

Lotus World

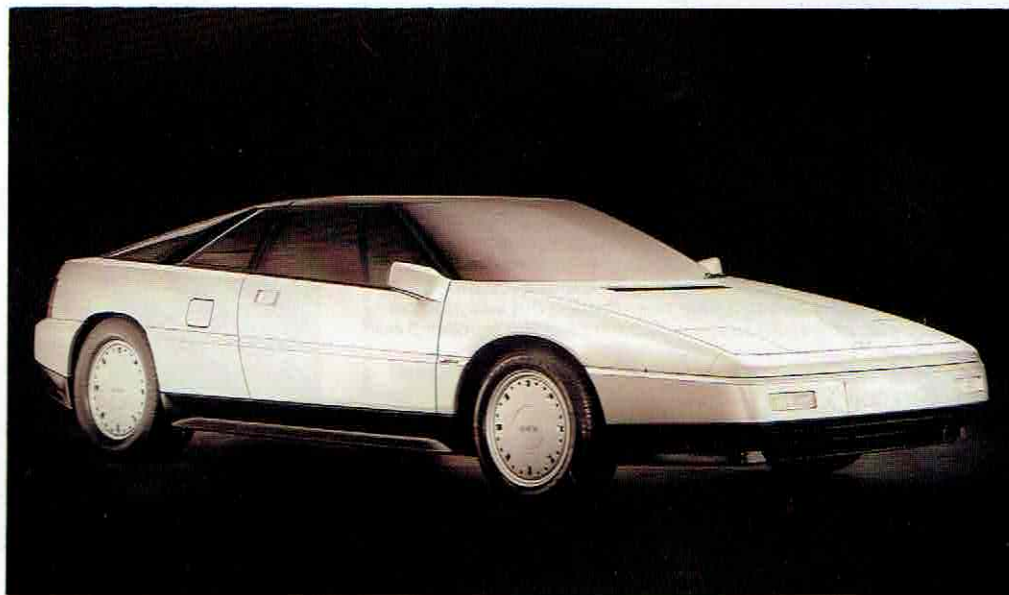
The official magazine of Club Team Lotus and Lotus Cars Limited

As this issue goes to print Lotus Cars was besieged with enquiries about the many exciting new products displayed on their dazzling Motor Show Stand, which demonstrates their high technology company profile.

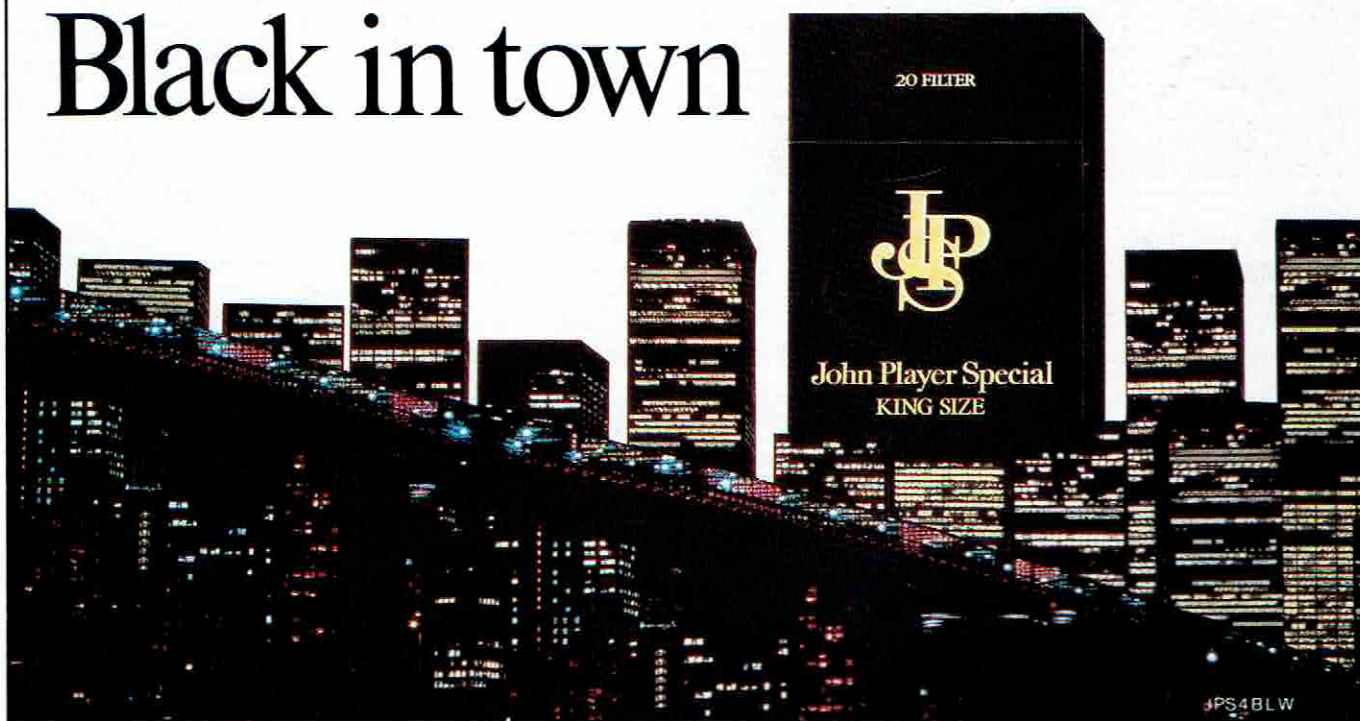
As in previous years, both the press and trade had already judged our stand to be of top attraction both from the technical aspect and for the eye-catching designs and excellent quality of workmanship topped off by visually exciting colour schemes.

In this issue you will read of our brand new 180+ mph Concept 88 car, the equally new and advanced Lotus V8 research power unit and the restyled and improved range of Excel, Esprit and Turbo models. Add to this our aero engine together with our all purpose 4 cylinder power unit, our unique opalescent pearl paintwork colour scheme (which changes shade as you walk round it), exterior accessories now matched to body colours and brand new aids to driver comfort and you have a range of motor cars and technical features unmatched by any other manufacturer in the world's automobile markets of 1985.

CONCEPT 88!



Black in town



MIDDLE TAR
As defined by H. M. Government

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

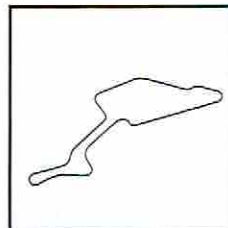
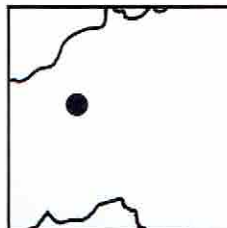
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John Player Special

G.P. d'EUROPE

OCTOBER 7th
GERMANY
Nurburgring



Our first trip to the newly built Nurburgring circuit was an excellent example that a very successful pre-race test does not necessarily guarantee a similar situation in the race that follows!

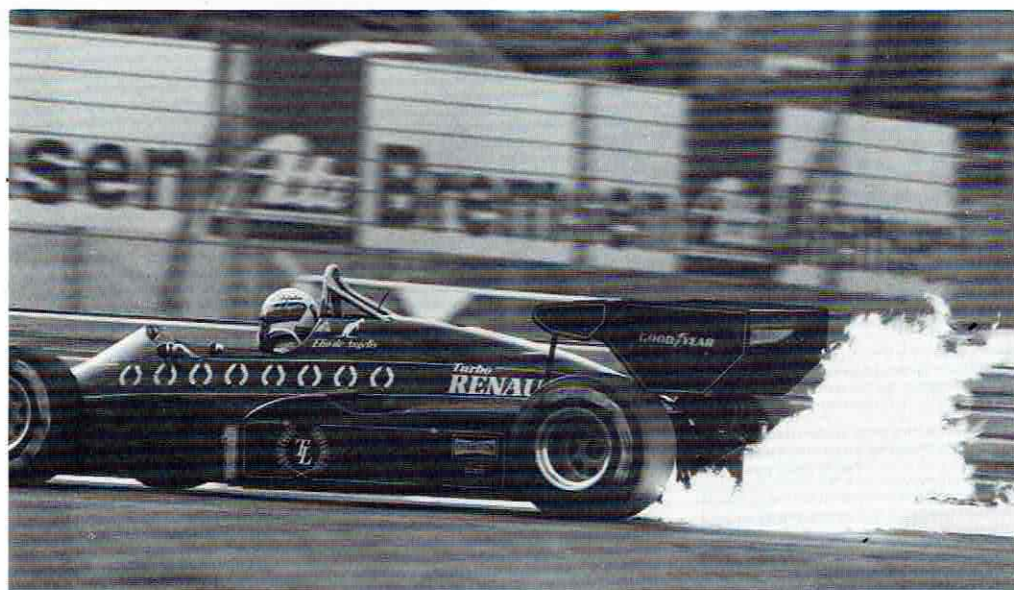
Our memory of this year's G.P. d'Europe will be one of blown turbos, rain and a lot of work for our mechanics coupled with the disappointing character of the new circuit which with its billiard table surface and featureless layout compared badly with the old but now abandoned version lying only a short distance away in the forests of the Eifel mountains.

Testing

Our three days of testing in the previous month had left us with high hopes of success in the race to come. Twelve F.1 teams had taken part and so the overall results were more complete than if only two or three had run and Elio's "pole" stood for all three days. His time of 1.19.41 stood up well against the times registered in official practice, only two drivers (Piquet and Prost) going quicker. After the test our engineers had totalled up eight major gearbox breakages amongst the other teams taking part and with our new unit still in pristine condition we hoped we might have put the cat in the bag! We had taken only one car, Johnny Dumfries sharing the driving with Elio but he concentrated more on getting mileage under his belt by doing full fuel tank runs and sampling Renault's latest experimental engine. As a result his fastest time of 1.26.62 placed him 19th out of the 21 car field. Fog had delayed the first day's running and with memories of similar conditions in years past, the October race date did not appear to be a good example of F.I.S.A.s brightest planning strategy.

Friday Practice

Running opened in cold conditions before a very small crowd the majority of enthusiasts appearing to share our opinion of a date so near the end of the year but they changed their minds for the race itself and a sizeable crowd made the quite long trek from the towns in the vicinity. The new track facilities could not be faulted and the organisation was to the usual Teutonic thoroughness, but it was amusing to see both race drivers and mechanics queuing up to spend their Deutschmark fee in order to take their hire cars round the old track so as to sample delights and experiences



Elio literally flashes over the line in qualifying, but free wheeling and with his time gone. Result - 23rd place on the start grid!

WINNER Alain Prost FASTEST LAP: Piquet/Alboreto 1.23.146

of the past. Most later admitted it was a real eye opener. Our team of young mechanics were interested to find the landlady of their hotel recognised Bob Dance from days gone by and even more interested by her photographs of our mechanics of a period also now long gone. As one added with a smile, "of course she was over eighty!"

The characterless circuit was easy to learn, but proved to lack suitable places for passing. Elio's initial running was plagued with various problems that stayed with him all weekend the first being with his carbon fibre brakes which called for his discs to be changed. As he was also not happy with his engine's performance the spare car was made ready and when he returned to the pits he reported everything was good and the engine was a great improvement. By now his race car was ready to go, but a malfunction with a front upright soon brought him back to pit lane and he resumed his running in the spare.

Unofficial Practice

1st	Prost	1.20.967
2nd	Piquet	1.21.555
3rd	Tambay	1.21.691
4th	NIGEL	1.22.334

5th	ELIO	1.22.694
6th	Surer	1.22.815

Qualifying

It was Nigel's first experience of the new circuit but being easy to learn he soon settled in and spent the morning's unofficial period obtaining tyre data. Then as he prepared for his afternoon qualifying run specks of rain were felt and his time of 1.21.710 put him in 8th place; by the time of his second run rain was falling and he aborted. Unfortunately, the laps he had completed had exhausted the life of his qualifying tyres and when the track dried later there was insufficient grip for him to improve his earlier time so eighth was where he stayed.

Elio preferred the spare car for qualifying but the turbo failed before he could register a decent time. Returning quickly to the pits he jumped into his race car and the turbo in that failed almost immediately so his crew, already into a turbo change on the spare car hurried to complete the work as soon as possible. Then on his qualifying run the newly fitted turbos also failed before he had reached the start/finish area and the clocks stopped as he freewheeled

across the line - on fire! He was 23rd on the record sheets.

1st	Piquet	1.18.871
2nd	Prost	1.19.175
3rd	Tambay	1.19.499
4th	Rosberg	1.20.652
8th	NIGEL	1.21.710
23rd	ELIO	1.26.161

Saturday

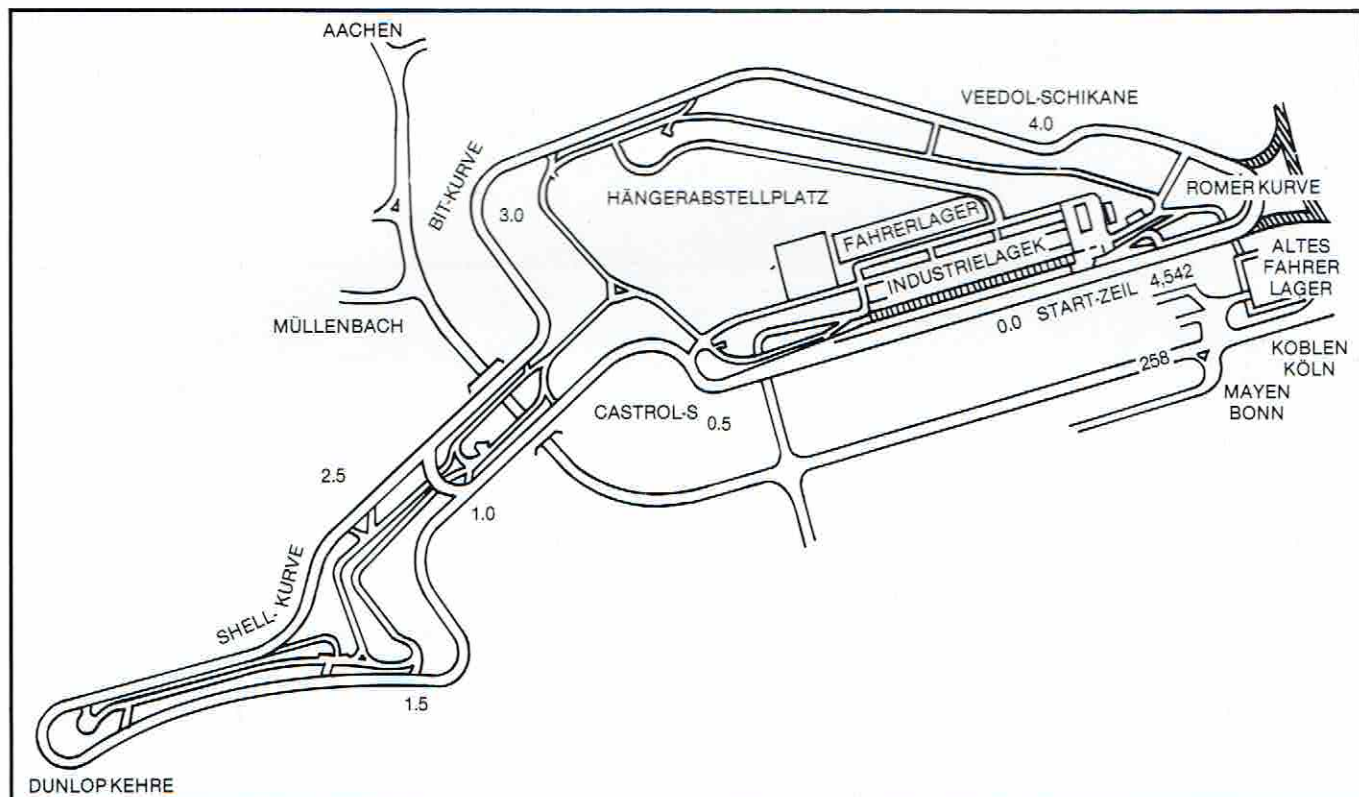
Now the rain fell all day, the only reassuring aspect being that whilst the track stayed wet our cars remained first and second quickest for the majority of the time.

Drivers were having monster excursions all round the circuit, as they experimented in finding the best parts of the track to give maximum grip and with the huge run off areas of grass and then mud available to them the cars soon resembled autocross vehicles.

Unofficial

1st	Lauda	1.40.459
2nd	Cheever	1.41.057
3rd	Warwick	1.41.173
4th	ELIO	1.42.072
5th	Alboreto	1.42.078
6th	NIGEL	1.42.423

Elio and Nigel's investigation of the best lines to take were no exception and their resulting



The new and characterless Nurburging Circuit that has reputedly cost £20M.



Martian style figures went well with the new featureless Nurburging. Peter Warr's galoshes add a touch of normality.

high speed spins on the wet grass compelled them to make straight for the pits for a hose down of cars and particularly the mud covered air intakes to radiators. On one occasion the mud and grass invaded right into Elio's cockpit covering him from head to foot and for a moment we thought he would also merit the same treatment.

As the rain continued to fall throughout the day, times counted for little. Elio was fastest, but with a 1.39.762 this didn't count for much and for race grid times the Friday score-sheets had to stand. Like Niki, Elio would have numerous people to pass when the race got under way, but no one had an inkling of how well our young Italian would do this on the big day!

Saturday's Official Practice

(Grid times taken from Friday)

1st	ELIO	1.39.762
2nd	Lauda	1.40.392
3rd	Prost	1.40.693
4th	NIGEL	1.40.705
5th	Cheever	1.41.285
6th	Patrese	1.41.724

Warm-Up

Both our cars had called for a long programme of work on pre-race night, and this restarted again following warm-up on race day. When Elio's car was nearing race completion late on Saturday night an oil seal in the gearbox was found to be misplaced after the unit had been refitted and the whole of the rear end of the car had to be taken off again by Nigel Stepney's crew.

Similarly Paul Simpson and his crew in charge of Nigel's car, having completed his rebuild tried unsuccessfully to get the engine to fire which was later found to be a problem connected with the collector tank and a pressure system which had re-

versed itself; it was 2 a.m. before work could be halted.

Problems again affected Nigel's car during the half hour race warm-up period, and Paul Simpson's lads had to take the engine right out of the car in order to change a troublesome fuel pump. However, both cars had recorded reasonable times (Elio 7th and Nigel 8th) with Niki leading the field with a 1.24.001.

The Race

When the field streamed past the pits at the end of lap 1 our crew could be forgiven for thinking they had misread our car numbers! But Elio was indeed 11th and Nigel 21st (and because of all the cars that had flown off the track) last! He had moved just a few feet when the green light came on and then almost stopped, which we presumed had been caused by hot tyres (heated by the electric blankets we had placed on the tyres of both cars whilst sitting on the grid) giving extra strong grip thereby almost stalling the engine.

We had been assured prior to the race that fuel consumption would be no problem (did Piquet and Alboreto get the same message?) so we were running engines with lots of boost.

Elio's charge through the field easily eclipsed Niki's similar effort from 15th place and by only lap 7 of the 67 lap race (189.1 miles) was up to ninth place and looking for a place to pass the car in front. By lap 12 he was 8th behind Arnoux's Ferrari and took until lap 20 to get past the diminutive Frenchman.

Soon he was only a second behind Niki, but almost immediately his engine let go and his spirited and skilled drive was all

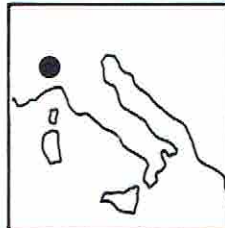
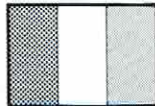
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John Player Special

GEARBOX SUCCESS

SEPTEMBER 9th
ITALY
Monza



WINNER: Niki Lauda FASTEST LAP: Niki Lauda 1.31.912

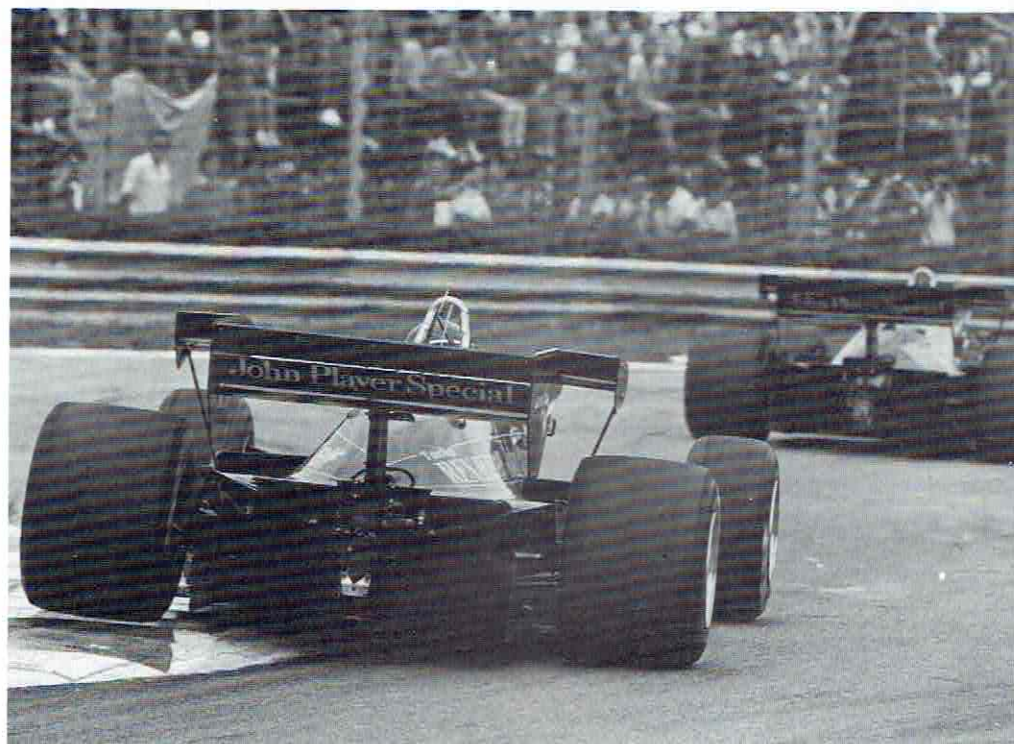
For us the most remarkable feature of this year's Italian Grand Prix was the highly successful debut of our brand new gearbox, all credit for which is due to our drawing office and home-based staff.

After our spate of gearbox troubles earlier this year due entirely to the fact that the original 1978 design requirement was for a unit to transfer something like 200 hp less than the regular power output of today's cars, the decision to build a completely new unit was made three days after the British Grand Prix and only five weeks prior to our cars leaving for Monza.

To appreciate our Team's achievement, months can elapse before a project such as this usually reaches fruition, yet the completely new box (not a derivative of its predecessor) was finished and running successfully on Elio's car for first practice at Monza.

New Compounds

Our Team was in good shape on the Thursday night and with the Renault engineers completing their task of dressing and tuning the engines early our crew was able to have an early night. The main topic for discussion in the paddock centred on Ayrton Senna and the announcement by the Toleman team his seat had been filled by Stephan Johansson. Ayrton in reply had produced an explanatory document putting his side of the controversy and Peter Warr asked



the members of the press to ensure this was allocated the same amount of column inches as previous coverage on the affair. Our pre-race test at Monza had been curtailed by bad weather as we have reported

Ouch! The undertray on No. 12 gets a touch of research and development as Nigel follows Elio through one of the Monza chicanes.

previously. Goodyear brought along new compounds and Elio's car was running with the new gearbox and again had carbon fibre brakes fitted.

New Gearbox

The first running of our brand new gearbox was an important step forward for us and both our race crew and home-based drawing office and factory staff were anxious to see how it would shape up. It was a completely new unit from its casing through to its selectors, gearchange and internal gears and it was obviously a great fillip to all our staff when Elio reported that all was well and its operation was beyond criticism.

At the end of the first untimed session on Friday Nigel, running on quallies, was fourth fastest but Elio was not so fortunate as grease had leaked onto his brakes and slowed up proceedings for him quite considerably.

Friday Untimed Practice

1st	Piquet	1.29.482
2nd	Prost	1.30.076
3rd	Lauda	1.30.247
4th	NIGEL	1.30.287
5th	Alboreto	1.30.483
8th	ELIO	1.31.281

Friday Qualifying

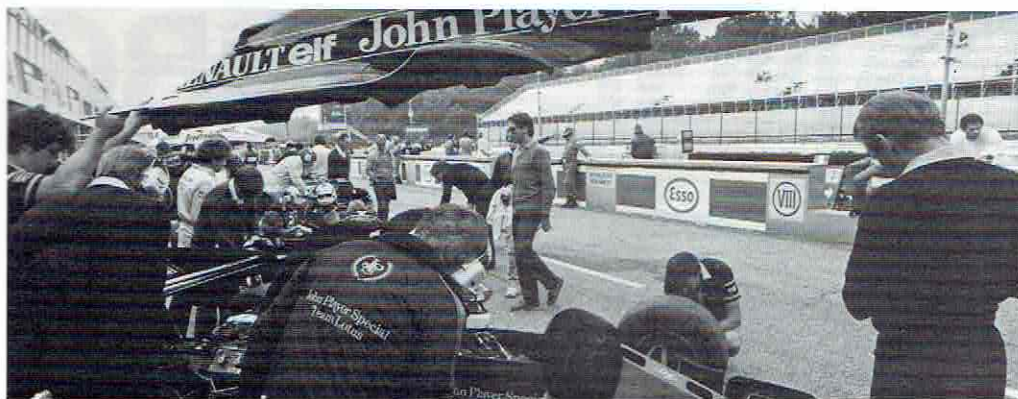
Rain had fallen in between the two practice sessions and when the green light came on the track was quite wet. Temperatures were obviously low, so low in fact it was impossible to get the carbon-fibre brakes up to their proper operating temperature and Gerard was not keen to run in such conditions as this would produce uneven braking. The switch was therefore made back to the cast iron type.

In the wet Nigel was 3 seconds quicker than anyone else early on but by now the rain had stopped and the track was drying out



Final qualifying at Monza and three intense men wait for Elio's all out time to register.

Continued on Page 14



Elio sits in his "office" before scrutiny and discussion takes place at Monza during practice. Note the deserted Grandstand, an unfamiliar sight at Monza. The explanation is in our report.

GEARBOX SUCCESS

Continued from Page 11

producing ideal conditions for yet another battle between Elio and Nelson Piquet.

Unfair

Qualifying has now produced the situation of the Brabham team running a car and engine specifically designed for qualifying only and which could only last a few laps into a race if called upon to do so. Our Team strongly disagrees with this quite unnecessary expenditure and we continued to run in stan-

dard form our engines fitted with big turbos and employing low compression ratios so that maximum boost for qualifying could be utilized.

Bad Luck

With poor weather in attendance and the possibility this would continue the following day, Friday's qualifying results were obviously very important. We ran as light as possible with the minimum of fuel in the tanks so as to run at maximum speed. Poor Nigel was baulked on his first run and decided to try again. On his second run he was again baulked and without

coming into the pits decided to have another go. Then when conditions were just right for a quick third run the car ran out of fuel at the back of the circuit and that was that. Nigel immediately ran all the way back to the pits to get in the spare car but as he arrived the chequered flag marking the end of practice went out!

Elio on the other hand had a real flyer and took pole position with a resounding time seven tenths of a second quicker than Nelson who had suffered a turbo failure in his special qualifying car. What made it doubly nice for us was that Elio's time was the fastest ever put up at Monza

and it obviously spoke well for his new transmission.

Friday Qualifying

1st	ELIO	1.28.014
2nd	Piquet	1.28.709
3rd	Fabi	1.29.383
4th	Alboreto	1.29.810
5th	Prost	1.29.854
13th	NIGEL	1.31.715

Saturday Morning

The first session saw our cars running with full fuel tanks testing the various compounds Goodyear had brought along. Throughout the one and a half hours we remained in good shape on the time sheets, Nigel now elevating himself to third spot just a fraction of a second behind second man Tambay.

Saturday Untimed

1st	Prost	1.28.173
2nd	Tambay	1.30.205
3rd	NIGEL	1.30.243
4th	Patrese	1.30.383
5th	Fabi	1.30.459
13th	ELIO	1.33.264

Final Qualifying

The final session saw us using the same cars but with boost turned up and with the additional feature of bungs in the waste gates so as to utilize more exhaust. If you remember that Nelson was in his "qualifying only" car with at least another 100 hp available to him then our

MONZA – A Strange Place

Our personal view of Monza was echoed by Peter Warr on his return to the office after the Grand Prix.

"At all the other circuits the Team has friends on the gate – at Monza the gate people only recognise their friends and family friends, usually around 450 per gate official it always seems, all of whom get in for free. Turn up as a worker without the required credentials, but obviously dressed as a member of a Team, and all hell breaks loose!"

Security was much improved this year, to the detriment of crowd numbers (see picture top of page). The grandstand was never full during practice or the race and whereas the media put this down to Ferrari's poor showing Peter was sure this was directly due to the new arrangements that ensured everyone coming in had to pay. Add to this new snip and shear proof wiring used for the fencing, together with guard dogs, well locked gates and a no-mans land between even higher fences than previous years and you have the answer. Even the grandstand had its own huge barrier surrounding it, hence fewer enthusiastic, but unruly, spectators. Even the old dodge of "if you can't steal tickets then print your own" so prevalent at Monza in the past, didn't work this year.

As Peter continued "It's a strange place...all that history (Ed: it first opened in 1922 to a 2 litre Italian Grand Prix run over 497 miles won by Bordino in a F.I.A.T.) and yet the nearer you get to it the more you look forward to leaving it!" "To me it means cars being damaged by

people tramping all over them, equipment being stolen...it's a pain!"

Poor Tambay! After surviving the big Prost blow-up which took place right in front of him followed by a similar one from Piquet's Brabham a few laps later in which his visor was covered in oil, Patrick took a lead that he held until only 9 laps from the finish. As he said later "the car was running well. My only problem was with third gear jumping out under braking but I was still confident I could keep the lead and give Renault and myself the first win of the year – but it was not to be. Four laps before I dropped out I started having problems with the throttle getting stiff to operate. That's when Niki was able to get past and then on the next lap the cable broke as I changed gear coming onto the pit straight and it was all over for me".

Patrese in his determination to finish was putting in 3 minute laps at the end to save fuel.

Our spare car only completed 2 laps at Monza so this was selected to go to Nurburgring for the test programme following the Italian Grand Prix.

Hooligans

"Duck" our transporter driver thought he had the measure of the spectator hooligans who always insist on walking across the top of his truck. He covered both our flag-poles with CV grease but even so one determined enthusiast survived this and subsequently had a little "talk" with Ian round the back of the truck.



Pictured prior to the Portuguese Grand Prix race car engineer Steve Hallam (Centre) talks to Paul Blackburn (Assembly) whilst race team mechanic Steve Tate listens in. Steve is now famed for his magical act producing peanuts out of the air (see Monza story).

One spot of humour (but only to the onlookers) concerned Manfred Winkelhock. After a multitude of problems and farcical situations the hair that broke the camel's back came on the warm up lap of the race when he could find only fourth and fifth gears. When he completed his lap and stopped at the back of the grid the furious Manfred got out of his car, explained to anyone who would listen just what

he thought of it and walked away, presumably for ever, leaving his mechanics to push the car away.

The Brabhams' use a three position electronic waste gate which the driver can adjust for short bursts of power in order to nip past the driver in front.

Like Winkelhock poor Rosberg also had his patience stretched. On one occasion when the



Tim Densham points, Elio says "one please" and Sho our Japanese mechanic prepares to send "his" car (the spare) on its way.

young Italian's final time only one second off Piquet's pace was highly creditable. A look at the speed trap figures gives an even better indication inasmuch as Elio was timed at 306 kph at the start line trap to Nelson's 312 kph, but the trap at the end of the straight told the whole story with Elio timed at 308 kph and Nelson at 319 kph. The only other race specification car to be faster than us was Prost's McLaren which was timed over the start line at 308 kph.

It was interesting to watch Ferrari's attempt to get back into their usual dominant position at Monza, their new

bodyshape that appeared at the beginning of practice looking like a cross between our 95T and the McLaren. Eventually these were pushed away after a number of problems and driver grumbles and both were using the older version by the time of the race.

Race Grid Times

1st	Piquet	1.26.584
2nd	Prost	1.26.671
3rd	ELIO	1.27.538
4th	Lauda	1.28.533
5th	Fabi	1.28.587
7th	NIGEL	1.28.969

Discussions

Saturday night saw us change

the two engines in both our drivers' cars. Renault's advice was that we should run with low compression engines in the race enabling us to run with more boost in our effort to stay in the same league as the McLaren and Brabham cars. Fuel consumption figures during practice had shown we would be very close to running dry before the end of the Grand Prix and it was essential that we crammed in every drop possible. To ensure we were safe the temperature of the fuel was reduced to minus 47°

Warm Up

In the half hour warm up period which started at 11 a.m. we tried all six tyre compounds and although being the fastest Good-year shod cars only finished eighth on the time-sheets. Drama occurred when Elio returned to the pit and was obviously quite unable to get out of the cockpit without assistance; turning into one of the chicanes he had torn a muscle in his shoulder which obviously called for immediate medical attention and the Renault doctor and physiotherapist worked on him until the start of the race. It was obviously a matter of great concern to us as like Niki there was every possibility Elio would be unable to complete the race. Nigel in pre-race discussions decided to adopt the same wait-and-see strategy he had adopted at Hockenheim so successfully.

Untimed Practice (Race Morning)

1st	Prost	1.31.698
2nd	Piquet	1.32.182
3rd	Warwick	1.32.643
4th	Tambay	1.33.075
8th	ELIO	1.34.087
10th	NIGEL	1.34.486

Grand Prix

Both Elio and Nigel made good starts Elio being in third place at the end of lap 1 and Nigel in seventh. On lap 3 Elio had dropped to sixth but moved back into fifth the following lap, only Alboreto displacing him once in his run through to lap 10. Just two laps later the gauge on his instrument panel showed that boost was dropping away and there was nothing he could do to restore the situation. At the same time he was having difficulty finding gears which happily later turned out to be not within the gearbox itself but the little ball within the gate mechanism which enables the driver to slip the lever into whichever slot he wishes to select. The ball had got a slight burr on it and during acceleration and braking Elio found it was impossible to make any selection at all. By lap 15 his race was over.

Sadly Nigel was walking slowly back to the pits when this happened as he had fallen foul of a patch of oil on the circuit and had spun off into one of the sandbank run-off areas. He had kept his engine running and while these sandbanks are extremely efficient at stopping cars it means just that and Nigel merely spun his wheels and sank deeper into the grit.

It was a sad end to a race we firmly believed we would do well in, our only consolation being the highly successful debut of the new transmission.

Race Results

1st	Lauda
2nd	Alboreto
3rd	Patrese
4th	Johansson
5th	Gartner
6th	Berger

engine blew up in a big way he merely unclipped his belt, got out of the cockpit and walked away, leaving it to burn.

Frivolity

After a big pat on the back session for the McLaren mechanics when they arrived at Milan airport our own crew was given a sizeable pile of notes to buy themselves a drink. As this was downed so the Toleman lads arrived and the same generous gesture was made. In the frivolity that followed each of the empty glasses was stacked one on top of the other until the column was successfully wedged on the ceiling. It is left to you to guess how the poor airport wait-

ers successfully handled that one.

Steve Tate, one of our quieter mechanics, was warmly thanked by the crowd for supplying an unlimited volume of peanuts until it was discovered the empty tins were having their lids replaced and the airport bar display restocked!

The Piquet and Fabi Brabham BMW blow-ups were quite definitely "rod jobs".

Bob Dance and Ian Martin brought our race transporter back home after a determined drive for a Brands test scheduled immediately they returned but due to Elio taking doctor's advice to rest as long as possible this was cancelled.

G.P d'EUROPE - Continued from Page 7

over. Similar failures affected both Tambay's and Warwick's engines, but fuel consumption up to these enforced exits later showed there was little likelihood of finishing the race so we were spared even greater disappointment.

Nigel's effort after his slow start was equally spirited and he also charged through the field taking 8th place by lap 34 and 7th by lap 42. By lap 44 he was into 6th and like his team-mate before him was now behind Niki but 30 seconds adrift. Then on

lap 50 his engine blew up, seizing as it did so and locking the rear wheels so that he spun off the circuit. Then as the oil in the turbos caught fire and the fire marshal's efforts appeared to be directed in the wrong area, Nigel took the extinguisher from him and finished the job.

For us it was all over, and for a track reputedly costing £20m and taking 2½ years to build complete with seating for 160,000 people, it was surprising how quickly the whole event was forgotten.

CHAIRMAN STRESSES - Continued from Page 3

sations spread across the globe and enquiries from other organisations were being received daily.

Financing

Mr. Wickins announced that financing for the new Elan would come from the Company's own resources together with a £3 million facility arranged with the Trustee Savings Bank.

Earlier in the A.G.M.'s proceedings Mr. Wickins had confirmed shareholder's agreement to the appointment of Binder Hamlyn as Auditors the change arising solely from the fact the latter were already acting for British Car Auction Group PLC and that such a move was in keeping with the Chairman's desire to contain operating expenditure. In his an-

nouncement Mr. Wickins paid tribute to the support and professional endeavours of Peat, Marwick, Mitchell & Co on behalf of the Company over past years.

Mr. Wickins was also pleased to announce the re-election of both Mr. A. G. Curtis and Mr. K. Matsumoto to the Board of Directors, as both gentlemen had played a considerable and valuable part in the Board's affairs.

In declaring the business of the A.G.M. to be over, Mr. Wickins invited all those present to enjoy an excellent buffet lunch, and for shareholders to combine this with asking any further questions they might have for both himself and the other Directors present.

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