

Grand Prix

LONG BEACH INTERNATIONAL





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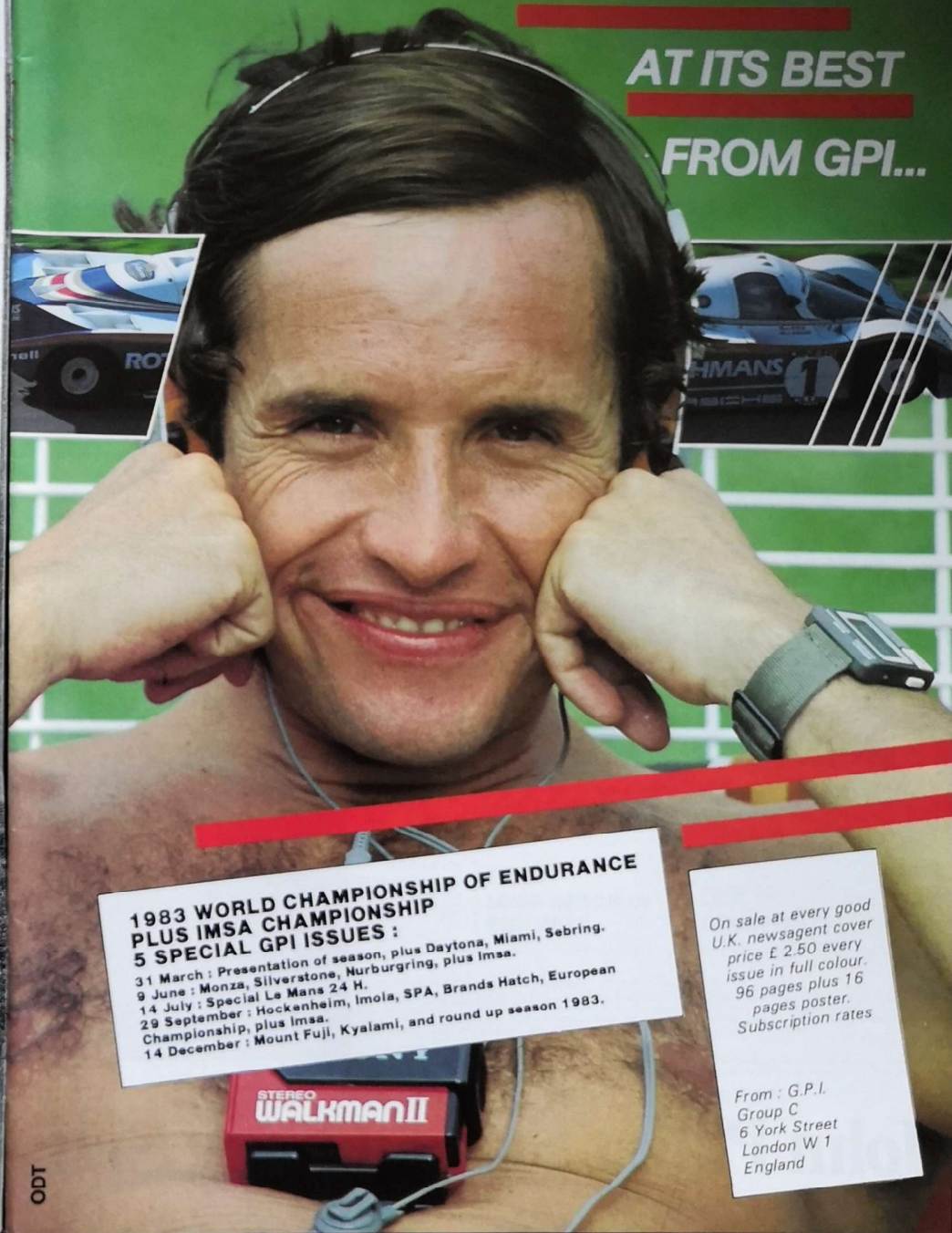
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WATSON REBORN



Do Irishmen, like good wine, improve with age? Some of John Watson's races during the past two years would seem to confirm that theory. Wattie, with no concrete contract with McLaren, is obviously enjoying his racing, with a fine performance around the streets of Long Beach, as in Detroit and at Dijon last year. Keke Rosberg describes his Long Beach weekend, and an active one it was, while Jacques Laffite and Marc Surer give further insights to the Californian race.

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PRACTICE

Ferrari are competitive again, three Frenchmen on the first two rows, and the story of the bump!

N°61 (FRANCE) WILL BE ON SALE ON APRIL 20, 1983

Grand Prix INTERNATIONAL

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THE RACE



While the rest of them were knocking one another out of the race, John Watson was quietly warming his Michelins for another superb climb through the field. All eyes were on Tambay and Rosberg at the start: they were on Wattie at the end when it mattered.

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LONG BEACH STATISTICS AND LAP CHART

PAGE 22

TOLEMAN: ON TARGET



Toleman managing director Alex Hawkridge always said he wanted to race with unique equipment, such as the Hart turbo and Pirelli tyres. It has meant problems, but now the former F2 champions are no longer non-qualifiers, and this year they're looking for their first win.

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SULLIVAN



More than ten years after the Kentucky Kid worked as a gofer for Ken Tyrrell's team, he is now driving for one of Britain's best-known racing teams. He's already shown promise.

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POSTCARD



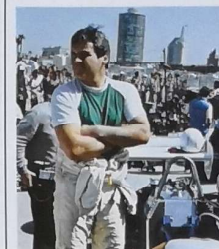
The weather was beautiful and so were the girls. Lots of love from GPI in sunny California!

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LONG BEACH IN PICTURES

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EXTRA, EXTRA



Jonesy is back! It wasn't easy, but the Australian made his comeback at Long Beach. And Theodore's Roberto Guerrero put on a good show in his wife's home State. And what about those two shunts, within 500 yards of one another? Details within!

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GUY LIGIER: TRANSITION TIME



Guy Ligier's equipe has known better days, as it fluctuates between being a big and a little team. Guy tells GPI how he's tackling 1983.

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COCKPITS

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The paddock in Long Beach

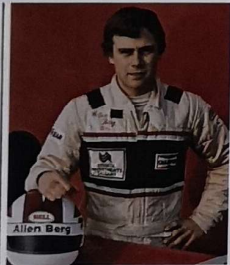


ALLEN BERG: GPI'S CHAMPION

We have a habit of supporting up-and-coming champions. In 1981, Grand Prix International lent its support to Jonathan Palmer who went on to win the Marlboro British Formula Three championship. Last year, we supported Pierre Petit, and he went on to win the French Formula Three series. This year, we've chosen Canadian Allen Berg to carry the Grand Prix International colours. He has tough acts to follow after Palmer and Petit. But then he's had his fair share of success already.

He was born on August 1, 1961, and began racing karts in 1977. After winning five kart championships, he went on to win the unlimited class ice race series in Calgary and in 1980 finished third in the American Formula Ford Association's pro series. Since then he has concentrated on Atlantic racing, finishing fifth in the 1981 American series, 10th in the 1982 series, and then winning the International Formula Pacific championship in New Zealand over the winter, which also gave him second in the Formula Mondial World Cup series—South Pacific region.

Now Berg will be trying to emulate Palmer by winning the British F3 series in his Neil Trundle run 1982 Ralt. Allen hasn't had much luck in the first four races of the season, having had a spin in the



rain, a broken first gear and a first corner shunt. Clearly the English 'spring' and lack of power in F3 are taking some getting used to. But we wish him better luck in the future.

QUOTE OF THE WEEK

Quote of the week was recounted by Chris Wickly of the Toleman team. After the first day's practice when neither the International Formula Pacific championship in New Zealand over the winter, which also gave him second in the Formula Mondial World Cup series—South Pacific region.

HONDA'S F1 SPIRIT TURBO

Before you read your next GPI, Honda will have made their return to Formula One. At the time of writing, this is planned for the Marlboro Race of Champions at Brands Hatch on April 10. Only one car will be run for Stefan Johansson but there are already rumours that a V6 Honda turbo engine may be found in the back of Frank Williams' car next year. Honda last raced in F1 in 1968 after a chequered five-year Grand Prix effort which brought only two outright championship victories. At that time, the company preferred to race a car/engine/gearbox combination developed and built entirely in Japan, but this year's project involves the co-operation of Spirit Racing from Slough, west of London. It was set up at the end of 1981 by former March team manager John Wickham and ex-McLaren designer Gordon Coppuck. The team had an excellent first year in F2 using the Honda V6 engine in the back of Coppuck's honeycomb chassis.

It is that chassis which forms the basis of an experimental F1 car which has already covered several thousands of kilometers testing in England, the United States and Brazil. The team went to Rio after the Grand Prix to see how their test car fared in comparison to the rest of the F1 circus which had just left for Long Beach. Unfortunately, it rained every day, but the new car's quickest was a 1'41'40" on C race tyres which was quicker than Ferrari under the same conditions and would have got them onto the penultimate row of the grid for the Grand Prix. The team only managed 500 kms of testing.

Now a new chassis is being prepared. "Altogether a bigger car," said Wickham, "with a bigger fuel tank, different front suspension and different bodywork. We hope to get the car to Dijon for the Swiss GP, otherwise to Silverstone." Meanwhile, it seems that Honda may be talking with other teams who could use the turbo engine. "Under our agreement with Honda," said Wickham, "they are free to make the engine available to

any other team nominated by them. They are extremely adaptable people, and I would not be surprised to see a new engine being developed by them before next winter."

Frank Williams has also had discussions with Honda, and was at Silverstone for the F2 race where he talked with John Judd who builds the Honda F2 engines. Indeed, it was a Williams day out, for as well as Frank there was Patrick Head, Frank Dernie and Gary Thomas who used to work on the Honda-powered Ralts. But Frank remains a realist: "We haven't signed a contract yet," he insisted, "although I agree that we shall have to start a turbo programme before the end of this year if the current regulations are allowed to continue unaltered."

TROUBLED TIMES

As the Long Beach Grand Prix crumbles, even as it triumphed, a number of other races are in difficulties. First of these is Las Vegas which will host a CART race for 1983. Detroit, which is on an annual option, is also unhappy at having to raise an extra \$1.5 million to sweeten network participation. Now Dijon is also in trouble due to lack of interest and journalists who went to South Africa to report on the recent motorcycle Grand Prix say Kyalami too is headed for troubled waters. The 1984 race being scheduled just a few months after the October 1983 race, sponsors have not been falling over each other coming to their help. For what we think of the murky waters of the American scene, we refer you to the Editorial.

NEW FERRARI

Plans for a new Ferrari for the Monaco Grand Prix have been pushed forward to try and have the new car ready for Imola. The main object of the exercise is to knock 50 kilos off the current car which weighs close to 600 kilos.



MERCI AIR FRANCE

For those of you who might wonder how we manage to get these great photographs back to our printers in such a hurry, we are happy to show the crew that is responsible for this issue. They took off at 9pm on Saturday night after their day at the races with all that you need. And there are other crews who have been doing it for some years from our far-flung races: from Brazil to California and all points in between, for which our thanks.

FAMOUS FOOTPRINT

The famous bump in Long Beach was finally levelled. It took a small army of workers from 5.30 on Friday afternoon to 2.30 on Saturday morning to level and resurface it: quite a tribute to the Long Beach G.P. organisers and their persuasive powers with their workers. At 8.45 on Saturday morning, Niki Lauda was an early visitor to the site and decided to put a daunt foot in the fresh quick-dry concrete. The imprint was small, faint. Niki was too late to leave his mark like the other stars at Graumann's Chinise in Hollywood.

HUNT THE CHAMPION

A new game, called Hunt the Champion, dropped through the letter box the other week. It's not a board game, but a solely British Challenge sponsored by Marlboro — and yes, James Hunt is helping them ensure that Britain will produce another World Champion. Six million entry forms are being distributed nationwide, in garages and pubs and anyone not actively involved in motor sport can fill them in. The lucky man or woman who passes GO will collect a fully-sponsored season in Formula Ford. Once the entries have been screened to eliminate over-ambitious octogenarians, the aspiring Hunts will be whittled down to a thousand. They will then be invited to a series of ten

test days, during which professionals will choose the twenty best, once they've demonstrated their skills in race prepared Ford XR3s. After completing a course at a top racing school, the twenty will undergo a final series of tests to choose the three drivers with the greatest potential. In September, these three will race each other for the prize. Complicated, isn't it?



REPORTER DEREK

Another visitor to the city of the Queen Mary and the Old Sailors' home was Derek Daly. He arrived in time for the first Indy race of the season at Phoenix, only to discover it had been cancelled. It didn't seem to worry him, as Derek has shifted his base to the United States, at least for the time being: with Atlantic and the Indy 500 taking up the next few months of his time, he doesn't expect to be back in Europe before June. But Indy attracts him. Not merely for the races themselves, but also as a means of advancing his F1 career, which is far from abandoned. "I don't see how it can harm my chances," said a beaming, relaxed Derek. "Look at Tambay: he got into CanAm and now he's with Ferrari." Now, whether lighting strikes twice is another question. Meanwhile, he's promised four articles on Indy racing and its relationship (and differences from) F1 racing. If his writing is as colourful as his driving, some of us should be in for a treat.

DECOLONIZING AMERICA

It's no secret that Formula One is in trouble in America. Long Beach is out, Las Vegas seems likely to follow, Detroit has had to cough up another \$1.5 million to get television and only New York, which hasn't yet lived through its first Grand Prix looks a likely bet.

The reasons? They are not hard to find: starting with the recession that is hitting all sports throughout the world and going on to the notorious provincialism of America about international sports that either are not American in origin or do not have American folk heroes.

It must be said that F1 invaded the United States with scant preparation. It was an Ecclestone idea and a brilliant one, but it was not pursued with the thoroughness with which, for instance, an American would have planned introducing baseball to Europe. Sports editors and television magnates in the United States go with what they know, which is understandable. They know their market, and when they don't, they make sure their market knows them. But if sports editors refuse to move beyond local sports and their readers think an average speed of 85 mph around a track like Long Beach is slow, it's that they don't understand the nature of the beast. A long campaign of education, including junkets, paid feeding of stories, invitations, deep thrusting advertisements and so on was vital. It wasn't done and the sports is naked in a world with lots of competition for every sports buck.

That is only one side of the coin, as is the clear intent of Roger Penske and his CART to muscle in on a territory which Ecclestone has long considered Formula One property. This, like any discount merchant, Penske can easily do: he offers familiar merchandise at cut rates. True, it won't sell outside America: so, who needs the rest of the world?

The other side of that coin is the inability of FISA and FOCA to make up their minds on one vital question: is it we who need America or America which needs Formula One? Ask around, and Americans can answer that question. Despite the 85,000 people at Long Beach, no network wanted the television; and how many of those 85,000 knew what the sport is really about? In 1975, Long Beach ran a Formula 5000 race and drew 40,000 paying spectators. In 1976, to the sound of trumpets, Formula One burst on the scene and drew 43,000. Scant reward. We know the sport is international; so do the soccer moguls know that their is. Americans remain unconvinced.

But one of the big reasons for their lack of conviction is the cost. Ah, the cost! The cost of moving 40 cars, 400 people and all the rest of it from one side of the globe to the other. A cost that, in 1984, is going to run to \$2 million. Make the customers pay more? Pull in more sponsors (when television is backing off)? Long Beach had 85,000 customers, and kids begging for seats at the gates. It also had 5,000 empty 75 buck seats, proving there is a limit to customer compliance with the inflationary cost of the sport.

Americans have a multitude of formulae and lots of happy circuit owners. So, what for F1? No, it is clearly F1 that needs America. It is an international sport and without America it can't call itself that. It needs American races, American drivers, American viewers, readers and fans.

Is it right, then, that the cost of an American race should be three times as great as that of a British or a European, just because of geography? Would it not make more sense to levy all races at the same cost to each and spread the load? It is time FOCA and FISA got together to find the formula that keeps America in and stops the California Split.



WATSON REBORN



A new John Watson emerged at Long Beach. A stunning race, assisted by the collapse of the front runners enabled Wattie to take the flag going away; but only after a winter of soul searching.

_____ by Keith Botsford



There he was with lipstick smeared on his left cheek, the hero of the hour. The McLaren pits couldn't quite believe it had happened: a one-two of titanic dimensions. "Extraordinary!" said the McLaren pits. As for John, he was more modest about his achievement in taking his car from 22nd on the grid to a flashing victory reminiscent of last year at Detroit. But one thing was clear: this was a very different John to the introspective, often withdrawn man we have known. Not that he was exuberant: only that he took the race as his due. Like a master. He sprayed the champagne, they sprayed him back, Niki drank water, Arnoux looked mischievously at the busy models thrusting their tits into his face. But it had been John's afternoon.

Congratulations to the mechanics, a stop by the Michelin man who said the French equivalent of "He didn't half do one!" and then into a jammed press conference to woo the local journalists with an exemplary combination of charm and diplomacy. Honey never flowed more smoothly. Nor modesty ever sounded so sweet. Mind you, modesty comes easily when you've driven a race like that and won it. No, it wasn't his best ever race, said John. Detroit was better. "I dominated that race. The surfaces were similar and the tyres worked the same way. But other people had problems in front of me here. When Keke and Tambay went off that didn't exactly hurt. They're hard men to pass. Logically, my chances of winning were very slim. But you always have to think there's a chance. Life is full of long shots. Sometimes they come through." For a while John had his problems cutting through the field. "There were two Ensigns and two Alfas ahead of me and bunched up. But once I got past them, I had no real trouble catching up with the front runners." No trouble? By lap 13 he was still only up to 16th place and it wasn't until ten laps later that he got into real contention. Thereafter, progress was rapid. "It's always difficult getting

JACQUES LAFFITE

Luckily I wasn't too close to Keke when he spun on the first lap. When he came up on me on lap two I let him go. He was driving a bit too hard at the start of the race when there were still 74 laps to go. At the end of the race my tyres were still good and Keke's were a lot more used than mine after 25 laps. It was stupid losing my place to Arnoux. I thought I had 40 seconds in hand, and I had been getting signs about Patrese. I wanted to drink but I could not reach the pipe in my helmet so I slowed down and opened up the helmet to reach the pipe. It cost me at least 20 seconds and the next thing I knew Arnoux was coming past. If I hadn't slowed for that it wouldn't have been any trouble holding on to third place.

MARC SURER

The car was much better on full tanks than it had been on empty tanks all weekend. In practice I set a time almost as fast with more than 25 gallons of fuel and race tyres than I did with empty tanks and qualifiers. The car was the same in the race. At the start it was very good, but as the fuel load got lighter it was understeering more and more and I kept having to back off for a couple of laps to cool off the tyres.

If the car had handled the same at the end of the race as it did at the start I am sure I could have been much higher up the results.

It's the first time I have ever driven a car which is so much better on full tanks. Everyone else is happy when the fuel load is getting lighter and I was sitting there wishing the car would stay heavy. Maybe we should have planned a race with a pit stop to add more fuel and make sure the tanks were full at the finish.

by on circuits like this, but I can't say I had any real problems. Maybe it's psychological. They see me behind them and they begin worrying."

That latter remark because this was another of Wattie's now fabled charges from behind: some of which work (like Detroit last year) and some don't; as in Brazil two weeks ago when his car stopped on him. He was asked if he'd ever come from that far behind. "Not in a racing car, no," said John. Which left the world speculating on what John might have been thinking about.

As for taking over the lead, he didn't even know he had done it. "I was getting signals from the pits about Patrese, and I didn't realise I was in front until several laps later. Any time or place you can pass is good especially on a track like Long Beach. The Cosworths are the harder cars to get by: the turbos can't get through the corners so quickly, so you know you've always got a chance with them."

But all things considered, as John said, "the last three years have been the best of my career. The potential is there at McLaren and barely been touched upon. A Cosworth has no right to win any more," he said, "and by the end of the season, I can't see them doing it."

None of which explains the new Watson. That is a spiritual transformation. He was upset somewhat by the anthem played on the podium, *Soldier Boys*, which just happens to be the Eire anthem, while John is from the Protestant North. Ah well... The transformation started after Vegas. "When I failed to win the championship at Vegas, I had to take a hard look at myself. It was a contentious winter. I looked long and hard at myself and I came out with a new idea about my own determination and ambition." The kind of new idea that had no fear of Alan Jones' rumoured take-over of his drive. "I plan to drive for McLaren all season," Wattie said. "Alan's expert at stirring things up, I wish him well at Arrows. I know where I am."



KEKE'S COLUMN

After Brazil, I went off with Andrea de Cesaris in Niki's plane. It was heavy work: not as bad as the European tour we did for Marlboro, which was two press conferences a day, but even one is a lot for a man who's better at driving than smiling.

In Mexico City we inaugurated a monument to the Rodriguez brothers. It was a nice thing to do; the family was pleased. I nearly got run over by fans. A super track but it would take a lot to make it safe. About Acapulco, all I can say is that I don't need to go back.

I didn't get rid of my cold until Saturday at Long Beach, but I'd like to tell the world I wasn't thinking about being disqualified in Brazil. If I worried my head about these political problems I wouldn't be a driver. I can only do the best I can. I did my bloody best in Brazil and all I'll say about that decision is that it's unsporting. After all, I didn't have anything to do with the pushstart, but I'm the one who loses out. I knew these were the two races where I must score and what have I got? Zero points, but two good races.

The first day of qualifying, our cars were just wrong. We had a big meeting and decided which way we should go: after which I wound up third, not too bad. I was a bit disappointed; I felt I should be second. I couldn't beat Tambay's time, but Arnoux I thought was within my reach. But I never got a lap on my second qualies.

At the start, there's a long way to the first corner and I almost made it through, but Tambay just didn't move at the light and I had to turn fast and I hit poor Rene. That was entirely my fault. I overdid it. I knew I could sort out the Ferrari. No problems, I started out cautious. Well, apart from the spin. I had one in Willow Springs. I had a good go at Patrick. I took the inside line and when I touched my brakes, there must have been a bump and the wheels must have been off the ground. Then came the crunch with Tambay. I was level with him, he turned in, I couldn't dodge out. So I got around him alright and I thought, good now it's all clear. But there was Jacques. I made it plain to him he shouldn't dice with me and that's where Jarier came up my rear. If he'd been on the right line, he'd have hit E.T. By the way, in the warm-up someone had a big sign up saying Go E.T. Maybe he's not so gentle any more!

1. Tambay led into the first corner, pushing the eager Rosberg back to second. Keke had made a spectacular start, making contact with Arnoux who was overtaken by Laffite on the inside. (Photo: B. Asset)



2. Alboreto and Jarier fight out fourth place. The Frenchman muscled past, but similar tactics failed to bring the same result when he caught up the leaders. At that time, the Ligier was the best placed Michelin-shod car. (Photo: DPPI)



3. The leaders: Tambay is closely challenged by the two Williams, Rosberg followed by Laffite who observes his teammate's success in trying to overtake the Ferrari. Jarier caught up but within 500 yards, three of the leaders would be eliminated in two separate accidents. (Photo: DPPI)



4. Only one of the leaders remains: Jacques Laffite. At this point, he looked as though he could win. But to win, it transpired that Michelins were necessary and Jacques' Williams was fitted with Goodyear tyres. (Photo: B. Asset)



Cool sun, boats bobbing in the background, beefy California types holding up cardboard signs begging for tickets. If this was the last Long Beach Grand Prix, it was a doubly spectacular one: two races, each memorable in its own way, and a justifiable sell-out.

With two Ferraris up front and two Williams just behind them, we expected—and got—a suitably dramatic start. We got one, but Tambay didn't. His car remained fixed to the concrete just long enough for an eager Rosberg to take evasive action up the middle, between the two red cars. As Keke said, he couldn't do anything about it, but nudging Arnoux was all his fault. Keke nearly made it past Tambay before the first corner. Nearly, but not quite. Behind them, in tight platoon fashion, Alboreto's Tyrrell stayed with the front runners, for a race that was not to be. Not for him. Keke, with Laffite on his tail, was doing what he could to get by Tambay, whose tyres, Keke says, were wearing. It wasn't to be. Jarier, who had a splendid race until an excess of enthusiasm overtook judgement, was moving up fast, from tenth to fifth in 20 laps and against some fierce opposition. The incident that ended his race was doubly unfortunate; it deprived the race of Rosberg and deprived Jarier of a victory that was, with his Michelin tyres, well within his grasp.

The incident which turned the race around took place on lap 25. Keke, who had first had a fantastic spin ("I took an inside line and found a bump I hadn't explored and the rear lifted off and I went round faster than I've ever done") and then one serious attack on Tambay on an impossible outside line, saw his opportunity. Tambay, always a little wider on the corners than Keke, left a gap on the inside as he braked, Keke seized it, was level and kept to his line. A few yards past the corner, however, Tambay turned his Ferrari inwards and it climbed up on Keke's front wheel and flipped up onto two wheels, leaving Tambay stranded in the middle of the track. Unfazed, Keke drove around him and set off again, only to find Laffite had closed the gap and was alongside. "I let him know he shouldn't try it," said

Keke, as both headed for the next corner. Unfortunately, as Keke braked, Jarier was too close to him and went right up his rear. Finis Keke, and soon after, finis Jean-Pierre.

Meanwhile, behind the reduced front runners, where Laffite now led, followed by Patrese and Surer, first Lauda then John Watson were realizing that on this circuit, as at Detroit, their Michelins were nearly ideal: better and better as they warmed up. Both McLaren's had driven though the entire field and were threatening Laffite and Patrese. In their hearts they knew: this was to be their race. And thus, if the truly spectacular disappeared with the retirement of Rosberg, who drove a second blinder in a row, the race still did not lack suspense. Of those two, which would survive? Could Laffite stay up front? Would the McLaren's go the distance? In the event, the answers were not long in coming. Niki had such a pain in his leg that he yielded to Watson. If yielded is the right word: "He didn't exactly give it to me," said Watson, understating what was a fine braking action that must have taken Niki by surprise. Laffite could only hold out until lap 45, then Watson took him, with some pace, and pulling away, established a superiority that was never to be challenged. None of this means that there weren't some spectacular races behind. Special mention to Alboreto, who had an unfortunate brush with Jarier and had to retire with his rear suspension gone; to Cheever, who made two pit stops (one useless) and was still challenging from fifth place on lap 67 when his gearbox went; to Rene Arnoux, who had to change tyres as well as be hit by Rosberg at the start and still finished a fine third; to Cecotto, who showed, as in Brazil, that F1 is to his liking, by finishing sixth—a result that will please Messrs. Yip and Nunn; and to Laffite, who battled nobly, and Surer who salvaged two points for Arrows on a day when Alan Jones' leg (and an incident with a wall) led him to retire. Two races: one enthralling and bristling with aggro and resilient defence; the other, a swift, masterful glide to victory by Watson and Lauda. Memorable on all counts: from 22nd and 23rd to first and second is worth remembering.



5. There was just as much action behind the leaders. The unforgiving Long Beach concrete walls claimed those who made the slightest mistake, including Warwick and Winkelhock. (Photo: B. Asset)



6. Alan Jones suffered badly on his return to F1 racing. His leg was still painful, and his Arrows' steering was damaged early on. He had to let teammate Marc Surer past, even though he had been quicker than the Swiss driver during practice. (Photo: DPPI)



7. You can win races from the back rows of the grid. The McLaren's proved that by having their own battle won by Watson, and then demoting Laffite's ill-handling Williams to third place which was then claimed by René Arnoux. (Photo: B. Asset)



8. Watson and Arnoux spray champagne watched by an amused Niki Lauda, now the World Championship leader with one point advantage over teammate Watson and Brazilian GP winner Nelson Piquet. (Photo: B. Asset)

Long Beach statistics

LONG BEACH GRAND PRIX

Date: March 27 1983
 Circuit: Long Beach
 Circuit length: 2,035 miles
 Race distance: 75 laps, 152,621 miles
 Weather: fine and sunny
 Crowd: 85,000

PREVIOUS WINNERS

(last five races)
 1978: Reutemann (Ferrari)
 1979: Villeneuve (Ferrari)
 1980: Piquet (Brabham)
 1981: Jones (Williams)
 1982: Lauda (Mc Laren)

STARTING GRID

1. ARNOUX Ferrari 126 C2 1:26:35 (1)	11. TAMMAY Ferrari 126C2 1:26:35 (1)
2. LAFFITE Williams FW08-Cosworth 1:27:18 (2)	12. ROSSBERG Williams FW08-Cosworth 1:27:14 (2)
3. WARWICK Toleman TG183B-Hart 1:28:13 (2)	13. DE ANGELIS Lotus 93T-Renault 1:27:36 (2)
4. PROST Renault RE40 1:28:58 (1)	14. ALBARETO Tyrrell 011-Cosworth 1:28:42 (2)
5. JARIER Liger JS21-Cosworth 1:28:31 (2)	15. SULLIVAN Tyrrell 011-Cosworth 1:28:83 (2)
6. JONES Arrows A6-Cosworth 1:29:11 (2)	16. PATRESE Brabham BT52-BMW 1:28:56 (1)
7. GIACOMELLI Toleman TG183B-Hart 1:29:26 (2)	17. MANSELL Lotus 92-Cosworth 1:29:16 (2)
8. SURIER Arrows A6-Cosworth 1:29:52 (2)	18. CHEEVER Renault RE30C 1:29:42 (2)
9. GUERRERO Theodore 183-Cosworth 1:29:58 (1)	19. CECOTTO Theodore 183-Cosworth 1:29:58 (1)
10. PIQUET Brabham BT52-BMW 1:30:04 (2)	20. DE CESARIS Alfa Romeo 183T 1:29:53 (2)
11. WATSON McLaren MP4-1C-Cosworth 1:30:10 (2)	21. BALDI Alfa Romeo 183T 1:30:07 (2)
12. WINKELHOCK ATS D6-BMW 1:30:20 (2)	22. LAUDA McLaren MP4-1C-Cosworth 1:30:18 (2)
13. BOESEL Liger JS 21-Cosworth 1:31:7 (1)	23. SALAZAR RAM 01-Cosworth 1:31:126 (2)

Did not qualify:
 Fabi/Osella FA10-Cosworth, 1:31:90 (2)
 Ghinzani/Osella FA10-Cosworth,
 1:32:18 (2)

(*) Driver's Saturday afternoon practice time
 of 1:28:528 disallowed, because his car did
 not conform to the regulations.



PROVISIONAL WORLD CHAMPIONSHIP POSITIONS

(After the Brazilian Grand Prix and Long Beach)

	6	4	Total
1. Lauda	6	4	10
2. Watson	9	9	9
3. Piquet	9	3	6
4. Laffite	1	4	4
5. Arnoux	2	2	3
6. Surier	—	1	1
7. Tambay	—	1	1
8. Cecotto	—	1	1



OFFICIAL QUALIFYING TIMES

	Untimed practice	Timed practice 1	Untimed practice 2	Timed practice 2	Warm-up Sunday
1. Rosberg	1:30:483	1:29:577	1:29:299	1:27:145	1:29:426
2. Laffite	1:30:726	1:30:529	1:29:531	1:27:818	1:30:281
3. Alboreto	1:29:922	1:29:066	1:29:103	1:28:425	1:30:222
4. Sullivan	1:31:993	1:31:271	1:29:313	1:28:833	1:30:652
5. Piquet	1:33:418	1:30:173	1:30:764	1:30:034	1:31:278
6. Patrese	1:33:976	1:28:968	1:30:013	1:29:467	1:30:160
7. Watson	1:33:858	1:32:439	1:30:262	1:30:100	1:30:678
8. Lauda	1:32:177	1:30:262	1:30:147	1:30:188	1:30:974
9. Winkelhock	1:33:389	1:31:999	1:30:256	1:30:220	1:32:492
11. De Cesaris	1:31:250	1:31:624	1:28:790	1:27:982	1:31:712
12. Mansell	1:32:482	1:31:728	1:28:868	1:28:167	1:33:493
15. Prost	1:29:933	1:28:558	1:48:914	1:29:765	1:40:806
16. Cheever	1:32:273	1:30:997	1:32:027	1:29:422	1:30:209
17. Salazar	1:36:206	1:32:997	1:31:925	1:28:167	1:33:864
22. De Cesaris	1:32:473	1:33:336	1:31:341	1:29:603	1:32:733
23. Baldi	1:30:188 (2)	1:31:924	1:32:770	1:30:070	1:32:236
25. Jarier	1:31:281	1:29:600	1:32:452	1:28:913	1:30:000
26. Boesel	1:34:023	1:31:799	1:31:454	1:31:765	1:31:930
27. Tambay	1:30:404	1:28:998	1:30:415	1:28:117	1:30:795
28. Arnoux	1:30:233	1:28:936	1:28:880	1:27:828	1:29:442
29. Surier	1:32:217	1:30:067	1:29:618	1:29:621	1:29:450
30. Jones	1:32:321	1:30:451	1:30:410	1:29:112	1:30:178
31. Fabi	1:36:548	1:32:515	1:32:515	1:31:901	—
32. Ghinzani	1:36:414	—	1:34:089	1:32:182	—
33. Guerrero	1:30:214	1:29:585	1:29:662	1:28:628	1:30:487
34. Cecotto	1:31:777	1:29:599	1:30:818	1:30:258	1:30:520
36. Warwick	1:50:528	—	1:28:997	1:28:130	1:33:181
38. Giacomelli	1:42:167	—	1:31:867	1:27:286	1:32:475

RESULTS

1. Watson/Mc Laren MP4-1C-Cosworth, 75 laps, 152,621 miles in 1 hr 53'34" 889, average speed 80.625 m.p.h.
 2. Lauda
 3. Arnoux
 4. Laffite
 5. Surier
 6. Cecotto
 7. Boesel
 8. Sullivan
 9. Alboreto
 10. Patrese
 11. Prost
 12. Mansell
 Mc Laren MP4-1C-Cosworth
 Ferrari 126C2
 Williams FW08-Cosworth
 Arrows A6-Cosworth
 Theodore 183-Cosworth
 Liger JS21-Cosworth
 Tyrrell 011-Cosworth
 Brabham BT52-BMW
 Renault RE40
 Lotus 92-Cosworth

Best lap: Lauda/Mc Laren MP4-1C-Cosworth, 1'28" 330 on the 42nd lap, average of 82.930 m.p.h.



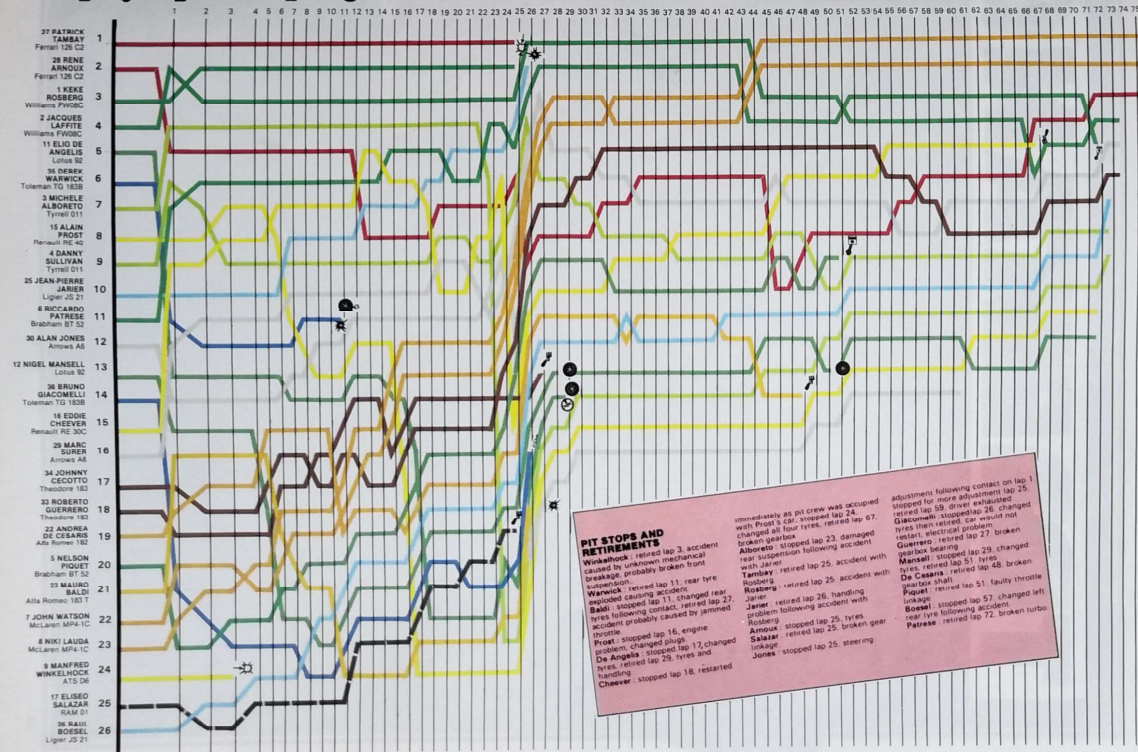
CONSTRUCTORS' WORLD CHAMPIONSHIP

1. Mc Laren 19 pts; 2. Brabham 9 pts; 3. Ferrari 6 pts; Williams 6 pts; 5. Arrows 3 pts; 6. Theodore 1 pt.

THEIR FASTEST RACE LAPS

Lauda	1:28:330 (42)
Arnoux	1:28:370 (62)
Watson	1:28:652 (41)
Prost	1:28:417 (67)
Alboreto	1:29:032 (70)
Jarier	1:29:264 (08)
Patrese	1:29:718 (40)
Cheever	1:30:104 (40)
Laffite	1:30:163 (40)
Rosberg	1:30:256 (04)
Piquet	1:30:256 (31)
Jones	1:30:261 (37)
Tambay	1:30:370 (12)
Sullivan	1:30:372 (11)
Cecotto	1:30:382 (40)
Surier	1:30:617 (18)
Guerrero	1:30:645 (08)
Warwick	1:30:771 (10)
Boesel	1:31:263 (41)
De Cesaris	1:31:280 (06)
De Angelis	1:31:344 (27)
Mansell	1:31:885 (22)
Baldi	1:32:185 (19)
Salazar	1:32:506 (22)
Giacomelli	1:33:512 (05)
Winkelhock	1:33:792 (03)

Lap-by-lap - Giro per giro - Runde um runde - Tour par tour - Vuelta a vuelta - Ronde



TOLEMAN: ON TARGET

It's less than two years since the Toleman team made a sudden appearance in F1 as the only all-British turbo team. Uncompetitive in the first year, in 1982 they raced a new and sophisticated chassis which, in 1983 flat bottom guise, has already proved itself to be sensationally quick. So far the Toleman objectives have been met: this year they plan to start winning.

by Rob de la Salle



The fastest car around Rio's Jacarepagua circuit in the weeks before the Brazilian GP was, unofficially, the exciting twin-winged Toleman-Hart TG183B in the hands of Hampshire driver Derek Warwick. In the tyre tests held a month before the race the British turbocar had narrowly beaten the new (and still untraced) Renault RE40 of Alain Prost, while in the three additional days of testing on March 4-6 Warwick had again set the pace with the help of the very effective Pirelli qualifying tyres.

Other teams might dispute Toleman's claim to have the fastest car over one lap. Renault, for example, timed Prost a fraction faster in the tyre test, while the Williams team—who had timed Keke Rosberg from a point behind the pits in order to keep his true lap speed secret—revealed last week that their car had in fact set a faster time than anybody else's (including the turbos) before official practice began.

On the Saturday afternoon of the GP weekend itself, however, it was clear to the Toleman personnel that they had the fastest car of the 28 which were speeding around the track. Halfway through the vital last hour of timed qualifying, with a cloud obscuring the tropical sun, Derek Warwick was sent out on his first set of Pirelli "stickies" on the pit wall, team manager Roger Silman watched the dark blue and red turbocar flash down the main straight, then clicked his stopwatch and smiled. "Derek's two seconds faster than he's ever been before at that point on the circuit," he said excitedly. "This lap must be good enough for pole position."

Alas, it was not to be. Instead of accelerating past the official start/finish line in front of the pits with a triumphant "Whump" from its Hart turbo, the Toleman appeared in the pit lane followed by a smoke haze and a trickle of oil. The engine was in ruins, and so were Derek's chances of pole position. Underneath his helmet his face was black; when he removed the helmet and slammed it down on the pit counter nobody dared to approach him.

If anyone had suggested then that Toleman chief Alex Hawkridge had persuaded Brian Hart unwisely to increase the boost pressure of his engines, with expensive consequences, he would have been wrong. "We can't afford to run the sort of boost that the other turbos are using," said Silman later. "We have examined the engine and we think Derek's blow-up was caused this morning when a bolt fell out of the fuel injection system, causing it to run very lean for a short period. It looks as though a piston failed because it was burned in the morning incident."

Nevertheless, the Toleman team had already qualified honourably in 5th place (Warwick) and 15th (Giacomelli), and Warwick was to finish an encouraging 8th in Sunday's race, despite a suspension-bending moment with Baldi and the loss of turbo boost pressure at the beginning of the 63 laps.

As Toleman group managing director Alex Hawkridge well remembers, it's not so long ago that the British turbocars were less than impressive. "We knew that 1981, our first year in Formula 1, would be a learning year. We had set ourselves the target of becoming competitive in 1982, and agreed that 1983 should be a season for winning races. In those terms, we're on schedule. But we haven't forgotten that at this race, Brazil 1982, we failed to qualify at all. Fortunately the results started to come later in the 1982 season. In fact we aimed ourselves last year at Lotus, which was considered to be a competitive team, and in qualifying we were usually just ahead of them or behind them."

At the end of the 1982 season, Toleman introduced a completely new chassis to accept the turbocharged Hart 415T four-cylinder engine which had been developed in Harlow by Brian Hart on a budget which was minute by "Grande" constructors' standards. The TG183—as elegant a machine as its predecessor had been ungainly—raced at Monza and Las Vegas. It hit trouble at both races, but with its carbon fibre monocoque and neat turbo installation, was looking very promising.

"That car, though, was never seen in its intended form at a race," says Hawkridge: "we had some new underwing configurations which Derek was able to test in private, where they couldn't be copied, and as he'll tell you, they produced unbelievable downforce."

But the new regulations, imposed on all the teams in an authoritarian move by FISA president Balestre, rendered the new Toleman obsolete overnight. It was a potentially fatal decision for the Toleman team, which had invested several million dollars in the development of new technology. Group chairman Ted Toleman had already warned Hawkridge that in 1983 the racing team would have to find all its sponsorship funds independently of the group, which like so many other European enterprises was finding its business (based mainly on the transportation of cars from port or factory to retail outlets throughout the UK) in the grips of recession.

In the political battle between the constructors and the racing federation, Hawkridge has consistently sided with the major constructors, the so-called "legalists". But unlike them, his team stood to lose money and (equally important) competitiveness as a result of the "flat bottom" rules. Surely this would place a strain on Toleman support for FISA?

"We were very much against the decision," admits Hawkridge, "though not because of the new rules themselves, which we (the 'legalist' teams) had already formulated and recommended. Our suggestion had been that the new rules be implemented in 1984, but we did have a problem with the time scale under which they were to be introduced. Not only did the sudden imposition of rules undermine the stability of the formula but

The Tolemans leave the pits: could this season be the season of success for the English team after two tough years of apprenticeship? They've already proved that they have the speed, all they need now is reliability.
(Photo: B. Asset)





Derek Warwick has already confirmed the promise shown at last year's British Grand Prix, while late signing Bruno Giacomelli has made a fresh start after a disappointing 1982. (Photos: B. Asset)

also the stability of the teams, ourselves included. We also believe that not enough time was available to make the rules appropriate and sufficiently water-tight. The fact is that there are significant loopholes in the new regulations, which various teams are exploiting in different ways. That includes us. I'm sure, for example, that the twin-wing rear aerodynamic device which we've got, or the underwings at the back of the Ligier, were not envisaged by the rule-makers."

Despite his reservations, Hawkrigide is confident that ultimately the rules can be made to provide the safer, more spectacular racing which Balestre and FISA had in mind when they placed the sudden ban on ground effects. The speed of the new Toleman shows that budgetary constraints have not handicapped the engineers' ability to adapt quickly. On Rio form, they've done a better job than the major turbo teams with their untold millions of dollars.

But every penny of sponsorship money has to be carefully budgeted at Toleman's workshops near Witney in Oxfordshire. In a brochure which he produced last year to inform potential sponsors of the costs involved in F1 racing, Hawkrigide placed a figure of no less than 6.3 million dollars on the cost of going racing in 1983 with two cars and a separate research and development team. During the winter he has succeeded in finding some of the money from two major Italian sources, which include the Candy washing machine company and Magirus, a division of the Iveco truck making group.

"We have a constraint on our activities insofar as we're on a sponsorship programme that's based on results," he says, "which means that we must do well in order to achieve revenue. Our expectation is that we will earn this year, with our existing arrangement, about four million dollars. We didn't say last year that we would stop racing if we didn't have the full 6.3 million, but we can't do it yet in the way we'd like to do. For example, here in Rio we should have had three cars available for Derek and Bruno instead of two, and there should have been a fourth back in England for a separate test programme."

Having the Toleman group behind the team is more than just a psychological advantage. "We can't fall back on the group for cash", says Hawkrigide, "but the team benefits from its Toleman associations in other ways. For example we have a very high credit rating with our suppliers—and that's not common in the racing business."

By any standards, Toleman's achievements in F1 have been remarkable during the short period—less than two years—that they've been in Grand Prix racing. An interesting aspect of the Toleman approach to F1 has been the complete faith which Hawkrigide has placed in the personnel who were recruited for the Formula 2 team which went on to win the 1981 European F2

championship before embarking on the F1 adventure.

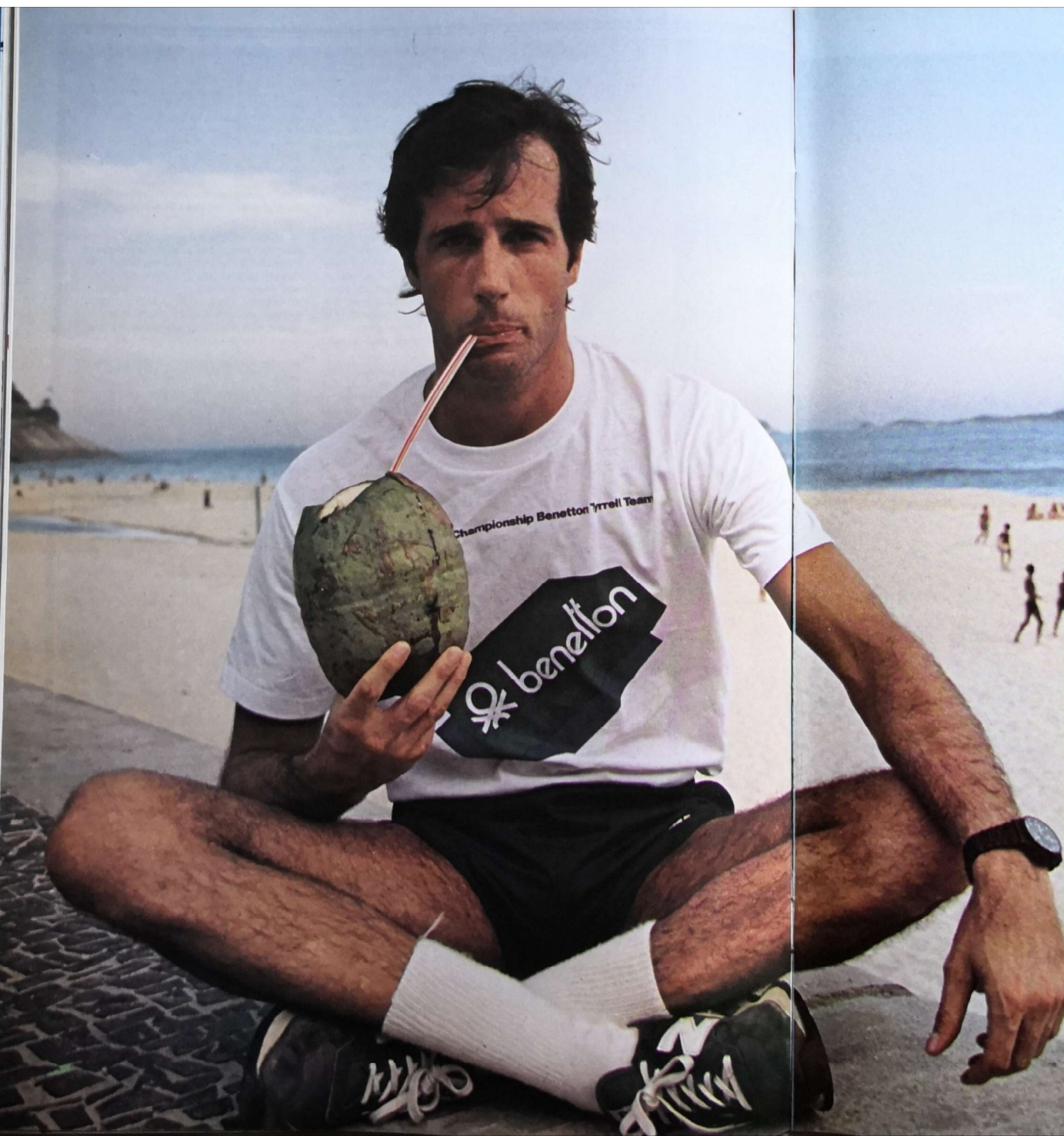
Of the team's engineers, only chief designer Rory Byrne is even close to 40 years old, and only one had even worked on an F1 design before last year. Both Byrne and his development engineer Pat Symonds (who was responsible for the wind tunnel programme that shaped the latest car) served a valuable racing "apprenticeship" in British Formula Ford, which until recently had produced lot of driving talent for the GP world but not many boffins.

A reliable indicator to the ability of the Toleman personnel was the agreement by Brian Hart to undertake the David-and-Goliath task of taking on Renault, BMW and Ferrari in the supply of turbocharged engines. Hart, with F2 and sportscar experience going back more than 15 years, had resolutely stayed away from any F1 involvement. Perhaps the most



remarkable aspect of Hart's engine however, has been its obvious power (remember Warwick overtaking Pironi's Ferrari into 2nd place at Brands Hatch) without the sophisticated engine management (ignition, injection) systems for which his turbo rivals have been able to afford expensive micro-processor controls.

"In terms of what we've achieved, with what we've had, in the time available for it," says Hawkrigide, "we're World Champions already in terms of cost-effectiveness. But that isn't the point. The important thing is that the pressure of competition makes people do extraordinary things, and in a remarkably short space of time we've developed a very competitive package." □



SULLIVAN: DREAM COME TRUE



In May 1973, a young and immature American teenager set foot in England for the first time with a mere \$200 stuffed in his pocket. Within a few days, he was rubbing shoulders with Jackie Stewart and François Cevert in the Tyrrell team, at that time at the peak of motor racing.

by Didier Brailon

THE young man was 21 years old, full of wild ideas, and was called Danny Sullivan. All he knew of the world was his native Kentucky which he'd left two and half years earlier for the squalor of New York.

Why had he left the green and pleasant State of Kentucky for the gloom of the city? Like many young men, he wanted to be independent and was bored with life in the carefully controlled confines of the comfortable family home. His father was a comfortably-off businessman with three house construction companies. Life was easy, well-organized; trips in the family's private plane, private schools and walks around the family farm.

Then one day Danny took off with a friend for a weekend in New York. The weekend stretched; in the next thirty months, the Kentucky Kid took odd jobs here and there, changing from one thing to another when the pay improved, or was 'less bad'.

Kentucky is the centre of the world of horse racing, and Danny maintained one vital link with his home state: a school-friend's father who was involved with a different kind of racing. That man was Frank Falkner, a world famous paediatrician who was a friend of the Sullivan family. Even though the only motor race he'd ever seen was the Indianapolis 500, young Danny told Frank that he wanted to be a racing driver. The reason that Frank Falkner was involved in choosing Danny's career was that he was a good friend of Ken and Norah Tyrrell, and a frequent visitor to Grands Prix, as he is still. When Frank mentioned to Tyrrell's number one driver Jackie Stewart that a young American friend of his wanted to be a racing driver, the Scot suggested that a course at the Jim Russell Racing Drivers School might be a wise course of action.

And that's why Danny Sullivan landed in England that day in May, and headed for East Horsley in Surrey. There he worked for an Alfa Romeo and Lotus garage dur-

ing the week, and for Ken Tyrrell's nearby Formula One team at the weekends. But at weekends, Formula One teams go racing, and within a few weeks, Danny found himself at the Monaco Grand Prix, acting as odd-job man: polishing the Tyrrells, moving great piles of tyres around the paddock, driving people to and from the hotel: basically, any little job that needed doing by someone. It was a tough apprenticeship for someone who had only seen racing from the outside, as he realises today. "I didn't know what to expect in Europe. Frank had tried to warn me, but he didn't tell me what it was really like. I didn't realise what he was really getting at. Becoming a racing driver was the first serious thing I'd ever attempted. Until then, I'd just been a kid, so green that I just made mistakes and my father was always telling me that I couldn't see the wood for the trees. He was damn well right!"

Danny's race career began driving in fits



and starts due to what was to become an habitual shortage of money. His family back in the States virtually cut him off. They thought he was crazy trying to get into a sport whose most publicised aspect consisted of accidents and injury. Danny, meanwhile, shared a house with Tom Pryce and Tony Trimmer, and then had his first season in Formula Ford in an Elden. That went well, and Danny was eager to move up to Formula Three. He bought the ex-Bob Evans March 733 with the help of a less impecunious girlfriend and spent more than a year trying hard to run the car on virtually nothing. But early in 1975, Frank Falkner helped him secure a drive with Modus for £4000. He'd already missed the first six rounds of the BP Championship, but he went on to win five races and finish second in the series to his good friend Gunnar Nilsson.

After a good season in F3, any aspiring driver is entitled to think about Formula One. Danny approached his compatriot, Don Nichols who ran Shadow and was duly offered a drive—for \$150,000. That was well beyond his reach, and Danny slipped into semi-obscure. He would travel Europe in search of funds, his old

blue Alfa Romeo acting as hotel room on occasions. He accepted any drive that was going, but he did a few races in Brian Lewis's F2 Boxer.

In desperation, Danny quit Europe and thanks to March tackled the Formula Atlantic series in New Zealand and finished off the year in the same Formula back home in the States. He had gone full circle: back in the States with no future. "Things looked pretty bleak in 1979. I had nothing. I was teaching at one of Skip Barber's racing schools but I was really fed up, ready to drop everything and go to the other end of the world."

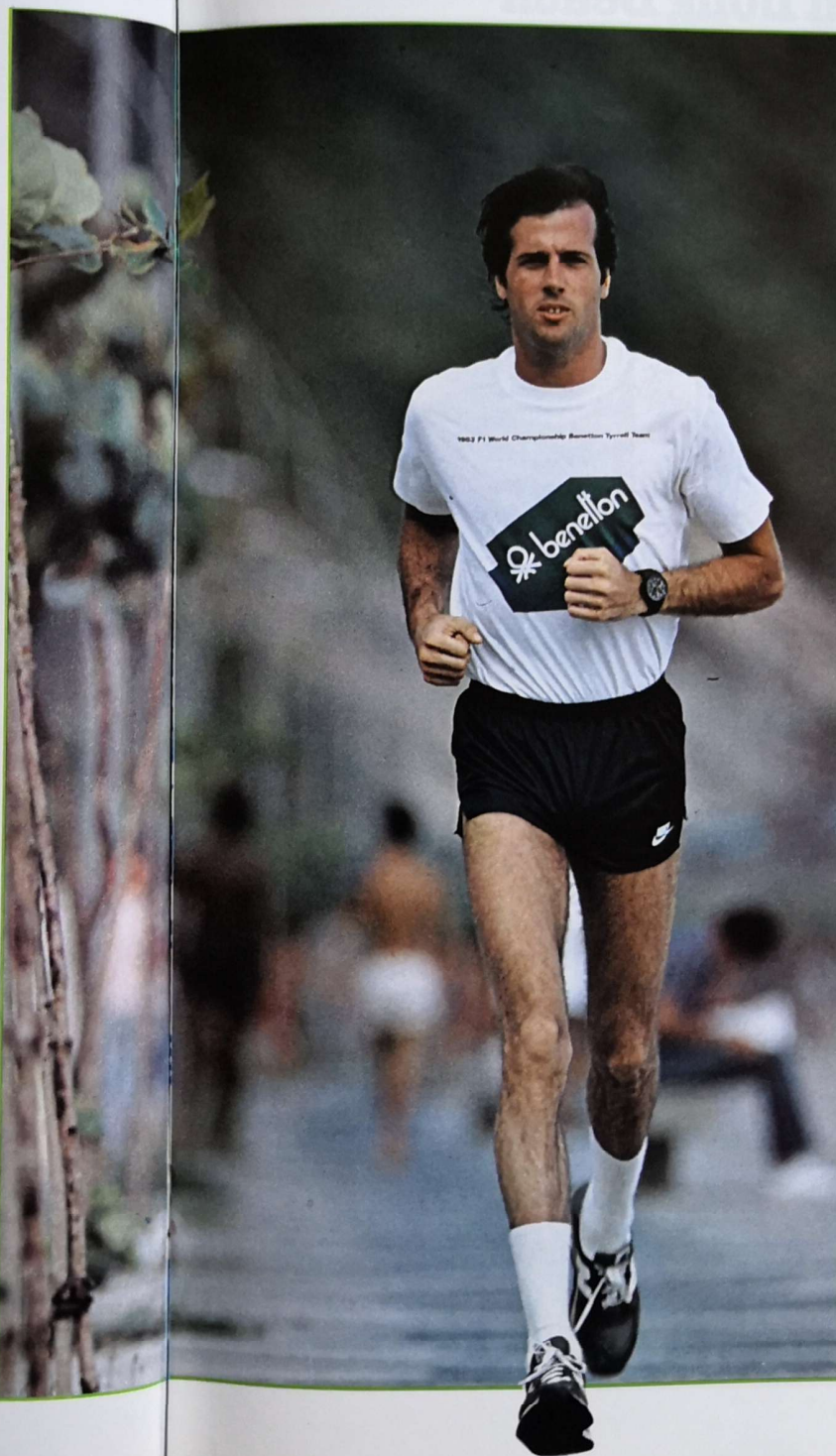
And then just at that moment, as though carefully rehearsed as in the best of soap operas, Garvin Brown came on the scene. Garvin Brown was the fairy godmother to Danny that Count Zanon had previously been to Ronnie Peterson and now Michele Alboreto among others. "I'd met Garvin Brown a few months earlier. He's got an enormous distillery in Kentucky and he's crazy about motor

racing. At the end of the season, he rang for a chat about CanAm, and ended up sending me an air ticket to go and watch the last race of the year. We met a few people and finally came to an agreement with the Smith brothers to drive their new car which would be called the Intrepid GB1."

Danny, once more, seemed to be about to embark on a promising motor racing career, but the GB1 turned out to be far from good. So Garvin Brown took the bull by the horns and bought a new Lola, hiring ex-March F1 mechanic Dave White to run it. Danny won the last race of the year, at Las Vegas, and once again, his career seemed to have taken off. Paul Newman offered him a drive in his March 827 for the 1982 season, and he would make his Indy debut that year.

"Garvin had come to an agreement with Forsyth and I finished third at Atlanta in my first ever CART race. It looked good, but it soon got worse when Hector Rebaque arrived with bags of money. The team just didn't have the ability to run two cars, and although no one ever dared say it to my face, I was soon getting the number two treatment. That was hard to take because Falkner and I reckoned that

The Kentucky Kid is no model, but like most people, he looks good in Benetton's gear. Not only does he suit his sponsors, but also his old friend Ken Tyrrell, who has found a fine number two in Sullivan.
(Photos: B. Asset)



1982 was really my last chance and I was relying on a good CART season to bring my name to the attention of Formula One team managers. In fact I'd been so long in the States, four years, that I'd almost forgotten about Formula One."

But Danny and Garvin were able to make contacts at last year's Las Vegas Grand Prix, where Danny again won in CanAm. "Garvin had nothing to do that weekend, so he spent the time talking with various teams. He went to Tyrrell first of all, but Ken didn't have a sponsor and there didn't seem much chance of a drive without bringing some money. Garvin also spoke to Ensign and Toleman who both seemed fairly interested in running an American driver. Most other teams were all tied up."

But fortunately the situation sorted itself out. Ken Tyrrell asked Danny to test at Circuit Paul Ricard (where Danny set fastest time on control tyres) and then found a sponsor. The result was that a dream came true. Twelve years after he'd first worked for Tyrrell, Danny went back to the team's Surrey base, but this time as a driver—he was no longer the gofer.

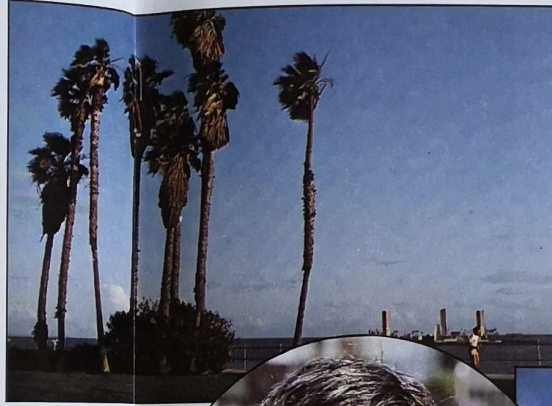
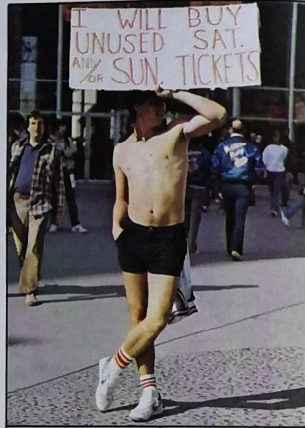
"Formula One has always been my aim, more so than CART racing. It wouldn't be bad to stay in the States and earn half a million dollars, but I couldn't see myself rushing round ovals at 200 mph, half an inch from a concrete wall for the rest of my life. No, when I dreamed of racing, it was as a Grand Prix driver. It wasn't because of the money, but to earn my place in the world standings. What I like about Formula One is that it's totally professional. That's where the best drivers are, and you have to struggle for everything you want. Besides, everyone from journalists, mechanics, tyre manufacturers to drivers and teams are totally competitive. I like that, it suits my temperament. And now that I'm one of them, I'm more convinced than ever. The image that I had of Grand Prix racing was the right one, and after having taken part in my first race, I realise that it's just the way that I expected it to be. Now I've got to get some miles under my belt and get myself used to some of the peculiarities of Formula One, like using qualifying tyres."

Drivers he already knows, like Eddie Cheever, Keke Rosberg, Patrick Tambay and Riccardo Patrese have already given Danny some helpful advice. And sooner or later, he's going to have to quit his apartment in Aspen, Colorado and his girlfriend's house at Brentwood near Los Angeles, and live in Europe. It's an essential move if he isn't to spend his life in airliners.

"My girlfriend knows Paris, so we might live there. I wouldn't mind living in France, even though I do find that Europe is a bit old-fashioned and staid, and life is more expensive and harder than in the States. But I've got to choose: either become a Formula One driver, or stay in my home country where the phones work and shops stay open all night..."

Postcard from Long Beach

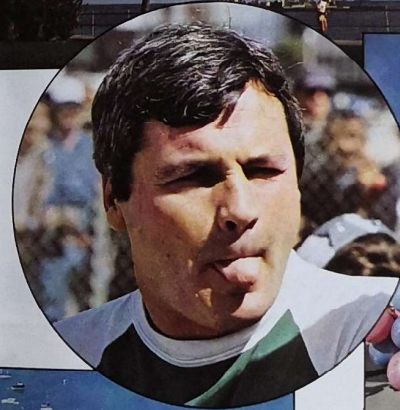
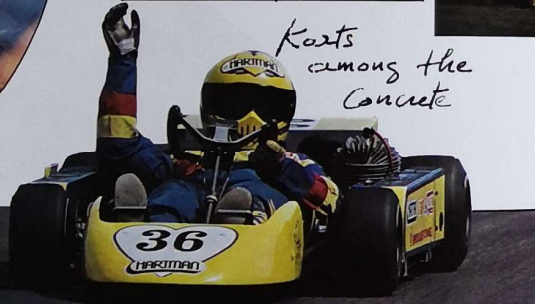
California: Pretty girls, cool guys...



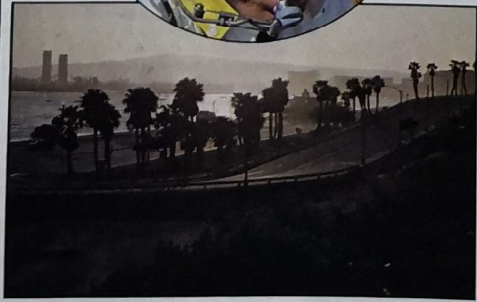
The Grand Prix was a festival for the young and beautiful



Karts among the concrete



The Sun was great for some!



Long Beach: home for the retired Spruce Goose, Queen Mary, old cars, and ex-world champions.



RENAULT REVIVAL?

Renault's RE40 looked new and shiny under the azure Californian sky. Fresh out of its wrapping paper, it's still too early to know if it will be the car which will put

Alain Prost back among the front runners. The first two races have been disappointing: this time last year he had 18 points. (Photos: DPPI and B. Asset).

THE JONES BOY IS BACK!

Alan Jones got bored at home in Australia watching his cows grow fat. He quit F1 on a high by winning at Las Vegas, but crept back into the sport by the back door in the mid-field Arrows. Alan still has some problems to overcome, but he obviously hasn't lost his touch, even though his horizons may have expanded somewhat.

(Photos: B. Asset)





JOHNNY BE GOOD!

There was little doubt from the start that Roberto Guerrero had immense promise, which he has confirmed ever since. But it's quite a surprise to find Johnny Cecotto doing so well so soon. He's clearly taken to four wheels in the same way as his motorcycling predecessors such as Surtees, Hailwood, Beltoise, proving that two extra wheels does not surpress latent talent.
(Photos: DPPI)





SULLIVAN 1, PROST 0

*There's no established hierarchy in F1. New boy Sullivan nipped past senior prefect Alain Prost as though he'd been in F1 for years. But then such surprises are part of the fascination of Grand Prix racing.
(Photo: Autopresse)*



PATRICK'S DAY PARADE

There are some who thought that Patrick Tambay would be over-shadowed by René Arnoux this year, but Patrick was utterly competitive at Long Beach.

He's obviously a front-runner, and any thought that his teammate might dominate him is out of the question.

(Photo: DPPI)

RELAXED RICCARDO

*Riccardo Patrese looks at ease in comparison to little René Arnoux. The Frenchman's driving position makes him appear anxious, worried about what may be around the next corner.
(Photo: B. Asset)*



EXTRA, EXTRA

BEING THERE

Wednesday, March 23. One hundred and twenty miles from Long Beach amongst the sand and tumbleweeds of the Mojave desert, just a few miles from the landing site of the space shuttle, a truck turns up the road to Willow Springs raceway. It's a barren place, the undulating track carved out of the rocky foothills bordering the edge of the desert.

The track has become a popular testing venue for several Grand Prix teams over the winter. Williams, Honda and Renault had already turned laps at Willow, and now, as the doors of the truck were opened up, the handful of enthusiasts watched as the all-white Arrows was rolled down the ramps into the almost deserted pit lane. There was no driver's name on the side, no stickers anywhere on the car, just a simple Australian flag stuck on either side of the car behind the roll-over bar.

It was just another test day at Willow Springs, but a big day for Alan Jones who, eighteen months after winning the Las Vegas Grand Prix and then turning his back on Grand Prix racing, decided that life down on the farm in his native Australia, was not enough to replace the life of being a Grand Prix star.

"I thought racing for fun in Australia plus the fare would be enough but it wasn't. Whatever racing you do, the fun stops when you are sitting on the grid. So I woke up one morning around Christmas and thought if I'm going to race, I might as well do it properly and get paid for it. I missed racing, that's why I have come back," explained Jones, now more like the old Jones, relaxed, humorous and even enjoying the attention that had become too much two years ago and driven him from the sport.

"I have even learned to be nice to the press," he said with a smile, but that day it wasn't the questions that worried him but his own fears that 18 months away from a Grand Prix racing and a still painful broken leg might have slowed him up as a world champion F1 driver. "I only got off my crutches a week ago, and the pins they had to put in my leg are just below the skin and are being pushed against the side of the monocoque, although some reshaping with a big hammer helped relieve the problem."

Despite a brief harmless spin on cold tyres, Jones' fears were soon a thing of the past. "Everything feels really good. I've only done about 20 laps and I am already beginning to start picking faults with the handling and looking for more speed at some of the corners. It feels like I've never been away, just had the usual winter lay-off."

By the end of the day, Jones' times had tumbled to 1'10"8 while Alain Prost and Eddie Cheever, testing the Renault tur-

bos at the same time, had not bettered 1'10"6 and 1'10"1 respectively. "We had last year's hard 'A' compound tyres and the engine is not a very good one, so I feel pretty pleased with the times," said Alan, who by the end of the day had made his decision to take part in the Long Beach Grand Prix.

Since he stopped racing, he has had two bad accidents on the farm. A motorcycle crash left him with deep scars on one arm and 14 stitches in his head, while the horse riding accident just after his decision to return to F1 left him with a bad limp for the moment, the pins probably staying there until the end of the season.

"I had to come back to racing, it was getting too dangerous down on the farm", joked Alan, although his wife Beverly was not too happy about the idea. "She will stay on the farm with Christian who is going to school now." Alan plans to return to the farm in the off season.

"I expect to race for another three or four years," says Jones. But he is not willing to say who he will be racing with after Long Beach. He certainly left his return to Grand Prix racing until a little late in the season, "But not as late as everybody might think," he says with a knowing smile.

The race weekend shows how much Jones has changed. He is serene, untroubled. It is clear, as he hobbles around the pits, just how much his leg does bother him. In fact, it is going to drive him out of the race. He touched a wall, but it wasn't terminal. "Some things never change," he says philosophically. "I just didn't see any point going on with that much pain just to finish in umpteenth place."

His practice times showed that Arrows still had much to do to sort their car out. First, he had to be able to sit properly. With his leg rubbing against the side of the cockpit, the team had padded his seat with foam. "But the foam gives," said Alan, "and you slide all over the place. But that's not something we could fix here. We have to wait to get back to the factory. We think we know what's wrong with the car and it can all be fixed, but not in time for this race."

But his good humour was evident and so was his total relaxation. The smile was ever-present, and it was a new, mellowed Jones we were seeing. "Of course, if I had a brain in my head I would have come back earlier and put in a few months' testing and then we might have sorted things out a bit." He always was honest, even when it hurt.

There were old friends about, to keep him company and the scene wasn't that unfamiliar. "There are new faces and that's a little tricky. I used to know who ought to be avoided. Now, it's guesswork but I've already spotted a few," he says cheerfully. "As for the old ones, I think I know them. They seem glad enough to



see me back and it's like coming back after a school holiday. In some strange way, I don't feel I've ever been away." Meanwhile, the problem exercising everyone was that of money. There was a picturesque scene as Arrows' Jackie Oliver explained to the local enthusiasts why the car was bare of all sponsorship (except for a small Valvoline contract) and the California Car Club passed round the hat. A rather bemused Alan turned over a smallish sum to charity and surprisingly, failed to kiss the glamorous blonde who represented the enriched poor. That hardly solved the problems of how Jones' fees could be met and the car developed.

Alan's solution was characteristic. He demonstrated it with an imaginary ladle turning in a big kettle of soup, the Family's gesture for 'stirring it up', getting everyone excited. The man knows he can have any drive he wants where there's a spot open. Hence the heated rumours circulating that he was going to join Marlboro McLaren International and his grin as the TAG men left his side; back with Frank Williams is clearly where Alan would like to be. It was a winning combination before, and alongside Keke, as he said, "It would be kind of fun, wouldn't it?"

There was folklore of all sorts during Alan's weekend. Like John Watson coming up to Alan and putting a tape measure around his ample posterior. "What do you think you're doing?" asked Alan. Replied John: "Just making sure my seat doesn't fit you." All good give and take. But primarily, the mood was philosophical. He was back, and if not fighting fit physically, very much in shape mentally. You would have thought that coming back to drive in this most exciting of sports, he would find it a bit difficult. But as was obvious from Alan's demeanour he had lost none of his determination. Sure, Beverly had been a bit hard on him, but as he said: "She finally realised she would be better off letting me do what I want instead of having me around the house looking restless, and when she realised that, she gave me her full support. But I do miss them, both of them. I've only been away a few days and I think of them all the time. Christian's at such a marvellous age..." So now we have the new, mature Jones as sentimentalist too!

**Jeff Hutchinson
and Keith Botsford**

EXTRA, EXTRA

COOL AS A CUKE

Room 121 at the Queensway Hotel was full of bursting point. Twenty or thirty people, invited for a drink by Teddy Yip, were crammed in there like sardines. It was Saturday evening, practice was over. In the middle of this wall-to-wall human carpeting were the heroes of the hour, Roberto Guerrero and Johnny Cecotto, who willingly accepted praise showered on them from right and left. When drinks were over, around 50 guests were to be driven off to a Chinese restaurant near LAX, the Los Angeles airport. This was to be Teddy Yip's treat. He'd organised it and the menu himself, some three days earlier. Now he was trying to hurry everyone to the restaurant. A proper Chinese meal lasts at least four or five hours!

He's an amazing fellow, Teddy Yip. Here he was, celebrating after practice had finished. As far as he was concerned, "everything was fine." Did he know that Guerrero's fastest time had been discounted earlier that afternoon because the car's bodywork was 11 millimeters too wide? From eighth on the grid, Guerrero was demoted to the ninth row. Maybe Teddy was too pre-occupied with his drinks party, dinner that night or the party he's holding this June for all the ladies who have figured in his life. It's be-

ing held in Hong Kong, and every one of the lucky guests will receive a diamond necklace. It seems that Teddy may need about 40 of them, if the rumours are true! The next morning, once the party spirit had died down, Katie and Roberto Guerrero were walking briskly through a pit lane almost as full as room 121 at the Queensway. It wasn't long before the start of the race, but Roberto had made sure that his American wife had put him to bed early the night before. So now he was cool and calm as he walked towards the Theodore pit. The previous afternoon's drama of having his fastest time annulled appeared to have been forgotten.

"Everything's going well," he said with his usual wry grin. "The car feels good, it's well balanced and was fitted with a really good new engine on Friday evening. I really drove hard during practice and then suddenly all that effort came to naught. I don't blame the team because it's not as though they were trying to cheat. Another 11 millimeters body width wasn't going to give us an enormous advantage. It was simply a breach of the rules. Everyone can make mistakes and rules are made to be adhered to. But everything was checked very thoroughly

in Rio and it's quite a surprise to find that the car is now too wide." Calmly Roberto walked to his car, swinging his helmet in his hand. "The race is going to be hard, if only because I'm now way back on the grid and it's hard to overtake here. But I feel quite confident. During the warm-up the car felt good on full tanks. We seem to have got rid of the slight understeer that we had in practice."

Last year's Ensign N182 and this year's



Theodore 183 aren't very different at first sight, but already this year the young Colombian's results have looked promising. That wry grin was on his face again as he explained why some people are already calling him the revelation of the season. "The difference between this year and last is like night and day. We've got more than one engine, for instance! And they've all got about 20 bhp more than last year's."

He would only say that he would "do my

best" in the race. He usually does, but in spite of his efforts, he got no higher than 13th before the gear linkage broke on the 27th lap.

Obviously he was disappointed, but he was soon back in the pits, leaning over the wall enthusiastically encouraging teammate Cecotto to his sixth place, and keeping track of the movements at the front of the field thanks to the excellent TV coverage and a little TV on the pit wall.

One of the most charming things about Roberto is his calm outlook. He may have been excited as he watched from the pit wall, but he rarely gets over-excited when he's working. His performance at Long Beach may have ended prematurely but while he was out there, he led both the McLarens, and you know what happened to them!

Didier Brailion

CRUCIAL SECONDS

"My car was sliding more and more. I had fitted four Goodyear type B tyres and the front left got overheated."

With sweat running down his face, Tambay was walking slowly along the track. A few yards away stood his Ferrari, silent and still, at the end of the escape road where officials had just left it.

"I had everything under control," Tambay told pressmen crowding eagerly around him. "I was driving along happily without worrying too much about Rosberg. I think I could have stayed ahead of him till the end because as soon as I eased up, my tyres cooled down." But the Ferrari, in the lead since the start,

came unstuck in the 25th lap. Patrick, sliding slightly more than usual in the fast left leading up to the hairpin, lost a bit of time and Rosberg, lying in wait behind his rear wing, thought he could attack when he braked. Rosberg tried to overtake on the inside, close to the concrete wall.

"I didn't even see him coming," the Frenchman confessed, "because I was on my normal line and since there was no room on my right, I saw no reason to look in my mirrors. Suddenly, I felt something bump against my rear right wheel and I was thrown into the air. Whichever way you look at it, overtaking here means taking a very big risk."

It was the kind of risk that Jarier, once more in the kind of form he showed in his heyday with Shadow in 1975, was quite ready to take. Having overtaken Sullivan, he quickly found himself close behind Cheever. Clearly his Ligier was faster

than the Renault, but the problem was trying to find a gap.

Jean-Pierre, wound-up and irritated, tried on the left and on the right. After several long minutes he finally overtook the black and yellow Renault. On the 18th lap, under braking for the hairpin, he went down the inside and challenged Patrese.

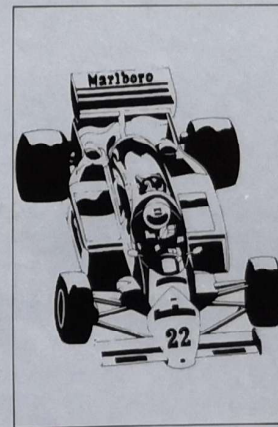
The Brabham-BMW yielded two laps on, at the braking point for the chicane. Alboreto's Tyrrell was the next target for the Ligier. Jean-Pierre decided to pull out all the stops to prevent the leaders—a few yards ahead of him—getting away. It ended with the bright green Tyrrell spinning off the track in the Pine Avenue straight. By the time Jarier had restarted, Patrese had gone by again. But Jarier wasn't worried. He overtook the Italian under braking for the chicane two laps later. He was now fourth, with Laffite, Rosberg and Tambay still ahead. And

then came that crazy 25th lap. Rosberg lost time when his Williams sent the unfortunate Tambay's Ferrari flying into the air. In the chicane, 150 yards on from where the collision took place, the two Williams, Laffite's and Rosberg's, were the first to brake. Jacques was on the inside, and Keke, glancing to the right, realised it was better not to try anything. He had taken the wrong line and he slowed down, because he thought there was bound to be an accident. He eased up a fraction of a second sooner than in the earlier laps and Jarier saw his chance: there was a gap of about a yard between the two Williams. To try to get through, he had to brake as late as possible, and that was what he did, when Keke was slowing down. The Ligier's nose section and the tail section of the Williams collided, throwing the English car violently into the escape road.

Jarier was furious: his front wings were

completely twisted, but he tried to get back into the race. After all, Laffite, the new leader, was only a few yards ahead. On the pit straight, Jarier had to admit defeat. Not only had his car's aerodynamics been destroyed, they were working in reverse, lifting his front wheels several inches off the track. It was in these crucial 150 yards of the 25th lap that Jarier lost the race. Like the McLarens, his car was fitted with Michelin tyres—the secret weapon needed to win. He was much more competitive than either John or Niki and unfortunately, he's unlikely to get such a good chance of winning again in the near future. The mood among the Ligier team was pretty black—all the more so because the explanation Jean-Pierre gave for his collision with Rosberg was a bit different from the team patron's—and from our own assessment.

D.B.





The man in the cap has placed all his hopes on Jean-Pierre Jarier. How times have changed! But while Ligier needs Jarier's talent and experience, the reverse could be said, Jarier needs Ligier, because Formula One's team managers were scarcely climbing over one another to get his signature on a contract during the off-season. (Photos: B. Asset and DPPI)

LIGIER: TRANSITION TIME

The story of Guy Ligier's team over the last few years is not one of Formula One's success stories. This year, the difficulties look to be accentuated. But the man himself is infinitely resilient. Not easy to put down or push out of the sport he loves.

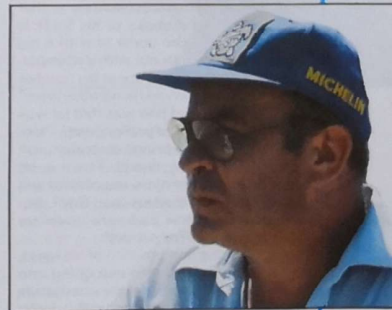
by Keith Botsford

Cocky, plump, powerful, combative, Guy Ligier is today at one of the many crossroads in his life. They have come and gone, these intersections, and Ligier has made himself as much at home with adversity as with success. Having set out to honour his country and his sport, Ligier Gitanes has been since its creation one of those marginal teams somewhere between the major constructors and the very minor. For a while, at least on paper, it looked as though the association with a major manufacturer, Talbot, might provide Ligier with the financial and engineering backing which his team needed. Perhaps even with the necessary discipline. He finds himself at an awkward juncture now because of the withdrawal of what had been meant to be his salvation, Talbot. "Our big problem," said Ligier in Rio, "was that Talbot's departure was, from our point of view, premature. We weren't ready for it. There was no time to prepare for it. It happened three months before the end of the season: what could we do in so short a time?"

"We had to reorganize the team. We had to set it back on its feet really, without support. We had neither the same resources nor the same personnel. It's not easy to face the world with 35 percent of your budget gone. And when disaster strikes you that suddenly, you can't just go out in a few months and find yourself new sponsorship." True enough, as many teams have been finding out in the close season. It's a difficulty best described by another team with Ligier's problems, whose boss described how he would call up sponsor after sponsor only to find out that he was beating on a door already half battered down by a succession of F1 constructors, some with records far better than his own. "Finding a sponsor is one of a constructor's major tasks," acknowledged Ligier. "It's something you just improvise. It requires forethought, prepara-

tion. One has to lay a groundwork and then there are long, careful negotiations. I don't deny it for an instant. This is going to be a very troubled year for the team."

This year, Guy races with his oldest sponsor, Gitanes. Is he at least assured of some long-range support from that



quarter? "No," he answered simply. "In principle, this is the last year for Gitanes, that is what the contract says. That does not mean that I do not hope they will continue. It does mean that I have to wait to find out. I would hope to know in about a month or six weeks. Of course I'm hopeful. If I didn't have hopes, I'd give it all up. Anyway, the matter is out of my hands. Things are being decided right now: what can I do but wait? I have a meeting two months from now and then I'll find out."

So, as has been unkindly pointed out, Ligier has been forced to that tried-and-true remedy of the constructor without huge liquidity: the pay-as-you-drive driver. It was a subject on which Ligier preferred not to dwell. After all, his was a two-driver team, and Jean-Pierre Jarier might now, given his career, be con-

sidered an 'utility' driver, but he is certainly no paying crotch of gold.

"Jean-Pierre is a known quantity. He is certainly no everyday driver. I also happen to think he's been a very unlucky driver. He's never had really first rate cars: not for any length of time. And when he's had a good one, he's done really rather well. I can think of some quite brilliant races he's put in." So can we all, recalling at the same time that such drivers have been both brilliant and erratic. Never the soberest or purest of drives, Jean-Pierre's talent is undisputed. The same is not true of his discipline or his concentration as a driver. But Ligier thinks he has matured.

"I don't think Jarier is as erratic as he once was. He's been around a long time, he has done solid work, I think he deserves his chance."

But alongside Jarier, Ligier fields a young driver who appeared on the F1 scene, rather dramatically at a Rothman's press conference in London a year ago. Young, handsome and rich Boesel is: as a driver, he has yet to prove himself and even in his own Brazil, he is not rated as highly as a number of other young drivers. True, his experience with the Rothman's March team was not exactly a splendid success.

But many people doubt that fault was entirely his. The sponsorship was withdrawn as suddenly and as sharply as Talbot left Ligier, proving once again that old adage of Bernard Ecclestone's, that one sponsor who sticks to his trade is worth a dozen who come in with a big splash and then walk out with a whimper. Ligier sat on the fence about his number two driver: how could he do otherwise? All he would say of him was that he was "Young, serious and professional." Un-said was that he brings in some cash which Ligier badly needs. There is no shame in that: far more successful and prosperous constructors than Guy Ligier have trod the same path: one driver for results, another for support.

But even in the composition of his team, there is a question. Without going into the matter at great length, one recalls that it was not so long ago that Guy Ligier was quoted as saying he had a low opinion of Jarier and that only over his dead body would Jarier ever race for him again. Whence the volte face?

"Me? Anti-Jarier?" asked Ligier rhetorically, "I've never been against the man. I was definitely against certain statements he made, but there is a difference. Jarier, unfortunately in my view, made certain remarks about Jean-Pierre Jabouille (who at the time was Ligier's team-manager). I thought he overstepped the limits of what is correct, and if I take up a responsibility, I carry that responsibility out: to the end. I am a known loyalist. I am loyal to my people and I do not admit disloyalty within my team. If I make a mistake, I admit it. If I give my support, I don't suddenly withdraw it in the middle of the season. But Jarier did. Jabouille had a very serious accident in his Renault. He did everything he could to come back to rac-



Raul Boesel, Guy Ligier's number two, has his seat in the team thanks to his sponsors, who bring much needed finance to the team. Prior to his first unhappy F1 season, Raul shone in F3 in Britain.
(Photos: B. Asset)

ing. He just couldn't manage it. That was a physical matter and no fault of Jabouille's. Jarier and I fought over that. Jarier said Jabouille couldn't drive. He was right. But in human terms, you can't just destroy a man like that. I defended Jabouille.

"In Formula One, as in the rest of life, you have to take the human into considerations. What is past is past. You can't concentrate on the negative."

Between seasons, Ligier took up a number of contacts, with the Argentine driver Oscar Larrauri, with Guerrero, with Jean-Louis Schlesser, with Baldi. On the whole, however, Guy has always been a patriot. He wanted a French team. "It's true, I've always had a French driver in my team, and I will continue that way. That does not mean that I have to be all-French. But at the moment, French drivers are fairly thin on the ground. There are people coming along in F2 and F3, but for the time being I felt I had to stay with a solid reputation. It is not a time for adventures.

"I suppose in some ways I am the same as Frank Williams. Frank is a British patriot. I love my country. I race to give my country something: just as Frank does. It doesn't make Frank less of a patriot that his two champions should be an Australian and a Finn. I'm a great admirer of Frank's: of his discipline and his sense of organization. They are things which have always been just a little lacking at Ligier."

A big smile took over Guy's bluff face as he defined his team's style: "semi-professional," he said. "There's a bit of that in the French temperament."

When Francois Mitterand was elected president of France, it was thought that the French government might come to Ligier's aid. The two had known each other since Mitterand had come to Magny Cours, which happened to be in his constituency. That was in 1963. "he financed Magny Cours and is passionate about sport and particularly cars," said Guy. "I was driving myself and we've always kept in touch.

"What I might be able to ask from my friend Francois, I don't feel I could go and ask from the president. After all, he has other fish to fry. I'm sure that if someone asked him about helping racing, he would say 'Guy Ligier', but that's all there is to it.

"There were contacts with the French lottery, but they didn't work out at the highest level. Mainly, I think, because the lottery doesn't export anything. It doesn't really need to get into sponsorship in an international sport."

Despite the addition of the engineer Hervé Guilpin, Ligier has not always been known as an innovative team from the engineering point of view. This year, however, there were two major changes: a new hydraulic suspension team and a shift from the Matra engine to the trustworthy Cosworth.

"We've been working, off and on, on the suspension with PSA for some three years. It is a joint effort with Citroen and maintains a contact of sorts, at least for

the time being, with Talbot. We devised the system because of the problem of different weight loads, particularly under the new flat-bottomed regulations. The system is promising, but I can't say that we've made life easy for ourselves by introducing it at this time.

"No more have we made life easy by shifting to the Cosworth. But we couldn't continue with Matra. There were industrial problems over there and a quarrel over costs between Peugeot and Matra. Not to speak of the fact that the Matra was the worst of the aspirated engines in Formula One. Outdated and out of breath. Still, we had only 3 1/2 months to break in new regulations, new drivers, new engines, new suspensions and new financial conditions. It hasn't been easy.

"Frankly, the costs in F1 have run away with all of us. We need a turbo, because



that is the way the sport must go, but if the manufacturers won't give us one, there is no way we can afford one. The world is in recession, but F1 costs 25 percent more every year. Either the rules are shifted so that we can all compete more equally or there will be wholesale drop-outs.

"It's all very well to talk about the big manufacturers coming in and taking our places. But when they've won their championship, will they stay in the sport? Ferrari is a case apart, but in the old days Mercedes didn't, will Renault? When they win their title, what's left in it for them?"

Burly, genial, tough—and without breakfast—Ligier faced up well to this recital of his woes and worries. "You have to grin and bear it," he said. "I'm just a natural fighter and I love this sport. I love all aspects of it. And nothing says I have to stay in Formula One. I couldn't give up the sport, but F1 is not the only aspect of it that interests me.

"Anyway, like Frank Williams, I had a tough childhood. I was an orphan at seven, I came into life without a cent. That is a great way to build character. I've made my own way in life and in Formula One. So for the time being the name of my game is survival. Let the team survive and we'll be alright. For us at the moment, all is transition." □



ALFA ROMEO EURORACING

183T/02: Andrea de Cesaris (I)
183T/03: Mauro Baldi (I)
183T/01: spare

Euroracing's Alfa Romeo-powered cars were unchanged,

but they did have considerable problems with understeer on the Friday. De Cesaris's car broke a turbo on Saturday afternoon which started a small fire. A second, 100 cms wide wing mounted in front of the original wing was to be tried but the idea was ultimately side-lined by designer Gerard Ducarouge.



ARROWS- COSWORTH

A6/2: Marc Surer (CH)
A6/3: Alan Jones (AUS)
A6/1: spare

The major novelty for the Arrows team was driver Alan Jones who quit Formula One in 1981 and was making a comeback with the team, leaving Chico Serra without a drive again. A third A6, the spare car A6/1, had been shipped from England for Jones to test at Willow Springs in the desert near

Los Angeles the Wednesday before the Grand Prix. The Australian driver wasn't too comfortable in the car, partly because his leg still hadn't healed. But he drove without a seat, the pedal box had to be cut about and the extinguisher bottle had to be taken out. Furthermore, the gear change was mounted too far back and the steering column had to be shortened by two centimeters. Technically speaking, the only novelty was a wide front wing which was tried on the Friday instead of the usual front nose fins.

ATS-BMW

D6/01: Manfred Winkelhock (D)

Following the disappointing showing in Brazil, the ATS suspension set-up, rather too similar to that of a wing car, had been totally rethought. Furthermore, the front wings comprised an extra flap, the

engine cover had been shortened and the underwings had been cut in order to free the gearbox, which had also been made more reliable. Designer Gustav Brunner admits that D6/01 is only a prototype and that the second model which will be at the French GP will be 23 kilos lighter. A third car should be under construction soon.



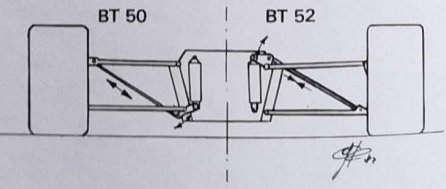
BRABHAM-BMW

BT 52/3: Nelson Piquet (BR)
BT 52/2: Riccardo Patrese (I)
BT 52/1: spare

The Brabham team had worked on the gearbox in particular since Rio, but there were also two little air scoops in the left side pod to cool

the rear shock absorbers which were overheating due to their proximity to the turbocharger.

Left, the 1982 Brabham BT 50 pullrod suspension: the upper wishbone is connected to the bottom of the shock absorber by a link. Right, this year's BT 52 pushrod suspension: the lower wishbone and the top of the shocker are connected.



FERRARI

126 C2/065: Patrick Tambay (F)
126 C2/064: René Arnoux (F)
126 C2/063: spare

The engine covers had been shortened to allow for improved engine cooling. A lot of aerodynamic work had been done: the wings used in Rio had been modified, now being made up of four parts instead of three, and new wings developed from those tested in January at Rio had also made the trip to Long Beach. These two little wings were mounted beside the cockpit and

linked to the side pods behind them. The team decided to keep the wings on the cars after Friday's practice because they gave more downforce which improved traction. The addition of these wings increased the Ferraris' weight by more than five kilos which meant each car topped 580 kilos without fuel.



LOTUS-RENAULT AND COSWORTH

93T/1: Elio de Angelis (I)
92/10: Nigel Mansell (GB)
92/05: spare

The 92s were unchanged but the 93T, on the other hand, had undergone considerable modifica-

tion. The weight distribution had been changed, with more weight towards the back of the car and a longer wheelbase. Combined with the use of different springs, this gave better traction although it wasn't until Saturday that this was achieved. On Friday, because of insufficient rear downforce, the rear tyres' temperature was never more than 130° but their ideal working temperature is between 175° and 185°.

Tony Rudd, who at 60 is the senior English engineer, was working with the team again. He was apprenticed to Rolls Royce and later joined BRM. Where he helped Graham Hill win the 1962 World Championship. He then worked on the V16 engine before building the Rover BRM turbine car which did the Le Mans 24 hrs. He joined Lotus at the end of 1968 and worked as engineering and research director at Lotus, specialising in road cars.

LIGIER-COSWORTH

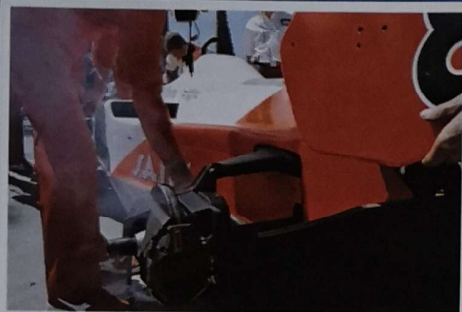
JS 21/04: Jean-Pierre Jarier (F)
JS 21/03: Raul Boesel (BR)
JS 21/02: spare.

The Ligiers, still without engine-covers, have a modification on their rear right side. The reason for

the change is better-protected battery mountings, intended to eliminate the problems brought on by vibration in Rio. The hydraulic suspension has been further adjusted to bring it up to its ideal configuration and the 140 cms secondary wing, seen during practice at Rio, has not been brought along; it will only be used on circuits where a lot of downforce is needed.



Cockpits



McLAREN-COSWORTH

MP4-1C/06: John Watson (GB)
MP4-1C/07: Niki Lauda (A)
MP4-1C/05: spare

A three-piece rear wing had been built to provide more downforce, but because of the bump on Seaside Way which made the cars take off, it was not used on Friday. The MP4-1C set-up was completely changed during the two days of practice, but no satisfactory solution was found.



RAM MARCH COSWORTH

RAM01/1: Eliseo Salazar (RCH)

The special aerodynamic con-

figuration seen in Brazil, using very extended under wings ending at the tip of the rear wing, has gone. The RAM 01 only has a single air outlet, instead of two separate ones and its new, utterly conventional set-up, is very similar to the Arrows A6.

OSELLA-COSWORTH

FA1D/01: Corrado Fabi (I)
FA1D/02: Piercarlo Ghinzani (I)

Fabi's car is 36 kilos lighter than at Rio, thanks to titanium exhausts, lighter driveshafts, carbon fibre brakes and the fact that the engine cover has been removed. It now weighs 556 kilos. Enzo Osella worked in the Fiat wind-tunnel and found a defect in the set-up that was used in Brazil; as a result, the first part of the rear wing is now tilted less than the second part. The bodywork of the new car, which will soon be fitted with an Alfa Romeo V12 engine, was also tested in a wind-tunnel. It looks very much like the BT 52. On Saturday, at Long Beach, Fabi's and Ghinzani's cars were different at the back. Fabi's had a



Williams-type set-up, while Ghinzani's had long side pods, bodywork around the gearbox and its rear wing mounted on two sideplates.

THEODORE-COSWORTH

183/17: Robert Guerrero (COL)
183/18: Johnny Cecotto (YV)

At Long Beach, the 183s were fitted with twin caliper discs, which increased their weight by 10 kilos. On Friday morning, Guerrero tried an extra, 140 cm wing, fitted on the roll bar.

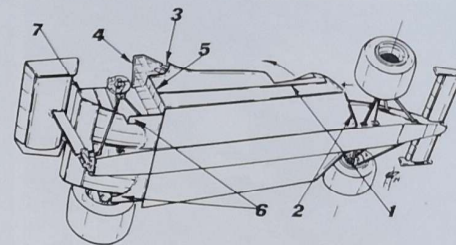


RENAULT

RE 40/00: Alain Prost (F)
RE 30C/11: Eddie Cheever (USA)
RE 30C/12: Prost's spare
RE 30C/10: Cheever's spare

The RE 40 had been brought out to try to compensate for the poor performance in Rio. It's 12 kilos lighter than the RE 30C and has a carbon fibre monocoque built by Hurel Dubois, an aeronautics firm in the Paris region. The finish on

this monocoque isn't great, by present standards, but it should be better on future ones. Renault got in some practice on the Wednesday before the race at the Willow Springs circuit, along with Jones' Arrows. Prost's RE 40, which had problems with its injection pump, lapped with a best of 1'10"6, as against 1'10"3 for Cheever's RE 30C, which broke a turbo, and 1'10"8 for the Arrows. At Long Beach, Renault fitted a concave very angled, three-piece rear wing, with a flap intended to stop the rest of the wing from vibrating.



RENAULT RE 40

1) The side radiators have an air outflow over the sidepods.
2) The RE 40 is the current car, and has the longest side pods.
3) The exhausts come out under the rear wheels, along the vertical fin protected by

asbestos, as seen in (4).
5) The air outflows are separated behind the rear wheels.
6) Rear suspension faring constructed in a way not yet seen on the current cars.
7) Rounded rear profile extends back towards the rear wing mounting.



Cockpits



TYRRELL-COSWORTH

011/6: Michele Alboreto (I)
011/2: Danny Sullivan (USA)
011/5: spare

On Alboreto's car, the lower rear bodywork is shorter than on the other two cars. It was damaged on Saturday morning, but repaired in time for the afternoon session.



TOLEMAN-HART

TG 183B/02: Derek Warwick (GB)
TG 183 B/01: Bruno Giacomelli (I)

On Friday morning, the Tolemans, unchanged since Rio, had four successive rear suspension breakages—two each. The reason was the bump on Seaside Way

which made the cars take off. Rory Byrne put it down to his cars having less downforce which caused them to take off more than other cars. This problem prevented them from taking part in the first timed practice and they didn't put in another appearance until Saturday, when the bump had been flattened. The new car should be racing on April 8 at Paul Ricard.

WILLIAMS-COSWORTH

FW 08C/07: Keke Rosberg (SF)
FW 08C/08: Jacques Laffite (F)
FW 08C/06: spare.



The very large front wings and a smaller three-piece rear wing, one piece of which is a large rear flap, were tried out on Friday. Aerodynamicist Frank Dernie took over the trackwork from Patrick Head.

At Long Beach there was a lot of chat about a tiny hole on the rear of the left side pod, where a non-return valve was located. According to Frank Williams, it's intended to fill the radiator with water faster, but some specialists believe that it's used to feed a special gas, carbon protoxyde, in-

to the engine, to increase its power. Frank Williams says his cars weigh 535 kilos and that single calibre brakes would have to be used to bring them down to 500 kilos.



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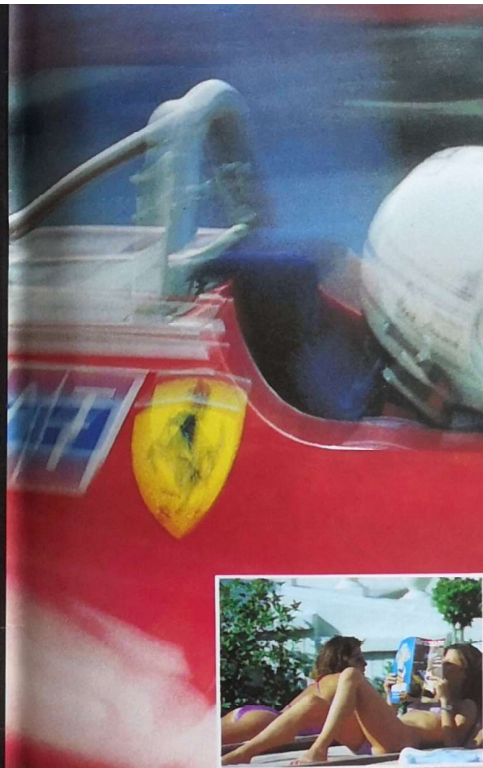
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