and would be grateful if you would pass on to him on our behalf.

Looking to the future, we wish all at Lotus a successful season. We hope to support you abroad, in Europe, as well as at our home circuit.

If we see you we'll wave and if you are ever at Silverstone and have time to spare, you are always welcome at "Juniper".

Regards to you all.

Muriel and Geoff Glaus.
Northants.

P.S. Our old 2+ 2 is still going strong!

Geoff's photos will appear in our July issue - Ed.

FRUSTRATION

I feel that I must write to you, I have been a LOTUS GP supporter for many years and I was absolutely shaken to the core to learn from the Motoring News that Elio de Angelis decided that during the Italian G.P. to come in on Lap 44 to say that "the whole thing was a waste of time". I can just imagine the feelings of Peter Warr and the rest of the Team to that statement, they must have been disgusted at his behaviour.

I would like to remind Mr. de Angelis that he did not have much chance in the 1982 Austrian G.P. being some 30+ seconds off the pace when everyone in front of him went out leaving him only to beat Keke and he did to everyone's delight. By going on at the Italian G.P. the same thing could have happened giving our first race to Colin.

Like boxers, racing drivers have to be hungry to win, I have thought for a long time that de Angelis is not hungry enough to win. I believe that this isn't the first time that he has let the side down. The great name of LOTUS deserves better than this.

May I close by saying, give Nigel a chance in the Turbo and let de Angelis trail behind in the 92 - or how about Alan Jones?

D. Telfer

DRAWINGS COMPLAINT

Reference my order for general arrangement drawings for Lotus Formula One cars. I have re-read the advertisement in your broadsheet, and nowhere can I see any reference or implication that the price is per drawing. Twelve pounds per sheet is, quite frankly a rip-off - die-line drawings of that size cost my company under one pound per sheet!

Therefore, will you please return my cheque as soon as possible.

J.C. Harris, Romford

FOOTNOTE:

If it was simply a question of copying drawings, then our prices, we agree, would be excessive. However, some of our listed drawings came from Hornsey, and some from Cheshunt. These together with those produced in Norfolk since 1966 (and the Team has moved site four times in all) had been locked and stored away in a multitude of filing cabinets and containers together with countless detailed engineering drawings. Our design staff spent a great deal of time going to various storage sites, surveying drawing upon drawing (some were produced before our staff were born!) and classifying them. A great many had been produced in such a hurry no reference to the Mark of Type number had been pencilled in so these took ages to reference. At the end of the exercise, we had over 70 piles of drawings divided between general arrangement and detailed engineering drawings which then had to be filed in one place near at hand. All this took a lot of valuable time which cost a lot of money and which is reflected in the price.

Also on the act were legal beagles called in to advise on the implications of making engineering drawings available to the general public. We are only too anxious to help long and expensive exercises by genuine enthusiasts to rebuild cars from our past but we also know there are others prepared to produce replicas purely for profit as has happened with other cars. Hopefully, we shall soon have a solution to this and will be able to make an announcement shortly. Our detailed engineering drawings are complete for the following Marks or Types:

11	22	32	48	73
14	23	33	49	76
15	24	34	56	77
16	25	35	58	
17	26	38	62	
18	27	39	63	
19	28	41	64	
20	29	42	69	
21	31	43	72	

As requested, Mr. Harris had his cheque returned.

Editor

therefore taken from Thursday's list and Elio was in by the skin of his teeth! Out were Lauda, Watson, Giacomelli, Fagi, Salazar and Ghinzani.

Overnight the cars were race prepared with Nigel now in high spirits for the race as events seemed to point to him being able to get up front on a circuit that he really enjoys. With refuelling during the race taboo here, cars were back to full fuel tank running in the half hour warm-up - Elio also getting a trifle more rear wing. Due to its limited running between turbo failures, his car still had the

slowed him - he held 17th place for three laps and then set about climbing through the field. On lap 4, he was 14th, going to 13th on lap 5, 10th on lap 6 and then moved up a place on each succeeding lap until by ten, he was in 6th place behind Prost and ahead of Piquet. Remember that eleven out of the 20 cars were running on wet tyres and as a result of this majority, the event was suitably classified as "wet" with pit stops to come for the change-over to slicks. By lap 18, he had slipped back to 8th place behind Cheever and made for the pits to change his own tyres, rejoining in 12th spot. Now he stayed where he was



Action view! Elio accelerates downhill in the wet session that saw Niki Lauda and John Watson excluded.

engine from practice installed, and the fact it had eaten pieces of compressor blades seemed to have no ill effects on it, which says a lot for the Renault personnel's faith in their power units.

Decisions

When race time came around, the weather had deteriorated and rain was falling in sufficient quantities to bring out the umbrellas. Sunk down well below the hills inland, and with the large lump on which the Palace is built jutting out to sea behind the eastern end of the pits, a view of what the weather holds over the horizon is severely limited, and both drivers were asked to decide if they wanted to start on wets or dries. Nigel opted for wets, and Elio with a more experienced weather-eye, probably due to his past boating experience, went for dries which, as it turned out was the right choice.

As the lights turned green at 15.30 hours, all the cars got away safely but for our Birmingham lad his luck ran out at the very first corner when Alboreto and he tangled - both cars going into the armco and retiring immediately. A devastatingly disappointed Nigel walked back to the pits quite unable to believe what had happened. Our crew saw the yellow flags appear but by watching the closed-circuit television saw Elio in the stream of cars so knew he was safe, but the kerfuffle immediately in front of him had obviously

until only lap 28 of the 76 lap race when he made a further stop only dropping one place but trailing round just ahead of last man, Serra. He was eleventh by lap 50 when he made yet another stop, and the decision to stop for good was made for him when he selected first gear, the car gave a quick leap and then with a disconsolate clunk, a left rear drive shaft broke as a result of the bumps and lumps of the circuit.

His engine was still running happily on its additional diet of foreign bodies, although we noticed the new cockpit control fitted to our cars was not fitted to the Renault factory entries.

So the race which isn't a race in its true terms was over. As Elio was heard to tell a member of the press, it is an event where you can hold up anyone you like without trying - it's just a race composed of several cars holding up all the others.

Well no one held up the butterfly set - they were up, up and away fluttering off to their next port of call until another year had gone by and they returned to this monied seaside location.

We were off too, but heading for the forests of the Ardennes in Belgium and a welcome return to the Spa-Francorchamps circuit, now much altered since our last visit thirteen years ago, but retaining all its old magic.

The State of the Championship after Monaco

Results:

1st. Rosberg	4th. Tambay
2nd. Piquet	5th. Sullivan
3rd. Prost	6th. Baldi

World Championship Manufacturers

1st. Ferrari	25	3rd. Williams	21
2nd. Renault	23	McLaren	21
3rd. Brabham	21	6th. Arrows	4

World Championship Drivers

1st. Piquet	21	4th. Rosberg	14
2nd. Prost	19	5th. Watson	11
3rd. Tambay	17	6th. Lauda	10

1983 World Championship

Races: 16*

Events to date: 5

Total Victories: Since 1960

LOTUS: 72

FERRARI 56

1983 Winners

Constructors

1st. Brabham	1
McLaren	1
Renault	1
Ferrari	1
Williams	1

Drivers

1st. Piquet	1
Watson	1
Prost	1
Tambay	1
Rosberg	1

Tyre Battle:

PIRELLI:

GOODYEAR: 2

MICHELIN: 3

Pole Position:

1st. Prost	2
2nd. Rosberg	1
Tambay	1
Arnoux	1

Fastest Laps:

1st. Piquet	2
2nd. Lauda	1
Prost	1
Patrese	1

* Now reduced from 17 due to cancellation of the Swiss G.P. at Dijon July 10th.



Paul Simpson is either giving a little prayer or trying to get his breath back. Paul is an accomplished marathon runner and in our report of Imola you will read of Paul's early return to Norwich so as to take part in the Norfolk 26 mile Marathon. He finished 82nd out of 1200 runners, in 3 hours 7 minutes which was 20 minutes quicker than his 1982 fastest time.

MONACO SNIPPETS

We were pleased to have Hazel Chapman in our crew again for Monaco, and she worked hard and enthusiastically with us throughout practice and the race.

Peter Warr had some friends organise a dinner party for important sponsors and guests at Monaco and on arrival parked his car in a rather tight space alongside the kerb in the street outside. When he emerged from the festivities sometime later, the car was still there but the task of getting into it was significantly harder than when he parked it. It was upside down.