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# MICHAEL ANDRETTI

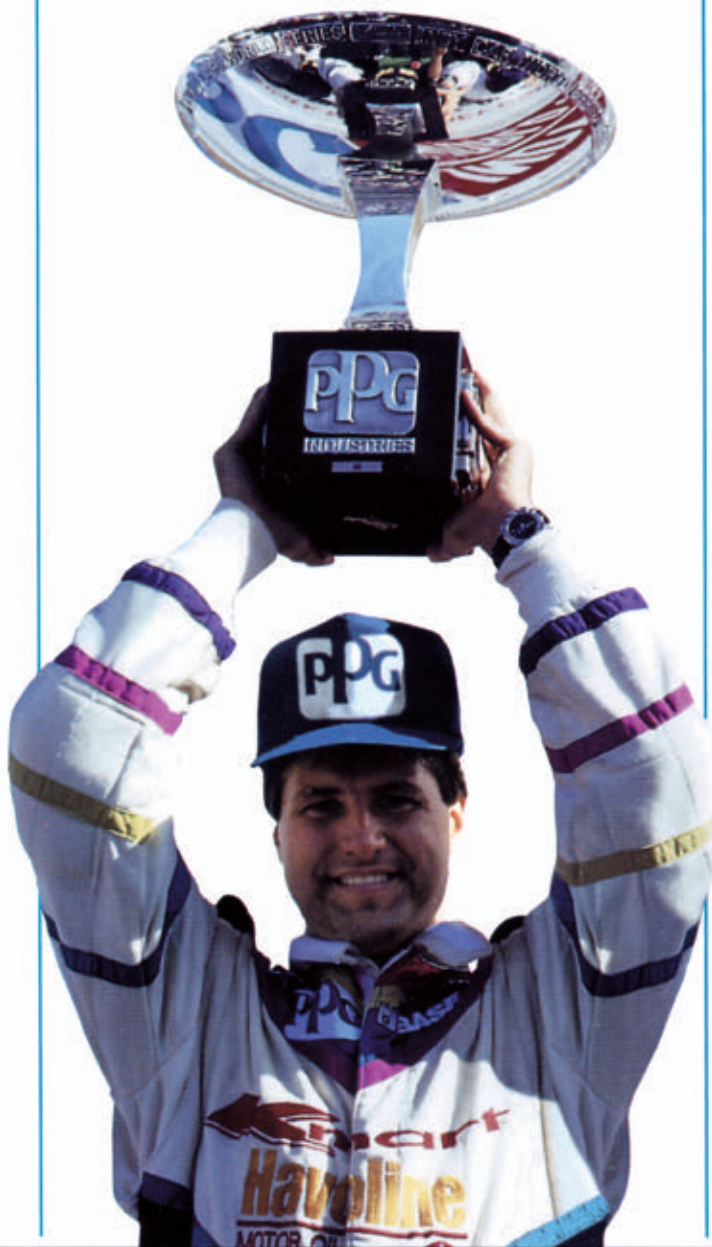
## 1991 INDY CAR SERIES CHAMPION

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**I**t's only fitting that once again we tip our racing cap to a member of one of auto racing's most famous families, the Andrettis of Nazareth – Pennsylvania, that is.

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## ◀ DREAM FODDER

The fabric of Formula 1, carbon fiber, abounds in the Lotus cockpit, wrapping the driver in a cocoon of strength and safety. Digital dashboard display is augmented by Lotus's pioneering work in "heads-up" instrument array where relevant data readouts are electronically projected into driver's field of straight-ahead vision. See Page 33 for more on the state of the art in Formula 1 technology.  
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by JOHN ZIMMERMANN

Welcome to *RACER*, America's Auto Racing Magazine. We hope you like what you see and read and feel. For some time now, this project has been a bit of an obsession within the walls of Pfanner Communications, Inc., as the proper elements were assembled and blended and tempered and forged into a cohesive whole by a vision. That vision, Paul Pfanner's vision, is *RACER*.

*RACER*'s vision is to illustrate the why beyond the what. To seek the long view, the perspective that allows complete appreciation of events and occasions. The vision to provide inspiration and provoke investigation—if only on a theoretical plane. To illuminate the present, reflect upon the past and wonder about the future. The vision to have a vision.

To have a vision, however, is not the same as having vision. While one sees possibilities, the other understands necessities. Perhaps *RACER* will be capable of both, carving its niche as the magazine that American auto racing has always needed, never enjoyed.

One aspect of the *RACER* vision is to match the presentation level of a motor sports magazine to the preparation level of its subject matter. To bring the sport's diverse dimensions evocatively to the horizontal and vertical fields of the paper page, and to expand the realm of the reader's imagination.

While *RACER* will always have the best interests of the sport in mind and at heart, it will not turn away when there is a position to be taken or an opinion to be expressed. This does not mean *RACER* will spend its time chasing after the cause of the month, but when something merits a look, we'll take one. Those who may say this is none of our business should remember the words of Thomas Jefferson: "A free press is the first activity attacked by those who fear the investigation of their actions."

Any activity or enterprise that believes itself beyond criticism is probably in even worse condition than any detractors may allege. *RACER* will analyze and comment from the perspective of its collective experience, and will encourage the subjects of our stories to do the same. In that way, it will be possible for all of us to move continually toward the ultimate betterment of our sport.

*RACER* has not just sprung up overnight, the concept and execution have been years in formation. If you aren't already familiar with the names listed on our masthead or credited within our pages, you will hopefully come to appreciate and trust them as your relationship with them in these pages grows.

More than a dozen years ago, Paul Pfanner decided that if he was ever going to be allowed

**"*RACER* hasn't just sprung up overnight, the concept and execution have been years in formation."**

to do the work he wanted, he'd have to work for himself. With a couple of friends he started Pfanner, Catheron & Brown. Over time and through effort, that company grew to the point that it was contracted to produce half a dozen titles nearly every month.

Eventually PC&B became Pfanner Communications, and now is the time to seize the moment and take a major step forward. *RACER* represents this company's first venture into commercial publishing. As I said before, *RACER* is Paul's vision.

Editors at Large Gordon Kirby and Steve Nickless are long-time cohorts of both mine and Paul's. Kirby is commencing his 20th year as American correspondent for the British weekly, *Autosport*. He's been involved in a number of major and minor magazines, and has also written several books about the sport.

Eleven years ago, Nickless and I helped Paul Oxman found *On Track*, and in the interim he's formed his own business, Nickless Communications, and now services a diversified clientele in and out of publishing.

Senior Editors Maurice Hamilton, Pete Lyons and Eoin Young hardly need any introduction. Mr. Hamilton edited the prestigious Grand Prix annual *Autocourse* for a decade, and now reports to London for *The Observer*. Mr. Lyons is my own personal inspiration for being in this business, and as we were putting this issue together he lost his father, Ozzie, a similar inspiration for him. Our thoughts are with you, Peter. Eoin Young is, well, he's just Eoin Young.

As for *RACER*'s photographers, it's said that a picture is worth a thousand words, so perhaps I should let them speak for themselves. Racing is nothing if not an emotional exercise, and through the lens of the camera is that emotion best conveyed. In Paul-Henri Cahier, Bob Costanzo, Gary Gold, Geoffrey Hewitt, Ron McQueeney and the others, we feel we have some of the best in the business.

We all share one common goal: to do our best work for you and for the sport of auto racing, work that makes a difference.

In closing, let us remember that May 8 is the 10th anniversary of the loss of Gilles Villeneuve. As his one-time teammate, Jody Scheckter, says of Gilles in Nigel Roebuck's book, *Grand Prix Greats*, "He was the fastest racing driver the world has ever seen. If he could come back and live his life again, I think he would do exactly the same—and with the same love." Many consider him the truest racer of all time. We think he'd have enjoyed this magazine. We hope you do too.

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# THE NEWS

## Max Mosley In America

■ FISA president Max Mosley visited February's Daytona 500 and promised to be at Indianapolis in May. While in Daytona, the FISA president emphasized his interest in trying to tie together the many elements of worldwide motor sport.

"There are so many different forms of motor sport from rallying to Stock Car racing to Formula 1 and IndyCars," commented Mosley. "But all of them share the same basic skills and requirements, and I'm sure we can all learn from each other."

"Perhaps more than anything, this is what I want to achieve during my tenure in the FISA presidency," added Mosley. "I want to be able to get everyone working together and learning from each other to make motor sport as a whole stronger and more competitive in the overall sports marketplace."



PAMELA LAUSEN/FISA

### LEGALESE Does Mosley contradict?

A few weeks later, the FISA appointed a study group to develop long-term planning for international motor sport. Mosley personally appointed the five-man committee, comprised of John Cooper from the U.S., Jose Abed from Mexico,



### RESISTANT Stokkan balks at limits.

Kenyan Shekhar Mehta, Lars Osterlind from Sweden and Japan's Kazuo Suzuki.

Mosley said his intention is to define objectives and create a structure to achieve those ends. "The FISA is like a multi-national corporation," noted Mosley.

"There are 80 member countries and a turnover of between \$10 to 20 billion. It is huge, and at the moment completely unstructured."

### And Yet, Squabbling Continues

Ostensibly, this year's IndyCar season-opener in Surfers Paradise, Australia, was going to be a legal race within FISA's statutes. IndyCar chairman Bill Stokkan said exactly that at a press conference for the Australian media on the Monday before the race, but a few days later it began to look as if the FISA and CART were going to agree to disagree.

"The problems revolved around language," commented Stokkan. "I was testing some of the language in the agreement (FISA president) Max (Mosley) had sent me. Things like, 'Is Mexico part of North America? Is Japan a continent?'"

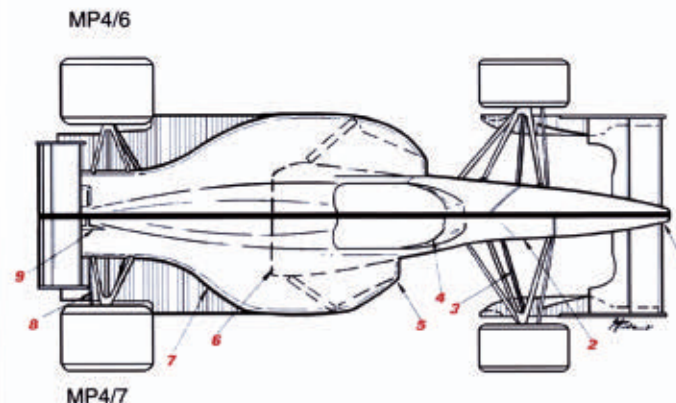
"The important part, I think," Stokkan added, "was a phrase restricting any future overseas IndyCar races to 'Indianapolis Motor Speedway-type ovals.' Obviously, it's absurd to have us restricted to racing on any tracks other than a four-

## McLaren Responds To Williams Sting With MP4/7

■ Defending F1 Constructors Champion McLaren was badly out-paced in the season's first two Grands Prix, running last season's MP4/6B against the latest actively suspended Williams FW14B. Consequently, the debut of the team's latest car, the MP4/7, has been pushed forward to what is expected to be the Brazilian GP on April 5. Complete details of the new car can be found on Page 37, and while it still does not have an active suspension system, a new semi-automatic transmission mates with the engine management system to allow electronic control of engine and gearbox—"fly by wire" if you will.

Of course, World Champion Ayrton Senna isn't happy with the situation, and had a serious accident in Mexico (Page 22) trying to bridge the performance gap with his talent, skill and bravado.

### THIS IS WHAT McLAREN DID TO MAKE NEW MP4/7 AN IMPROVEMENT OVER PREVIOUS MP4/6



GIORGIO PIOLA ILLUSTRATION

The differences between the two McLarens can be seen in this drawing. The latest car has a one-piece nose and front wing structure (1), and a much narrower monocoque (2) than its predecessor. The front suspension geometry is revised, with the lower front wishbone arm (3) angled more toward the rear. A taller windscreen (4) tops a revised cockpit entry, and the sidepods are shorter and less rounded with a wider air duct opening (5). The fuel cell (6) has been made wider and lower, and the "Coke-bottle" shape (7) of the tail section is quite different. The rear suspension (8) is entirely new, while the two MP4/6B gearbox oil radiators have been replaced by a single unit (9) mounted within the central wing support.





MICHAEL C. BROWN

**SURF'S UP**  
IndyCar racing's second visit to the wonder down under produced another good contest, and a re-run of last year's international political controversy.

turn superspeedway like Indianapolis—which doesn't exist anyplace else in the world. So I changed the phrase to read, 'IndyCar-type ovals.' We run on a whole variety of those and that would give plenty of scope."

Mosley didn't agree however. Before faxing his reply to Stokkan, the FISA president sent a letter to Australia's CAMS (Confederation of Australian Motor Sport), stating that the Aussie IndyCar race would not be authorized by FISA. Mosley's letter said the race would take place under CAMS jurisdiction, noting that the FISA would support CAMS in any court actions that might result.

In turn, CAMS issued its own statement, and released to the press the content of Mosley's letter. In the statement CAMS president John Large noted 'CAMS regrets this situation has arisen.' Large emphasized that CAMS was working with the Surfers Paradise organizers and the Queensland state government to make the race a continuing fixture.

In the end, CAMS officials and stewards staffed the Surfer's weekend. Maybe next year, third time around, the FISA will agree to legalize the IndyCar race on Australia's eastern Gold Coast.

—Gordon Kirby



**TROUBLED TIMES** Honda horsepower no longer seems to be only requirement for GP victory. Ayrton Senna won't go untroubled until he again rides the crest.



JON ASHER

**MILESTONE MAN** Bernstein acknowledges cheers after historic 300mph pass.

## Triple Century Man

■ Top Fuel drag racer cum motor sports magnate Kenny Bernstein has a new feather to stuff in his already rather full hat, and that's the distinction of being the first person to notch a 300mph speed in a wheel-driven vehicle in the standing quarter-mile. Bernstein's record-shattering run in his Budweiser King fueler came at the NHRA Motorcraft Gatornationals in Gainesville, Fla., during qualifying on Friday, March 20. Ironically, less than a month prior to the race, Slick 50 Engine Protectant had announced a \$50,000 bonus for the first driver to top the triple century mark, and while Bernstein and crew chief Dale Armstrong didn't need the extra incentive, it certainly didn't hurt their wallets either! Bernstein backed up the speed with later runs of 298.30mph and 299.30mph during Sunday

elimination racing, but as luck would have it, he failed to win the event, smoking the tires in the final against fellow Texan, Eddie Hill.

Hill, the first driver to crack the four-second barrier (April 9, 1988), set an all-time elapsed time record of 4.801sec during the Gatornationals eliminations, and notched an unheard-of four straight runs in the 4.8sec. zone to earn his first NHRA National event title since his storybook 1988 season. Making Hill's accomplishment all the more impressive is the fact that he's still driving the same car that cracked the four-second barrier five years ago—the same machine that was almost completely destroyed in a horrific finish line blow-over at the Winternationals a few years ago.

—Jon Asher

## The Cylinder Head Debate: Ford vs. Chevy In NASCAR

■ Davey Allison and Bill Elliott ran off four straight Winston Cup wins for Ford in February and March, while defending champion Dale Earnhardt's leading Chevrolet struggled to be competitive. Those results have fueled debate about new cylinder heads.

Under the firm guidance of new technical boss Gary Nelson, NASCAR has allowed both Ford and Chevrolet teams to run new cylinder heads this year. A variety of heads have been developed and raced in recent years, and specific types were approved for both makes for '92. Through July, however, any head that meets the approved specification may be raced.

It's well known that Junior Johnson's cars are using the team's own heads until the end of July, although the approved Ford head was developed by Robert Yates' team where Allison does the driving. The approved Chevrolet features an 18-degree valve angle, and champion Earnhardt and Richard Childress' GM Goodwrench team has resolved to race-develop the new Chevy head.



"Anytime you try some new stuff you're going to make some sacrifices," commented Childress. "Ford has been running its heads for a long time. Just about all the teams have to do is bolt 'em on and go. We need to be more patient with our new heads and work with them."

Despite a lot of talk and pressure to change the engine rules to "help the GM teams," NASCAR has maintained it has no intention of doing so. The implication is that a course of action has been decided on, and everything will work out in the wash over the course of the season.



# THE NEWS

## New IndyCar Name, Purse Structure



■ In February, CART announced a new official or brand name. "IndyCar" supersedes the CART acronym in an effort to provide a more specific identity for the PPG IndyCar World Series.

Championship Auto Racing Teams Inc., remains the corporate name of the IndyCar sanctioning body. "Championship Auto Racing Teams Inc., is a wonderful corporate name," commented IndyCar's chairman Bill Stokkan. "But 'IndyCar' is the perfect name for our sport."

Other changes include a restructuring of the total prize package. The purses of the 15 IndyCar-sanctioned races have been combined, and that total divided again by 15 so that each race pays the same money. Only the top 20 finishers in each race are now paid. These figures will not be published on a race-by-race basis, an entirely uncommon practice in American motor sport. Penalties will also be paid, for the first time this year, by franchise holders who miss races.

## New York GP Confirmed!

GARY GOLD



■ After more than a year of intensive effort, the Marlboro Grand Prix of New York City IndyCar race was announced in early March by New York mayor David Dinkins. The first New York GP will take place on June 27, 1993, with only one day of practice and qualifying on June 26. The 1.7-mile track will circle the World Trade Center, adjacent to Battery Park in lower Manhattan.

Principals in the race are Marlboro's parent company, Philip Morris USA, Cleveland-based Motormarketing International and IndyCar team owner Chip Ganassi. Philip Morris USA's corporate offices occupy a tall tower at 120 Park Ave. in central Manhattan, and the company has been pursuing a race in the city since it moved into IndyCar racing in 1986.

Motormarketing and Ganassi took over promoting the dying, Marlboro-sponsored Meadowlands IndyCar event two years ago. All along, their intention has been to move the race across the river from New Jersey to midtown Manhattan, and the present combination of forces has achieved that objective.

Under the agreement with the city, 30 percent (1100 billboards) of Marlboro's outdoor advertising in New York City will carry anti-smoking messages aimed at young people during the promotional run-up to the race. Philip Morris has also agreed to year-round anti-smoking ads on 10 percent or 350 billboards in the five boroughs of the metropolis. Also, anti-smoking pamphlets will be distributed in the city's schools by Philip Morris.

The race was approved by a 4-2 vote from the city's Franchise and Concession Review Committee. Mayor Dinkins said the city will be paid 10 percent of vending revenues from the race, as well as from 1.5 percent of gross to 7 percent of

net profits. There's a guaranteed payment of \$100,000 in the first year and \$200,000 in the second year. Payment to the city is open to renegotiation every three years through the 10, one-year contracts Motormarketing and Philip Morris have signed.

The costs for public services to stage the race and for paving of the streets used for the circuit must also be paid to the city, and Motormarketing will establish a non-profit youth foundation that will total a minimum of \$8 million if the race runs for all 10 years of the contract.

With CART having moved its corporate and marketing office to Manhattan in the past year, the race's announcement represents a real coup, not only for Marlboro and Motormarketing, but for the sport of IndyCar racing as a whole.

Even the usually reserved New York Times has come out as a supporter of the race. An editorial in the Sunday, March 8, edition of The Times entitled "Big Wheels on Wall Street" had good things to say about Indy Cars running through the city's financial district. "With a bit of luck," wrote The Times, "the race...could bring New York some good publicity, some fun and become the asphalt equivalent of the tall ships."

The Times closed its editorial by commenting on Philip Morris' agreement to mount an anti-smoking campaign in conjunction with its promotion of the race. "Those terms do not turn big wheels on Wall Street into a wonderful idea," opined The Times editorial staff. "But they do make it possible to imagine a new kind of festival." —Gordon Kirby



MIKE TO MIKE Ford racing boss Kranefuss could find comfort in Andretti's race.

## Strong Debut For New Ford-Cosworth XB

■ A broken exhaust header brought a premature end to a strong debut run for the new Ford-Cosworth XB IndyCar engine. Michael Andretti led the first 40 laps of the PPG Cup IndyCar opener at Surfers Paradise before the header failure. The engine was mounted in one of Newman-Haas Racing's T91/00 Lolas, since the new T92/00 chassis that's been designed specifically for the new engine was scheduled to debut at Phoenix.



MICHAEL C. BROWN PHOTOS

## Porsche Brings Carrera Cup To North America

■ The Porsche Carrera Cup—a spec car series that features competition between equally prepared Porsche 911 Carrera 2s—first saw the light of day in Germany two seasons ago. Since then it has spread to a second German series (the Carrera Trophy) and to France, and for 1992 will be introduced to North America and Japan. Eight races have been scheduled for the North American series, each a 30-minute sprint for a purse of \$60,000. All eight races will be televised, and the total prize fund available for the series, including contingency monies, is expected to top \$500,000.

According to Alwin Springer, Porsche's North American competition director, the Carrera Cup cars will be "turn key race cars when the teams receive them." The engine, transmission and differential will all be sealed, and the only adjustments allowed are for valve clearance and the clutch, as well as changing the oil and spark plugs.

"Our goal is to make the championship as simple and equal as possible," added Springer. Sealed Bosch Motronic engine management systems will be distributed via a lottery method, with each team assigned a different unit for each race. Toyo will provide the spec tire for the series, its new F1-SR, a Z-rated street radial design with a racing compound. Cars will cost \$100,000, plus a \$10,000 performance bond to ensure that the team competes in the majority of the races. A total of 45 cars will be available.





# PEOPLE WHO KNOW

Owen Snyder  
Chief Mechanic for  
Al Unser Jr.

"Sunday afternoon is what it's all about. We're a team—six men over the wall. You can't let one little advantage slip away, one little secret get out." To say that Owen Snyder is a focused individual would be something of an understatement.

A more appropriate description might be "obsessed." With winning. And with all



the details that make it possible. We're happy to report that one of those details is Valvoline motor oil. Like most Indy 500 Chief Mechanics, Owen uses Valvoline in his race car, and in



his personal car. After all, every one of our high performance motor oils is engineered to perform and protect under incredible stress. Withstand-

ing whatever heat, cold, pressure and dirt your engine can throw at it. But don't take it from us. Take it from Owen Snyder. Details



are his occupation—and preoccupation. **PEOPLE WHO KNOW USE VALVOLINE®**

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PAUL HENRI-CARHER

**NOT ENOUGH** Italian lady driver Giovanna Amati may have brought large bundle of lire to buy seat at Brabham, but it may still not be sufficient to save the troubled team from financial ruin.



MARK WEBER

**DEJA VU** Gunnar Porsche 966 showed up at Sebring wearing famous Brumos Porsche colors, sparked memories of deeds and decades past.



NANCIE BATTAGLIA

**BOBSLEDDIN' BODINE** NASCAR Winston Cup racer Geoff Bodine tried another form of high-speed competition in early March, bobsledding. He felt his knowledge of driving banked tracks would transfer easily to bobsleds. At Lake Placid, N.Y., Bodine completed a number of runs down the 15-curve course in a two-man sled, acting first as brakeman for driver Bruce Rosselli and later driving himself. Bodine compared the experience to Winston Cup racing, noting that it may look easy from the grandstands or on TV, but it's not.

## Tom Kendall Is Back!

■ "It felt good! I was surprised how much stamina I had, actually. Once we got into the race and got about 10 or 15 minutes in, I was just. I won't say cruising right along, because we were running hard, but I felt comfortable. After just a few minutes, I knew I was going to be able to run the distance. At least that was a victory of sorts."

"Even after it started overheating, and Brabham made his stop, I think we were within 18 seconds, and you can't ask for more than that. I mean that's not an insurmountable margin."

Yes, that's a race driver you're listening to. They all talk like that—upbeat, positive, optimistic. There's only one thing they have on their minds: Winning.

But stand back for a minute, and think about who you are hearing this from. His name is Tom Kendall, and if you follow racing at all, you probably know he lived through a savage crash last year. In fact, you've probably seen it on television, it's been replayed often enough.

It happened June 31, on the 61st lap of the IMSA Camel GTP race at Watkins Glen, N.Y. At the end of the fastest straightaway on the course, along which his 700-horsepower, Chevrolet-Intrepid had been reaching 180mph, Tom brushed the brakes and peeled off into the sweeping, downhill right-hander called the "Loop." Aggressively, he had the Intrepid's sharp, chisel-shaped nose right under the tail of another car.

The heavily-loaded rear wheel hub broke.

No matter how many times you watch the tape, it's sickening. As the wheel departs, the car snaps into a spin, completes a full, 360-degree loop across slick green grass and slams headfirst into a pile of old tires in front of a steel barrier. As the machine recoils, it springs bodily into the air and whirls again, but in the opposite direction. As its front end whips by the camera, you can see how badly crushed it is. You shudder.

Incredibly, a few seconds later Kendall's hand was sticking out of his window, waving. No, he didn't walk away from this one. It took a rescue crew many long minutes of painstaking work to cut him from the wreckage and lay him tenderly on a stretcher. Injuries: nothing much above the hips, a lot of snapped and shattered bone below.

That was then, this is now. Less than eight months later, Tom was back in race car, and on March 3, he lined up on the starting grid for the GTP race in Miami.

Leg, ankle and foot injuries are all too common in racing. Some drivers are never the same afterward, for reasons both physical and psychological. If Kendall, the 1990 SCCA Trans-Am champion and widely acclaimed rising star, ever feared his career was over, he never showed it. Nor did his team, Jim Miller's MTI Racing, which kept faith by guaranteeing his seat. In fact, if he hadn't been ready for Miami, they'd have stayed home too—even though the former Intrepid is now officially known as the Chevrolet GTP.

Was Tom ready? Does qualifying third fastest, ahead of one Nissan, two Toyota turbos and everything else give an indication?

"I actually came here just happy to be back," he confessed before the race. "But now I want to win!"

Win? How absurd! The man couldn't

**FANS FIRST** Tom Kendall will always find time to sign an autograph for a fan.



take a step without his pair of crutches. He didn't have enough strength in his right foot to press the brake pedal. And what about his overall strength, his stamina, his spirit?

Hey, this is Tom Kendall you're doubting here! Spirit, never in question. Bodily, well, his relentless rehabilitation routine was making him stronger every day, and if he still couldn't brake with his right foot, no problem, he'd use his left.

Turns out he always drives that way anyway. "I started left-foot breaking in the Winston Cup car, because the brake pedal gets lower and lower during the course of the race, and that makes it hard to heel-and-toe. Then I tested Bobby Rahal's Indy Car, and that car was so small I didn't have enough room to move my foot from the gas to the brake. He said 'Well, try left-foot braking.' So I tried, it worked well, and I think there are certain competitive advantages to it. When I got fitted last year for the GTP car, I made all my seats with that in mind, figured I'd try it, I liked it, and never went back."

"When you think about it, it makes a lot of sense. It enables you to be a fair amount smoother, and I think faster. And these gearboxes shift so well it's not a problem. In fact, it's probably better for the car not to use the clutch, it saves some wear and tear."

No, Tom Kendall didn't win his comeback race. But only because the car let him down—the water pump failed and he had to retire in a cloud of steam. Up to then, however, he was still thinking: Win!

What is the measure of a racer? You need more than a stopwatch. —Pete Lyons

PETE LYONS PHOTOS



**NEWLYWEDS** Tom and Caroline Kreefft walked down the aisle in early April.





KENNETH ANDERSEN

## Nelson Piquet Warms Up At 219

■ Three-time World Champion Nelson Piquet took his first laps in an Indy Car at the Indianapolis Motor Speedway on March 25. Without a ride in Formula 1 this year, Piquet has set his sights on the Indy 500. He will make his formal IndyCar debut in practice for next month's Indianapolis 500, aboard one of John Menard's Glidden Lola T92/00-Buicks. Teammate Gary Bettenhausen was the fastest qualifier for last year's 500, so rookie Piquet has a realistic hope of making the front row this year.

After two, rain-delayed days of running in one of last year's T91/00s, Piquet had managed just 40 laps, but he'd already lapped at 219.6mph. Snow was forecast for the following day, but Piquet was planning to camp out at the Speedway Motel and get in a some more testing.

"He's alright!" declared crew chief Jeff Sinden about his new charge. "It's not as if he's a rookie. He knows a lot about race cars. He's very smart and he's a good guy, a lot of fun."

Veteran teammate Bettenhausen had coached Piquet through his first two days, and Nelson said he was looking forward to learning about running in traffic. "To run alone like this after the second day, it's quite good," commented Piquet. "I don't say it's easy, but it's not scary. I think the most impressive thing for sure will be to run with all the other cars together. That's the most important thing to learn."

Piquet said he was already running flat out around the whole track, and was looking forward to getting in a full, uninterrupted day of running. "What we need to do now," he noted, "is to get into the '92 car and start learning about it."

The 39-year-old Brazilian will take part in USAC's three-day rookie orientation session at The Speedway at the end of April. "It's no problem. I will enjoy doing it. It'll be good to learn the rules of the track and get in some more miles with the car."

Piquet will be the 10th World Champion to race at Indianapolis. The others were or are: Alberto Ascari, Jack Brabham, Jim Clark, Graham Hill, Mario Andretti, Jackie Stewart, Denny Hulme, Jochen Rindt and Emerson Fittipaldi.

—Gordon Kirby

## ■ GUERRERO TOPS INDY SPEED MARK

Roberto Guerrero ran three consecutive laps of more than 230mph during recent testing at Indianapolis. Driving Kenny Bernstein's new Lola T92/00-Buick, Guerrero's fast laps—set under cool and calm conditions—were 5mph quicker than Emerson Fittipaldi's official track record, and faster than anyone has ever run at the 2.5-mile superspeedway. Guerrero will team with Jim Crawford for this year's Indy 500, and will also run several other IndyCar races for Bernstein's team this year.

## ■ ELLIOTT STRING HITS FOUR

The Bill Elliott/Junior Johnson winning streak stands at four, following Elliott's record-breaking victory in the TransSouth 500 at Darlington as we went to press. Elliott qualified second to teammate Sterling Marlin and stayed with the leaders all day, before a final chassis adjustment on his last stop produced the edge needed to drive away to a seven-second win over Harry Gant. In addition to being Elliott's fourth straight, the win was Ford's fifth in five races this year and ninth in a row dating back to last fall. An analysis of Elliott's success can be found on Page 46.

## ■ NEW ILMOR F1 ENGINE?

It seems possible that the Ilmor engines, promised exclusively for the Swiss-based, Mercedes-backed Sauber F1 car in 1993, will be a completely new design that will run in parallel with the present V10, much in the way Ford and Cosworth will run their new V12 alongside customer V8s in '93.

## ■ THE SUN RISES ON CHEEVER

American Ross Cheever dominated the opening round of the All-Japan F3000 Championship at Suzuka on March 8. Starting his Mugen-powered Reynard 92D from pole position, he led the 34-lap race from start to finish, repeatedly re-setting the fastest race lap and pulling away at a second a lap.

Japanese veteran and former F3000 champion Kazuyoshi Hoshino, driving a Lola-Mugen, took the runner-up spot, while German driver Volker Wiedler, also in a Lola-Mugen, took third.

Cheever expected tougher competition from the 26-car field. "I was really expecting a tough race, like my win here last year when I was under pressure the whole way," he said. "But evidently our race setup was pretty

good, because I was able to pull away immediately."

On the strength of the win, Cheever takes the early season championship lead in his quest to claim the championship he hopes will carry him into Formula 1.

Two days of subsequent testing at the Fuji circuit, prior to the F3000 series' second round, turned out well for the other American hopeful, Jeff Krosnoff (see Page 62). The Californian topped the time charts in the second day's wet session, taking his Speedstar Lola around in 1:31.699, to best former Suncet teammate Mauro Martini by 0.308sec. Cheever ran only 10th at 1:32.817. In the first day's dry session, Krosnoff clocked in at 1:18.619, the fifth-fastest time and just 0.166sec behind quick man Eddie Irvine. Cheever was well down the list after managing only four laps.

## ■ SPORTSCAR WORLD CHAMPIONSHIP REMAINS IN DOUBT

As we were closing for press, the FISA was meeting with the major Sportscar manufacturers in a last-ditch attempt to save the Sportscar World Championship. Reports from Paris told of a half-million-dollar fee requested by the FISA from those manufacturers wishing to take part, and while Peugeot is said to have agreed immediately, both Nissan and Toyota asked for time to consider their answers. A deadline of Monday, March 30, had been given by FISA, and it seemed possible that a very limited SWC series would be run in 1992, supported primarily by Peugeot, Nissan and Toyota.

## ■ TRICKLE REJOINS STAVOLA BROTHERS

Dick Trickle has replaced Rick Wilson in the Stavola brothers Snickers Ford. The Stavolas had hired Wilson for the '91 season after eight years with Bobby Hillin Jr. doing the driving. Wilson, however, was even less successful than Hillin. After failing to score a single top-10 finish last year, Wilson had a disastrous Daytona 500, getting caught in a multiple wreck in his qualifying race and finishing 23rd in the 500 after starting from near the back.

The 50-year-old Trickle is reputed to have more wins than any other American racing driver after a long career in Stock Cars throughout the upper Midwest, where he was known as the "White Knight." He drove in the odd NASCAR race from as far back as 1970,

but never focused on Winston Cup racing until running full Winston Cup seasons for the Stavola brothers in 1989 and Cale Yarborough in '90.

Without a regular ride last year, Trickle ran about half the races for a variety of teams before getting the nod to replace Wilson for the second round of this year's championship at Rockingham. At Atlanta two weeks later, Trickle drove the Stavola Ford to a strong fifth place, and ranked 10th in the Winston Cup points after four races.

## ■ DODGE RETURNS TO TRANS-AM

For the first time in more than 20 years, Dodge will have an official factory-backed entry in the SCCA's Tide Trans-Am series. Minnesota's Archer brothers, Tommy and Bobby, will field two Dodge Daytona-bodied Riley and Scott Engineering chassis, powered by 310cid small-block Dodge engines prepared by Joey Arrington, son of former NASCAR driver Buddy Arrington. Sponsoring the effort will be Shellzone Antifreeze.

The last time factory Dodges took part in the Trans-Am was in 1970, when Jack McCormack fielded those lime-green Challengers for Sam Posey.

## ■ HOOSIER'S WINSTON CUP RETURN?

It looks likely that the Hoosier Tire Company will renew its giant-killing battle with Goodyear in next year's NASCAR Winston Cup championship. Hoosier raced against Goodyear in NASCAR throughout 1988 and the first four months of 1989. A small racing tire manufacturer located in Lakeville, Ind., Hoosier has been a popular short track brand for many years, and was forced to back out of the Winston Cup series in 1989 because it simply couldn't compete with Goodyear's introduction of radial tires to NASCAR.

After a short hiatus, Hoosier returned last year, supplying tires for NASCAR's second-level Busch Grand National series. The company continues in the BGN series this year, and has introduced its own "cambered asymmetrical radial."

Hoosier's president, Bob Newton, makes no bones about his plans of competing again with Goodyear at the top level. "When I can win the championship in Busch Grand National or prove that we have a product for Winston Cup, I'll go back," commented Newton. "My plans are to develop the radial tire this year and go back to Winston Cup next year."





by GORDON KIRBY

In the past quarter century a briny sea change has occurred in American motor racing. Looking back, who would dare to predict the future?

Twenty-five years ago a top American driver like Parnelli Jones, Dan Gurney or Mark Donohue would routinely race a wide range of different cars. He might run a USAC Championship race one weekend, an SCCA Can-Am Sportscar race the next week and a Trans-Am sedan race the following week.

Each of these forms of racing were major, crowd- and media-drawing events with seemingly limitless appeal. Indeed, the top forms of American racing seemed ready to overshadow European racing, and there was lots of loose talk about motor racing becoming, "The Sport of the '70s."

That phrase quickly became merely a bad joke, a parody of itself, but at the time there was genuine reason for racing fans to believe in the myth. After all, speeds and technology were starting to skyrocket at Indianapolis, the original, unlimited Can-Am series was capturing the imagination of race fans around the world and Detroit was jumping into the Trans-Am with the best drivers and teams in the business. At the time the Trans-Am seemed destined to blow NASCAR's rather countryfied Grand National series out of the water.

**PROMISE UNFULFILLED** The future seemed boundless, yet none of this potential was ever realized. Ten years later the USAC Championship had gone through some intrinsic changes in style and content and was beginning to struggle in the marketplace. The original Can-Am and Trans-Am series were dead and buried. Formula 5000 was in the midst of a fleeting boom only to be reborn as the ill-starred "new era" Can-Am which died a death of its own another 10 years later.

At the heart of these failures was an inability to deal with rapid technological change. After a long, blissful period of backyard engineering, more and more science was applied to racing cars during the '60s and '70s, but as speeds and costs climbed, the traditional sanctioning bodies dithered and dallied.

The USAC Championship witnessed a tremendous rate of change through the mid-'60s and into the '70s as the advent of rear-engined cars, turbines, turbocharging and wings revolutionized what has become known as IndyCar racing. From 1965 through '72, lap speeds at Indianapolis leaped from 160 to 196mph. As Indianapolis cars became ever faster and more specialized, the dirt track portion of the USAC Championship faded in importance. Since the 1930s, dirt races had



**ACROSS THE DIVIDE:** In 1972, with his Eagle-Offy enjoying unlimited boost and carrying full-width wings, ace dirt tracker Bobby Unser beat the previous year's Indianapolis record by a staggering 17mph!

comprised the bulk of the AAA or USAC Championship, but in 1971 they were dropped entirely from the series.

For a while, USAC attempted to fill the void with road races. The focus then fell on a handful of new oval superspeedways built in the late '60s. These seemed an ideal match for the ever-faster Indy Cars but USAC simply wasn't able to adapt to the rapidly changing times. Unable to make a go of the road races, USAC also failed to develop a strong ovals-only series, eventually falling victim to CART's revolution of 1979.

Why was it not possible to take advantage of what looked so good in the '60s? The primary reason was an inability to devise effective and sensible technical restrictions. The Can-Am series, for example, was founded on the "unlimited sportscar" concept, a grand dream which vaporized under the wheels of Chaparral's 2H sucker car and Porsche's turbocharged 917/30K. Costs and technology raped the Can-Am before the SCCA could properly respond. When the original Can-Am met an early death in the summer of 1974, a message about motor sport administration was offered to the world, but nobody, save NASCAR perhaps, heeded any of the signals.

For a couple of years, USAC danced with the SCCA, co-sanctioning the F5000 championship and talking about adopting the stock-block formula for its own series before backing away from the idea. As well as failing to develop a firm, long-term technical philosophy, there were other difficulties in adapting to the modern television- and sponsor-driven world of sport in general and motor racing in particular. USAC's loss of Marlboro as its series sponsor in 1971 after a single, experimental season, and the SCCA's similar losses of Can-Am sponsor Johnson's Wax and F5000 backer L&M cigarettes, proved fatally irreplaceable.

There were further shortcomings in managing and promoting the junior or training leagues. Classes like Formula Ford, Super Vee and Atlantic were largely ignored, while USAC lost its national Sprint Car constituency to the

World of Outlaws. The result was a decimated "farm system" which has gotten even more confused with the introduction of new formula atop new formula. Sprint Car racing, spectacular as it may be, has become even more regionalized, while the world of rear-engined pavement racing cars has witnessed the demise of Formula Super Vee and the introduction of a whole range of categories from Russell-Mazda and Barber-Saab through the American Racing Series (now known as Indy Lights) and Bill Tempero's American Indy Car Series.

Amid a proliferation of different categories, there's been an intramural fight for fans, sponsors and media space. The market has been splintered rather than finding a focus so that nobody knows where to look for upcoming talent, or how to compare the competitive skills among the many disparate junior leagues.

**STARTING OVER** The founding of CART was considered by some to be a sign of hope for new attitudes and methods, but that dream quickly proved to be a chimera. Founded and run by the team owners, CART never developed a philosophy of its own or an appreciation for the depth of its problems. Rather than working to rationalize the confusing picture among the junior leagues, CART permitted the American Racing Series to be introduced during John Frasco's regime, triggering a dispiriting squabble for billing and "market position" among Super Vee, Atlantic and the ARS.

During its early years CART started to boom, but little did Frasco and many others realize that the growth years came about as much because of the ultimate demise of the Can-Am as any other factor. As the Can-Am vanished, drivers, teams and race tracks switched allegiances to IndyCar racing. Newman/Haas, Truesports, Doug Shierson and Rick Galles' teams came from the derailed Can-Am or other forms of SCCA road racing. So, too, did drivers like Bobby Rahal and Danny Sullivan, car builders like March and Lola, and race tracks such as Laguna Seca, Mid-Ohio and Elkhart Lake.



In recent years, the reality of matters has begun to creep closer to the surface as CART's continuing lack of any real leadership or technical philosophy has contributed to unending political turmoil, dwindling car counts and a serious dearth of upcoming talent. New management has come in under the direction of former beer and fashion marketing man Bill Stokkan, who has made a number of useful and important changes. However, after almost two years in CART's appointed chairmanship, Stokkan is just beginning to comprehend the depth and breeding of the problems confronting open-wheel or single-seater racing in this country.

Meanwhile, NASCAR has grown steadily, almost stealth-like, in the last quarter century. Rule stability, cost-effectiveness and a strong series sponsor have made the Winston Cup the healthiest form of racing in the world. Clear and strong leadership from Bill France Sr. and Junior has been a key to this achievement, in company with tremendous grass roots appeal and a carefully nurtured "farm system." From being a mere rival to the Trans-Am series in the late '60s, NASCAR's top league—not least the entire structure of American Stock Car racing—has come a long way!

As the new season warms to full boil, everyone in the sport shares fresh hopes and aspirations. With NASCAR steaming along merrily and the same said for drag racing and the NHRA, I have to admit to feeling longheld worries about IndyCar racing in particular and

## "Why was it not possible to take advantage of what looked so good in the '60s?"

open-wheel racing as a whole. Stokkan seems to be trying hard in a difficult, situation where he remains largely the valet of his 22 directors and team owners. A man I respect for his forthrightness and capacity for work, Stokkan is faced with an uphill battle to wrap his arms about the entire octopus that is American open-wheel racing.

Another important player in today's schema is young Indianapolis Motor Speedway president Tony George. A racer in Formula Ford, Super Vee and ARS cars, he's been around the IndyCar world for some time. Tony has never been impressed with CART, nor does he see that organization in good light today, and he has clearly decided to chart his own course.

In the two years that he's been the Speedway's president, Tony has taken a look at Formula 1 and thought about a possible change to 3.5-liter naturally-aspirated engines at Indianapolis. He's made his own, spurned proposal to merge forces with CART, and most recently he's talked about trying to re-establish an ovals-only IndyCar series as well as adding a Winston Cup race to the Speedway's sched-

ule and wanting to attract the United States GP F1 race to an undetermined venue in Indianapolis. Clearly, Tony George is trying to assume a leadership role in American open-wheel racing, and one has to wish him well in creating positive changes.

In Messrs. George and Stokkan we have some powerful players. Equally powerful are long-time successful team owners like Roger Penske and Carl Haas. Penske's business empire and sphere of influence extends well beyond the remarkable achievements of his legendary race team, while Haas has a wide reach of his own as a major shareholder in Lola Cars and the SCCA's Chairman of the Board.

As much as some may fear the power of men like Penske and Haas, it has to be remembered they have been around the sport for many years and will continue to exert considerable influence in the years to come. Given that fact, it is even more incumbent on these power brokers to work together to generate the crucial element of leadership that is needed in our domestic open-wheel scene.

Far be it for me or anyone here at *RACER* to suggest that a magazine can provide leadership, but I will say we want to provide in *RACER*, a forum to enter into, investigate and enjoy the technical and human essentials of motor racing. If we are able to help in permitting this tremendously diversified sport take a keen look at itself and develop a new course as we approach the millennium, we will have done our job.

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# DESIGN BRIEFS

## PENSKE-CHEVY 92

■ Penske Racing's latest Indy Car is known as the Penske-Chevy 92, the 15th in a line of Penske Indy Cars that stretches back to the PC5 of 1977. Geoff Ferris was Penske's chief designer from the PC5 through the PC12 of 1984, before moving over to take charge of the transmission design shop. Alan Jenkins came in to produce two beautiful but unsuccessful cars in the PC15 and 16, and it took the hiring of Nigel Bennett late in 1987 to get Penske's cars back into the winner's circle.

Bennett had been Lola's Indy Car design chief for four years. Before that he had worked for a variety of F1 teams, and was Mario Andretti's race engineer when Mario won the World Championship with Lotus in 1978. Bennett started his career in motor racing as a tire engineer for Firestone, and has been around the sport for more than 20 years.

His first car for Penske was the PC17 of 1988, in which Rick Mears won the Indy 500 and Danny Sullivan won the IndyCar championship. The following year, Emerson Fittipaldi won the Indy 500 and the IndyCar title in a PC18 run by Patrick Racing, while Mears won three races and ran a close second in the championship. Slightly less successful in the past two years in the face of stiff competition from Lola, Penske's Bennett-designed cars won four races in 1990 and thrice in '91.

Slim as last year's tally of wins may have been, Rick Mears did win both the Indianapolis and Michigan 500s aboard a PC20 or Penske-Chevy 91 according to the latest nomenclature. Nevertheless, there were handling problems in a number of races on street circuits, road courses and even short ovals. To improve matters, Bennett has paid particular attention to the weight distribution and mechanical efficiency of the new car.

"Those were two of the things



MICHAEL C. BROWN PHOTOS



we fought against last year," admitted Bennett. "But we think we've got our sums right this time and we're very optimistic. The new car should have a better mechanical balance for street circuits, and it's got very much improved speedway and short oval aerodynamic shapes."



The Penske 92 is an entirely new car designed to suit the new, smaller Chevrolet 'B' engine. Like last year's Penske 91, the new car is built around an all-carbon composite monocoque. Unlike last year's car, however, it features slightly raised anhedral front wings in the current F1 vogue.

## EFFICIENT PACKAGE

Smaller Chevrolet "B" engine (LEFT) aids tidy packaging of new Penske (ABOVE). Front aerodynamics follow F1 trends with raised nose, anhedral wings and endplates extended rearward (FAR LEFT). Suspension at both ends remains wishbone-pushrod with rear shock absorbers mounted atop gearbox.

"The new car is basically built around the new Chevrolet-Ilmor 265B engine," said Bennett. "It's not designed to take the older engine at all. It's a quite different car in a lot of respects. We've done an all-new gearbox which is a development of the existing transverse 'box we've been racing. And the car has much-improved aerodynamics."

Bennett was drawn to proclaim no less than a 15 percent improvement in lift vs. drag coefficients. "That should translate to the car being 4mph quicker down the straight," he predicted.

Bennett said he had no difficulties in fitting the rear



## DESIGN BRIEFS

suspension components into the smaller package afforded by the revised Chevy engine. He acknowledged that it should become more of a problem in the future, and also intimated that another, yet smaller Chevrolet engine may be in the long-term pipeline.

"The rear suspension does become the limiting factor in how small you can make the package," noted Bennett. "The engine is a lot smaller than the 265A, although it probably could go further. I expect you'll see another step at some point in the future."

Penske Cars has built six new cars in the past few years, but only five '92 cars will be built. "We'll have four new cars at Indianapolis," commented Nick Goozee, general manager of the car-building shop in England. "The fourth car will probably arrive during the month of May. The fifth car around June or July."

The first of the new cars was shipped to the U.S. at the end of January and has been tested vigorously by Rick Mears, Emerson Fittipaldi and Paul Tracy. Tests have taken place on superspeedways, short ovals, road courses and tight, street-type tracks, and Fittipaldi has suggested a 230mph lap will be possible in ideal conditions at Indianapolis next month.

—Gordon Kirby

## TRUESPORTS 92C

■ This is an important year for Truesports. After three years without a win and an ambitious car-building project under way, the team has made a major change for the new season—from Judd to Chevrolet engines. The Chevrolet deal was a big factor in keeping Budweiser on board as Truesports' primary sponsor, which means there's considerable pressure for the team to win a race or two this year.

Driver Scott Pruett is in the second year of a comeback from March 1990 leg injuries. In a handful of races last year, Pruett showed not only that he is capable of running at the front, but that the first of Truesports' self-built Indy Cars had the makings of a race winner. The '92 season will tell the story.



MICHAEL C. BROWN PHOTOS



Chief designer Don Halliday hasn't made any major changes to the mechanical layout of last year's car. He's refined and smoothed the packaging, but the overall weight distribution and layout of this year's car remains the same as last year's 91C.

"There were several places where we trapped ourselves last year as far as making a neat package," reported Halliday. "We've learned those lessons. I'm a lot happier with this car than last year's car, that's for sure."

"The whole mechanical package is similar to last year, but uprated I would say," commented Halliday. "The front of the chassis is exactly the same as last year, and we changed the back slightly to accept the Chevrolet engine."

Radiators remain mounted vertically, reaching forward as before, but the rest of the aerodynamic package received a lot of attention. Truesports operates its own 40 percent scale wind tunnel at Ohio State University, and has the most active wind tunnel program of any IndyCar team.



"From Indianapolis last year," noted Halliday, "we've been in the wind tunnel quite consistently, maybe not 50 percent of the time, but for many weeks. We've concentrated heavily on the tunnel because we know other teams can't do as much as we do there."

## AMERICAN MADE

Now running Chevrolet engines (LEFT), latest Truesports model is an evolution of last year's car, with improved aerodynamics draped over essentially the same mechanicals (FAR LEFT). Raised nose, anhedral wings and revised sidepod openings are visible from the front (ABOVE).

The tunnel is run by Gary Grossenbacher who has become noted as one of racing's top self-taught aerodynamicists. "We've got a good reference point from track to tunnel," commented Halliday. "Everything we've done in terms of drag and centers of

## GALMER G92

The Galmer G92-Chevrolet Indy Car made a very impressive debut at the Surfers Paradise season-opener. Al Unser Jr. put one of the Galmers on the pole and ran a close second to Michael Andretti through the first 40 laps. Unser and the Galmer then led for six laps before losing places through a bungled pit stop.

In the rain at the end of the race, the Galmers proved too stiffly set-up. Unable to put power down on a wet track, Unser slipped to fifth at the finish with teammate Danny Sullivan taking sixth in the team car.

Early testing revealed the Galmer's front wings weren't up to the job of balancing the heavy downloading created by the car's rear wing and underbody. New front wings were produced for Round 2 of the IndyCar championship at Phoenix, but the cars had to run in Australia with the less efficient original front wings. This wasn't a big problem, because the Aussie street circuit is very fast with long straightaways and tight chicanes, but it did mean the rear suspension had to be run much stiffer than would otherwise have been preferred.

Bearing some resemblance to the March 88C which Galmer designer Alan Mertens also penned, the Galmer was fast through the air in Australia, and was very effective under braking. In addition to the new front wing arrangement, a new rear suspension geometry is also in the pipeline. We'll provide a complete design brief on this exciting new Indy Car in the next issue of RACER. —Gordon Kirby



pressure and all those magical things have worked out spot-on, so it's been a very, very good tool."

Grossenbacher found some worthwhile reduction in drag after last year's Indy 500. Modified bodywork and air inlets were tried successfully in the Michigan 500. Further gains were made over the summer and the new car incorporates these, including tall, narrow radiator inlets and a raised nose with slightly extended anhedral front wings.

"We have a front wing that follows F1 trends with the raised nose section," said Halliday. "We've found that to be of some advantage. We've kept things as tight as we can around the engine. It's the 'A' Chevrolet and it's quite a big lump. It follows our trend of last year where we try to teardrop the bodywork off the tail."

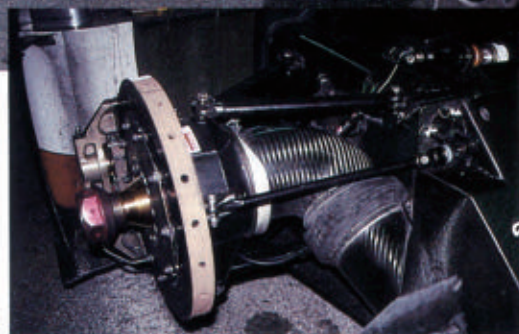
Despite the tight packaging, wind tunnel gains should solve cooling problems encountered with turbo, wastegate and electronics. Detail developments have also been applied to the team's 6-speed transverse gearboxes.

Forty-four people are currently employed by Truesports, eight in the design department. "It's a pretty talented group," commented Halliday. "They can turn their hands to a lot of different types of engineering, which is very useful."

A rather shy, soft-spoken New Zealander, Halliday is confident of the team's ability to regain the winner's circle this year. "I think it's within our grasp. People are wary of what we're capable of doing. We've got a few things up our sleeves. We'll see if we have to play them!" —Gordon Kirby



PETE LYONS PHOTOS



**F1 WITH FENDERS** Group C Jaguar adapted to GTP rules (LEFT) has carbon-fiber chassis (TOP), F1-derived 3.5-liter V8 and well-ventilated carbon brakes (ABOVE).

## JAGUAR XJR-14

■ A stalwart IMSA contender since 1982, Jaguar chose the second race of the 1992 season to launch its third engine type in its fourth basic chassis model. A month earlier, up the coast at Daytona in the season-opening 24-hour enduro, Jaguar's vener-

able V12 earned maximum GTP points by finishing second overall to a Japanese-entered, non-GTP Nissan. For the two-hour sprint around Miami's cramped Bicentennial Park course, the British firm chose not its familiar turbo V6, but an even more specialized weapon from its European arsenal, the V8-engined XJR-14.

The move struck immediate terror into rival hearts. Often called "a Formula 1 car with fenders," the XJR-14 is an international Group C racer, built originally for last year's new Sportscar World Championship (SWC). Smaller and lighter, as powerful but more agile, and in some ways less limited than IMSA's traditional, painstakingly regulated P cars, C cars are faster. Worse, they're more expensive.

In Group C, as in Formula 1, only normally aspirated, 3.5-liter engines are permitted. Recognizing, however, that hard economic times could take their toll on its fields, IMSA opened GTP to 3.5-liter engines in 1990 in hopes of attracting new competitors. A division of Ford Motor Company now, Jaguar built the XJR-14 around Ford's F1 engine. A special Cosworth design developed for Jaguar, this is a light, compact, narrow-angle (75-degree) V8 with four cams and 32 valves. In flat-out F1 racing, running on specially-blended racing gasoline and twisting as high as 15,000rpm, it pumps out horsepower numbers deep into the 700s.



MICHAEL C. BROWN



# DESIGN BRIEFS

Those specs have to be cut back a bit for durability in Sportscar service, but the XJR-14—an exquisite carbon-fiber confection built tight around engine and driver—was the top SWC car of '91, winning three races and the series title.

The XJR-14's front suspension features widebase fabricated wishbones that actuate pushrods to torsion bars and shock absorbers mounted horizontally above the driver's feet, with much thought given to accessibility for mechanics and engineers. The car's more conventional rear suspension relies on wishbones and pushrods operating through bell cranks to shock/spring units located atop the gearbox. That 6-speed gearbox is a TWR-designed unit that carries its ratios ahead of the crown wheel and pinion, with a central shift lever for the driver.

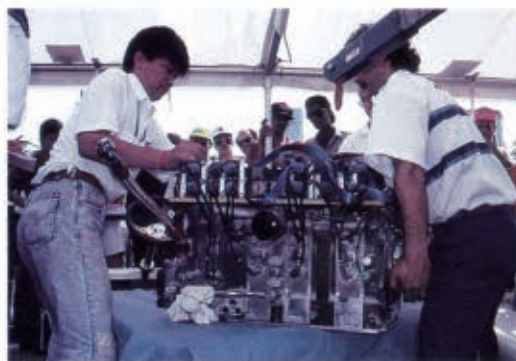
To suit IMSA rules and American conditions, the original Group C car had to be modified in several ways. U.S. tracks are generally rougher than their European counterparts, so some parts had to be beefed up. Our weather is generally warmer, so the cooling also had to be improved. Plus, IMSA imposes a decibel limit of 108, so the V8's exhaust had to feel mufflers for the first time.

Still, at Miami the new-to-America Jag proved to be as fast as other teams had feared. Even their insistence that IMSA enforce a rule about rooftop air scoop heights failed to blunt its performance. Driven forcefully by Davy Jones, the lithe, little 1650lb car qualified on pole, 0.8sec ahead of the next quickest car, defending champion Geoff Brabham's 2100lb turbo-Nissan V6. At the green, the lone white Jaguar scrambled away in the lead, scratching around the turns like, well, like a cat chased by big, muscular dogs.

Jones might well have won, but difficulty with the car's unique left-hand, narrow-pattern, 6-speed gear shift, compounded by fatigue caused by high cockpit temperatures, resulted in two spinouts. After the second one, the engine refused to restart and Jones was classified sixth. Brabham and his Nissan, the



GEORGE HEWITT PHOTOS



## NEW GAME

Shapely new Mazda entry in GTP conflict (ABOVE) had a less than sparkling debut, but sound design and proven four-chamber rotary engine (LOWER LEFT) bode well for the future. Compact cockpit (UPPER LEFT) integrates clean control layout, highlighted by electronic dashboard display.

dominant combination of the past few years, took victory again, but everyone had felt the shock wave from the weapon of the future.

—Pete Lyons

## MAZDA RX-792P

■ Felix Wankel's revolutionary rotary engine has been a force on the race track almost from the day Mazda first put it on the street nearly three decades ago. Small, light, powerful, smooth and, after years of development, very reliable, the two-rotor street motor has won literally hundreds of races and dozens of championships in both professional and amateur competition of many kinds.

Last year, a four-rotor Mazda race engine powered a Mazda 787B prototype to victory in the world's most revered Sportscar contest, the 24 Hours of Le Mans.

It also took IMSA's closely-fought, GTO championship.

For 1992, Mazda's American branch is stepping up to GTP. Motorsports manager Dick St. Ives says the rationale behind the decision is simple: "We want to compete on the track with the same companies we're competing with in the showroom."

Accordingly, veteran American designer Lee Dykstra—who in the early '80s was responsible for the design of Jaguar's fine, first-generation V12 GTP—plucked the long, lean four-rotor out of the front of his RX-7-lookalike GTO car and nestled it deep into the back of a lovely little IMSA-spec racing coupe.

The RX-792P's monocoque chassis is constructed entirely of carbon fiber, and cloaked in all-carbon bodywork. Wishbone-pushrod suspension at both ends operates horizontally mounted

shock absorbers located perpendicular to the car's centerline. Its electronically fuel-injected R26B engine—displacing 2.6 liters under IMSA's rotary-measuring system—produces 650hp and 420ft-lb of torque. The car can weigh as little as 1750lb with IMSA-spec ground-effect tunnels.

The latest computer-aided design techniques allowed Dykstra to "do realistic aerodynamic simulations, and we actually developed the quarter-scale model on the CAD. Overall, the CAD system allows you to explore more avenues and aspects of car construction before you commit to a model or materials."

The car made its first appearance at Miami, where it showed promise in practice, but disappeared behind a cloud of smoke before the race. Exhaust system problems, more specifically the 1800-degree muffler cooking nearby body structure, were but a matter of insufficient testing and debugging time.

That the RX-792P made it to Miami at all was thanks to the good old-fashioned human efforts of the superhuman kind that are so much a part of racing. Mazda's initial schedule called for a debut at Daytona, but frustrating delays—also part of racing—made even Miami iffy. The machine never even ran until Friday—only two days before the GTP event—and then for only a handful of shakedown laps at Charlotte Motor Speedway, near the team's base. Going on to Florida that night was more to keep the public relations faith than to race for real. Like a wine opened before its time, proper evaluation of the RX-792P isn't yet possible, but in its few laps of public practice, it showed signs of being a series contender. —Pete Lyons



In September of 1975 an Englishman named Christopher Robin Pook staged a Formula 5000 race through the streets of a rather dowdy downtown Long Beach. The site of the Pacific Theater's Navy base during World War II, Long Beach was known merely as a huge seaport through the '50s, '60s and '70s, a time in which the city's downtown drifted into seedy disrepair. It may have seemed an unlikely place to start a motor racing revolution, but that's exactly what was initiated on a September afternoon in the California port city 17 years ago.

Once he'd inaugurated his circuit, the aggressive Pook switched to Formula 1 for 1976, and when Mario Andretti won the race the following year after an epic battle with Jody Scheckter and Niki Lauda, the Toyota Grand Prix of Long Beach became popular enough to start making money. In 1983, Bernie Ecclestone's price got too high and Pook switched from F1 to IndyCars. Some people questioned the wisdom of the change to IndyCars, but the race has continued to grow from strength to strength.

Although there were other street races, Pook's race in Long Beach was the first really successful event of its type in modern times. It also proved that a downtown motor race can be of immense value to a city, as Long Beach used the race to trigger a thorough and sparkling redevelopment of its downtown core. An array of new hotels, a convention center and a new world trade center are the bountiful product of Pook's brash street-racing ideas of almost two decades ago.

Pook currently holds a contract with the city for a race through the streets until the year 2000. "And we're talking about renewals through 2010," he adds proudly. Over the years, Pook and his Race Circuit Management organization have staged or promoted a variety of races on "temporary circuits." He was involved at Caesars Palace in Las Vegas with F1 and IndyCars, consulted in Detroit, where F1 was also replaced by IndyCars and consulted also with the Meadowlands. Four years ago he started running the Nissan-backed Camel Grand Prix of Southern California, an IMSA race over a temporary circuit at the fairgrounds in Del Mar, Calif., just north of San Diego.

**IRONS IN THE FIRE** These days, however, Pook is singing a new tune. For the past year or so, he's been an advocate of "single destination, multi-purpose, permanent tracks." Race Circuit Management has a few irons in the fire around the country for this kind of racing complex, with its hottest prospect a site in Dallas-Fort Worth.

"There's a time for everything in life, and in my opinion the days of street circuits are gone," declared Pook. "The objective of street circuits was to bring motor racing to the major markets and to the public at large, and I think

“  
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”

they achieved that objective, opening up the sport to a whole new segment of the population that were not motor racing fans."

Pook noted that experience has shown him that the layout of the track and having enough space and vantage points for spectators are key elements in the success of a street circuit. "You have to do it with the right level of decorum," he commented. "First of all, the circuit has got to make sense. With all due respect to Denver, it was never a motor racing circuit. And I suppose the same criticism could be made about the Meadowlands."

"We were the ones who laid out the Meadowlands," Pook went on, "and we were forced to admit that what we built there wasn't a motor racing circuit. It was the first clue we got that temporary circuits sometimes won't get the job done. And then Phoenix was another example of problems with getting the job done at temporary circuits. In Phoenix, you couldn't put enough people in to support it."

The crux of Pook's new philosophy, however, is that temporary or street circuits are simply too expensive unless a major sponsor is prepared to underwrite the whole package. "In today's world," he noted, "you've got to have a lot of money for a one-time event. Just to get it going, to get the roads in condition and do everything that's needed you're probably talking \$6-9 million to get it done properly."

"Then on top of that," Pook went on, "you've got to add the costs of putting your seats up and taking them down and the costs of putting your safety system in and taking it out. That's another million and a half dollars. If you add those annual costs to the capital costs of getting it going and amortize it over 10 years, you've got \$4-5 million as a debt service."

"If you take a look at what you can build in the way of a permanent facility for the same \$4-5 million annual debt, you soon realize that

you can't pay for a temporary circuit and make a profit, but you can build a permanent circuit and make it work."

Pook insists that a "fairy godmother" is required to make a modern temporary circuit work. "You've got to have a substantial sponsor prepared to write a check for \$6-9 million and not expect to get a return on it."

**UNDER ONE ROOF** With his as yet unconfirmed plans to build a multi-purpose motor-sports facility in Dallas-Fort Worth, Pook hopes to start a new phase in his career as race promoter extraordinaire. Pook's plan is to include an oval, road course and drag strip under one roof.

"I'm preaching the single destination, multi-purpose circuit, where it all takes place in one spot. You market a single facility to the public, the media and your sponsors. This is very important because the three disciplines—oval, road and drag racing—cover all the demographics of income, age and gender."

"As it is, we've got drag racing on one side of town, oval racing on another side and road racing near another part of town. It's disjointed in the eyes of the general sports spectator, and it presents a marketing dilemma for the sponsors who have to invest in three different venues in the same market to reach all the demographics."

"The single-destination, multi-purpose facility solves all those problems," concluded Pook. "And that's the direction I believe we have to move the sport."

Will the Long Beach street racing impresario's newest song be a hit with fans, sponsors and the business world? Bear in mind that there are a dozen active temporary circuits running professional motor races in the U.S. and Canada, so that Pook's new philosophy could have a profound effect on things.

—Gordon Kirby



RON HUSSEY





by MAURICE HAMILTON

When Gerhard Berger and Ayrton Senna qualified fifth and sixth for the Mexican Grand Prix, it was the first time since October 1987 that a McLaren had been absent from the front two rows of an F1 grid. It is a statistic that underscores the remarkable consistency of this team. In Mexico, though, it was a painful illustration of the desperate bout of uncompetitiveness that engulfed the reigning champions the moment the season began in South Africa.

The results of the first two races—a clean sweep for Nigel Mansell, Riccardo Patrese and Williams-Renault—made public a discomfort that was exacerbated in Mexico by Benetton-Ford getting in on the act as well. If anything was certain to accelerate McLaren's plans to introduce its new MP4/7, then this was it.

In fact, Ron Dennis had assessed the situation at the end of the first day of practice at Kyalami. It was evident to the McLaren boss that Williams, with its active ride suspension, had a technical advantage so impressive that the 1991 McLaren would be swept aside wherever they went. Gone were the days when Honda power could overcome everything—including a mediocre chassis.

Plans were immediately laid to reduce the final development phase of MP4/7 by a month—a tall order in an already hectic schedule, but one which only McLaren could contemplate. Instead of introducing the new car at Round 4 in Spain on May 3, a supreme effort was made to bring MP4/7 to Round 3 in Brazil on April 15.

In many ways, this was a compliment to the development carried out by Williams, as well as a response to the further thought that the Williams raced in South Africa and Mexico—the FW14B—was only an interim model. Williams' proper 1992 car, the FW15, is not due for release until June. Apart from an industrious winter by Renault and Elf, the key to the Williams domination lays in the electronically controlled suspension that, in simple terms, maintains the car's ride-height at the same level, regardless of the bumpy nature of the track or the weight of the car.

**POKER FACE** Mansell may have played down the significance of this advantage at Kyalami (and, to a lesser extent in Mexico), but it was strikingly obvious that the Williams cornered with a sure-footed control that placed it in a different league. It was reminiscent of how the Lotus 79 rewrote the performance parameters when it appeared in 1978. This should not, however, detract from Mansell's performance, since he was prepared to extend the car to its limits, all of the time, every lap.

That was not necessarily the case with Riccardo Patrese in South Africa, and it made for an interesting demonstration of a major shortcoming with such a system. During qualifying, a 2cm mistake was made with the ride-height setting. Given the critical nature of adjustments on a Formula 1 car, a rival engineer explained that such an error was the equivalent of accidentally leaving off the rear wing. He wasn't exaggerating.

Under normal circumstances, Patrese would have pinpointed such a major shortcoming within half a lap. In this case, however, the active ride tried to compensate and, in so doing, disguised the source of the problem and weakened Patrese's confidence in the car.

He was back on form in Mexico, though, qualifying within a couple of tenths of Mansell's pole time. Such was the superiority of these two that Mansell knew his strongest challenge would come from within his own team. The Williams drivers waged a war which may have looked tedious on television, but the lap times told of its furious intensity.

Mansell and Patrese traded fastest laps, the gap between them during the first 25 laps being no more than five seconds. By half-distance Mansell had eased his advantage out to 9.8sec, and from then on, each time Patrese put in a quick one, Mansell would crush his challenge with a withering series of two or three super-fast laps. All Patrese could do was hope for a mechanical failure on Nigel's car—but there was none.

Instead, it was Senna who suffered a rare transmission failure, or so the official party line said. The more cynical members of the pit lane wondered whether this was a euphemism for Ayrton giving up the struggle with a badly bruised left leg. Even if that were true, no one would have blamed Senna for stopping. He had already gone beyond the call of duty by qualifying and then making an aggressive start to hold third place for 11 laps.



**PENSIVE PATRESE** Deceived by his car at Kyalami.



**OVER THE EDGE** Senna tried all he knew and more.

Senna's accident during the first qualifying session was indicative of how hard he was trying in the car, the competitiveness of which had been stretched to the point where its shortcomings were cruelly exposed. Handling had never been a strong point on the McLaren MP4/6, and over the bumps of the Autodromo Hermanos Rodriguez, it looked lethal.

When the car broke away and slammed sideways into the barrier, Senna, by rights, should have suffered a broken leg as a lower wishbone poked through the monocoque. Indeed, he said the pain was so intense, he felt both legs had been broken. In fact, only his left leg had been badly bruised around the calf muscle, but it was bad enough for him to undergo several hours of physiotherapy that night, and no way to spend his 32nd birthday.

The timing of the accident was unfortunate in more ways than one, since not long before, Senna had been giving the press his first impressions of the new McLaren following a test session at Silverstone. The MP4/7 breaks new ground by incorporating a so-called fly-by-wire system that does away with a mechanical linkage between the throttle and the engine. Coupled with a semi-automatic gearbox, this will help synchronize engine and gearbox speeds.

Senna was making the point that such complex electronics threaten to diminish the control exercised by the driver as he becomes the servant of the foolproof system. In other words, Senna was saying that a driver's superior skills could no longer eke out an advantage. Then he went out and proved the theory in reverse, with a tiny error of judgment—one that did not deserve such painful consequences.

**BUMPY RIDE** Senna roundly condemned the Mexican track, saying its standards had never met the needs of a modern Formula 1 car, and nothing had been done about it. Certainly, the bumps were even worse than usual, but that



aside, the challenge of the circuit remained, even though the magnificent Peraltada curve before the pits had been rebuilt with a less steep banking. The general impression was that the drivers liked the layout of the circuit, just not the standard of its construction.

The opposite was true of the revised Kyalami track. Technically excellent from a construction point of view, the layout left a lot to be desired since it lacked a decent straight. The problem for the new track is that it is within the boundaries of the defunct and much-loved Kyalami of old. With reminders of the good old happy days spread across the hillside, the new format never had a chance. Even so, the Grand Prix teams were delighted to be back in the sunshine of South Africa—which was more than could be said for the return to Mexico in 1986. And, according to Senna, the standards in Mexico have gotten worse with each passing year.

Following such a forceful shunt, no one expected to see Senna again that weekend, never mind having him turn up on Saturday to qualify. He did it in a new car which the team had built overnight from a spare monocoque brought specifically for such emergencies. There was more work for the McLaren mechanics on the Saturday, when Berger spun twice, the second incident sending him into the barrier at high speed. That car was repairable, and it was a sign of McLaren's strength that, in the midst of such chaos, they were able to find a suitable setup for the race.

Berger gave a fairly boring race some interest with his cut-and-thrust battle with Martin Brundle for fourth place. Brundle retired when his Benetton lost most of its water and, subsequently, its power, but Martin was not too disappointed because he had gone some way toward redeeming his reputation after spinning out on the first lap in South Africa.

**TOUGH ASSIGNMENT** On the one hand, the drive with Benetton is the chance Brundle has been waiting for. On the other, it has brought its pressures and, at Kyalami, Martin was more intense than I have ever seen him. Brundle must succeed this year but, unfortunately for the Englishman, he finds himself pitted against one of the most thrilling talents to have emerged since Ayrton Senna.

That young man, Michael Schumacher, was quicker than Brundle in every qualifying session at both races. In Mexico, however, Brundle was showing signs of settling in with the car and team. Nonetheless, he conceded that Schumacher had found the better line around the Autodromo Hermanos Rodriguez—where he won in Sportscars for Mercedes-Benz—and, before the start, Brundle told Schumacher he'd let the German through if Brundle made the better getaway. That is precisely what happened, Schumacher moving ahead on lap two. Brundle then kept



**OVER THE SHOULDER** Things are not well at Ferrari these days, and no one understands better than Jean Alesi.

pace despite, or perhaps because of, the relentless pressure from Berger.

Schumacher's stock rises each time he takes to the track. His confidence is astonishing for a novice of 23, and it seemed somehow perfectly natural that he finished third in Mexico even though it was only his eighth Grand Prix.

Schumacher finished fourth at Kyalami as well, and the Mexican result confirmed the resurgence of Benetton. I asked Tom Walkinshaw, the team's technical director, if he could attribute this to one particular thing. He said it was due to a number of factors; development of the chassis, serious work by Ford and Cosworth on the Series VI engine; a potent brew from Mobil; the switch from Pirelli to Goodyear; and, last but not least, two hard-nosed drivers spurring each other on.

It was interesting to watch Mansell quietly eyeing Schumacher as they sat in the TV studio after the race. Trying to appear indifferent, Nigel was nevertheless weighing up the man who, clearly, will be fighting for the championship one day soon. In the meantime, the betting for 1992 lay heavily on Mansell. He's never had it so good: a competitive car; McLaren struggling (temporarily); and Alain Prost absent for a year, since the Prost/Ligier saga finally ended when terms could not be agreed between the two parties.



**SUPERSTAR** Is Herr Schumacher the next great one?

**SINKING DEEPER** At Ferrari, the Italians seem to have gone from bad to worse with a car that, according to Ivan Capelli, "has no straightline speed, doesn't handle and has no traction. Other than that, it's fine." Both Ferraris quit with engine failures (oil feed problems) in South Africa. Alesi went out with yet another engine failure in Mexico, but poor Capelli could not get even that far after being rammed by Karl Wendlinger's March-Ilmor at the start.

Far from being a top contender, Ferrari scarcely has deserved to be only a middle-ranking team thus far. In Mexico, the Prancing Horses were shown up by both Tyrrell and Lotus. The Tyrrell drivers are enjoying a better handling car this year thanks to the switch from the heavy Mugen/Honda to the more compact Ilmor, and after Johnny Herbert drove impressively to sixth at Kyalami, Mika Hakkinen hounded Alesi in Mexico as Lotus continued to make the most of its new relationship with the HB Ford engine.

As for Jordan, an appalling start to the season in South Africa was improved upon slightly in Mexico because the absence of serious overheating problems with the Yamaha meant the team was able to do some serious running and learn more about the new chassis. The net result was eighth on the grid for Mauricio Gugelmin. That was, however, the beginning and end of the improvement. Power from the V12 simply faded away as the Brazilian completed his one and only lap. Teammate Stefano Modena, having been forced to start from the pit lane due to a misfire, worked his way up to 18th before the gearbox broke. How fortunes change in Formula 1.

Yes, indeed. Before the start of the Mexican Grand Prix, the paddock discussion had been about Prost and his future. After the race, the talk was of Schumacher. Prost? Everyone had forgotten about him. It was a timely if cynical reminder that Prost, at the age of 37, can hardly afford to miss a year with such a burgeoning talent threatening to attract the attention of the top teams. Schumacher may be contracted to Benetton or, if they return to F1, Mercedes-Benz. In GP racing, though, pieces of signed paper have often proved meaningless against the power of the signature of the Secretary of the Treasury on the U.S. dollar bill.



# NIGEL MANSELL

## THE ENEMY WITHIN

This year will probably be his last chance to break free and climb to the final peak occupied by the truly great champions. He can do it. But he needs to face the truth about himself first. **by MAURICE HAMILTON**

**S**peak the truth in public about Nigel Mansell as Grand Prix insiders find him, and you venture into a dangerous area. It's like saying Princess Diana is a thoroughly difficult person. That is probably not the case, but to air such a theory in the typical English shopping mall is to risk a brusque dismissal at best, the onset of physical violence at worst.

It is the same with Nigel Mansell. He is, without question, the most popular Grand Prix driver on a global basis; liked and respected from Milan to Melbourne. Yet the majority of Formula 1's critical community, while agreeing about the sheer excitement Nigel brings to the race track, find him totally maddening—if only because he ought to win the World Championship and yet seems destined not to do so. This season could be a case in point. Just like 1986, '87 and '91, in fact.

What is it about Nigel Mansell that infuriates? Is it his silly moustache? No; he looked even sillier when he shaved it off in 1988. Is it his unconscious addiction to malapropisms? No; the verbal stumblings brighten the most puerile of Mansell press conferences. Is it his flat, droning voice? No; the Midlands accent is no more aggravating than Alain Prost's nasal responses.

What is it then? Why does the average Grand Prix reporter quickly become exasperated and harbor the silent wish to stuff his notebook down Mansell's throat?

It is a matter of trying to help Mansell help himself. The urge is to bring a halt to the verbal destruction of an stunning image created by a brilliant performance on the track; stem the flow of cliché-ridden replies which make you cringe in embarrassment for the man. More than that, however, you simply want to avoid the public exposure of his greatest weakness—the inability to be honest with himself.

What's that got to do with winning the championship? If he drives as well as he does, why should personal shortcomings be open to public debate? What does it matter that he is often economical with the truth?

**WALKING PARADOX** The answer is that his performances on the track are always likely to be flawed for that very reason. Nigel Mansell will never admit to making mistakes—not crucial ones, anyway. Deep down, there is a basic insecurity which prompts such an evasive reaction when confronted by self-inflicted failure. And that insecurity seems to produce irrational responses in the car at a time when he is under pressure—the very point when he needs to bring all of his flair and aggression to a productive and thrilling climax.

Mansell is a walking paradox. He is difficult to explain, particularly to his many supporters. The Italians love him because of his spectacular deeds for Ferrari in 1989 and 1990. In Australia, they adore his British Bulldog qualities. In Japan, the Mansell concession stands do an amazingly brisk trade, making Nigel even more popular than Ayrton Senna.

In South Africa this year, the spectator enclosures at Kyalami were awash with Union Jacks. Mansell was the man they had come to see, and he didn't let them down: Fastest in all six practice sessions, led from start to finish, and set the fastest lap two laps from the end.

And there's the rub: Mansell had a 24-second lead at the time. He was not under the slightest pressure, and yet he simply had to make some kind of personal statement by slashing the previous best lap—which he had established in any case. It was madness. Senna or Prost would never commit such folly with the race in their pockets. It demonstrated that Nigel never learns.

He did exactly the same thing in Canada last year. Having led from the start and pulled away at his leisure, Mansell became overconfident. He repeatedly smashed the lap record, and then as the final lap began he started waving to the crowd. Halfway round that last lap, he allowed the engine revs to drop unnecessarily low, and as a result, the semi-automatic gearbox selected neutral and the engine died. There was no means of re-starting the Renault V10. His race was over less than a mile from home. Ten points down the pan.

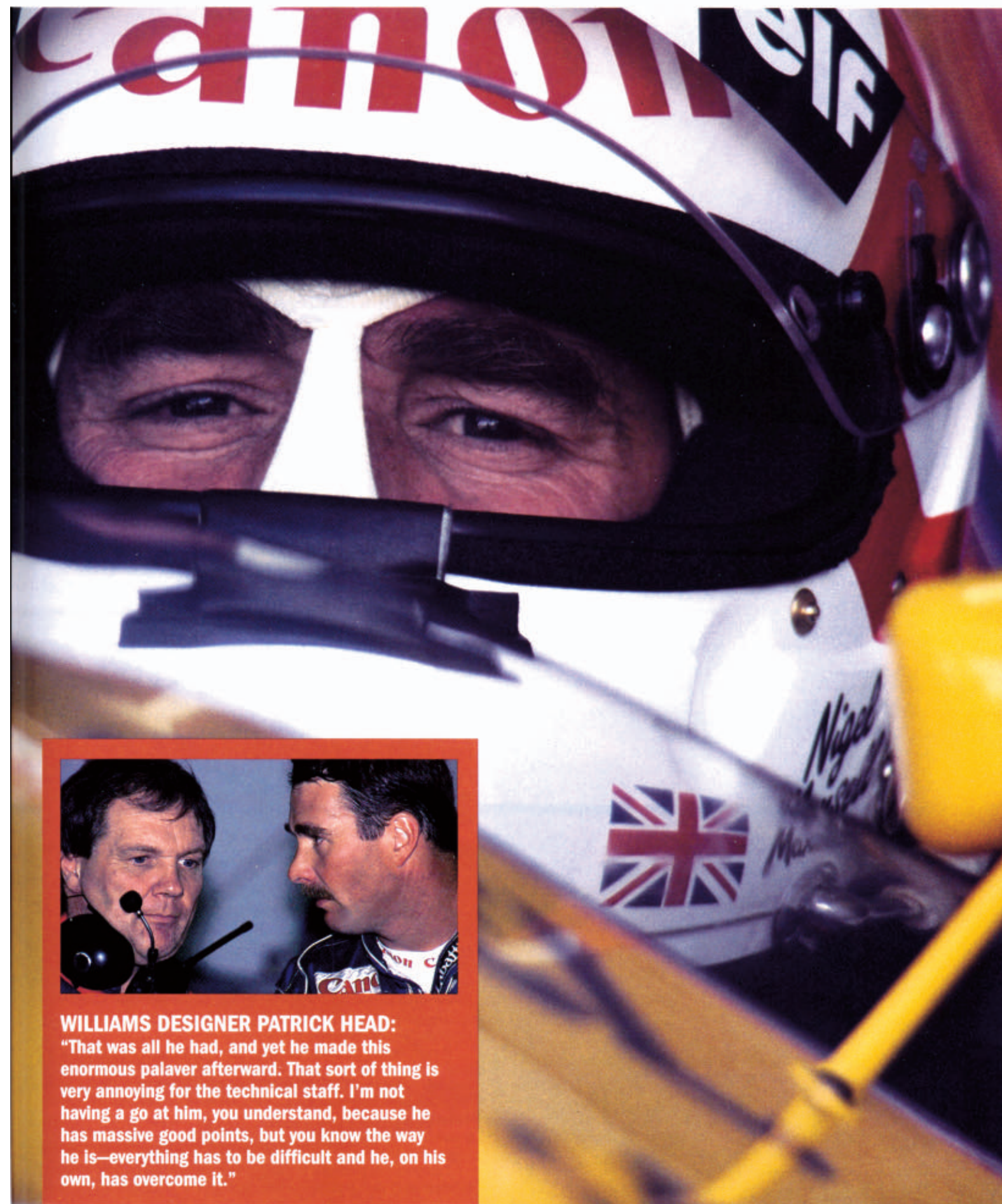
But, you understand, it wasn't his fault. Good gracious, no. For the rest of the season, he seized any opportunity to cast aspersions on the gearbox. A month later, he won at Silverstone. It had been an exquisite performance; absolutely flawless. Then he got out of the car.

At the press conference came a litany of hardship caused by the gearbox giving trouble. It was, he said, the same problem he had experienced in Canada but, this time, he knew how to cope. It had been a struggle, but he had made it. Phew! What a hero.

Absolute crap. The Williams technicians, who had sweated blood for 12 months over the gearbox, knew better. The telemetry told no lies, and they were angered that their workmanship should, in effect, be rubbished as someone earning 100 times their salary tried to save his reputation. Patrick Head, the technical director at Williams, fully sympathized with his staff. Pragmatic to the point of being blunt, Head expressed his views in a straightforward fashion once the season had ended.

"Nigel had no problems at Silverstone," said Head. "That was pure bull. We had the whole race recorded, and he never missed a change, up





**WILLIAMS DESIGNER PATRICK HEAD:**

"That was all he had, and yet he made this enormous palaver afterward. That sort of thing is very annoying for the technical staff. I'm not having a go at him, you understand, because he has massive good points, but you know the way he is—everything has to be difficult and he, on his own, has overcome it."



# THE ENEMY WITHIN

**"He has to examine those mistakes which turned three World Championship-winning chances into near misses."**

—James Hunt

or down. What he did have, on two occasions, was what we call 're-tries'—if the system misses a change, it lets the clutch out, and automatically has another go. The change takes maybe a quarter of a second, rather than considerably less than that, and the driver senses this as a slow downchange, with a bit more of a kick at the back of the car.

"That was all he had, and yet he made this enormous palaver afterward. That sort of thing is very annoying for the technical staff. I'm not having a go at him, you understand, because he has massive good points, but you know the way he is—everything has to be difficult and he, on his own, has overcome it."

Head's comments were well-received by the mechanics at Williams. They don't dislike Nigel—it is difficult to feel animosity toward someone who takes the product of your labors and wrings it by the neck—but his self-centered attitude can be wearisome inside a team where every member of staff is working tirelessly toward achieving the same end result.

Sure, Mansell pays tribute to the efforts of his team, but such public expressions of gratitude are so labored and without spontaneity that you tend not to believe him. That, of course, is an unfair assumption—but an unavoidable one nevertheless. There is always the thought that his needs come first. Anything less is perceived by Nigel as being unfair.

He requires constant reassurance, which is why written criticism—no matter how justified or well-meaning—is considered to be negative. It's another facet of his unwillingness to face mistakes. Indeed, matters have reached such a state, his distrust of the media so acute, that interviews have to be carried out by a writer nominated by Mansell, i.e., a camp follower. That rules out most of the British motor sport press at a stroke.

**A DIFFERENT VIEW** Mansell fans, however, agree with his stance. Why should he put up with abuse? If he needs constant reassurance, so what? The end-product is so dazzling in a racing car that any amount of morale-boosting massage is worthwhile. It is a point of view which finds favor with Peter Collins, the team manager at Lotus.

Collins is one of the few people in the Grand Prix paddock who truly

understands Mansell the racing driver and can communicate with him. It was Collins who persuaded Colin Chapman to give Mansell a trial with Lotus in 1980. It was Collins who, as team manager at Williams in 1985, shaped Mansell into a Grand Prix winner of outstanding class. As a result, Collins fails to see the sense in Patrick Head's public exposure of Mansell's shortcomings.

"It's not what Nigel needs," says Collins. "OK, Patrick may have his reasons, and it was done with the very best of intentions but, at the end of the day, they have employed Nigel to win races. And you won't get the best out of him by saying negative things. He takes these things personally and that only winds him up even more—creates the opposite reaction to the one you really need."

"The fact is he needs an arm around the shoulder from time to time; he needs good advice. And, if that's what it takes to get the result you want, then that's really what you've got to be doing. Because the end result is so worthwhile."

"He has an electrifying presence on the race track," Collins goes on. "Sure, he has his faults, but I do like him a lot. I like his level of total commitment. I believe if we had worked together continually we would have won some championships. That's not to diminish the efforts of other people. For whatever reason, I seem to understand how his brain works. He's fantastically talented and, handled right, he is more than capable of winning the championship."

Doubtless that's true. Particularly this year since the early evidence suggests that the latest Williams-Renault, with its computer-controlled suspension and semi-automatic gearbox, is one of the best cars ever put at Mansell's disposal. So, for that matter, was the Williams-Honda in 1987. Yet Nigel somehow contrived to throw it all away.

He has mellowed since then but, as this year's South African Grand Prix illustrated, he is still capable of the occasional curious action which, in isolation, does not amount to much but, in terms of the consistency necessary throughout a 16-race season, can make the difference between winning and losing the title. James Hunt, in 1976 the last British driver to be World Champion, put his finger on it when he said:

"For all his driving ability, aggression, experience and courage Mansell must learn to handle the enormous pressures that bear down on today's sporting heroes both on and off the track. Look at his record and you will see he is at his most vulnerable when the pressure is on."

"He has to examine those mistakes which turned three World Championship-winning chances into near misses. That examination should prove to him that all he has to do is drive normally—just as he does when the title is not staring him in the face."

Certainly, on a good day, Mansell is stunning to watch. He works his car to the limit, always attacking, probing, the one certainty being that he will overtake the other guy, come what may. In this regard, Mansell is the only driver who can take the fight to Senna.

All the basic elements are in place, yet this strange uncertainty lurks beneath the surface. At the end of last year, Mansell left Britain to live in Florida. The reason given was that the climate allowed him to train more effectively although, disillusioned by his teammate's speed in the early part of last season, Mansell is known to have spoken to Carl Haas about an IndyCar drive in 1992. Anyway, improved fitness was in evidence at the beginning of the season when he turned up in South Africa looking leaner than ever before. But the move away from Britain is typical of the Mansell Paradox.

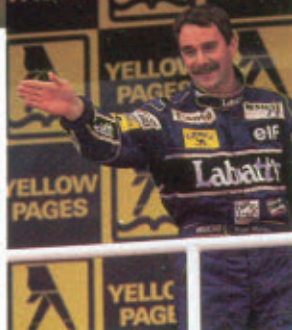
If ever there was a home-loving man, a true-Brit who embraces the basic virtues of cups of tea, cheese and pickle sandwiches, roast beef and two veg, then Mansell encapsulates those values. And yet, ironically, this relentless need to prove himself prevents the personal acceptance of an ability which has carved a unique niche in the gallery of Grand Prix greats. He remains a prisoner of some inner force that drives him along a ragged line dividing sheer brilliance from desperate ineptitude.

This year will probably be his last chance to break free and climb to the final peak occupied by the truly great champions. He can do it. But he needs to face the truth about Nigel Mansell first.



## NIGEL'S STRONG START

Mansell enjoyed the perfect beginning for his 1992 World Championship campaign. He and "Red 5" were the fastest combination at year's first two GPs, blitzing away from the green light and running off from the field in both South Africa and Mexico and making full use of Williams' latest reactive suspension system. Now that his team has given him the kind of advantage every driver dreams of, Mansell is looking to take 10 points from every outing.







# HEAD TO HEAD

New V8 Engines From Ford and Chevrolet Make For a Historic Season of IndyCar Racing **by GORDON KIRBY**

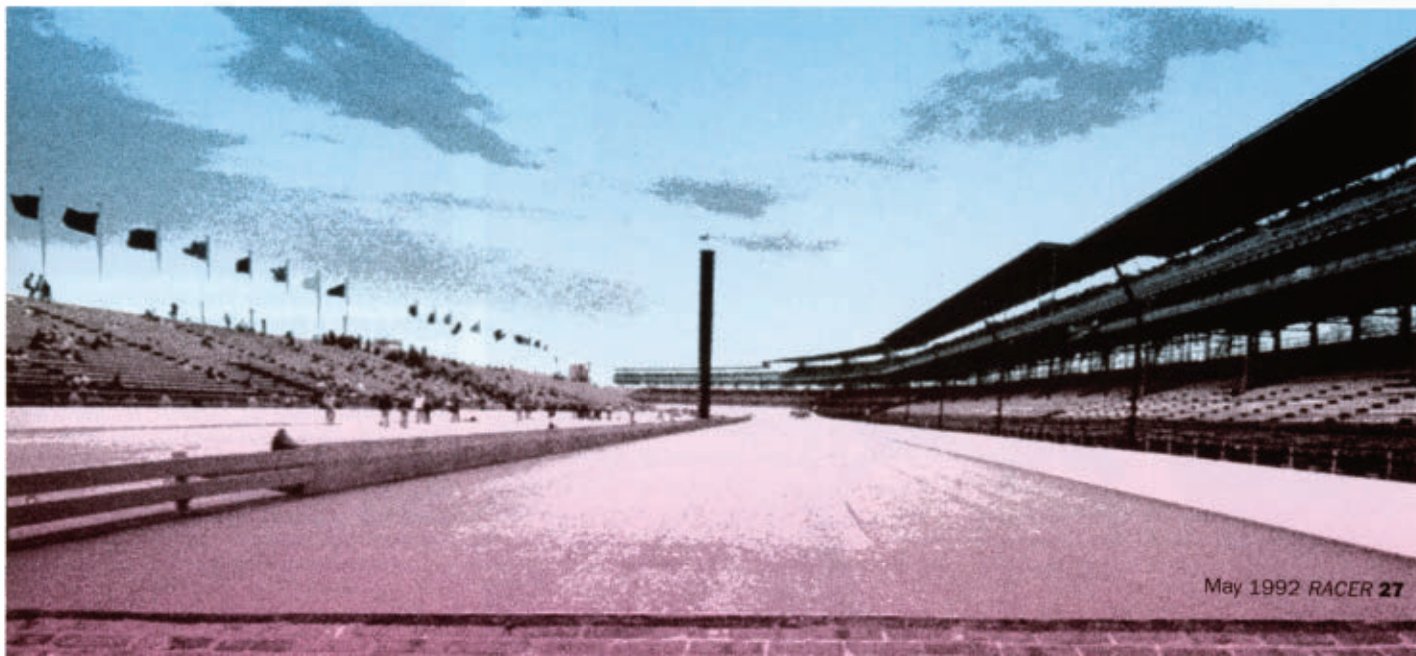
**I**n the last four years, Chevrolet's four camshaft 265A turbo V8 has dominated IndyCar racing. In that time, the Chevy Indy V8 has powered four Indy 500 winners and four PPG Cup champions, and is unbeaten over the past two seasons.

Designed and built in Northamptonshire, England, by Ilmor Engineering, Chevrolet's Indy V8 was first raced by Al Unser in a Penske PC-15 chassis at Phoenix International Raceway in the spring of 1986. The engine scored its first victory in Mario Andretti's Lola at Long Beach in April of the following year, and has won all but three IndyCar races since 1988.

Competition for Chevrolet in recent years has come from Porsche, Alfa Romeo, Judd and Cosworth's outdated DFX and DFS V8s. Each of

Porsche, Judd and Cosworth scored a single win apiece during 1988 and '89, but Chevrolet clearly had its rivals out-horsepowered. With but a single win to its credit, Porsche withdrew from IndyCar racing at the end of 1990. Alfa Romeo withdrew at the end of last year, after failing to make a competitive showing in three seasons, and only one team is running Judd engines this year.

Meantime, Cosworth Engineering has been working flat-out for nearly three years on a brand new Indy V8. Code-named the XB, the latest Cosworth is backed by Ford and is expected to break Chevrolet's hold on IndyCar racing this year, in cars driven by defending PPG Cup champion Michael Andretti, his father Mario, Eddie Cheever and 1990 Indy 500 winner Arie Luyendyk.





# HEAD TO HEAD

**"We intended to design a smaller and lighter engine that would produce more power just from reduced friction."** —Steve Miller

Design work on the Ford/Cosworth XB V8 began in June 1989 and the engine first ran on the dyno on July 31, 1990. Strikingly smaller and lighter than any existing Indy engine, it was rigorously bench-tested before running on a race track for the first time. That happened almost 15 months later on Sept. 23, 1991, at Road America, Wis. The engine was fitted to a year-old Newman/Haas Lola and driven for the first time by Mario Andretti, who drove it as hard as he could all day, but couldn't break it!

At the end of that first day of testing, Mario had lapped within two seconds of pole position for the previous day's IndyCar race. In an old, rather ill-handling car, Mario had run right on the previous day's race pace, and I can attest to how hard he ran the engine because I was standing in the pits on that historic day.

Cosworth engineer Steve Miller also tells an interesting story about talking to Carl Haas and Mario before the XB's maiden track test:

"We sat in the motor home with Carl and Michael and Mario and said 'Right, we want to set off with a 12,000rpm limit,'" recalled Miller. "As soon as we think everything's OK we'll raise the rev limit and we want you to do a race distance."

"Carl said, 'You've got to be joking. Why do you want to start at 12,000?' You can run it a lot quicker than that, we told him, 12,000 is being conservative. Well, Carl said, 'It's your effing engine! If that's what you want, that's what we'll do.' He just didn't believe it could be run that quickly the first time on the track. I tell you, it was pretty satisfying to have the engine survive that first day!"

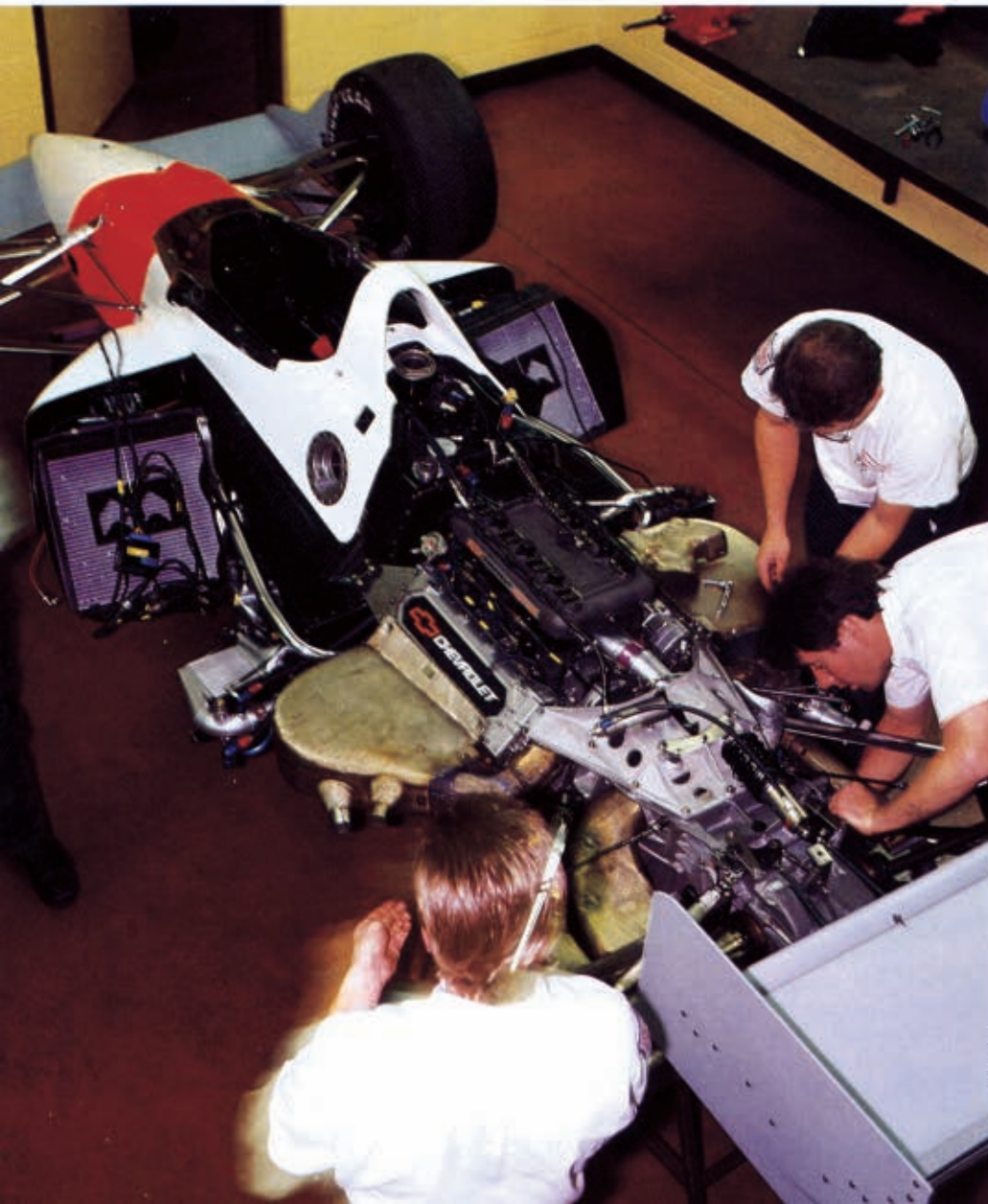
The XB's impressive showing in its first track test convinced not only Mario and Michael, but also team owners Haas and Chip Ganassi that it was worth the gamble of switching from Chevrolet's tried-and-true product. Two months later, Ford held a press

conference at the Indianapolis Motor Speedway's Hall of Fame Museum to announce that, after an absence of 20 years, it was returning to IndyCar racing in 1992 with the Newman/Haas and Ganassi teams.

Over the winter, Newman/Haas with the Andrettis put more than 3000 test miles on a series of XB engines. In February, the Andrettis completed a trouble-free 500-mile test at Texas World Speedway, running laps at more than 230mph! At the same time, Eddie Cheever also ran 500 miles with another XB in one of Chip Ganassi's cars.

Following the February test session, Michael Andretti was brimming with confidence. "It was very, very impressive," commented Michael. "Now I'm sure we've done the right thing."

Chevrolet and Ilmor Engineering have responded to the Ford/Cosworth challenge by producing their own new engine. Rather than



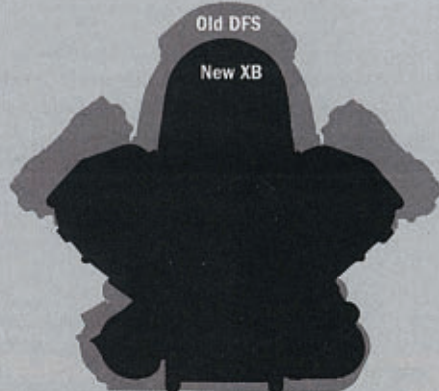
## REPACKAGED WEAPONS

Destined exclusively for Penske Racing in 1992, the newest Chevrolet Indy V8 that's shown being nestled into the latest Penske Indy Car (LEFT) is a neater and smaller package than its predecessor, the 265A (ABOVE). Although based on Mario Illien's original design, the new 265B engine (TOP) has a block, heads, rods, pistons and cams that are all new.



## The Battle of the Boost

Ever since turbocharging was introduced to IndyCar racing in 1966, the problem facing the rulemakers has been how to regulate the boost pressure generated by the device. Over time the best solution has been shown to be the "pop-off" valve, a simple spring and plate apparatus that is carefully maintained, monitored and distributed by the sanctioning organization. The valve attaches to the engine's plenum chamber and, using the stiffness of its spring, seals a hole in the chamber up to a pre-set limit. This limit is decided by the rules, but is measured by the length of a column of mercury able to be supported by the pressure required to compress the spring. This method of measuring with mercury is derived from meteorology, where atmospheric pressure is defined as the pressure exerted by the earth's atmosphere at any given point. The value of standard or normal atmospheric pressure at sea level is equivalent to the pressure exerted by a column of mercury 760 millimeters (29.12in.) high. This pressure—equal to 14.7lb/sq. in.—is also referred to as one atmosphere, or one bar. —JZ



## Narrower Means Faster

The general desire was for a slim engine to correspond with the roll hoop and the driver's head. Getting the height of the plenum down wasn't a big consideration. The car builders preferred rear bodywork which was tall and slim rather than something that was low and flat.

being an all-new design, though, the latest Chevrolet is a development of the existing, successful Indy V8. Based on the 265A bottom end, the new engine—the 265B—is a slightly smaller overall package and is being raced exclusively this year by Penske Racing with drivers Rick Mears and Emerson Fittipaldi.

In addition to the new Chevrolet 'B' engine, more cars than ever are running conventional Chevy 265A V8s. Racing the standard Chevy engine this year are Al Unser Jr. and Danny Sullivan at Galles/Kraco Racing; Bobby Rahal for Rahal-Hogan; John Andretti with Hall/VDS; A.J. Foyt; Scott Brayton and Hiro Matsushita for Dick Simon; Scott Goodyear with Derrick Walker; Tony Bettenhausen in his own team; and Ted Prappas for P.I.G. Racing. Paul Tracy will also use Chevy's standard 265A engine for his handful of scheduled appearances this year in a third Penske entry.

Ilmor has manufactured a further 36 of the older 265A engines this winter, which means that 150 of the standard Chevy Indy V8s are now in service.

**FORD'S CHALLENGE** The Ford Motor Company and Cosworth share a long history, going back to 1967 when Ford agreed to bankroll the Cosworth DFV V8 Formula 1 engine. The DFV went on to dominate F1 for more than a decade and to achieve similar results in turbocharged form in IndyCar racing, where it was known as the DFX.

A brand-new turbocharged 1.5-liter Formula 1 engine was built by Cosworth for Ford in 1985, followed four years later by a new naturally-aspirated V8 for the new 3.5-liter F1 rules. Driven by Nelson Piquet, the 3.5-liter F1 V8 won the last two Grand Prix races of 1990.

In addition to its deep involvement with Ford's racing program, Cosworth produces high-performance road car engines that are installed as original equipment in Ford Sierras and Scorpions built in England. Some 10,000 road car engines are turned out each year at Cosworth's headquarters in Northampton.

Other Cosworth projects include a range of 24-valve cylinder heads produced for Mercedes-Benz and a four-cylinder Ford-based engine used successfully in midget racing. Cosworth also produces pistons and other engine components for use in NASCAR stock car racing.

As well as being smaller and some 60lb lighter than Chevrolet's standard Indy V8, the new Ford/Cosworth XB produces more horsepower. Nobody will quote any figures, but Michael Andretti's description of driving the XB tells the story. "It feels just like the Chevrolet," commented Michael, "only with more power." The XB is also able to rev safely to 13,000rpm, a 500rpm improvement over the Chevrolet. Another advantage is claimed in fuel efficiency, which can be a very important factor in road course or street circuit races.

In charge of the XB program is veteran Cosworth employee Dick Scammell. Now a director of the company, Scammell was a crewman with Team Lotus when the Cosworth DFV F1 engine was first raced back in '67. Scammell oversees the XB program, with engineers Steve Miller and Malcolm Tyrrell directing the project. Miller is in charge of in-the-field operations and attends all tests and races. Tyrrell comes to some test sessions, but spends most of his time watching over the production of components in England.

"We know from other projects how to make the engine friction lower," commented Miller about the XB's design parameters. "So initially we intended to design an engine that was going to be smaller and lighter and would produce more power just from reduced friction."

"From development of the F1 turbo and naturally aspirated V8," added Miller, "we knew we could make the engine more compact, and work we did, during both the design stage and the development program, led to the engine breathing better and making more power."

Scammell noted that Cosworth's recent DFX and DFS Indy V8s were based on the DFV, which started life as a 3.0-liter V8 and ultimately was expanded to 4.0 liters. So, too, was Chevy's 265A engine based on existing principles. "Really," Scammell made the point, "nobody has designed a proper, tailor-made, 2.65 turbo until now."

Another element in determining the size and layout of the XB was to match its physical shape to the requirements of the chassis builders. "Early in the design stage we went around and talked to all the car constructors," commented Miller. "And the general desire was for a slim engine to correspond with the

roll hoop and the driver's head. Getting the height of the plenum down wasn't a big consideration. The car builders preferred rear bodywork which was tall and slim rather than something that was low and flat."

Miller noted the car constructors also wanted a slim sump or oil pan to suit the underbody tunnels of a ground-effect Indy Car. "The requirements of a slim sump and slim plenum dictated the cylinder bank angle," said Miller. "The rest was just making it as compact as possible."

As far as fuel economy is concerned, Miller remains a little tight-lipped. "Most of it is in the cam timing and injection area," said Miller. "Apart from reduced friction, there's very little in the fundamentals of the engine that you could do to improve the economy. If the engine performs well, of course, you can run narrower cams and get better economy, and you've got the opportunity to trade absolute horsepower for driveability and economy."

Miller said Cosworth's vast expertise in manufacturing pistons is also a plus in terms of fuel economy. "We were able to develop a better piston design and to make them out of better alloys than are commercially available," he noted.

The original plan was to race the new engine in 1991, but none of the top teams were prepared to abandon Chevrolet's proven power and reliability in time for the '91 season. The result was an intensive dyno testing program with well over 100 hours dyno-testing time completed before the engine's first track test in Wisconsin last fall.

This winter's exhaustive track testing efforts with the Andrettis and Cheever have eliminated most detail problems so that the XB goes into its first season of competition seem-



"It's just a smaller package." —Mario Illien

ingly ready to win races. "It's one thing running engines on the dyno under controlled conditions or even running them in test sessions," cautioned production manager Tyrrell. "But in the heat of battle, they're going to be abused. Once we start racing the engine, there will be a whole new level of use."

Thirty engines had been built by Cosworth for the start of the new season. Another 10 engines will be manufactured during the summer, and in 1993, the Ford/Cosworth XB will be more generally available to other IndyCar teams beyond Newman/Haas and Ganassi.

"Yes, it's going to be available," commented Scammell. "But only as far as what we can handle in a reasonable fashion. We don't want to end up burying ourselves and doing a bad job for everybody."

Cosworth's stateside facility in Torrance, Calif., has been expanded over the winter. A new dynamometer has been installed and more qualified engine builders have been hired to maintain and rebuild customer engines over the next few years.

"Race support will be provided from England and from Torrance," commented Scammell. "We will rebuild some engines in California, but we will also freight some of the engines back to England because we want to keep an eye on them."

Noted Miller: "I don't think it's possible to develop the engine sensibly in its early life if we're not seeing race engines back here in England. It's the only way to do it."

**CHEVROLET'S RESPONSE** When it became clear last summer that Cosworth was pushing

ahead with its XB V8, Chevrolet took the decision to produce a revised version of its engine. A crash program was undertaken by Ilmor Engineering to design and build the 265B V8.

Located about 10 miles north of Cosworth's headquarters, Ilmor is run by ex-Cosworth engineers Mario Illien and Paul Morgan. In addition to producing Chevrolet's 265A and B turbo V8s, Ilmor also competes in Formula 1 with its own, naturally aspirated 3.5-liter V10. After two years with the financially troubled Leyton House team, Ilmor's F1 V10 engine is also being raced this year by the Tyrrell team.

As noted, Ilmor's latest Chevrolet Indy V8 is based on the existing engine. Few details have been released about the 265B. Nor have any specifics been put on the slight reduction in weight and size of the new Chevy, although the engine is supposed to match the new Ford's ability to rev to 13,000rpm.

"It's just a smaller package," commented Mario Illien. "The concept is very similar. It's just packaged a little neater and smaller. It uses the same pumps, but the rest is all new. It has a new block, new heads, new rods, pistons and cams and a new drivetrain."

The new 265B engine was first run on Ilmor's dyno a few days after Christmas, and was first track-tested by Penske Racing in late January. Although it hasn't undergone anything like the gestation process enjoyed by the new Ford V8, Chevrolet's latest engine is said to have run reliably and effectively through this winter's initial track tests.

Rick Mears said the engine looked good after putting a total of 600 miles on three examples. "From the performance standpoint,



**DEFENDERS** Ilmor's Paul Morgan and Mario Illien chat with customer and Chevrolet stalwart Jim Hall.

just from the numbers—straightline speed and that kind of thing—it seems definitely better than the conventional Chevrolet.

"So far, out of the box, for as little time as it's been in existence, the engine has been very reliable. It's a good package. It makes for a smaller car and a good combination all around."


Teammate Emerson Fittipaldi was equally confident after early testing. "I have a lot of faith in the new engine," said Fittipaldi. "I think Mario Illien and Ilmor Engineering have developed it from a good base. The normal Chevy engine is solid, it's powerful and it's reliable. And the new engine is a development of that engine. It's not like a brand new engine."

"It has very good torque," continued Fittipaldi. "And it's very, very smooth at high revs. I think that's noticeable. It likes to run at high rpm and it's very smooth. I think that's the major change from last year."

Fittipaldi also predicted lap speeds in practice at Indianapolis of 230mph or better as a result of this year's new cars and engines. "It depends on the weather, but I think the record could easily be broken this year in qualifying. If it's a cool day, for sure the record's going to be broken. I would say in the 'Happy Hour' possibly we could see for the first time over 230mph average by drafting someone else."

Indeed, Penske's rookie driver, Paul Tracy, ran some sustained, high-rpm tests with the new Chevrolet engine at Texas World Speedway in late February, lapping at 232mph. Tracy put more than 200 miles on two different engines, giving Chevrolet and Ilmor almost as much pre-season confidence as Ford and Cosworth.

"Obviously, we don't know where we stand relative to the rest of the competition," noted Illien. "But I think we should be reasonably competitive. Obviously racing conditions are always different than testing. One has to be careful. Reality can always come and hit you."

So, there you have it. This year, for the first time ever in IndyCar racing, we have Ford vs. Chevrolet. New goals are being chased in power output, rpm limits and fuel efficiency. The ante keeps getting pushed higher. 

**THE SPOILER** This is the ninth year of Buick's Indy engine program with its 3.4-liter (209cid), single-camshaft, rocker-arm V6. At Indianapolis, under USAC rules, the stock-block-based, rocker-arm engine has always been permitted an extra 10in. of manifold pressure compared to the 2.65-liter, four-cam V8s, and this "boost break" has contributed to some remarkable performances over the years.

After two years of development by McLaren Engines in Detroit, the Buick V6 was first raced in an Indy Car by Scott Brayton in 1984. The following year Brayton sat in the middle of the front row at Indianapolis next to Pancho Carter who put Rick Galles' Buick-powered March on the pole at a record 212.583mph!

Reliability over 500 miles has always been a problem for the rocker-arm V6 that churns out more than 800hp at a comparatively lazy 8000rpm. Nevertheless, the engine continues to be popular because of its lesser cost. Last year there were no fewer than 10 Buicks in the field at Indianapolis, but only two of them finished—with Stan Fox the best Buick finisher in eighth place. Buick-powered Gary Bettenhausen turned the fastest qualifying run at Indianapolis last year. Driving one of John Menard's pair of Lolas, Bettenhausen averaged 224.468mph for his four laps, albeit on the second day of qualifying, so he had to start the 500 from midfield.

For the past two years, Lola has designed purpose-built chassis to suit the Buick V6. To enable the comparatively tall, top-heavy engine to be fitted as low as possible in the car, Buick had to produce a revised oil sump, front cover, intake manifold and valve covers. The current racing version of the rocker-arm V6 features a low-deck block with offset connecting rod journals. The offset provides an even firing order that reduces most of the secondary harmonics or vibration normally associated with a V6.

CART rules have always restricted Buick's engine to the same boost pressure as the four-camshaft V8s, believing that the extra displacement was enough to balance the design differences, but this year the V6 will be allowed to run all IndyCar races with 50in. of manifold pressure—five more inches than the 2.65-liter four-camers. Roberto Guerrero and Dominic Dobson will run some races this season with Buick engines, joined by Bettenhausen, Jim Crawford and three-time F1 World Champion Nelson Piquet at Indianapolis.





# Different Era, Different Game

David Lazenby, chief mechanic for the original Lotus-Ford effort at Indianapolis, remembers what it was like behind the scenes in 1963.

by STEVE NICKLESS

**G**reat hoopla will surely surround Ford's return to Indianapolis this May. The new Ford Cosworth XB will no doubt win much acclaim at The Brickyard, but it can do no more than another Ford V8 from another era. Jim Clark's fine Lotus-Ford triumph in the 1965 500 was an achievement made all the more interesting for the two-year build-up to it.

One man who remembers the details of that 1963 effort only too well is Clark's chief mechanic at The Speedway, Englishman David Lazenby. Lazenby, then a relative newcomer to racing, was given the keys to the preparation of an assault on Indianapolis by not only his employer, Lotus, but the Ford Motor Company itself. The '92 Ford-Cosworth effort will be scrupulously measured and carefully orchestrated; Ford's no less public "return" 29 years ago, says Lazenby, was something else again.

**LAST-GASP EFFORT** Author Leo Levine sums up the 1963 formal launch of the new Lotus-Ford Indy Car in his epic book, *Ford: The Dust and the Glory*: "The long-awaited end product of a supposed mass dollar expenditure and all-out engineering effort by one of the world's largest corporations, there wasn't an outsider in the place with even the slightest suspicion this was strictly a shoestring, last-gasp effort."

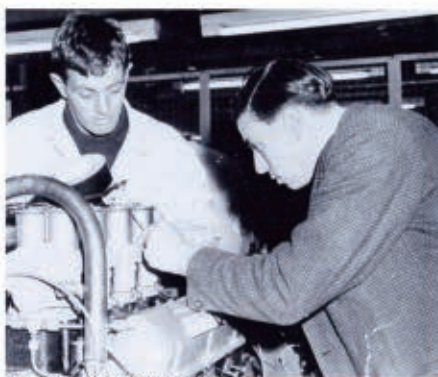
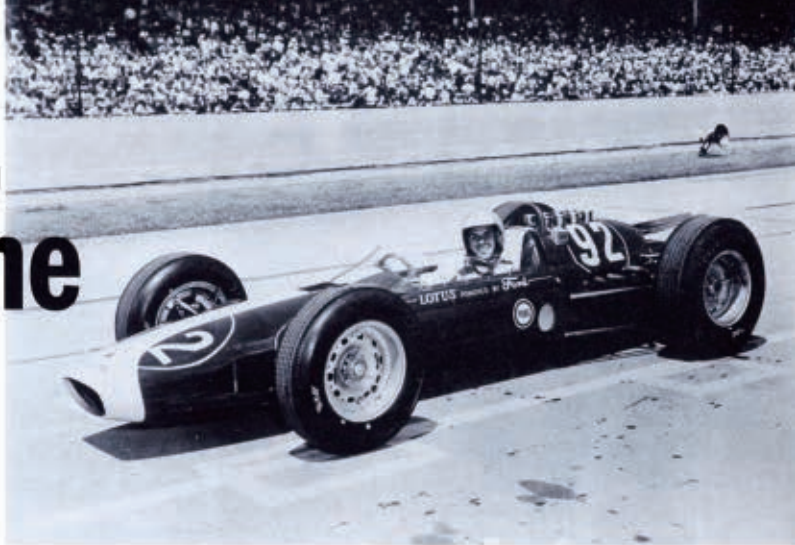
Indeed, only a handful of exhausted Ford and Lotus people present knew the details, among them the 26-year-old Lazenby, who in March of 1963 was appointed "chief mechanic, second" to Team Lotus number one Jim Endruweit who was also responsible for the F1 program. As such, Lazenby was largely in charge of the day-to-day activity for Ford's two-car assault on Indianapolis.

Lazenby got the job almost by accident, having never laid eyes on a USAC champ car until the Colin Chapman-conceived, Len Terry-designed Lotus 29 started taking shape in his hands in a back corner of the Lotus works. Lazenby had just started his second full season with the Lotus F1 team at the '62 season-opening Dutch GP, where Clark had given Chapman's revolutionary monocoque Lotus 25 its first competitive outing.

As impressed as anyone else with the 25 in Holland was Porsche driver Dan Gurney. Gurney had another race on his mind that day at Zandvoort, however, the '62 Indy 500, in which he would race a unique Mickey Thompson-built, Buick-powered mid-engine machine.

Gurney, unlike many of his American contemporaries, knew that the days of the front-engined roadster at Indy were almost over, and that Jack Brabham's performance in the '61 500 in a dramatically underpowered rear-engined Cooper had been the siren call. He all but insisted that Chapman attend the '62 500. Colin agreed, legend has it, only when Dan offered to buy the airline ticket.

"Indy was a bloody awe-inspiring place, really," says Lazenby who saw it himself for the first time a year later. "It was a totally different scene from Formula 1 racing in Europe which, in comparison was a very relaxed affair. In F1, everybody knew everybody, everybody talked to everybody and you just snuck in and got the job done. The initial impression of Indy was, 'God this is a very professional organization. Everybody knows what they're doing and they've got it all sewed up!' And those roadsters! Some of those front-engined cars really went. Impressive machines—big, heavy, fast and noisy!"



PHOTOS COURTESY DAVID LAZENBY

## BEHIND THE SCENES

Lazenby's tale of troublesome over-lightened Dunlop wheels makes Clark's qualifying run (ABOVE) all the more impressive. Lazenby and Clark (LEFT) engage in some pre-race fiddling with the little Ford engine's carburetors.

**FORD BITES** Chapman had a look, and The Speedway must have made a real impression on him, for just six weeks later he and Gurney laid copies of a proposal for a Lotus Indy Car on the desks of several of the Ford Motor Company's key executives.

Choosing to present it first to Ford seems quite sensible in hindsight, though Ford had nothing in its engine arsenal like the four-cylinder Offy that dominated the Indianapolis scene. Chapman's cars had, however, compiled a brilliant record in junior formulae with Ford-based powerplants, and Gurney had recently scored points with Ford management by subbing for original Ford choice David Hobbs in the Daytona Continental Sportscar race.

On July 23, just days after seeing his Type 25 win the British GP, Chapman and Gurney got a fair reception at Ford and the opportunity to talk at length with several Ford marketing and engineering principals.

They apparently didn't know that several men within Ford were already steaming ahead on an Indianapolis project. Bill Gay had attended the '62 500 with fellow Ford engineer Dave Evans and come away firmly believing that Ford, well along in developing some exotic V8 engines for a variety of racing venues, could and should be involved.

Chapman, says author Doug Nye, in *The Story of Lotus: 1961-1971*, laid out his requirements: 350hp, carbureted, running on gasoline. Gay, aware that the ubiquitous Offenhauser had over 400hp, ran on methanol and boasted fuel injection, seemed to have doubts.

Although he would ultimately fight for and get budget approval for the Indy project, Gay was apparently swayed by an interesting exhibition put on by Chapman at Indy in October of '62. Clark's USGP-winning 2.7-liter, 175hp F1 Lotus 25 was shipped to The Speedway, where Clark did nearly 100 laps and went 143mph. Chapman got the go ahead—though no formal contract—and designer Terry started work immediately on the Lotus 29, a longer (to meet USAC's 96in. wheelbase minimum) and sturdier 25.

"There was an immediate split of labor in the workshop when the Indy program was announced," Lazenby remembers, "and I was switched over to it. I was pretty well in charge of building the 29s."

Ford, meanwhile hedging its bets a little, set to work on two configurations of its pushrod V8 (code name AX230-2), one for methanol and one for gasoline.



# Different Era

**TESTING DRAMAS** Interestingly, Ford used what it had and stuck prototype Indy engines into a Galaxie stock car it shipped to Daytona where Nelson Stacy started a test program. Later in that month of November '62, however, the Indianapolis budget was cut. There was apparently considerable infighting about the engine's configuration: Gas or methanol? Magneto or battery ignition? Carburetors or fuel injection?

In January, a revised test engine was shipped to Gurney to run in the Sportscar race at Daytona, and it proved problematical. In February, a copy was finally sent to England, where the first 29 was completed.

"We shook the car down at Snetterton and then we all flew to Ford's test track in Kingman, Ariz.," Lazenby remembers. Clark quickly got up to a staggering 165mph, but not without some drama.

"The press has written that there were all sorts of problems in Kingman, but there weren't," says Lazenby. "There was just one major problem: It was a pushrod engine, you remember, and there were studs holding all the rockers in place—you know, those American-type bent-metal rockers. Well, the heat treatment was wrong on those studs and they kept snapping.

"That was basically the only problem we had, unless of course Ford knew of some others they were keeping bloody quiet about!"

Gay, who Lazenby remembers as the man who spent the whole time in Kingman glued to the telephone talking to Dearborn—"He'd be on there three, four hours at a time!"—would save the day. He personally led the team which effected major revisions to the valve train. After several all-nighters, a chartered airplane flew the only remaining engine to Indianapolis. It was such a thrash, that parts were borrowed from two rental Ford Fairlanes in the garage area to finish the engine installation!

On March 24, the green and yellow Team Lotus 29 was wheeled out and its bellowing Ford V8 fired off in anger. Clark got up to 146mph before wind and rain caused a two-day delay. Jimmy flew home to race at Snetterton, and Gurney stepped in, topping 149mph in his first few laps.

Overnight, Lazenby and his crew changed the final drive. Very late on the afternoon of March 28, Gurney clocked in at a staggering 59.78sec, 150.50mph—the second-fastest lap in Speedway history!

In early April, Ford signed contracts with Chapman for three cars, one each for Clark and Gurney, plus a spare.

**THE '63 RACE, AN ANTICLIMAX** The spare was a good idea, for after turning qualifying laps of 151 and 152mph, Gurney hit the Turn One wall hard. Clark, though, was unruffled and qualified a solid fifth after being temporarily on pole with a four-lap average of 149.75mph.

"Sixty-three was the year we started out with these horrible Dunlop wheels where somebody had drilled too many lightening holes and weakened the things. I remember the car flying around on these wheels in practice. Jimmy came in every so often and Chapman would say, 'Go and have a look at those cracks and figure out if it's all right for another few laps.' He wouldn't make the decision, he'd send us bugging off to look at the cracks and try and work out at what rate they were growing!"

For qualifying, Team Lotus turned up on Firestone rubber, partly because of the problem with the Dunlop wheels and partly as a palliative to Ford whose ties to Firestone were strong. This started a major war in the paddock as initially Firestone (which was providing 16in. fronts and 18in. rears to all the roadster teams) claimed it couldn't supply the little 15-inchers Lotus had to everyone else.

A.J. Foyt ran to Goodyear, everyone else ran off screaming and waving peti-

tions and Firestone ultimately relented—which caused another crisis: a 15in. wheel shortage.

Lotus got caught up in the latter because Gurney had crashed with the only set of "wide" 15in. rear wheels in the Lotus garage on his car, which meant Clark had to qualify using the narrower Dunlop wheels.

"By then, Chapman had come up with a sort of adapter that went up behind the wheel to help strengthen it a little bit," notes Lazenby. "We eventually got a set of new wheels from somewhere; we certainly didn't race on the Dunlop wheels with all those holes in them. Whether these were American wheels or wheels that were rapidly made in England and shipped over, I don't know. I rather fancy they were probably American wheels. Everyone pitched in to get the spare ready for Dan to run."

Gurney eventually got in easily with four laps at an average of 149.019mph.

For the Lotus men, the race itself was tense from start to finish, Clark and Gurney slipping back to 10th and 11th in the early laps, well behind flying leader Parnelli Jones in the J.C. Agajanian-entered roadster called "Calhoun." As the roadsters began their pit stops starting about lap 60, however, the Lotuses found themselves running in the first and second places they would keep until their own first stops on lap 93 (Gurney) and 95 (Clark).

Jones got the lead back, but Clark was charging around at a consistent 147-149mph pace. The Scot was a mere 12 seconds behind—and on the move—when the brilliant Jones rocketed away from his third and final stop on Lap 163.

Clark took half a second a lap away from Jones until, on lap 179, Eddie Sachs hit the first turn wall to bring out the caution flag. The green Ford-powered Lotus had closed within four seconds of the lead roadster.

And then politics (provincialism? favoritism?) reared its head. With the field slowed down for the yellow flag laps, it became clear to everyone that the oil that had recently begun to appear on the racing line was coming from leader Jones' oil tank. Though chief steward Harlan Fengler had said he would deal harshly with anyone leaking fluids at any time, he did nothing about Jones' oil in the final minutes of the race—despite Chapman's rantings and ravings. Clark lost a lot of time due to a minor but significant misunderstanding about the yellow flag rules, and dropped even farther behind. Ultimately Jones claimed victory by 33.83sec. Clark finished second and Gurney seventh, a marvelous result for both Lotus and Ford.

Team Lotus, however, was not happy at all, and Clark, "tired of the condescending treatment he had received as a rookie and a foreigner," wrote Levine, "let loose with a few opinions of the race now that he had shown what he could do. 'What beat us?' he asked. 'Well, I think it was the yellow flag, and the black flag, and the rules and things. Given an equal chance and a break or two, we should have lapped Parnelli. I'm not really keen to come back except that it is, of course, a lot of money.'"

"I don't think Jimmy ever really took to the place, being honest," says Lazenby today. "I'm not sure if you should quote me on that, however. He really was a country lad, a helluva nice person, fantastic chap, you really can't say enough about him, but I don't think Jimmy really took to the—how do I put this nicely?—the American way of life. All the razzmatazz, the hooah and flag-waving that went with driving the car."

Clark would, of course, return to Indianapolis despite his threats. The '64 event was a complete disaster for Team Lotus, but the two "preambles" only made Clark's dominant '65 victory all the sweeter.

As for the pushrod Ford V8 engines, they were wonderful in their debut. "We really didn't touch the engines all month," Lazenby remembers. "There was a Ford crew there who did all the engine work. Gay and Evans were there. We had no problem respecting the Ford crew, they got stuck in and did the job all right, no problem at all there." The Ford V8 became a four-cammer in '64, got turbo-charged in '67, and lived on sweetly for years. But that's another story.



Chapman, Lazenby and Clark did return to Indy, dominating the '65 race. Today, Lazenby, with wife Jane (RIGHT), owns and operates a successful machine company in England.







**PLUGGING IN** McLaren technicians probe the systems of the team's new MP4/7-Honda during an electronic debriefing. Test driver Mark Blundell rests.

## Electronics And Aerodynamics Dominate The Focus Of Formula 1

**PROBING** Distinctive "double floor" aerodynamics incorporate unusual radiator inlet that helps set Ferrari's new F92A apart from its rivals.

# ADVANCING THE STATE OF THE ART

by **GIORGIO PIOLA**



# STATE OF THE ART

**T**he continuing emergence of advanced electronics in racing applications highlights the opening of the 1992 Formula 1 World Championship season. While many argue that sophisticated design applications like electronic controls detract from the driver's contribution to the car's performance, others counter that technical advances allow the best drivers to raise the level of their own contribution even higher by having less to concentrate upon. One thing, however, is certain: With the continuing introduction of ever more technological breakthroughs, the gap between F1's "haves" and its "have-nots" will only broaden.

At this early stage of the 1992 season, top marks must go to the Williams team. Last season, Williams followed Ferrari's lead by using a semi-automatic gearbox, but this year the team has come back and, for the moment at least, taken the technical lead with a car that also features active suspension, a refinement of the system that produced victory at Monza for the team in 1987.

**THE NEW LEADER** When the light flashed green on the first Grand Prix of the year at Kyalami, the Williams FW14Bs drove off into the sunset, kept at constant ride height—regardless of the level of the fuel tanks—by the "reactive" suspension developed by design chief Patrick Head and company. Developing this reactive suspension system has been a Williams priority since 1987 when it first appeared on the FW11B, and the Williams



**UP CLOSE AND PERSONAL** The Williams advantage in action. Front wing endplate detail is also visible.

research team has been concentrating intensively on perfecting the present reactive system since last July.

The team's test driver, Damon Hill, and Riccardo Patrese (joined at times by Nigel Mansell) logged nearly 18,000 test miles in an attempt to establish bulletproof reliability for the system before taking it to Kyalami. Sufficient progress was made in both electronics and hydraulics to give active suspension a second life in F1 after being abandoned due to its enormous complexity five seasons ago—despite producing wins for both Williams and Lotus. In those days there was also a weight penalty of nearly 50lb, quite a handicap for an F1 car required to weigh only 1111lb.

The combination of sophisticated carbon fiber chassis technology and the very light Renault engine, however, gave Williams the opportunity for a complete re-think that has

allowed the construction of a reactive car that weighs nearly 40lb less than one without active suspension.

The full advantage of active suspension, however, will not be seen until the arrival of Williams' forthcoming FW15, where the aerodynamic package was created on the premise that it will always work at a consistent ride height. The major differences should be seen at the rear, where the diffuser of an "ordinary" car loses a great percentage of its efficiency if the car gets too close to the ground.

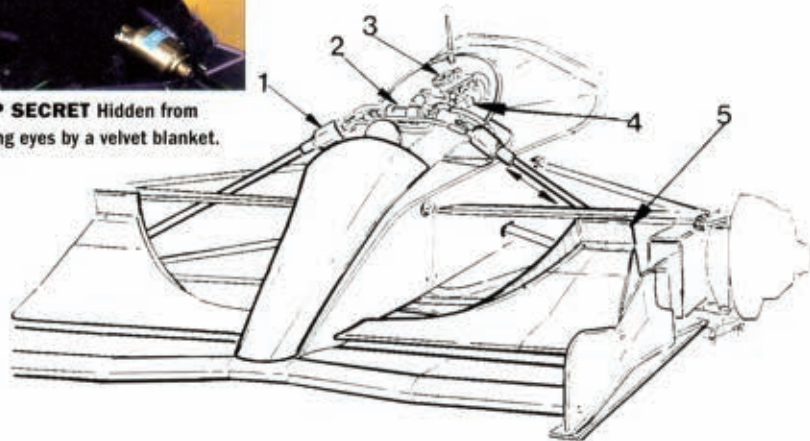
**THE FIGHTER JET** Ferrari has chosen another approach to that same problem, but one quite different from Williams. In the F92A, the Italians have produced a car with highly innovative aerodynamics in an attempt to maintain as static an aerodynamic platform as possible.

Customarily, the airflow coming into a car

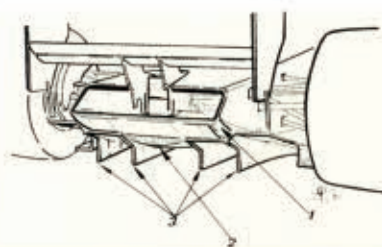


**TOP SECRET** Hidden from prying eyes by a velvet blanket.

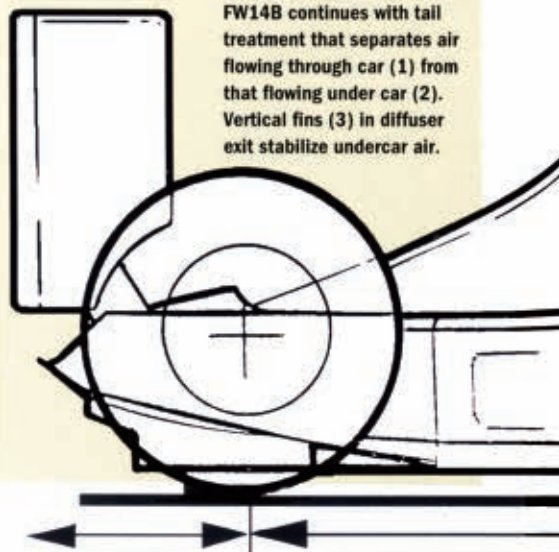
## WILLIAMS FW14B



**THE WILLIAMS-RENAULT REACTIVE SUSPENSION SYSTEM** proved its worth in Kyalami. The hydraulic system consists of cylinders (1) built from an exotic lightweight alloy. These are linked to conventional shock absorbers (2) and activated by electro-valve actuators (3) linked to a distributor (4) for the entire system. Additionally, the improved performance of the Renault V10 engines allowed the team to install vertical flaps (5) on the trailing edges of the upswept front wings, trading off some of the extra power for improved grip.



**SPLIT FLOW** Williams FW14B continues with tail treatment that separates air flowing through car (1) from that flowing under car (2). Vertical fins (3) in diffuser exit stabilize undercar air.







**INTERIM WEAPON** New MP4/7 is likely an intermediate step until team's active suspension is up to speed.



**TWIN TUNNELS:** Pods housing radiators connect to central chassis through small wing sections.

is divided into three parts. The first of these goes over the bodywork and the wings. The second goes through the sidepods to cool the radiators. The third goes under the car. With the Ferrari F92A, the lower zone of the tri-partite airflow has been split to create a fourth kind of flow between the lower part of the sidepods and the real flat bottom. This fourth flow, not sealed at the sides, works practically as an "air miniskirt" that channels the lower flow more smoothly and more effectively to increase the efficiency of the rear diffuser. As with any advanced aerodynamic idea, however, there are negative points, among them is that the complex construction means heavier weight due to the double structure in the lower

part of the car. In South Africa, the new Ferrari did not perform quite up to expectations, but both cars were sidelined by identical oiling problems that knocked them from point-scoring finishes, so the jury may still be out on the most radical car of the year.

**THE DEFENDING CHAMPIONS** In the McLaren camp, the new MP4/7 is not scheduled to race until the Brazilian GP at the earliest. Four years in gestation, the MP4/7 represents the product of more research effort than ever for a McLaren F1 car. It was first tested in early March, and uses what team boss Ron Dennis calls "fly by wire," a system similar to that employed in modern jet fighters to enable pilots to control large, complex planes that would be impossible to handle without the help of computers. This means that the traditional direct mechanical links between the controls at a driver's command and the business end of his race car have been replaced by the somewhat more remote control of electronics, as sensors and actuators take the place of shift levers and throttle cables. This ultimately will allow split-second precision in the synchronization of engine and gearbox speeds that should make for lightning-quick shifts. Dennis maintains that McLaren's emphasis is still on finishing races with reliable equipment, but the current wave of advances—an active system is said to be in the McLaren pipeline—may be pushing the team to abandon its traditional conservative ways.

## USING THE AIR BELOW

Until the middle 1970s undercar airflow was practically forgotten by designers. Then Colin Chapman brought out the Lotus 78 and 79, inventing ground effect by creating a form of venturi tunnels within the car's sidepods—tunnels whose outer edges were sealed to the ground by what came to be known as "skirts." The Lotus 79 dominated the 1978 season—with Mario Andretti producing his World Championship—and suddenly every team was building its own tunnel car.

The ground effect era may have been one of the harshest in Formula 1 history, as designers stiffened suspensions as much as possible to try to keep the tunnels sealed tightly to the ground. Skirt technology evolved as part of this quest, and FISA's rulemakers chased after each development trying to keep the situation under control.

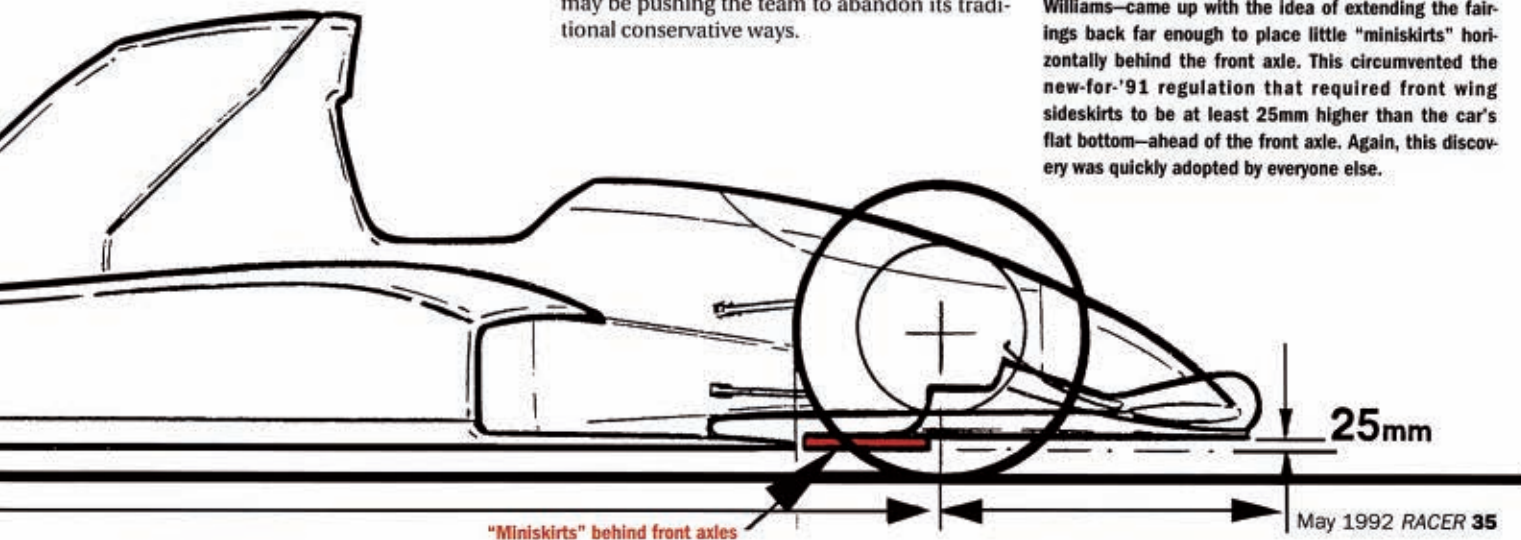
Finally, after a string of serious accidents that may or may not have been attributable to tunnel cars, skirts were banned for the 1983 season as FISA attempted to reduce the speed of the cars in corners, requiring all cars to have "flat" bottoms between the wheels.

With undercar aerodynamics prohibited between the wheels, attention shifted to the areas ahead of and behind them. In the rear, upswept undertrays created diffusers that produced additional downforce, and this was eventually augmented by creating additional grip in the front.

By 1986, the first evidence of skirting had begun to reappear on the lower edges of the front wing endplates of the Williams cars. These were little tuck-under tabs to "steer" the airflow in the desired direction. The design of these remained fairly stable until Adrian Newey introduced the "stepped nose" concept to F1 with his March 881. Soon, both extended and sculpted endplates and secondary "inner plates" also began to appear.

Jean-Claude Migeot took this a step further with 1990's Tyrrell 019, significantly raising the car's nose and drooping anhedral wings off either side, a trend copied by many others in one form or another. That same year, Ferrari produced endplates that curled under to create a scoop that extended rearward to channel air cleanly past the front wheels to reduce the turbulence of the air approaching the sidepods.

The technology of the front wing endplate was pushed even further last season, when Newey—now at Williams—came up with the idea of extending the fairings back far enough to place little "miniskirts" horizontally behind the front axle. This circumvented the new-for-'91 regulation that required front wing sideskirts to be at least 25mm higher than the car's flat bottom—ahead of the front axle. Again, this discovery was quickly adopted by everyone else.



"Miniskirts" behind front axles



# STATE OF THE ART

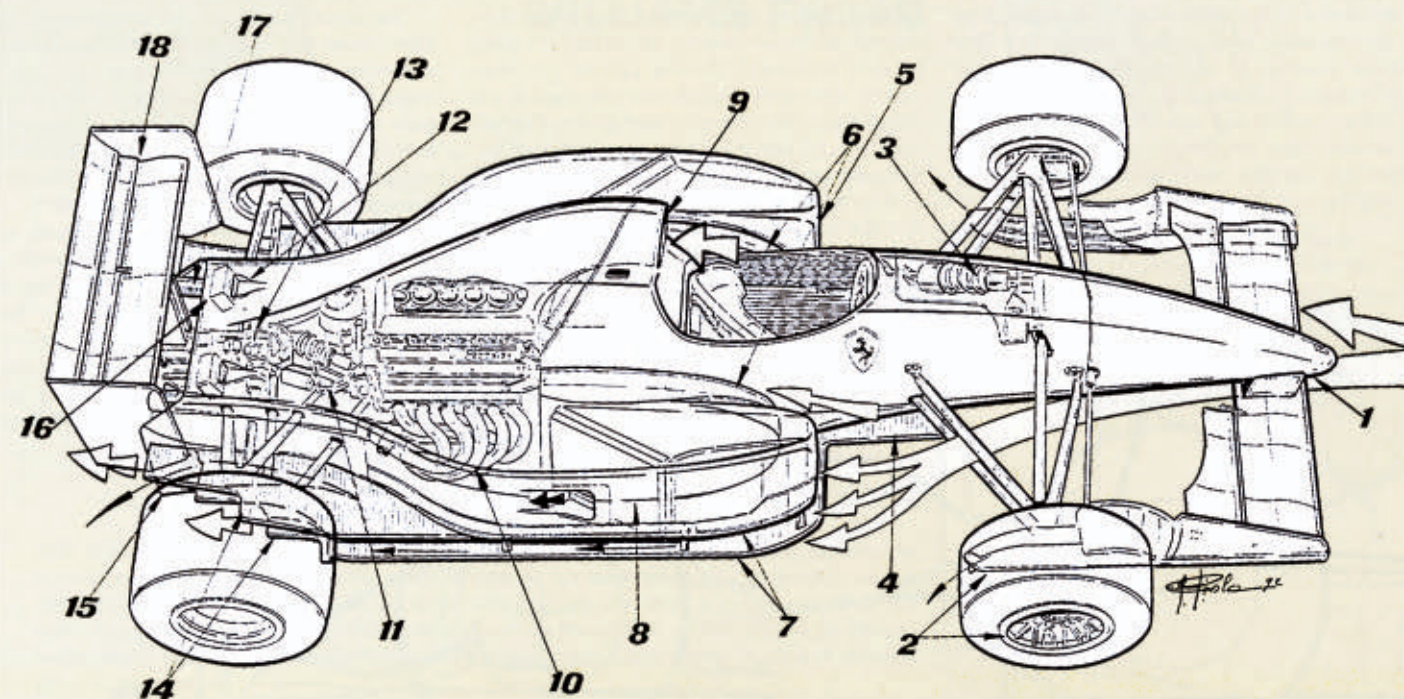


**MIXED REVIEWS** The light for the new season may have flashed green in South Africa, but problems with engine oiling system in the race sidelined both cars and prevented a complete evaluation of the new Ferrari F92A. In Mexico the situation worsened to the point that a new car may not be far off.

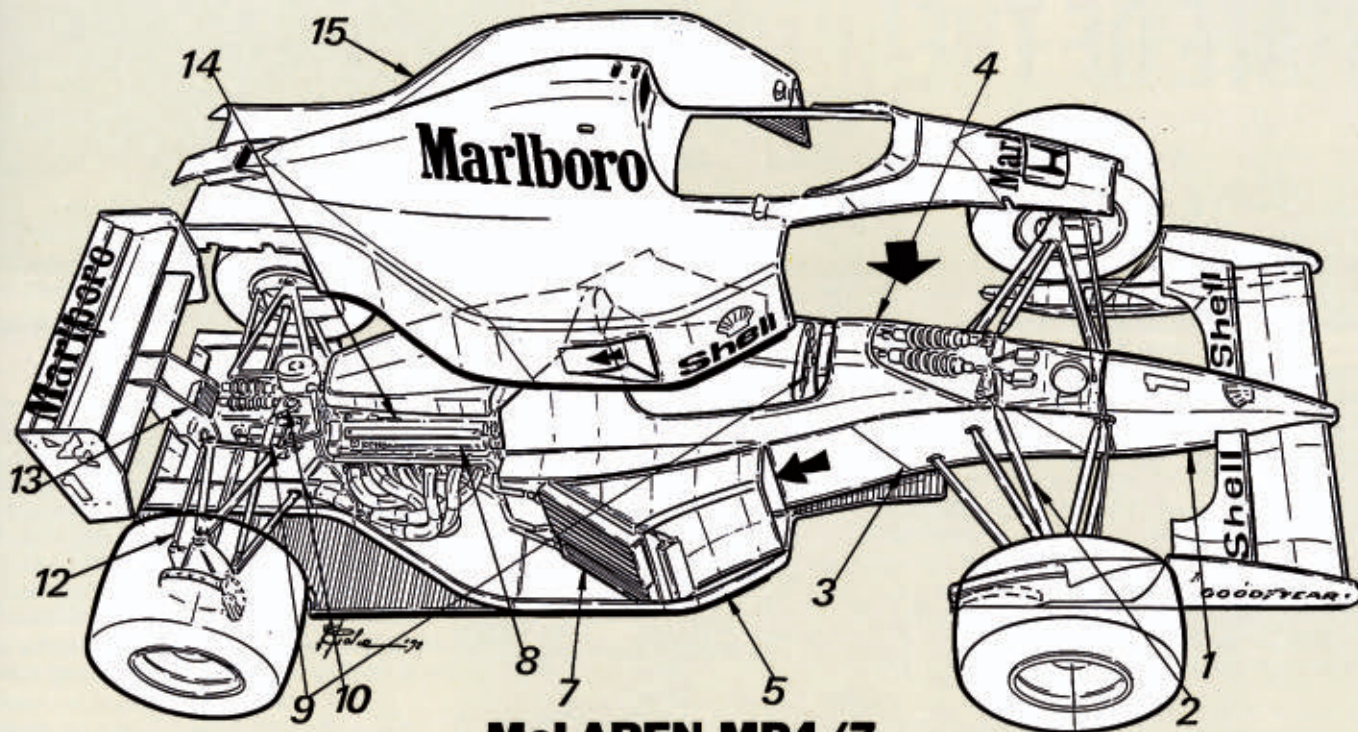
## FERRARI F92A

The F92A has a full-width wing like the Benetton and mini-skirts as on the 643 (1&2). The car also features new BBS forged magnesium rims (2). A new departure for Ferrari is a Bilstein monoshock with ride-height control (3). The car has a prominent air splitter (4). The air intakes (5) are separated from the chassis by two small wing sections (6) with part of this area comprising the fuel tank. The two floors are shown (7), with the radiator (8) in the standard position. The car has a new triangular airbox (9) simi-

lar to the Tyrrell, and the new engine is smaller, lower and lighter with a new exhaust system. The shape of the exhaust system (10) reflects detailed study and complements the venturi tunnels of the sidepod internals, exiting via a six-into-one junction. The rear suspension (11) is similar to the 643, while there are now two small oil radiators (12) for the semi-automatic gearbox, rather than a single large one. The longitudinal gearbox (13) has only six speeds, instead of seven as before, due to engine improvements.







## McLAREN MP4/7

The MP4/7 has a one-piece frontal section (1) comprising the nose wings and deformable structure. It is considerably narrower than that of the MP4/6. The front suspension (2) remains pushrod, but the rocker is angled further to the rear. The shock absorbers are located in a similar position, but the attachment (4) forms part of the front roll-over structure. McLaren has followed the high-nose trend, but without an exaggerated design. The nose has no vee in the middle like the Tyrrell, Jordan or Williams, but the chassis (3) is much narrower than the MP4/6 in the area of the driver's legs. The sidepods (5) are much shorter and less rounded with a wider air duct. There is one oil radiator in each side (7). The new Honda V12 engine (8) is lighter and lower than its predecessor, with a 65-degree

vee. The new car has a pneumatic semi-automatic gearbox (9) with no lever and consequently a narrower cockpit. The rear suspension (10) is all new, with the shock absorbers mounted horizontally on top of the gearbox rather than vertically on each side. The new rear suspension has a new upright (12) with a mid-height link to adjust toe-in. Instead of having two small radiators for the gearbox, there is only one in the middle of the wing mounting (13). Instead of being tall, it is low like the Williams, and affixes to the lower profile of the rear wing. There is no throttle cable on the MP4/7 (14), with the accelerator controlled electronically. There is thus no mechanical linkage between the driver, engine and throttle. The chassis rear coke bottle shape is completely different than the MP4/6.



**READY TO ROLL** Latest championship defender rolls out for testing. Though still evolutionary, its basic nature does depart from McLaren's tried and true conservatism by employing electronic controls for throttle and gear-change mechanisms.

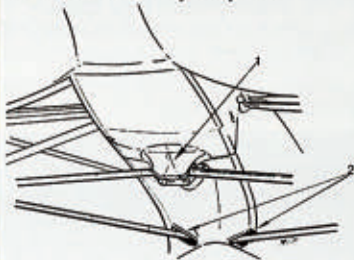


# STATE OF THE ART

## JORDAN 192

The most interesting car of 1991, after the Williams FW 14, was Gary Anderson's excellent first try at an F1 car, the Jordan 191. The Jordan 192 is clearly a much-refined development of that car. The front wings and flaps (1) are more curved than on last year's car, although the front wing endplates are much more conventional (2) without the same level of sculpting. The front suspension (3) is very different, with the two front pickup points of the lower wishbones meeting underneath the chassis in a shaped moulding attached to the chassis. The rear lower links are connected to the chassis just above the underside air splitter. The car features a monoshock with ride height control (5), although a new system is due later in the year. The entire chassis is 5cm higher than the 191 (4). The sidepods (6) have a similar shape to last season, but are slightly taller to accommodate larger radiators (7). The gear lever (8) operates sequentially (seven speeds) making gear-changing much quicker. The monocoque and fuel tank (9) are shorter than the 191, but slightly wider. The

**UNIQUE APPROACH** The lower front wishbones are attached to the chassis by means of a central linkage (1) attached to, rather than inside, the chassis. The rear arms are more traditional, entering the chassis' underside and attaching behind the underbody air-splitter.

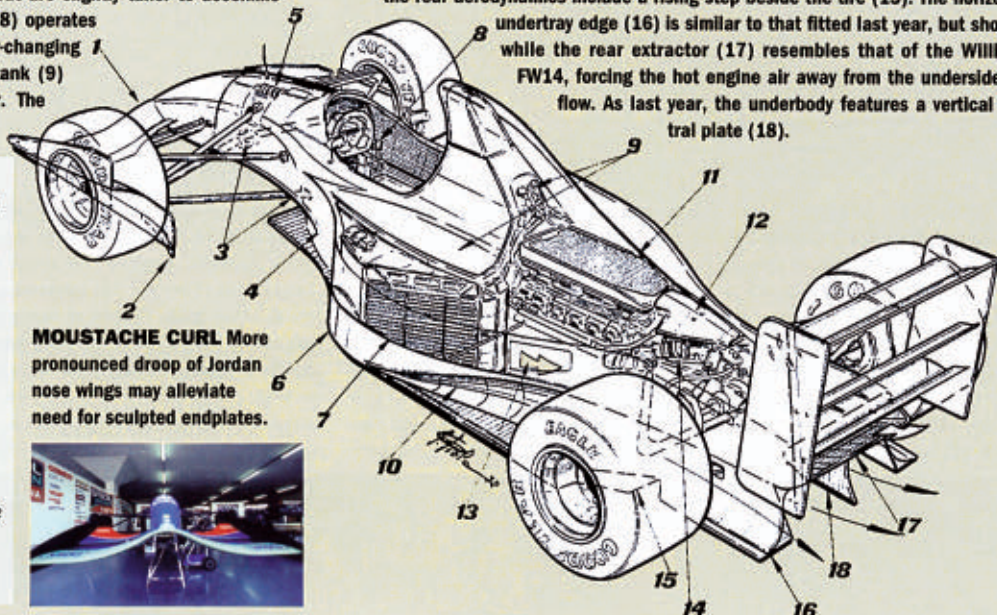


**MOUSTACHE CURL** More pronounced droop of Jordan nose wings may alleviate need for sculpted endplates.



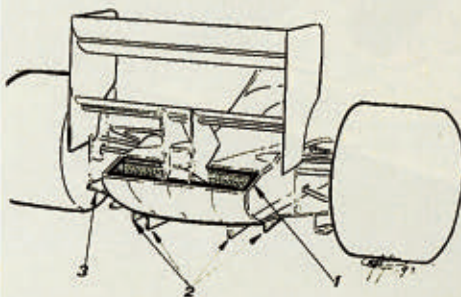
**REVISIONIST THINKING** Jordan designer Gary Anderson refined his previous design to take Yamaha V12.

rear of each of the sidepods is carved away (10) to aid the airflow to the rear undertray. Above this in the sidepod is an optional air outlet (13) for extra cooling. The 70-degree OX99 Yamaha V12 engine (11) is long and low, enabling the 192 to have an even slicker engine cover than last year's car. The carbon fiber oil tank (12) has been shaped to fit neatly under the bodywork, while also saving weight. The rear suspension (14) is similar to that used on the 191, while the changes to the rear aerodynamics include a rising step beside the tire (15). The horizontal undertray edge (16) is similar to that fitted last year, but shorter, while the rear extractor (17) resembles that of the Williams FW14, forcing the hot engine air away from the underside airflow. As last year, the underbody features a vertical central plate (18).



## LIGIER JS37

The rear of Frank Dernie's new Ligier JS37-Renault employs an unusual upswept diffuser (1) with four vertical underside plates (2) and edges (3) that are aerodynamically sculpted.



### PUZZLE SOLVED

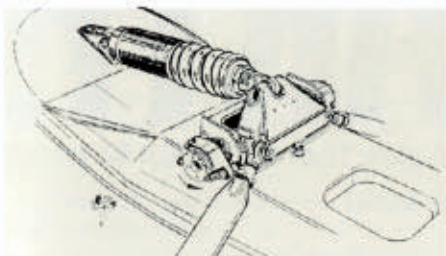
Though Alain Prost ended up not joining the team, the attractive JS37 represents a big step forward for Guy Ligier's team, though perhaps not as large as some may have hoped.







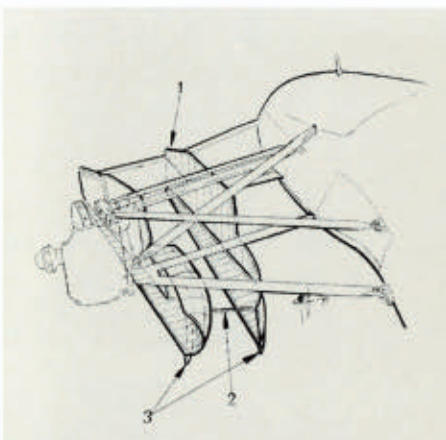
**VENTURI LARROUSSE** Rescued from creditors, Gerard Larrousse has hooked up with Venturi performance car company, former March boss Robin Herd and Lamborghini to produce the new V12-powered LC92 (RIGHT) with Benetton-style nose. Front suspension (ABOVE) uses conventional shock mounting above driver's feet.



**DALLARA** Additions of Ferrari power and Goodyear tires are the major changes at Scuderia Italia for '92, although new monoshock front suspension (ABOVE) highlights new BMS 192 chassis (RIGHT). The team rejoiced in Mexico, where for the first time in Grand Prix history, a Ferrari customer team outperformed the factory team.



**LOTUS** Awaiting completion of its new 107, Lotus began the season with a pair of 102D chassis (RIGHT), and picked up a point at each of the first two races. Ford HB V8s have replaced last year's Judds, but otherwise the car remains relatively the same as in '91, with novel front shock absorber placement (ABOVE).



**FOOTWORK A13** Alan Jenkins, the only American designer presently responsible for an F1 team, has modified his interesting Footwork A12—a car that was largely negated last year by the problems surrounding its Porsche engine—for the new season. Now powered by the 10-cylinder Mugen/Honda, the new A13 has



given up its individualistic nose shape—that featured a vertical central mounting for the wing—to follow the basic Jordan shape, but with an additional vertical plate (1) alongside the wing endplate. In order to keep this structure rigid, it is linked (2) to the endplate, and the system has dual rubbing strips (3).



MAIN  
EVENT

# THE GREATEST SHOW ON EARTH

The 1992 Running Of The Daytona 500 By STP Has Shown Once Again That Attention To Detail Makes NASCAR's Winston Cup Series The Most Popular Racing Around **by GORDON KIRBY**





Everyone knows that NASCAR is the most competitive and successful form of professional motor racing in the USA. If not the world. A stable, cost-effective technical formula and strong, steady administration have built what was once considered a crude backwoods form of racing into the modern casebook study of how to run a motor racing series.

In today's television-driven world, it's not difficult to understand why NASCAR's cost- and technology-controlled formula works so well, but there's much more to NASCAR's success than TV appeal. To begin with, this is the 22nd year that NASCAR's top division has been sponsored by RJ Reynolds' Winston brand. Winston's active, intelligent backing has been a key element in the steady growth of NASCAR, culminating in the renaming of the series four years ago when the time-honored Grand National moniker was dropped in favor of Winston Cup.

Stability is part of the plan, too, as the current 29-race schedule has remained almost unchanged through this period. This has meant that every NASCAR track from world famous Daytona to former dirt tracks like Richmond and North Wilkesboro have been able to build powerful traditions around well-established dates. This is a lesson still not properly absorbed by either Formula 1 or IndyCar racing.

Over the past winter much discussion took place in both Formula 1 and IndyCar circles about the effects of the worldwide recession.

Car counts are down this year in both of racing's top single-seater categories. IndyCar racing is expected to struggle to produce full fields at most of this summer's races, while F1 has been swamped this year by more rent-a-ride drivers than ever as most teams scratch to find the money to compete.

Not so in NASCAR. A stroll around the garages at February's traditional season-opening Daytona 500 revealed a grand total of 58 Winston Cup entries. No fewer than 30 of these enjoyed major sponsorship from a national brand or product. A similar story could be found in NASCAR's second division Busch Grand National category which also kicks off the new season at Daytona. Again, no other form of racing can boast such depth. Nor can any second division racing series draw a crowd of 100,000 for its own race on the day before the main event!

These days, the Daytona 500—even more so than the Indianapolis 500—is the meeting ground for America's automobile racing industry. As well as a full week of racing—eight different races are run over an eight-day period—there are events like a well-attended oval track promoter's workshop and a busy trade show at Daytona Beach's new downtown convention center. Plus, there's a whole plethora of nearby short track races not only for Stock Cars but Sprint Cars as well.

Opening day races on the 2.5-mile Big D trioval are the Busch Clash polewinners' 20-lap sprint race and a 200-mile race for ARCA's midwestern short trackers. Next comes Pole

Day qualifying runs, followed by three more days of practice and qualifying and then the pair of 125-mile Winston Cup qualifying races on Thursday afternoon.

Before the 500 on Sunday, there's the opening IROC race of the year on Friday and the Grand National race on Saturday. It's worth noting, incidentally, that 18 of the 44 starters in this year's Busch Grand National season-opener ran the full 120 laps or 300 miles. Even if Stock Cars may not be your thing, it's still a pretty damn good week's entertainment.

The 500 itself was won, of course, by Davey Allison in Robert Yates' Havoline Ford Thunderbird. Allison dominated the second half of the race after a mid-race multiple wreck delayed or eliminated most of the other favorites. Davey crashed on his own while practicing four days before the 500, and had to revert to a backup car for the following day's 125-mile qualifying race. He finished a strong third in his qualifying race and was running right there in fourth place in the 500 when the first three cars—Bill Elliott, Sterling Marlin and Ernie Irvan—collected each other while running three abreast as they motored off Daytona's west banking.

At the end of the 500, Allison had only Morgan Shepherd to worry about, but in his first race aboard the Wood Brothers' Citgo Ford, Shepherd didn't have the horsepower to make a move. The pair of Fords crossed the line nose-to-tail, exactly as they had been for many previous laps. In that way, the finish

PHOTOGRAPHY by BOB COSTANZO



#### FULL HOUSE

Packed grandstands and a solid field are but superficial indications of the grand success of stock car racing.



# GREATEST SHOW ON EARTH

was entirely typical of the relative lack of spectacle provided by the modern full "restrictor plate" races that are reserved in these days of heavy insurance fees for NASCAR's two fastest tracks, Daytona and Talladega.

**ALLISON LEADS STRONG FORD ATTACK** After threatening to do so in each of the past two years, Bobby Allison's oldest son scored his first Daytona 500 victory just nine days before his 31st birthday. Davey closed out the 1991 Winston Cup season as the hottest driver on the circuit, winning two of the year's last three races and finishing a closing third in the championship. This year, he's many people's favorite to unseat defending champion Dale Earnhardt.

At Daytona at least, Ford's fleet of T-Birds looked good, sweeping the front row with Junior Johnson's team and then taking the first four places in the 500. What happens at Daytona rarely reflects the character of the season to follow, but it seems clear that a number of Ford drivers have a good chance of winning the title, not least Allison.

Aside from Robert Yates' top-rated team, there are two or three other Ford teams that can win this year's Winston Cup championship. At Daytona, Junior Johnson's two-car team of Bill Elliott and Sterling Marlin looked damn near unbeatable until the lap 92 accident with Irvan's Chevrolet. Elliott should shine this year as he concentrates on merely driving Junior's Budweiser cars instead of running his own family team. Teammate Marlin showed his pace in the Maxwell House entry at Daytona, and in his second year with Johnson he must surely score his first Winston Cup win.

Other Fords capable of scooping this year's title are Jack Roush's Valvoline-sponsored lead entry with Mark Martin aboard and Bud Moore's Motorcraft car, driven this year by Geoff Bodine. Martin should be a serious championship contender, Bodine perhaps less so. Other top Fords include the Wood Brothers' car with Morgan Shepherd driving after he and Bodine swapped seats this past winter. Then there's Alan Kulwicki aboard his own Hooter's-backed car and Geoff's brother Brett Bodine in Kenny Bernstein's Quaker State entry. Bernstein's team is new to Ford's ranks, having previously run Buicks.

Chevrolet's top contender is Earnhardt, of course. Four of Earnhardt's five championships have come in the past six years with Richard Childress's excellent team. "Ironhead" or "The Intimidator" is an eminently aggressive and skilled driver. He has superb car control and is an entirely intuitive racer. He also understands the game impeccably from shop floor practicalities to the psyche required amid NASCAR's intensely close competition. Estimates put his all-up earnings from last year at \$4 million, including a base salary of \$1 million. This would make Earnhardt the biggest



**THE ROOTS OF A SUPERSTAR** The oldest of Bobby Allison's two sons apprenticed in his own and other peoples' cars in a variety of short track leagues. His father was insistent that Davey learn the business from the ground up. Bobby has frequently made the point that he wanted his sons to appreciate the endless investment in time and effort required to go racing.

Davey got his first real crack at Winston Cup racing in 1987 when he was 26 years old. Driving for Harry Ranier's team, he swept to NASCAR's Rookie-of-the-Year award with an unprecedented tally of five pole positions and two wins. He won two races apiece in each of the next three seasons, while Ranier sold his team at the end of 1988 to former crew chief Robert Yates.

Under Yates' direction, the team has become steadily stronger, and last year's addition of crew chief Larry MacReynolds seemed to make it turn the corner and become a contender to win almost any race. Allison has also matured into a very fast, heads-up driver. A two- (rather than four-) tire pitstop during the first round of stops enabled him to get back onto the track in the lead and with a cushion to Elliott, Marlin and Irvan. He led for 28 laps, staying clear of Elliott until a yellow for a light rainshower closed up the field.

In fourth place for the restart following another round of pitstops, Allison avoided the big accident on the backstretch a few laps later and went on to lead 98 of the race's final 103 laps. By so doing, Davey became only the second son of a previous winner to win one of America's classic 500-mile races. Richard Petty did it for the first time in 1964 after father Lee won the inaugural Daytona 500 in 1959, but no other son of a previous winner has pulled it off at Indianapolis or Daytona until Davey's win in February.

"This has been a goal of mine for as long as I can remember," said Allison after winning at Daytona. "Following my dad across the line here a few years ago (they were one-two in 1988) was a great day, but as far as recent memory, this is one of the best."

Father Bobby is still recovering from a near-fatal accident at Pocono in 1989, and was at Daytona, overseeing his own team which runs Hut Stricklin's car. The senior Allison was a proud man.

"I feel really good," grinned Bobby. "I feel a lot of happiness. I'm very, very proud. It's really a special pleasure. I feel like Davey is the best youngster out there."



earner in American racing. Once again, he and Childress' GM Goodwrench team will be tough men to beat over the 10 months and 29 races that comprise the Winston Cup season.

Other top Chevis are Rick Hendrick's two cars, the Tide machine driven by Ricky Rudd and Kenny Schrader's Kodiak car. Rudd finished second in last year's Winston Cup and will surely have strong days this summer, but a championship somehow seems unlikely. Schrader is a fine fellow, but an even less likely champion. Then there's the fast but still unpredictable Irvan in the Morgan-McClure Kodak Lumina, and three-time champion Darrell Waltrip aboard his own Western Auto-sponsored Darwal machines. Both should win a race or two, but neither seems to have the wherewithall to challenge for this year's championship. Other Chevis capable of winning races this year include Joe Gibbs' Interstate Batteries car (driven by Dale Jarrett in the team's debut season) and Billy Hagan's Sunoco entry (with 1984 champion Terry Labonte on board) although this last team may instead switch to Fords.

The merging of General Motors' motorsports activities under the umbrella of former Chevrolet man Herb Fishel's Motorsports Technology Group has resulted in the withdrawal of Buick from Winston Cup racing. This leaves Chevrolet, Pontiac and Oldsmobile waving the GM flag in NASCAR's top series. Pontiac's top drivers are Rusty Wallace (for Penske Racing South/Miller Brewing), Michael Waltrip (Bahari Racing/Pennzoil) and Richard and Kyle Petty for Petty Enterprises/STP and Sabco Racing/Mello Yello respectively. Wallace is the only one of these that seems a likely championship challenger and even then only remotely. Oldsmobile's top man is the extremely popular and accomplished Harry Gant who continues with Leo Jackson's Skoal Bandit team. The 52-year-old Gant will surely win a race or two.

**NEW ATTITUDES?** Probably the most notable thing at this year's Daytona 500 was the public arrival of Gary Nelson as NASCAR's technical director. One of the most highly-rated Winston Cup crew chiefs over the past 10 years, Nelson went to work for NASCAR at the end of last year. Celebrated in the past for his ability to skirt the rules, Nelson has promised to be more consistent in enforcing the rulebook and, by all accounts during the opening week of the season at least, he held true to his word.

Nelson produced new bodywork templates this winter, and quite a few teams had to re-skin their cars to be legal at this year's season opener. This is an expensive and time-consuming job if, like most top teams, you have between 10 and 15 cars. Once the Winston Cup teams got to Daytona in February, they found Nelson continued to be a stickler, sending them back to the garage on numerous occa-

**FORD THUNDERBIRD:** Allison's may not have been the strongest T-Bird, but he rolled it into Victory Lane.



**CHEVROLET LUMINA:** Like many Chevy drivers at Daytona, 1990 winner Derrick Cope struggled.



**PONTIAC GRAND PRIX:** Seven-time winner Richard Petty was Grand Marshal for his last Daytona 500.



**OLDSMOBILE CUTLASS:** 1991's Rookie of the Year, Bobby Hamilton, drove Country Time Olds.







# GREATEST SHOW ON EARTH

process at Daytona this year. Mosley was making his first visit to the Daytona 500 and was delighted with what he saw. "I'm very impressed with the way they run the technical inspection process," said Mosley. "I think we can learn some good things from them. I'd like to arrange for some of our people to come to a couple of NASCAR races this year to observe and learn from them."

One man who was rather more lukewarm toward Nelson's methods was Junior Johnson, one of NASCAR's senior team owners and a famous former driver. "It's good right now," commented Johnson. "But I seen this dog and pony act before. It really don't take no brains to enforce the rules. Just to lay a template on a car ain't that complicated."

"What I don't like," he went on, "is when they start tellin' people that you can't use something that's innovative but within the rules. Or when they allow you to do somethin' you've come up with and then tell everyone else about it. That's not the American way. It's communism and I hope it don't come 'round to that. I'm not sayin' it will, but I'm askin' the question 'cause I seen it before."

And then there was Roger Penske, trying his best to keep a low profile in NASCARland and scratching his head over his driver Rusty Wallace's comparatively poor showing on Daytona's high banks. Early in the week of practice, Penske's team was among those caught with some chassis-lowering screws built into one of its cars and fined by NASCAR. "I need some lawyers to race down here!" said Penske, grinning but only half-joking.

**KEEPING IT SIMPLE** Of course, the bottom line in NASCAR is that, first and foremost, it's a show for the fans, a circus. The philosophy is "keep it simple," and for years that approach has worked to marvellous effect. Which brings us to the question of whether or not NASCAR can maintain its successful formula and change with the times—as it surely must—as

we approach the end of the millenium.

More and more there are lurking questions about whether or not the Japanese will decide to compete in NASCAR with one of their American-built products. There are other questions about how and when NASCAR will expand the Winston Cup series from its largely regional southeastern base. Marketing requirements seem inevitable in pushing NASCAR to schedule more and more races on a wider geographic basis within the USA. This in turn will likely force NASCAR's long-faithful smaller tracks to give up their second race dates each year after most of them have made big investments in recent years to improve their facilities. A sticky question.

Then there's the possibility that increasing government pressure and regulation could force cigarette companies out of sports marketing in the next four or five years. In the past year, for the first time in the history of the NASCAR-Winston marriage, there were substantial budget and personnel cutbacks in Winston's public relations effort, partly because RJR is still restructuring after the company's takeover two years ago by leveraged buyout experts Kohlberg, Kravis and Roberts.

Another aspect to NASCAR's future is the possibility that Stock Car racing's very success is outstripping its current management culture. With popularity come more agents, more lawyers, more different constituents, all looking for their piece of the action. Oldtimers at Daytona say the past two or three years have seen a profound change begin to overtake the organization. Some suggest that Bill France Jr. is not comfortable with what he sees on the horizon, and that a power struggle may be taking shape within NASCAR that ultimately could force France from power. NASCAR without the France family seems incomprehensible, but stranger things have happened in the history of the world.

A final interesting—if not entirely serious—thought comes from a longtime equipment supplier who suggested at Daytona that the NFL was planning to take over NASCAR! "Do you think Joe Gibbs and the guys from Interstate Battery are just here for laughs," warned this veteran of the sport who best remains nameless. "The NFL sees something it can make even bigger and more profitable and they want it. You may think I'm crazy but remember, you heard it here first."

NASCAR will surely remain America's strongest form of racing for some time to come but there's no doubt that the next few years will see the beginnings of a new age in big time Stock Car racing. It will be interesting to see how it shakes out.

**NO TIME LIKE THE PRESENT** As dawn breaks over Daytona, Winston Cup teams are wide awake and hard at work attending to the details that ensure Stock Car racing's place atop American motor sports.



**POLICE ACTION** NASCAR president Bill France (RIGHT) named Gary Nelson (LEFT) his new technical director, and Nelson tackled rules enforcement head-on—to the letter and the intent of the law.

sions for detail changes before he would approve them.

Nevertheless, most drivers and team owners were amazingly beneficent in singing Nelson's praises, and the story played powerfully on TV and in the press. After winning the pole at Daytona, Sterling Marlin had nothing but good things to say about Nelson. Said Marlin: "I think you'll see some pretty close racing this year because of it. He's doin' a real good job and everybody's havin' to line up with the same stuff."

Even new FISA president Max Mosley was impressed with the technical inspection





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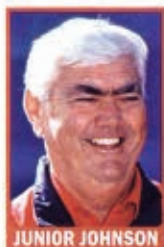
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# RED STORM

Bill Elliott Leaves Home And Finds Success With One Of Stock Car Racing's Great Teams by **GORDON KIRBY**

**F**rom the middle of last year it was an open secret that Bill Elliott would drive for Junior Johnson in 1992. Worn out from the grind of running the family team with brothers Ernie and Dan and partner Harry Melling, Elliott finally gave in last summer to Johnson's frequent offers of a seat on his team. Other than a few races here and there, Elliott had always driven for the family operation. He broke into Winston Cup racing with an ex-Penske Ford in 1976, and started winning races in 1983 after going into partnership with Michigan tool and pump manufacturer Harry Melling. Melling's backing enabled the Elliott brothers' team to run all the races and become a top operation with major sponsor Coors.

In 1985, Elliott won 11 superspeedway races and earned the sobriquet "Million Dollar Bill" by winning that year's inaugural Winston Million with victories in the Daytona, Talladega and Southern 500s. Three years later, Bill won the Winston Cup championship with fewer wins—six—but more consistency, which is always the key under NASCAR's deep-scoring point system. The last three years saw none of that, however, as Elliott won just three races in '89 and only one apiece in 1990 and '91. Last year he finished 11th in the championship, the team's worst year since the partnership with Melling began.

**DOWNHILL RUN** Many things contributed to the team's downhill glide. For one thing, it's an acknowledged fact that it's all but impossible to be a successful owner/driver in today's environment. Even Richard Petty has been unable to achieve this in recent years, while Alan Kulwicki continues resolutely to fight the odds. Then there are the increased costs of competing, at which Harry Melling had begun to flinch. He asked for more money from long-time sponsor Coors, but was turned down.

Beyond that, the stability of the team clearly felt the push and pull of a lot of family pressures. These were exacerbated by Bill's divorce two years ago, and then the deaths only a week apart last summer of the Elliott boys' mother and grandmother.

"What went on at Melling Racing last year would have been tough for anybody," Bill

freely admitted as the '92 season began.

Even before his mother and grandmother passed away, Elliott had decided to take up Junior Johnson's offer. Because the union wasn't announced until December, everyone proceeded with their jobs in the meantime, but it's easy to imagine the decision took a weight off Elliott's shoulders. He agreed to run a dozen Busch Grand National races in his brothers' cars this year, but as far as being an owner/driver in Winston Cup racing, Bill has put that behind him.

"Junior approached me a number of years ago to come drive for him," commented Elliott. "But the circumstances never did work out. This time things worked out.

"Junior can do anything that I did at Melling Racing, maybe more," added Elliott. "And until I had (crew chief) Mike Beam in 1990, I never had anyone I could depend on. I can depend on Tim (Brewer, Johnson's crew chief). That's a lot of relief right there."

**CLIMBING BACK** Since he retired from driving in 1966, Johnson's cars have won six NASCAR championships and 131 races going into the '92 season. On both counts Johnson stands second only to Petty Enterprises. Cale Yarborough became the only man to win three championships in a row in Johnson's cars in 1976-'78, while Darrell Waltrip won another three titles for Johnson in 1981, '82 and '85.

However, like the Melling-Elliott team, the most recent years have not been so successful. Terry Labonte won just four races for Johnson between 1987 and 1989, while a change to Geoff Bodine brought three wins in 1990 but only one last year. Johnson also expanded to running two cars last year, as he had in 1984, '85 and '86 with Waltrip and Neil Bonnett. This time Sterling Marlin was Johnson's pick to drive the second entry, and the plan continues into this season with Elliott in the colors of long-time Johnson sponsor Budweiser and Marlin driving for Maxwell House.

Before the '92 season got under way, Johnson was adamant that Elliott's move into the team was going to turn things around. "With Bill Elliott we're going right back where we belong, running up front again," declared Johnson. "There's no better driver in Winston

Cup racing than Bill, and I can't wait to see him in our Ford at Daytona."

Sure enough, Johnson's prediction was right on the money as Marlin and Elliott qualified on the front row for the 500. In company with Davey Allison's Ford, Johnson's two cars set the pace in the race's early going until getting involved in a multi-car wreck with Ernie Irvan on lap 92. Marlin's car was eliminated on the spot, while Elliott lost more than 20 laps in the pits effecting repairs.

**IN COMMAND** At Rockingham, N.C., two weeks later, however, and Richmond, Va., the following week, Elliott dominated. On two very different tracks, he led more than half of each race and won both. Suddenly he was a clear favorite to win this year's Winston Cup. That role solidified somewhat with a lucky win in Atlanta, Ga., that made it three straight.

"Our team is really pumped up now," commented Johnson. "We have all the ingredients we've been looking for. Bill brings a lot to our race team simply because he works on cars. He has set up his own chassis and makes those kinds of decisions. You combine his knowledge with the chassis knowledge we've compiled over the years and it means we've got to have a good-handling race car.

"Bill can sort out all the little things we need to help him be what he needs to be on the race track," added Johnson. "When you have all of that, you have the means to have a car that drives the way it should all day long."

Crew chief Tim Brewer, with Johnson since 1978 and the glory days with Yarborough, also has tremendous confidence in Elliott.

"I'm very confident in Bill's ability with chassis," said Brewer. "But he's also good at reading race tracks. He's good with the transition of what the car is going to do on worn tires, or with a full load of fuel as well as an empty tank. He has broad, broad perspective as far as knowledge about the car.

"Bill is a perfect asset to us," emphasized Brewer. "It's not a question of when are you going to win, it's how many will you win?"

At 36 years old, Elliott is still a youth by NASCAR standards. His fresh start with Junior Johnson could well be the start of a new dynasty in Stock Car racing.



# RISING



TRANSFORMED: Changing teams has revitalized Elliott's career.





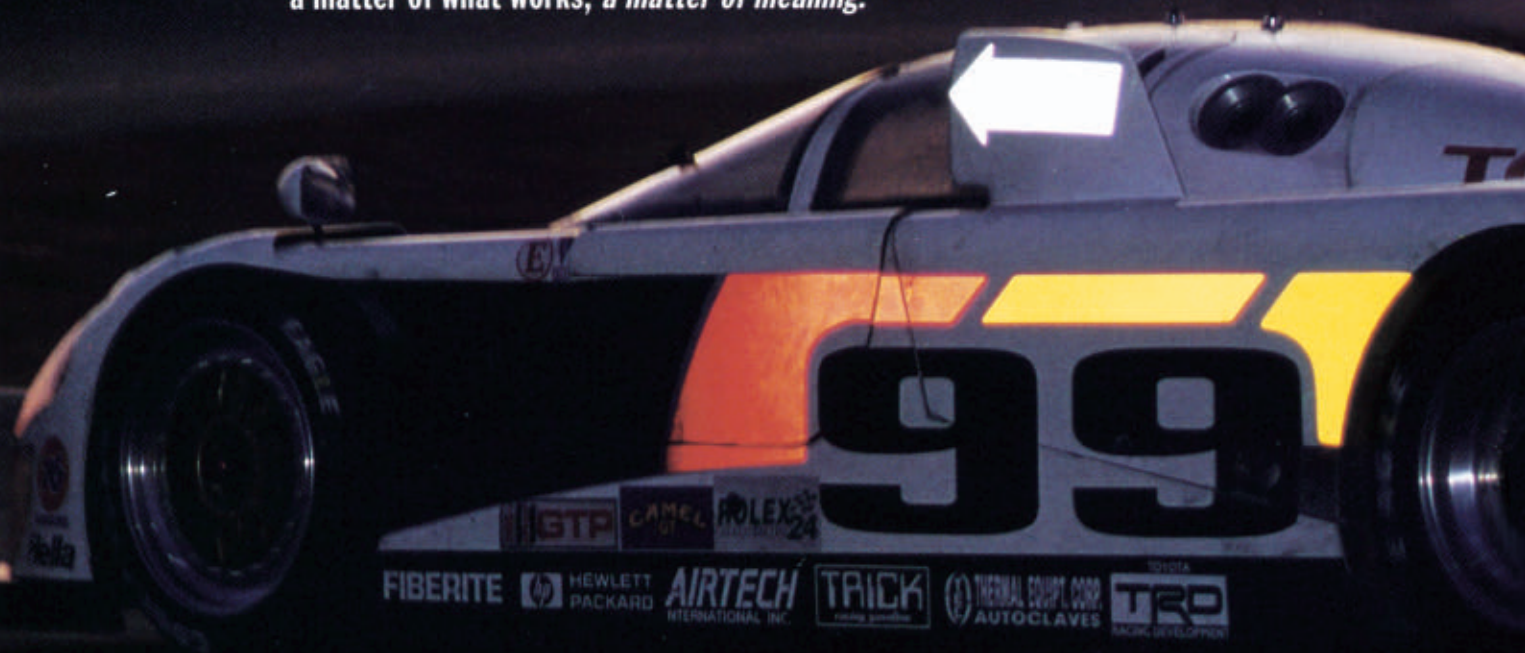
ANALYSIS

# SPORTSCAR

With An Uncertain Future On The Horizon, One Of Racing's Most

Somewhere, we believe, everything is rolling smoothly toward desired conclusions, all the questions answered and all the pieces in place. Such is not the case, however, in the world of Sportscar racing. Judging from the latest controversies there, racers still find themselves wrestling with that age-old question: What *is* a Sportscar?

The Europeans have defined their Sportscar World Championship so precisely that only a few marques even meet the specs, but in America IMSA has broadened and diversified its parameters along the lines of the nation's founding principles. All is not sweetness and light, though, as some perceive an imminent European threat, while others say 'Let them come and try.' The final resolution for either championship will likely come down to simple practicality, a matter of what works, *a matter of meaning.*





# TWILIGHT ZONE

Traditional Disciplines Ponders A New Order Of Business **by PETE LYONS**



"We'd like to see more of the European teams jump in here. Right now the door is open and IMSA's welcoming entries. I think it's great for the sport, and one has to look at what's best for racing as a whole."—Dan Gurney



# TWILIGHT ZONE

**"What's wrong with the Group C concept is a dependence upon a powerplant that is not compatible with the economic climate." —Mark Raffauf**

**Y**ou know you're doing something right when everybody's mad at you! That ancient rulemakers maxim must pretty well describe the feelings these days inside the Tampa offices of the International Motor Sports Association.

Chevrolet, one of IMSA's stalwarts over the years, has ordered work to stop on its next-generation Grand Touring Prototype, the Corvette GTP. The new racer, whose name indicates its importance to the corporation, was to have been introduced in July at Laguna Seca, Calif. Now, it may never run.

According to an official statement by Frank Ellis, who manages the company's Motorsports Marketing department, "Chevrolet returned to the Camel GT series last season, following several years absence, after we understood IMSA to say that one of their key philosophies for the series was to keep costs under control. The Jaguar XJR-14 that IMSA approved to race in Miami is one of the most costly sports prototype cars ever built.

"We have put the Corvette GTP program on indefinite hold until we have a full understanding of what will be required to compete against what appears to be a major escalation of technology and budget requirements."

Chevrolet, it would appear, is a bit browned-off at IMSA at the moment.

IMSA President Mark Raffauf, it would appear, has heard all this before. As a long-time protege of John Bishop, the sanctioning body's tough-minded founder (see sidebar), Raffauf was right there over the years when other entrants—and there was a long string of them—came clamoring about rules restricting their cars' performance. He listened, and he learned not to bend easily.

"Yes, the Jaguar XJR-14 was fast at Miami. But that was only one race," he says—and goes on to point out that the exotic import didn't win. So, he certainly saw no immediate reason to slap on any weight penalties.

"Anybody that takes what happened at Miami as proving anything about our formula is crazy," Raffauf asserts. "Everybody jumped up and said, 'He's 0.8sec faster!' Well, last year at nine Camel GT races one competitor or another was anywhere from a half to 1.3sec faster than the rest of the field."

He had the list at his fingertips:

"In Miami, Wayne Taylor, driving the Chevy-powered Intrepid, was almost half a second faster than Jones' turbo V6 Jaguar.

"At Road Atlanta, Jones had 1.3sec on Geoff Brabham's turbo Nissan. At Topeka, Jones had 0.8sec over Taylor. At Lime Rock, Tom Kendall's Intrepid topped Jones by 0.8sec.

"At Mid-Ohio, both Kendall and Taylor were 0.8sec quicker than Jones. In New Orleans, Perry McCarthy's Chevy-Spice was half a second quicker than Brabham.

"At Laguna Seca, Taylor beat Juan Fangio's new Toyota turbo by half a second. At

Portland, Taylor had 0.5sec on Brabham.

"Therefore, that one car is 0.8sec quicker than anyone else in a qualifying session is absolutely consistent with the 1991 season."

Nor did the IMSA official see anything in the Miami race itself to support arguments that the Jaguar was too fast. "When the race started, Brabham was all over his (Jones') ass. The Jag had the softest tires known to man on it, and could not pull away. The only time the Jag got a breather was in traffic. Brabham fell back about five or six seconds off of him, could still see him and just sat there.

"Later, after Jones came back out with fuel and new tires, Brabham was pulling away anywhere from a quarter to a half a second a lap. Near the end of the race it was more. At one time Brabham went from 10 seconds to 22 seconds ahead, and the Jag was healthy. The race certainly didn't show that that type of car, regardless of make, is a dominating car."

"Miami was not the Jag's track," protests Chevrolet spokesman Dave Hederich. "From what we know about it, it's a low-downforce, low-drag kind of car. It was fast there anyway. What happens when it gets onto one of the faster tracks? That thing may get to Road Atlanta and fly."

Raffauf acknowledges, "I could be proven wrong. The car may come to Road Atlanta and do a 1:02 or something (the GTP lap record is 1:10. —Ed.). If we're shown to be off on what we have assessed any new package, i.e. a three-five, any three-five, and/or the four-rotor Mazda, I'm sure you'll see us adjust the weights a little bit."

By three-five, Raffauf means a 3.5-liter, Group C engine like the new Jaguar's. IMSA opened the GTP rules to these and the cars

built around them three years ago, but Jaguar's is the first serious, competitive application of the option. An only slightly modified version of the V8 that wears Ford's oval emblem in Formula 1, the little Jaguar V8 is very high in tech, ultra-high in performance for its type and size, and does indeed represent, just as Chevrolet claims, a major escalation of technology and budget requirements. Some estimates place the engine cost ratio as high as 10 to 1, Group C vs. pushrod stock block. What about Chevy's evident accusation that IMSA has broken a promise to keep down the costs of doing GTP business?

That's not only Chevy's impression.

Jim Miller, the driver and businessman who founded the 1991 Intrepid team and built it up to the point it became attractive to Chevrolet for '92, reveals that he didn't begin with Chevy power in mind. "When I first started talking with (designer) Bob Riley on this back in the spring of 1990, our first idea was to go 3.5. I went over to Europe and talked with Mugen and Judd. Then I came back and talked with IMSA, and they said, 'No, no, don't do that, we aren't going to take IMSA in that direction.'"

**THE RATIONALE** Raffauf's response is, "I told him we're not going to take it in that direction exclusively. I said to Jim, and I'll say it to him right now, 'You will not be, nor will anyone else be, excluded from being competitive because of the 3.5-liter. Our position was, it isn't gonna be disallowed, but it isn't also going to be the sole package you need to race."

"The reasons for accepting Group C cars at that time were several. The philosophy of the formula is to provide our competitors with as many interests as possible. And if this is the

**CHEVY THUNDER IN MIAMI:** On a circuit well-suited to his Chevrolet GTP, Tom Kendall made his first start since last summer's Watkins Glen crash, carrying the "Bow Tie" into contention until sidelined by a faulty water pump just as he readied his charge.



"Our first idea was to go 3.5. I went over to Europe and talked with Mugen and Judd. Then I came back and talked with IMSA, and they said, 'No, no, don't do that, we aren't going to take IMSA in that direction.'" —Jim Miller





direction the rest of the world is going, fine, they'll have a place (with IMSA) too. Not exclusively, but they'll have a place."

Dan Gurney, who runs Toyota's GTP program, tends to agree with Raffauf. "I think, as a fan, it's one of the best things to happen to IMSA in a while," opined the All American Racers boss. "I also think we had the proper result in Miami. These rules have been in effect for three years, and they're fine. There may be some adjustments needed in the future, and IMSA's going to have to monitor more closely, but we'd like to see more of the European teams jump in here. Right now the door is open and IMSA's welcoming entries. I think it's great for the sport, and one has to look at what's best for racing as a whole."

Raffauf admits that his organization was looking for new blood. "One of the things is, right now the only new potential entrants are those who have 3.5s. There isn't anybody else."

Clearly, he's rankled by talk that now, three years later, IMSA has somehow pulled a fast one on established competitors. "A lot of people have jumped up and down saying, 'They made a special rule for Group C cars.'"

"The Jaguar as presented at Miami met every rule that every other car meets, except in the form of the scoop on the roof, and that was corrected. There's nothing wrong with that car. The doors, though they are different, the rules prescribe a parallelogram that has to be inscribed on the face of the door. It meets that. The cockpit dimensions, it meets the two-seater dimensions, and I can tell you, it is not volumetrically the smallest cockpit when compared with some of the existing cars. It's a GTP car, it meets the GTP rules. There is no real special ruling on our part."

Kas Kastner, the man who runs Nissan's GTP operation, has his own opinions. "The opening (in the rules) was there, but the biggest question is the cost. This is a manufacturers series, and any change in any direction always increases the cost."

"I think the first time out there at Miami we didn't see the Jaguar at its best. They don't put down a lot of downforce, so I think they may be over the hill and gone on a fast course. The Jaguar isn't the fastest car anyway, the Peugeot is. We haven't seen anything yet as far as these cars go, but I could see IMSA probably putting some weight on. We'd like to see them come and race with us, but you can't bring in something that will ruin the championship."

Raffauf doesn't believe Group C constitutes the crushing invasion of IMSA some predict.

"Cor Euser, who drove a 3.5 Cosworth-Spice at Del Mar last year, and a Chevy-powered car at Miami this time, made it very clear to me after the race that, if he ever had his choice, he'd drive a Chevy. He said they're just as powerful, they're just as quick. The difference is, with the 3.5 you've got to use the 6-speed gearbox. You know, the power is made



**STIRRING IT UP:** Tom Walkinshaw Racing brought a GTP-legal version of last year's Sportscar World Championship-winning Jaguar XJR-14 to Miami. Davy Jones qualified it on the pole, but the car broke while running second late in the race. Nevertheless the car's appearance fired a stern debate among the IMSA faithful.

## BY THE BOOK

If the date July 27, 1989 isn't stuck somewhere in your memory, it's perfectly understandable. It was, however, a Friday, and for IMSA's Camel GT series the opening day of practice for that year's G.I. Joe's Camel Gran Prix at Portland International Raceway. It was also the first time that GTP competitors could elect to follow the 1990 engine rules that had been announced by Technical Bulletin 1989-4, some three weeks before.

That bulletin announced the method that IMSA would use to regulate the eligibility of engines for GTP cars beginning with the 1990 season. It defined five basic "types" of engines and provided a weight vs. displacement graph that listed the weights that cars of those specific engine types and displacements would be required to carry beginning Jan. 1, 1990.

A subsequent graph was issued in March of 1990 to broaden the range of weights for turbocharged cars, but the rest of the graph remained intact, with 3.5-liter racing engines firmly lodged at 1750lb. The 1990 rules also provided a 100lb weight break for cars built to International Group C aerodynamic specifications that carried smaller and less effective ground-effect underbodies than allowed on standard GTP cars. Dan Gurney's Toyota-Eagle Mk III, introduced in mid-'91, was one car that used this rule to its advantage in order to gain the allowed reduction in minimum weight.

Those same rules remain in effect today, and under them the Jaguar XJR-14 that Tom Walkinshaw Racing has brought into the series is eligible, if it weighs in at 1650lb or more. IMSA does, of course, reserve the right to amend its weight vs. displacement chart as it may see fit, so the question of the new Jaguar is one that may not be fully answered for some time, and certainly one that will bear watching as the season unfolds. —JZ



# TWILIGHT ZONE

at a very precise range of rpms, and any turbo or normally aspirated big V8 car is going to be much easier to drive. Therefore, over the duration of a race, you'd have to go in favor of the car that gives the driver the opportunity to drive it, instead of fighting it all the time.

"My assessment of Davy was that he was fighting the car the whole race. It's a tough car to drive—he said it was one of the toughest cars he's ever driven. He was having to shift so much, a lot of the time he was going into corners with only one hand on the wheel. And on a busy race track, the last thing you want is a car that's a handful."

At Miami, Jones did indeed crawl from his spun-and-stalled XJR-14 looking very fatigued. Part of that appeared to be the result of extreme cockpit temperatures. To Raffauf, that's one more negative factor about the Jaguar's potential the critics are ignoring.

"First and foremost," he says, "they're going have to keep the weight at 1650 to go that fast. That precludes giving a cool suit to the driver and a few other things that you need for the comfort of the driver for the duration of a race. I feel it is going to be extremely difficult for them to win any races."

Not that the IMSA president wishes Jaguar ill. He goes on to affirm that, far from discouraging or encouraging one sort of design or another, his ongoing goal is to keep a performance balance between every kind of powerplant that anyone may want to race.



**STATUS QUO:** Somehow rising above all the controversy, the defending champion Nissan team's "standard" turbocharged GTP machine—which won in Miami—continues to collect points and lead the manufacturers championship.

**AN OPEN DOOR POLICY** "Our position is," Raffauf continues, "we're not gonna get rid of 'em, we'll put 'em in where they need to be, and when time shows that they need to be changed, we will. As we will with the Mazda, if it needs to be changed. As we would if somebody came and said, I wanna run a turbine, or I wanna run an electric car. We're not perfect, but we'll look at it and make a fair assessment of it and do our best."

This philosophy is directly opposed to the concept behind Europe's 3.5-liter-only Group C. A concept that has failed. Last year was the first season for the newly configured Sportscar World Championship, and it was well fought, but so few manufacturers and teams have committed to this second season—even series-



"We'd like to see them come and race with us, but you can't bring in something that will ruin the championship."

—Kas Kastner

winning Jaguar has not renewed—that no one is sure there will be a season.

"What's wrong with the Group C concept," believes Raffauf, "is a dependence upon a powerplant that is not, in my opinion, compatible with the economic climate. It's a great technical theory, no argument. It just doesn't apply to today. It costs too much money. And if you make it the only option, you force everyone out, and that's what they've done."

"It should not have been brought in at the expense of the turbocars, or stock-block cars, or the rotaries (Mazda won LeMans last year, but its rotary is no longer eligible) or any other type of engine. They've outlawed them all, except the Porsche, and that's because Porsche was so good to them for 10 years. But I think

## A WORD WITH JOHN BISHOP

John Bishop founded and built IMSA with an inspired combination of trust and bravado, but keeps his views on the present state of the organization close to his vest. He did, however, share some of his thoughts on road racing in general and IMSA in particular, and we began by asking about the current status of IMSA.

"I hear the same rumors you do, that the SCCA has made an offer for IMSA, and while people do talk with me about this, I'm not at liberty to tell everything they may have told me."

Have the problems of two decades ago been solved, the problems of how to run professional road racing?

"Nothing is so perfect it can't be improved, but I think IMSA has a style of conducting events and a style of treating competitors that is different from the other sanctioning bodies. While I'm sure it can be improved upon, I don't think it's deteriorated, either."

Is the motivation that brought you to create IMSA similar to what's transpiring today as the SCCA attempts to bring IMSA under its wing?

"In 1969 there was only one sanctioning body for road racing, and that was the SCCA. You had the Trans-Am, Can-Am, the USRRC and the Runoffs, the whole works, and the farm system to feed all those. At that time, new tracks were being built at such a rate that there was more business than one sanctioning body could have handled, which is the rationale that we used to form IMSA. Even though we started very small with formula cars and sedans, the reason for starting was justified. Even though all those tracks didn't get built, enough were in business to demonstrate the need for another sanctioning body, and, in time, we developed the bread-and-butter show—the GT cars—to satisfy that. We didn't hurt the SCCA because we stayed away from anything they were doing in road racing."



"Today there aren't that many new tracks being built, there have been one or two, but there are others that have gone out of business—in particular, street or temporary circuits. So, that condition doesn't parallel 1969 at all. The relationship between IMSA and the SCCA has gotten quite mellow over 22 years and, while it may have started out pretty hostile, over time things have worked out. The relationship has become almost cordial, particularly when Nick (Craw) became president. He's a former IMSA champion and he understood that we weren't out to do harm to any sanctioning body, and that's been fine."

Would unification of the SCCA and IMSA prove beneficial for the sport?

"I can only answer from a personal standpoint, and I'd sort of hate to see that. Not that I dislike the SCCA, but I think that many of the neat things that IMSA has done would probably be lost. I don't think the condition of having one sanctioning body would last very long, because I think the seeds would then be sown for somebody to have the idea to have some other IMSA. There's a lot of energy and creativity out there in racerland, and somebody will say, 'Gee, I think we ought to do this and so,' and they'll take an idea and run with it and form another sanctioning body."

Would you want to be involved in something like that?

"I had the best years of IMSA and we got out under the best of circumstances—honorably, I hope people will think. It may have changed enough in the three years we've been away that I'm a stranger to it. Things progress. Given a choice, I'd just as soon stay free of the potboiler."

Bishop continued concerning his beliefs on the organization he nurtured. While he may believe there are aspects of IMSA that need repair (particularly in communications), he feels that when you grow a tree, you don't cut it down at its roots and start over again to replicate that tree. The trust, the confidence and the good will that have brought international entries to IMSA have, perhaps, made it a more attractive commodity, but ultimately the question remains: Can anyone make IMSA a better sanctioning body than it is today? —Anne Proffitt



that's where the mistake is. The dependency on that powerplant exclusively is the wrong way to go. It's not consistent with the tradition of Sportscar racing, nor is it consistent with everyone's interest who would like to be in Sportscar racing. So, by doing it you have turned people away.

"I don't think we're far off (in IMSA) from having a formula that caters to every one of those interests."

Can it therefore be assumed that IMSA will continue to adjust the rules so that no one type of car will have an advantage? That Raffauf is not trying to foster one kind of engine or car?

"Absolutely correct. That's the best way to put it. IMSA in no way is trying to foster any particular package, and I will stand on its track record in the last three years as firm commitment to that. As I said earlier, anybody that takes one race, and the specific circumstances of that one race, as any change in philosophy one way or the other, is taking a very, very narrow, short-term view of it."

He freely admits, however, that the organization has some problems. The same economic malaise that struck Group C down in Europe has cut participants in GTP.

Rightly, Raffauf points out that the quality at the front remains high, and says he'd rather have a small field with lots of potential winners, rather than the other way around. That's why he resists any calls to cut GTP to a lesser level of technology and performance. Sure, simple stock-block cars would be cheaper, but Raffauf fears they'd draw fewer fans. The answer, he says, is to raise the stakes, to upgrade the championship's ability to pay for the cars it deserves.

"For the future, either the type of car has to change and be reduced in type, which has some major problems to it, or the infrastructure has to improve. And we're in the middle of that. IMSA needs to improve TV and marketing, and we are doing that."

Television definitely has a formative effect on auto race formats, tending to make them shorter than on-scene enthusiasts might prefer. That's why most GTP events are held to two hours. On a personal basis, however, he says, "I think the tradition of our sport is endurance racing, and I think in the future you will see us bring back a couple of longer races in the season. A 1000 kilometer, a 500-mile, or something like that. But we have to maintain a balance between short events, like a street track, and a Daytona at the other extreme."

"That's one of things that makes the series probably the most difficult anywhere, in that you have such a wide variety of environments within which you must perform."

So, despite the criticism he hears, IMSA's president remains a staunch enthusiast for today's Grand Touring Prototypes. "You know, I am in a position to introduce a lot of people to our type of racing, and they're just enthralled. These are spectacular cars, they put on a great show, and they put on great racing. I mean, side-by-side racing. You can't ask for anything better, and it's never happened in Sportscar racing before."

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MICHAEL C. BROWN

**LATE BLOOMER** Emerson Fittipaldi (5) kept new Penske in lead group all day, braved his way to the front after rainstorm yellow.

## Fearless Fittipaldi Flies in Paradise Penskies 1-2 in IndyCar Opener

**INDYCAR PPG WORLD SERIES**  
**ROUND 1/Surfers Paradise, Aus., Mar. 22**

■ Emerson Fittipaldi emerged from a late-race rainstorm to snare a charging, come-from-behind victory in the PPG Cup season-opening Daijyo IndyCar GP in Surfers Paradise. A heavy downpour washed across the circuit at lap 50, bringing out the pace car and changing the complexion of the contest.

With eight of the 65 laps to go, the race was restarted, Rick Mears (Marlboro Team Penske Chevy 92) leading from Al Unser Jr. (Valvoline Galmer G92-Chevy). Fittipaldi (Marlboro Team Penske Chevy 92) took the restart fifth, but employed his wet weather skills to charge past Mario Andretti (Kmart/Havoline Lola T91/00-



**HERO** Fittipaldi charged past teammate Mears with just three laps to go.

Ford-Cosworth), Danny Sullivan (Molson Galmer G92-Chevy) and Unser, before attacking and passing Mears with a tire-smoking inside dive at the chicane. Mears held on for second to give Roger Penske's team a sweep of the top two positions, while Bobby Rahal (Miller Genuine Draft Lola T92/00-Chevy) clawed up to third place in the closing laps. Unser held on for fourth ahead of teammate Sullivan, as John Andretti nipped Uncle Mario for fifth.

Defending PPG Cup champion Michael Andretti led the early going, chased hard by poleman Unser and Fittipaldi, but after leading the first two-thirds of the race, Andretti's Kmart/Havoline Lola was sidelined by a broken exhaust header on its new Ford-Cosworth XB engine.



# Elliott Pays the Bills, Wins Three Straight

## NASCAR WINSTON CUP

**ROUND 1/** Daytona Beach, Fla., Feb. 16

**ROUND 2/** Rockingham, N.C., March 1

**ROUND 3/** Richmond, Va., March 8

**ROUND 4/** Atlanta, Ga., March 15

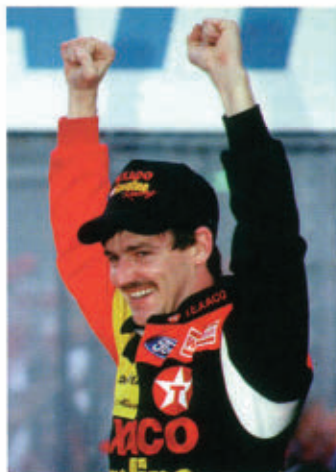
■ After dominating the previous two races, Georgia boy Bill Elliott lucked into his third straight NASCAR Winston Cup win in the Motorcraft Quality Parts 500, at his "home" track in Atlanta. Elliott's Junior Johnson/Budweiser Ford Thunderbird was slightly off the pace all day, but then the leaders, Davey Allison (Havoline Ford), Dick Trickle (Snickers Ford) and Harry Gant (Skoal Oldsmobile), made their final pit stop under green. Just as they came out of the pits, Mike Wallace spun to bring out the yellow flag and leave the late-stopping Elliott the only driver on the lead lap. With the luxury of a pit stop under caution, Elliott returned to the track with nearly a lap lead and cruised to victory, Ford's eighth straight in Winston Cup competition. Gant recovered for second, and defending Winston Cup champion Dale Earnhardt (Goodwrench Chevrolet), who had struggled all day like Elliott, took

third with a late charge.

The Pontiac Excitement 400, the third round of the Winston Cup series at Richmond produced a hard-fought battle that Elliott won by a margin of 18in. from Alan Kulwicki. Despite dominating most of the 400-lap race, the Budweiser Ford driver came under severe pressure in the last 20 laps from Kulwicki (Hooters Ford) who had closed to within a second of the lead, following the restart after the final caution period. Because he had started from pole position, the victory earned Elliott the Unocal 76 pyramid bonus payout of \$197,600, the second highest winnings in a Winston Cup race.

The week before, at Rockingham, Elliott dominated the Goodwrench 500, leading 260 of the race's 492 laps and crossing the finish line almost half a lap ahead of Allison as Gant took third.

The season-opening Daytona 500 by STP, came down to a duel to the line between Allison and Morgan Shepherd (Citgo/Wood Brothers Ford). The 30-year-old Allison led 127 of the 200 laps to claim the biggest win of his career, after managing to avoid a multi-car crash on



**GEORGIA LUCK** Elliott (ABOVE) profited from a perfectly timed yellow to win in Atlanta. Davey Allison (LEFT) enjoyed his dramatic Daytona victory, but maintains the best memory of his career will always be finishing the 500 second to his dad in '88.

lap 92 that eliminated several strong competitors, including front-row starters Bill Elliott and Sterling Marlin (Maxwell House Ford). With this win, Allison joined Richard Petty as the only sons of former winners to win the event. Allison's dad Bobby won the event in '78, '82, and '88, while Petty's father Lee won in 1959.

# Williams Reacts! Mansell Dominates Openers

## FIA FORMULA 1 WORLD CHAMPIONSHIP

**ROUND 1/**South Africa, Kyalami, March 1

**ROUND 2/**Mexico, Mexico City, March 21

■ Nigel Mansell continued his domination of the 1992 F1 World Championship with another runaway Williams-Renault win from pole position at the Mexican Grand Prix. Mansell finished nearly 13 seconds ahead of teammate Riccardo Patrese, with Germany's Michael Schumacher (Benetton-Ford) third.

Gerhard Berger took fourth, and actually set the fastest lap of the race on lap 60 with the McLaren MP4/6-Honda. Rounding out the top five was Andrea de Cesaris (Tyrrell-Ilmor V10), one lap down.

Defending World Champion Ayrton Senna—who survived a huge practice accident with only bruises—pulled out of the race with apparent transmission troubles after completing only 11 laps.

The South African Grand Prix produced a dream start to the season for Mansell, as he qualified fastest and set the fastest race lap while riding Williams' latest active suspension system (see Page 33) to a dominant victory.

Mansell's teammate, Riccardo Patrese, placed fourth on the starting grid

and had a flying start off the line, (apparently aided by a new traction control differential) passing both Senna and Berger before the first corner.

This put the Williams-Renaults first and second, and they held this order for the duration of the race. Mansell and Patrese were followed across the line by Senna, Schumacher and Berger.

## RICH BOYS CLUB

The 1992 crop of F1 talent (BELOW). Some earn big bucks, some bring them. Williams' re-active suspension seems to be the tweak of the year (RIGHT).



PAUL HENRI-CHARRIER PHOTOS



# I Am The Wallace, Koo, Koo, KaChoo

**NASCAR BUSCH GRAND NATIONAL**  
**ROUND 1/Daytona Beach, Fla., Feb. 15**  
**ROUND 2/Rockingham, N.C., March 1**  
**ROUND 3/Richmond, Va., March 8**  
**ROUND 4/Atlanta, Ga., March 15**  
**ROUND 5/Martinsville, Va., March 22**

■ Rebounding from the early season adversity of losing his ride, Kenny Wallace found himself atop the Busch Grand National point standings after five rounds of the 1992 championship. Wallace's "replacement ride"—the Felix Sabates-owned Dirt Devil Pontiac—carried him to his first victory of the year in Martinsville's Miller Genuine Draft 500.

Wallace led the entire second half of the 200-lap race, but had to survive a furious challenge after a late-race caution to take the checkered flag 0.7sec ahead of Joe Nemechek's Texas Pete Sauces Chevy and Chuck Bown's Nescafe/Nestea Pontiac. Both Nemechek and Bown slid across the line in disrepair after last-corner contact.

Last season's BGN Rookie of the Year, 20-year-old Jeff Gordon, posted the first win of his NASCAR career in the Atlanta Motor Speedway 300. Polesitter Gordon led the first 67 and the final 35 laps of the 197-lap contest in his Baby Ruth Ford, topping Harry Gant's Mac Tools Buick by almost four seconds. Hut Stricklin ran third in the Stanley Tools Chevy.

Gant drove a great race in the Hardee's 200 at Richmond the week before charging up from 28th starting position to lead most of the second half of the 197-lap contest on the 0.75-mile speedway. Runner-up Kenny Wallace's Dirt Devil Pontiac crossed the line half a second behind Gant, while third place went to defending series champ Bobby Labonte in the Slim Jim Chevrolet.

The Goodwrench 200 at the North Carolina Motor Speedway in Rockingham, provided Buick's first trip of the season to the winner's circle, as Ward Burton's Gwaltney Big 8s Buick moved into the lead with 21 laps left in the 197-lap race. Mark Martin (Winn-Dixie Ford) and Davey Allison (Havoline Ford) crossed the finish line second and third, respectively, after an exciting contest in which the lead changed hands a dozen times among nine drivers.

The season-opening BGN Goody's 300 at Daytona was won for the third straight year by Dale Earnhardt and the GM Goodwrench Chevrolet Lumina. Earnhardt led sporadically throughout the 120-lap race, including the final 48, but took the checker a mere 0.22sec ahead of Ernie Irvan's Kodak Chevrolet, with Ward Burton third.

# IMSA's 38 Hours of Florida

**IMSA CAMEL GT**  
**ROUND 1/Daytona Beach, Fla., Feb. 1-2**  
**ROUND 2/Miami, Fla., Feb. 23**  
**ROUND 3/Sebring, Fla., March 21**

■ Three races down and the season is not going to plan for the formidable Nissan Performance Technology, Inc. (NPTI) brigade. Not to plan at all. Armed to the teeth for the season-opening Rolex 24 at Daytona, the NPTI crew was shocked by the upstart Japanese NISMO entry that gave Nissan its first 24-hour victory at Daytona. The NPTI team's R90C entry dropped out with engine trouble and score no points.

Three weeks later, in Miami, Davy Jones qualified the new Group C-based Bud Light Jaguar XJR-14 on the pole, nearly a second faster than the rest. At Sebring, the All American Racers Toyota stole the show, as the night-blind Nissan NPT-91A of Geoff Brabham, Derek Daly and Arie Luyendyk fell five laps short.

Happily, team leader Brabham capitalized on a pair of Jones miscues to grab victory in Miami, and the runner-up finish at Sebring means Brabham is—as always—in the thick of the early season points race.

Nonetheless, the '92 season will be no cake walk for anyone: The Toyotas look strong indeed, with Juan-Manuel Fangio II leading the effort, and the single TWR Jaguar looks to be an awesome threat. Chevrolet GTP driver Tom Kendall was spectacular in Miami upon his return to racing after a six-month layoff caused by his Watkins Glen injuries.

While not quite on the pace, Porsche has still been picking up useful early season points. An amazing manufacturers title race (see Page 48) is brewing in IMSA's premier division.

**CAMEL LIGHTS** As predicted by everyone except its typically modest drivers, defending series champion Parker Johnstone and teammate Dan Marvin, the BFGoodrich-sponsored Acura-powered CompTech Spice breezed to victory in both the season-opening Rolex 24 at Daytona (winning by a "mere" 27 laps) and the Toyota Grand Prix of Miami, where the margin was nine laps despite an extra pit stop caused to swap drivers because of Marvin's recalcitrant cool suit.

At Sebring, however, both Acura-Spices suffered engine failures and the laurels fell to Jim Downing and Howard Katz in Downing's Mazda-Kudzu. This was an emotional "just-in-time" victory for the popular Lights veterans whose unsponsored effort has been running with nearly empty coffers all season.



**INVADERS** Japanese NISMO squad's Group C car ran off with overall victory at Daytona while Jaguar team bagged maximum GTP points with second-place finish.

**IMSA EXXON SUPREME SERIES**  
**ROUND 1/Daytona Beach, Fla., Feb. 1-2**  
**ROUND 2/Miami, Fla., Feb. 23**  
**ROUND 3/Sebring, Fla., March 21**

■ IMSA's alphabet soup of classes grows by one in 1992, the former GTO-class machinery now competing in the new GTS (for "GT Supreme" in honor of series sponsor Exxon), while what previously were called American Challenge cars get the old GTO moniker. GTU, starting its 22nd season, keeps its original name.

It was all far less confusing on the

track, where some familiar names have claimed the early-season headlines in the trio of Florida events. Wally Dallenbach, Dorsey Schroeder and Robby Gordon had pulled their Roush Ford Mustang so far out in front at Daytona that despite a blown engine with more than an hour remaining they won GTS by 24 laps! It was Roush Racing's eighth consecutive class win at Daytona. In the Miami street race, the potent Nissans starred, Steve Millen and Jeremy Dale heading a 300ZX Turbo 1-2. At Sebring, series newcomers Iv Horrr, Darin Brassfield, Paul Gentilozzi



**DOUBLING UP** David Loring has collected wins at Miami and Sebring for Nissan.

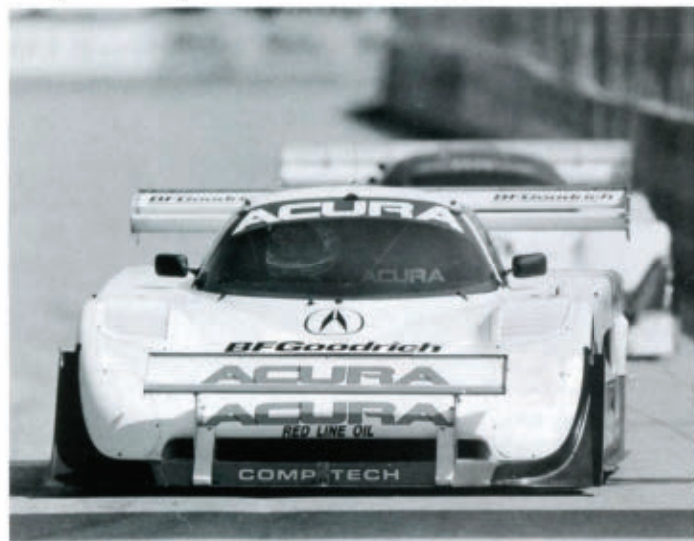


and George Robinson took Gentilozzi's Rocketsports Oldsmobile Cutlass Supreme to victory, their first since switching to GTS from the SCCA's Trans-Am series.

In GTU, meanwhile, Daytona specialists Dick Greer and Al Bacon did it again, winning the 24-Hour in fine style in the Wendy's Race Team Mazda RX-7. It was the team's third-straight win, while it marked Mazda's 11th consecutive year in victory lane at Daytona. Miami and

Sebring, however, belonged to David Loring and the Leitzinger Racing 240SX. Driving solo in Miami and teamed with former Camel GT champ John Paul Jr. at Sebring, Loring took over the early season point lead. Team boss and former series champion Bob Leitzinger drove his 240-SX to second place in both races—teamed with son Butch at Sebring—to hold that position in the points.

Tommy Riggins won GTO in Miami.



**MODEST SUCCESS** Acura teammates Parker Johnstone and Dan Marvin looked as if they would run away with the season until stumbling at Sebring.



**SUCCESSFUL DEBUT** Reynard 92H won first U.S. outing driven by Russell Spence.

## Atlantic Opener To Spence

**SCCA TOYOTA ATLANTIC CHAMPIONSHIP  
ROUND 1/Miami, Fla., Feb. 22**

■ The story of the '92 Toyota Atlantic Championship opener was written in Turn One of the first lap when second-row qualifier Harald Huysman (Reynard 92H), after a blazing start, was forced into outside front-row qualifier (and reigning series champion) Jovy Marcelo (Swift DB-4A) by an aggressive move by Christopher Smith. Both Huysman and Marcelo were eliminated on the spot, handing a

comfortable lead and the eventual win to Huysman's Reynard teammate Russell Spence.

Pursuit was left to a trio of California Swift drivers, Steve Cameron, Case Montgomery and Steve O'Hara. Both Cameron and Montgomery had their challenges blunted by driving errors so that O'Hara claimed second place after a strong 20-lap drive.

It was an almost picture-perfect debut for Reynard which looks set to give Swift a run for '92 championship honors.

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## Dirt Devils

### WORLD OF OUTLAWS

#### COPENHAGEN/SKOAL SHOOTOUT

**ROUNDS 1-14**/St. Petersburg, Fla., Feb. 8; Punta Gorda, Fla., Feb. 11; Ciudad Juarez, Mexico, Feb. 23; Bakersfield, Calif., Feb. 29; Hanford, Calif., March 4; San Jose, Calif., March 7; Placerville, Calif., March 11; Chico, Calif., March 14; Houston, Texas, March 18; Royse City, Texas, March 21; Oklahoma City, Okla., March 22 (Postponed)

■ The 101-round, 75-stop '92 World of Outlaws Copenhagen/Skoal Shootout is a dozen races old before most professional road racing teams have completed winter testing. Though the furious pace of travel and racing means fame here can be fleeting, the WoO series' most enduring stars can be counted on every night to give spectators their money's worth.

Such has been the case this season, already 14 races (in four states and two countries) old as this is written and fast becoming one of the most interesting on record. Already the championship has settled into a three-way battle between "the Steves,"—11-time WoO champion Steve Kinser and young Steve Smith, the 1990 WoO Rookie of the Year—and Ohioan Dave Blaney, the "Buckeye Bullet," who sit first-through-third in the points after those 14 events.

Kinser's Valvoline-sponsored Maxim sprinter, maintained by cousin Karl Kinser, won the indoor opener in St. Petersburg, the first WoO event ever held in Mexico as well as main events in Bakersfield and Chico, Calif. Blaney's sweep at Charlotte County Speedway in his Vivarin Gambler, meanwhile, kicked his '92 assault into high gear. Smith came on strong in California with back-to-back victories at Hanford and San Jose.

Of the rest, only the brilliant Doug Wolfgang has more than one win, while veterans Sammy Swindell and Jac Haudenschild, well down in the standings, each have one win apiece.

## Lancia vs. Toyota

### FIA WORLD RALLY CHAMPIONSHIP

**ROUND 1**/Monte Carlo, Monaco, Jan 24-29

**ROUND 2**/Karlstad, Sweden, Feb. 13-16

**ROUND 3**/Port Wine Rally, Estoril, Portugal, March 3-7

■ After three rounds of the FIA World Rally Championship, reigning World Champion Juha Kankkunen, co-driver Juha Piironen and their new Martini Lancia have moved into both the drivers and manufacturers championship points lead, following a convincing win in the Rally of Portugal.

Round 2, the Swedish Rally, which did not yield points toward the manufacturers championship, was won by Mats Jonsson and co-driver Lars Backman, in a Toyota Celica GT-Four. Jonsson was the 41st consecutive Scandinavian to win the event which was held in mid-February. Unusual above-zero temperatures, which for a while put the running of the event in doubt, caused a lot of melting snow and ice, which created some very slippery conditions.

At the Monte Carlo Rally, the opening round of the championship, held in January, the Martini Lancia HF Integrale team claimed victory with Didier Auriol and co-driver Bernard Occelli. Tough conditions at the rally were worsened by rowdy spectators who waited for the ice crews to pass, then threw snow on the road to add to the overall excitement.



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## Stuck Stomps

**IMSA BRIDGESTONE SUPERCAR SERIES**  
**ROUND 1/Miami, Fla., Feb. 23**

■ SCCA World Challenge champion Shawn Hendricks and his Valley Chevrolet-sponsored Corvette may have had a look at the lead in the championship opener at Miami, but it was only for a lap.

Then the vastly more experienced Hans Stuck Jr. found a hole for his Kendall Elite Porsche 911 Turbo and squeezed past. Stuck never looked back, breezing to a nine-second victory.

Hendricks held onto second spot, while Stuck's teammate Hurley Haywood fought off the hard-trying Lotus of Doc Bundy and Michael Brockman for third.

## Porsche Sweep

**IMSA FIRESTONE FIREHAWK SERIES**  
**ROUND 1/Sebring, Fla., March 20**

■ The opening round of the IMSA Firestone Firehawk Series at Sebring concluded in a Porsche 1-2-3 sweep. Averaging 82.3mph, Nick Ham and Rich Moskalik (Kelly Moss Racing) took the checkered flag almost one minute ahead of Joe Varde and Mark Sandridge in their Sandridge Racing Porsche. One lap down on the top two cars came the DW Motorsports entry co-driven by Fred Baker and Jarrett Freeman.

The victory was Ham's second straight Sebring Firehawk win, and the 12th straight Firehawk win for Porsche.

## Desert Duels

**SCORE: ROUND 1/Parker, Ariz., Jan. 24-26**

■ Averaging 56mph around the 407-mile Arizona desert course, brothers Tim and Ed Herbst (Chenoweth-Porsche) won the SCORE Parker 400 Off-Road race. They finished two minutes ahead of Jason Baldwin and Reggie Dunlap, also driving a Chenoweth-Porsche. Rounding out the top three were Ron Brant and Chuck Sudberry (Raceco-Porsche). The first pickup truck across the line, fifth overall, was Walker Evans' Dodge, but not before he plowed into some haybales a quarter-mile from the finish and rolled the truck.

**HDRA: ROUNDS 1-2/Lucerne Valley, Calif., Jan. 10-12; Las Vegas, Nev., March 12-15**

■ Larry Ragland raced to overall victory in the third annual High Desert Racing Association Nissan 400 desert race. Ragland, driving a full-size Chevrolet pickup truck, completed the 388.44-mile race in a little more than 7 hours and 40 minutes, averaging 50.94mph. Two-time overall and defending champion Ivan Stewart finished second, almost five minutes behind Ragland. The race, considered to be the most demanding in off-road racing, attracted a field of 164 vehicles competing in 15 different classes, but only 82 of them finished.

The Southern California 250, was another Ragland-dominated event. The Phoenix-based driver averaged 56mph during his run to victory in the 210-mile race, finishing 21 minutes ahead of second-placed Aaron Hawley (Chenoweth Porsche), who won the unlimited class.

## Stadium Stunts

**MTEG GRAND NATIONAL SPORT TRUCKS: ROUNDS 1-3/Anaheim, Calif., Jan. 18; San Diego, Calif., Feb. 22; Seattle, Wash., March 21**

■ Rod Millen's victory in the Seattle Kingdome put him in the drivers championship point lead with 183 points. His win added to Toyota's domination of the manufacturers championship, giving the Japanese manufacturer a total of 343 points, 112 ahead of rival Nissan.

Ivan Stewart (Toyota) ranks second overall with 145 points, while Rob MacCachren (Ford) is third with 133 points. Defending series champion Walker Evans, who introduced an entirely new Dodge Dakota truck in defense of his title, currently ranks fifth, two points behind fourth-placed Roger Mears (Nissan).

## Muddy Mess

**SCCA SUBARU PRO RALLY CHAMPIONSHIP: ROUND 1/Terlingua, Texas, Feb. 1**

■ Torrential rain and delays marked the start of the 1992 Subaru PRO Rally Championship season in Texas. The Big Bend Bash rally route was reconfigured after rain-soaked stage roads turned to sticky mud. Four stages were completed before the event was finally stopped due to bad weather and unsafe road conditions.

Paul Choiniere and co-driver Jeff Becker claimed victory driving an Audi Quattro. Defending Subaru PRO Rally champions Chad DiMarco and Erick Hauge's Group A Subaru finished 1.27m behind in second while Carl Merrill and Jon Wickens guided their Mitsubishi Eclipse to third.

# Bravo Bernstein!



**TOPS 300**  
Kenny Bernstein turned in drag racing's first triple century run in Florida.

**NHRA WINSTON DRAG RACING**

**ROUND 1/ Pomona, Calif., Feb. 2**  
**ROUND 2/ Chandler, Ariz., Feb. 23**  
**ROUND 3/Houston, Texas, March 8**  
**ROUND 4/ Gainesville, Fla., March 22**

■ Series point leader Kenny Bernstein made drag racing history in the second round of qualifications for the Motorcraft Gatornationals by turning in the sport's first 300mph run. Bernstein's speed of 301.70mph came as a complete surprise since no one had been running even close to the magic mark earlier in the day. Although he was able to establish the record by backing it up with a 299.10mph run in the second round of eliminations, Bernstein lost in the final to Eddie Hill. Hill tripped the clocks in 4.801sec during the second round of eliminations to set a new National ET record of his own, and backed it up in the third round with a 4.841.

Despite breaking the listed National ET mark twice during the weekend, Bernstein also lost in the finals of the Slick 50 Nationals, where defending Winston Top Fuel champion Joe Amato shut him down. At the Motorcraft-Ford Nationals, Pat Austin claimed victory over Doug Herbert who was making his first final round appearance in an NHRA National. In the season opener, the 32nd annual Winternationals at Pomona, Calif., Bernstein kicked his year off in style with a narrow win over Jim Head.

**FUNNY CARS** Four rounds of Funny Car competition have produced four different winners, and left defending Funny Car champ John Force atop the point standings with a slim 124-point lead over Cruz Pedregon. At the Motorcraft Gatornationals, Force forged his Castrol Olds Cutlass to final round victory over Jim Epler's Black Diamond Dodge Daytona, recording both the fastest run (289.01mph) and the quickest ET (5.154sec) of the weekend to do it.

Pedregon took the win at the Slick 50 Nationals, rolling his McDonald's Olds Cutlass to victory over Gordon Mineo, who coupled his first final round appearance with a career-best ET of 5.312sec in the ex-Blue Max Pontiac Trans Am on his final qualifying run. At the Arizona Nationals, 50-year-old veteran Tom Hoover (Scotch Print Trans Am) bagged his first National event victory in 13 years, outrunning Richard Hartman's Corvette. In the season-opening Chief Auto Parts Winternationals, Jim Epler beat Force by a scant 0.061sec for the final round win.

**PRO STOCK** Warren Johnson urged his AC-DeLo Olds Cutlass to a narrow 0.02sec victory over Jerry Eckman's Pontiac Trans Am in the finals of the Gatornationals. Eckman, however, still holds a comfortable 4214 to 2902 edge over Johnson in the point standings, having built his cushion with back-to-back victories in the season's first two races. In the season-opening Winternationals final, Eckman nipped Jim Yates' Pontiac Trans Am, while in Arizona he beat back the challenge of Johnson's Oldsmobile teammate Don Beverley. Mark Pawuk drove his Oldsmobile Cutlass to a tight final round win over Rickie Smith's Trans Am in Texas, the difference at the line being a mere 0.04sec.

## Ironhead's IROC

**DODGE INT'L RACE OF CHAMPIONS**  
**ROUND 1/Daytona Beach, Fla., Feb. 14**

■ An international race of champions it may be called, but with the format for this year's four-race series calling for four oval-track events it's looking more and more like the American race of champions. On the high banks of Daytona for the first race of '92, the NASCAR men continued to rule, with reigning Winston Cup champ Dale Earnhardt heading home a 1-2-3-4 romp by stock car racing's elite. Indeed, Al Unser Jr. was the only non-Winston Cup regular even to lead the 40-lap IROC XVI



**LATE MOVE Dale dives to the bottom.**

opener, Earnhardt and Ricky Rudd (who finished in a dead-heat for second with Harry Gant) dominating the otherwise thoroughly entertaining show.

Earnhardt claimed his third career IROC victory by diving underneath Rudd and Harry Gant out of the final turn to win by half a car length. His average speed in the Goodyear-shod Dodge Daytona was an amazing 182.556mph.





**THUMBS UP** A chronicle of the birth and development of the record-setting Ford-Cosworth DFV Formula 1 engine, and its competition debut in the Team Lotus cars of Jim Clark and Graham Hill, "Nine Days in Summer" is a film from another era. In those days, 25 years ago, no one in the pits wore headsets, smoking was still fashionable and the only graphics on the cars were the number and the constructor's name.

The new engine's progress is charted from designer Keith Duckworth's drawing board to the checkered flag on the race track. Clark and Lotus boss Colin Chapman are shown working on the car, while a crew member wheels out the new engine with

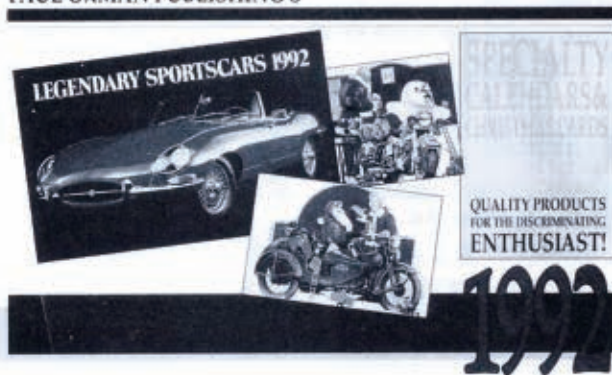
the reverence of a man handling nitroglycerine. Other scenes, following an initial test session, show a smiling Hill giving the new engine his approval: "Not a bad old tool."

The camera ventures inside the cockpit of the British Racing Green Lotus 49 to show the large red leather-wrapped steering wheel and minimal (by today's standards) instrumentation. It makes the viewer want to climb in and experience first-hand the exhilaration of driving such a beautiful machine.

Those cars sang in a different key to today's F1 machines, as shown by incredible footage from tracks such as Spa, Nurburgring and Watkins Glen. At the beautiful yet treacherous Nurburgring, we see car after car cresting the famous "Flugplatz," flying through the air with the speed, power, agility and grace of a downhill skier.

The video has a feel and a music score reminiscent of the 1966 film "Grand Prix," but is one any racing enthusiast can enjoy, whether they actually remember the grand old days, or just want an informed look back at a great era of Grand Prix racing. Retailing at \$29.95, the video is available by calling (800) 722-8630 or contacting The Motorsport Collector, Dept. RCR, 5120 Belmont Rd., Ste. L, Downers Grove, IL 60515.

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**MODEL MANIA** Trinity Models is a small English company that produces 18 to 20 models per week. Its selection of 1/24th scale models includes the Ferrari 312B3 (1974), the Jordan 191 (1991), the Tyrrell 020 (1991), the Benetton B191, the Williams FW14 and many more. New for 1992 are the Jordan 192 and Williams FW14B.

The hand-built models are approximately 7in. long and constructed from white metal, brass and resin with rubber tires. Only 250 of each marque will be built, each with a numbered plaque. Current Formula 1 cars are available with both drivers. Model prices start from £168 sterling. For those who enjoy model building, the company sells kits, with prices starting at £55 sterling. For more information, contact Trinity Models, Dept. RCR, F3, Enterprise House, Rippers Court, Sible Hedingham, Halstead, Essex, CO9 3PY, England. Telephone 011-44-787-62028.



**"THE EAGLE FLIES"** This beautifully detailed Michael Turner print, available from the Motorsport Collector, depicts Dan Gurney's victorious Eagle-Weslake leading the BRM of Jackie Stewart and the Ferrari of Chris Amon through the Masta Kink at Spa-Francorchamps. Gurney's triumph at the Belgian Grand Prix that day, June 18, 1967, was the first and only Grand Prix win for the F1 Eagle.

"The Eagle Flies" was originally published as an unsigned print in 1967 in Turner's book, *Formula One: the Cars and Drivers*. It has now been reprinted in a limited edition of 500 with each copy signed and numbered by Turner. Each print is also signed by Gurney. The edition has been published on acid free art paper with an overall print size of 17" x 22". The image size is 12.5" x 18". Cost is \$125 plus \$5 shipping per order. To order your print, call (800) 722-8630 or contact The Motorsport Collector, Dept. RCR, 5120 Belmont Rd., Ste. L, Downers Grove, IL 60515.



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**OCT. 31-NOV. 1, 1992**



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BOB COSTANZO

**RICKY CRAVEN** Stock Car racing fans in New England have been talking about Ricky Craven for four or five years. He started to show his stuff in the American-Canadian Tour in 1988 and '89 before convincing everyone in the Northeast he is Winston Cup-bound by winning NASCAR's Busch Grand National North Rookie-of-the-Year award in 1990 and sweeping to the championship last year.

Craven won 10 of last year's 21 Grand National North races, including a 250-miler at New Hampshire International Speedway in October. There, near his adopted hometown of Concord, N.H., Craven beat Harry Gant and other Winston Cup stars—shortly after Gant's storied "Mr. September" hot streak.

"There are two things that have done more for me than anything in my 10 years of racing," commented Craven. "Number one and foremost was winning the Grand National North championship. But as far as having an immediate impact, winning that televised race at NHIS did enormous things for me."

Indeed, Craven's classy, late-race pass of Gant and his record of 10 victories and four poles showed the world that he is a top young talent. This year Craven has moved south to North Carolina and is running the full Busch Grand National series. He's signed a two-year contract to drive Chevrolets for J&J Racing—BGN champions with Tommy Ellis in 1988—and the team is sponsored by DuPont, the deal sealed the morning of this year's Daytona 500.

J&J Racing is based in Danville, Va., and is owned by New Yorkers Bill Papke and John Jackson. The team has five cars and is run by veteran crew chief Darrell Bryant. Top engine man Ron Hutter builds the powerplants.

"It's everything I hoped it would be and maybe a little more," said Craven about the team. "They're serious racers. I think that's the most exciting part. They also understand there's a learning curve here, that for '92 there's a great deal for me to learn and not really a lot of time to do it in."

Most of the southern tracks are new this year to the 25-year old Craven. He's also learn-

ing about high-banked superspeedways like Daytona, Talladega, Atlanta and Michigan, of which there are more than ever on this year's expanded Grand National schedule.

"I recognize that superspeedway racing has got to be the key element for me on whether or not I make it into Winston Cup racing," reflected Craven. "You need to shine on the superspeedways with all the television and media exposure."

Craven was voted NASCAR North's most popular driver by the fans in 1990 and '91, and it's easy to see why. He's an outgoing, amiable man with a business-like air. Born in Newburgh, Maine, he started racing family-built stock cars in the Charger division at the nearby Unity Raceway. Graduating to the ACT, he drove for E.J. Prescott, but in 1989 put together his own team to run in NASCAR.

"I always had a hands-on knowledge of what it takes to be not only a successful race car driver, but a successful owner," commented Craven. "I learned early the mechanical aspects and the business aspects. I think that's why I was so successful in 1990 and '91, because I was as tough on Ricky Craven the owner and Ricky Craven the accounts receivable and accounts payable person, as on Ricky Craven the driver."

For the foreseeable future, however, the days of being a team owner are behind him. "This is different," he noted. "Now, and even in 1991, I recognize that I'm getting a little bit out of my league as an owner. It's been very important in getting me to where I am, but now I have to concentrate on being a championship race car driver because that's what I want to be, not a championship car owner."

Craven won last year's Grand National North title by the widest margin ever. He really hit his stride in mid-summer after winning the True Value 250 at Oxford Plains, Maine. "To natives of Maine or New England, the Oxford 250 is like the Daytona 500 of the area," Craven commented. "After winning that race as a driver and a team owner, I walked a fine line between being confident and overconfident."

"We were extremely confident, and as long as you don't go over that line you're going to do some terrific things. It's a hard thing to explain, but confidence will carry you a long way in this business."

The week after winning at Oxford Plains, Craven had his first and only mechanical DNF of the year, in the Budweiser 300 at NHIS. He then won four races in a row and six of the last eight races of the year.

"We went home and regrouped and really showed them what we're made of," declared Craven. "Confidence won us half of those races, there's no question in my mind. We just truly believed we could fly. We believed almost anything was obtainable."

Married for two years to K.K., and with a new baby daughter, Craven's goals for '92

include winning the Grand National Rookie of the Year award and at least one race. "Rookie of the Year would be a great honor," explained Craven. "Finishing in the top 10 in points would be a great achievement. Ninety percent of the tracks I'm going to this year I've never been at, so to finish in the top 10 in points would be an immediate success."

—Gordon Kirby



**JEFF KROSNOFF** Which American driver aiming at Formula 1 has gathered the most overseas experience in recent years? The correct answer, without a shadow of doubt, is Jeff Krosnoff. The 26-year-old Californian pursued a Formula 3 testing opportunity in Japan three years ago, and has since established himself as a top contender in Japanese Formula 3000 and Group C-type sportscars, gaining considerable experience and earning a living that most of his Stateside rivals can only dream about.

This is Krosnoff's fourth year in Japan, and for the new season he has the best seats he's ever enjoyed in both of Japan's top categories. In Group C, he's multiple Japanese champion Masahiro Hasemi's teammate in a pair of factory NISMO Nissans, and in F3000, he has replaced the revered Hasemi at Speedstar Racing after the 45-year old Japanese superstar decided to retire from open-wheel racing.

You have to remember that Hasemi has been Nissan's lead test driver for a full quarter century. It was Hasemi who teamed with his great rival Kazuyoshi Hoshino—the other veteran superstar of Japanese racing—and Toshio Suzuki to blitz our domestic IMSA teams aboard NISMO's factory Nissan Group C car in this year's Daytona 24 hours.

Gai-jin Krosnoff is excited with the opportunity to replace Hasemi in F3000 and join him as a teammate in sportscars. "Obviously, being with the NISMO team, my chances look really good there," enthused Krosnoff.

"I don't really have words to describe what being with that team means. They've won the championship the last two years in a row and they're always the dominant team at the race."



There are seven rounds to the All-Japan Sports-Prototype championship, and 10 rounds in the F3000 series. In Japan's F3000 championship, the fields are full (with more than 30 regular starters) and a three-way tire war rages between Bridgestone, Yokohama and Dunlop.

Krosnoff went to Japan three years ago, after racing very competitively in Formula Fords, Russell-Mazda, Formula Atlantic and the now-defunct SCCA Racetruck series. Through Speedstar wheels, who had sponsored him here in the U.S., Krosnoff got a chance to test an F3 and then an F3000 car in Japan, resulting in a full-time ride with Speedstar's F3000 team.

"I've always wanted to get to Formula 1," declared Krosnoff. "That's my goal, and when the opportunity presented itself to race in Japan, I just took it. It was the door that opened for me, and it just seemed the way to go rather than mope around in Atlantic and then try to get into Indy Lights."

"There was no way I could get to Europe," he went on. "I'd spoken to various people and tried various ways, but I just couldn't open any doors to Europe. Like I say, Japan was where the door opened for me."

Teamed with Hasemi in 1989, his first year in F3000, Krosnoff finished 10th in the championship. His best individual result was a third place. Speedstar preferred to revert to a single-car team for Hasemi in '90, and Krosnoff was farmed out to the Suntec team, racing in both F3000 and Group A sedans. He continued with Suntec last year and also drove a TWR Jaguar for the team in Sportscar races, which included an outing at LeMans.

In F3000, Krosnoff has always driven Mugen-powered Lolas on Dunlop tires. On his return to Speedstar he continues with the same combination, but has high hopes of scoring his first F3000 victory.

"I'm sure it's going to be better than last year because I have the full support of the team. They very much wanted me to come back with them this year, and anytime a team really wants the driver, I think, obviously, everybody works better."

"It's a one-car team and everybody's concentrating their effort on me," he went on. "It's a well-respected team with good engines and good people. I think it will be a good year."

Krosnoff was married in January, and new wife Tracy will visit Japan on a regular basis this summer as Jeff tries to win races and make the break into Formula 1 or IndyCars.

"I figure I'm well-enough prepared now to go into Formula 1," reckoned Krosnoff. "Now it's just a matter of making that jump. IndyCars has its appeal, as does a top World Sportscar team, but the goal is still F1."

Aside from Michael Andretti and Al Unser Jr., it's clear that Krosnoff is the American driver most prepared for the job. In the past three years he's labored in comparative obscurity, but with the equipment at his disposal this year, Krosnoff might finally make people in his home country sit up and take notice.

—Gordon Kirby



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Mesa Marin Raceway	September 5
Laguna Seca Raceway	September TBA
Willow Springs Raceway	November 1

\*\*TENTATIVE

### EAST

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Indianapolis Raceway Park	May 23
Pennsylvania International Raceway	June 7
Shannonville Motorsports Park	June 21
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New Hampshire International Speedway	June 28
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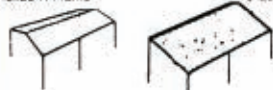




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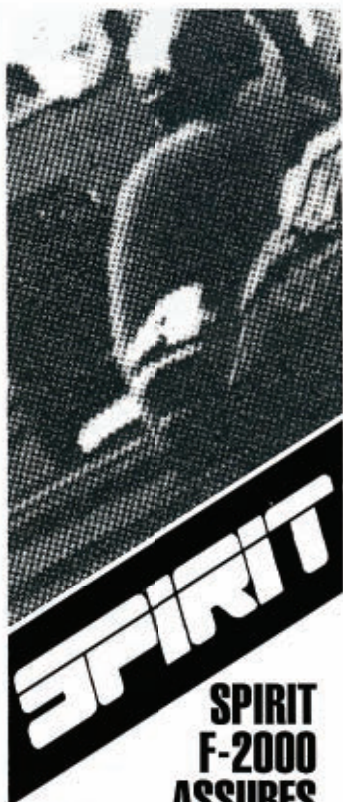
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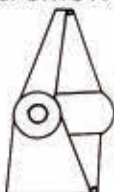
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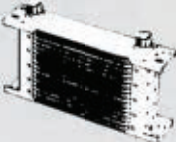
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# NEXT MONTH

**LOLA CARS TECH TOUR...** the chief Indy Car designer at Lola, Bruce Ashmore, discusses the highly advanced design and manufacturing techniques which have made Lola the dominant car builder in IndyCar racing the past two seasons. A candid examination of the pros and cons of the all-carbon fiber chassis, plus why the little Cosworth XB engine is such a threat to the Chevy-powered Lolas.

**INDY 500 PREVIEW...** extensive words and pictures on the hardware, backed up by Gordon Kirby's searching conversations with all the players. Includes a thorough Design Brief on the new Galmer G92 chassis, and an examination of the Lola T9200 series, comparing the not-so-subtle differences between the three different chassis developed to house the Buick, Chevrolet and Ford Cosworth engines.

**TRYING TIMES AT McLAREN-HONDA...** Ayrton Senna has seen his F1 dominance badly shaken by the superior handling of the Williams-Renault and his body battered in shunts struggling to keep up. Maurice Hamilton assesses how the team is responding and discusses the new car being rushed into the fight.

**MICHAEL ANDRETTI LOOKS AHEAD...** a candid interview with the current IndyCar champion about his future plans. Why does he contemplate leaving his comfortable, all-conquering IndyCar seat for the uncertainties of Formula 1? Just how serious is he about pursuing this goal? And what does he regard as his most serious challenge if he attempts to follow in his father's footsteps?

...plus much more on NASCAR, IMSA, SCCA, Eoin Young's Journal, and the informative *For The Record* section to keep you up to speed with motor racing.

ON YOUR NEWSSTAND MAY 15

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**LEGEND** All times listed are for Eastern Time Zone. Times accurate at time of printing, but check your local listings for any changes.  
L = Live program  
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# RACER'S DIARY

## SUN APRIL 19

■ No events scheduled at press time

### RACING ON TV

12:00am	Nissan 400, Las Vegas, Nev.	ESPN
3:30am	Saturday Night Thunder	ESPN
5:30am	Glory Days	ESPN
6:00am	Speedweek	ESPN
10:00am	Winners (Jeff Gordon)	TNN
10:30am	NHRA Today	TNN
11:00am	Inside Winston Cup Racing	TNN
11:00am	NHRA Chief Auto Parts Winter Nationals	PRIME
11:30am	Raceday (race reports)	TNN
2:00pm	NHRA Today	TNN
2:30pm	Inside Winston Cup Racing	TNN
2:30pm	Legends of the Brickyard	ESPN
3:00pm	Motorsports Special	TNN
3:25pm	Raceday Update (race reports)	TNN
6:00pm R	Winners (Jeff Gordon)	TNN
7:00pm	Raceday Update (race reports)	TNN
8:00pm	NHRA Chief Auto Parts Winter Nationals	PRIME
8:30pm	Raceday (race reports)	TNN

## MON APRIL 20

### TODAY'S EVENTS

FA British F3, Thuxton, Andover, England

### RACING ON TV

1:00am R	Winners (Jeff Gordon)	TNN
1:30am	Legends of the Brickyard	ESPN
1:30pm	Secrets of Speed	ESPN

## THU APRIL 23

### TODAY'S EVENTS

NHRA Winston Drag Racing, Atlanta, Ga.  
SCCA Subaru PRO Rally, Prescott Forest, Ariz.

### RACING ON TV

11:00pm	This Week in NASCAR	PRIME
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## TUE APRIL 21

■ No events scheduled at press time

### RACING ON TV

1:00am	SCCA Toyota Atlantic, Miami Fla.	ESPN
1:30am	Legends of the Brickyard	ESPN
2:00am	Firestone Indy Lights, Phoenix, Ariz.	ESPN
5:00am	Glory Days	ESPN
3:00pm	Legends of the Brickyard	ESPN

## FRI APRIL 24

### TODAY'S EVENTS

NHRA Winston Drag Racing, Atlanta, Ga.  
SCCA Subaru PRO Rally, Prescott Forest, Ariz.  
World of Outlaws, Knoxville, Iowa  
SCORE San Felipe 250, San Felipe, Mexico

### RACING ON TV

4:30am	Nissan 400, Las Vegas, Nev.	ESPN
12:00pm	This Week in NASCAR	PRIME
2:00pm	Glory Days	ESPN

## WED APRIL 22

■ No events or racing on TV scheduled at press time

## SAT APRIL 25

### TODAY'S EVENTS

NASCAR Busch Grand Nat'l, Gainesville, Ga.  
SCCA Pro Series, Road Atlanta, Braselton, Ga.  
NHRA Winston Drag Racing, Atlanta, Ga.  
SCCA Subaru PRO Rally, Prescott Forest, Ariz.  
World of Outlaws, Knoxville, Iowa  
SCORE San Felipe 250, San Felipe, Mexico

### RACING ON TV

12:00pm	SCCA Toyota Atlantic, Long Beach	ESPN
1:00pm	NHRA Today	TNN
1:00pm	Indy 500-A Race for Heroes	ESPN
1:30pm	Inside Winston Cup Racing	TNN
1:30pm	SCCA Toyota Celebrity, Long Beach	ESPN
4:00pm	Motorsport Special	TNN
6:00pm	Checkered Flag Phoenix, Ariz.	ESPN
7:30pm	Speedweek	ESPN
8:30pm	Checkered Flag Brazilian F1 GP	ESPN
9:30pm	Saturday Night Thunder	ESPN
10:30pm	Speedweek	TNN

## SUN MAY 3

### TODAY'S EVENTS

NASCAR Winston Cup, Winston 500, Talladega, Ala.  
FA Formula 1, Spanish GP, Circuito de Catalunya, Barcelona  
SCCA Tide Trans-Am Tour, Texas World, Texas  
SCCA World Challenge, Texas World, Texas  
World of Outlaws, Hutchinson, Kan.

### RACING ON TV

7:50am L	F1 Grand Prix of Spain, Barcelona, Spain	ESPN
10:00am	Winners (Ed McCulloch)	TNN
10:30am	NHRA Today	TNN
11:00am	Inside Winston Cup Racing	TNN
11:30am	Raceday (race reports)	TNN
12:30pm	ARCA, Talladega, Ala.	ESPN
2:00pm L	NASCAR Winston Cup, Talladega 500	ESPN
2:00pm	American Sports Cavalcade	TNN
3:25pm	Raceday Update (race reports)	TNN
3:30pm	NHRA Today	TNN
4:00pm	Inside Winston Cup Racing	TNN
4:30pm R	Winners (Ed McCulloch)	TNN
7:00pm	Raceday Update (race reports)	TNN
7:05pm	American Sports Cavalcade	TNN
8:30pm	Raceday (race reports)	TNN

## MON MAY 4

■ No events scheduled at press time

### RACING ON TV

1:00am	Winners (Ed McCulloch)	TNN
2:00am	Chevrolet MotorSports Hour	PRIME
10:30pm	Countdown to Indy	PRIME

## THU MAY 7

### TODAY'S EVENTS

FA World Rally, Tour de Corse, Ajaccio, Corsica

### RACING ON TV

12:00pm	NHRA Supersessionals, Texas	PRIME
1:00pm	Countdown to Indy	PRIME
1:30pm	Primetime Motorsports Hour	PRIME
3:00pm	Chevrolet MotorSports Hour	PRIME
8:30pm	Prime Time Motorsports	PRIME
10:00pm	Chevrolet MotorSports Hour	PRIME
11:00pm	This Week in NASCAR	PRIME

## TUE MAY 5

■ No events scheduled at press time

### RACING ON TV

12:30am	SCCA Tide Trans-Am, Long Beach, Calif.	ESPN
6:00pm	Countdown to Indy	PRIME
10:30pm	Countdown to Indy	PRIME

## FRI MAY 8

### TODAY'S EVENTS

World of Outlaws, Indianapolis, Ind.

### RACING ON TV

12:00am	Countdown to Indy	PRIME
6:00pm	Countdown to Indy	PRIME
10:30pm	Countdown to Indy	PRIME

## WED MAY 6

### TODAY'S EVENTS

World of Outlaws, Granite City, Ill.

### RACING ON TV

10:30pm	Countdown to Indy	PRIME
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## SAT MAY 9

### TODAY'S EVENTS

Indy Time Trials, Indianapolis, Ind.

### RACING ON TV

10:30am	Country Kitchen (Darrell Waltrip)	TNN
12:00pm L	Indy Time Trials, Indianapolis, Ind.	ABC
1:00pm	Busch Grand Nat'l, Nazareth, Pa.	TNN
3:00pm	Countdown to Indy	PRIME
3:00pm	NHRA Today	TNN
3:30pm	Inside Winston Cup Racing	TNN
4:00pm	Busch Grand Nat'l, Hickory, N.C.	TNN
9:30pm L	USAC Sprints, Indianapolis, Ind.	ESPN

## SUN MAY 17

### TODAY'S EVENTS

NASCAR Winston West California 300, Bakersfield, Calif.  
Indy Time Trials, Indianapolis, Ind.  
FA Formula 1, San Marino GP, Enzo e Dino Ferrari, Imola  
IMSA Exxon Supreme GTS/GTU/GTO, Mosport Park, Bowmanville, Ont.  
NHRA Winston Drag Racing, Goody's Mid-South Nationals, Memphis, Tenn.  
SCCA Subaru PRO Rally, Rim of the World, Palmdale, Calif.  
HORA Nevada 500, Pahrump, Nev.

### RACING ON TV

7:50am L	F1 Grand Prix of San Marino, Imola, Italy	ESPN
10:00am	Winners (Pat Austin)	TNN
10:30am	NHRA Today	TNN
11:00am	Inside Winston Cup Racing	TNN
11:30am	Raceday (race reports)	TNN
1:30pm L	Indy 500 Time Trials, Indianapolis, Ind.	ESPN
3:25pm	Raceday Update (race reports)	TNN
3:30pm	NHRA Today	TNN
4:00pm	Inside Winston Cup Racing	TNN
4:30pm R	Winners (Pat Austin)	TNN
6:00pm L	Indy 500 Time Trials, Indianapolis, Ind.	ESPN
7:00pm L	Goody's Mid-South Nationals, Memphis, Tenn.	TNN
8:30pm	Raceday (race reports)	TNN

## MON MAY 18

■ No events scheduled at press time

### RACING ON TV

1:00am R	Winners (Pat Austin)	TNN
4:30am	Chevrolet MotorSports Hour	PRIME

## THU MAY 21

### TODAY'S EVENTS

Indy 500, Carburetion Day, Indianapolis, Ind.  
World of Outlaws, Mechanicsburg, Pa.

### RACING ON TV

12:30pm	Indianapolis Race Preview	PRIME
1:30pm	Prime Time Motorsports	PRIME
3:00pm	Chevrolet MotorSports Hour	PRIME
7:30pm	Indianapolis Race Preview	PRIME
8:30pm	Prime Time Motorsports	PRIME
10:00pm	Chevrolet MotorSports Hour	PRIME
11:00pm	This Week in NASCAR	PRIME

## TUE MAY 19

### TODAY'S EVENTS

NASCAR Busch Grand Nat'l, Nazareth, Pa.

### RACING ON TV

12:00am	SCCA Tide Trans-Am, Texas World, Texas	ESPN
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## FRI MAY 22

### TODAY'S EVENTS

World of Outlaws, Mechanicsburg, Pa.  
USAC Silver Crown, Indianapolis, Ind.

### RACING ON TV

12:00pm	Goody's Sportsman 150	PRIME
6:00pm L	Indy Final Practice Day	ESPN

## WED MAY 20

### TODAY'S EVENTS

World of Outlaws, Saver, Pa.

### RACING ON TV

1:30am	Indianapolis Race Preview	PRIME
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## SAT MAY 23

### TODAY'S EVENTS

SCCA Toyota Atlantic, Lime Rock, Conn.  
NASCAR Busch Grand Nat'l, Charlotte, N.C.  
USAC Midglts, IRP, Chermont, Ind.  
World of Outlaws, Hagerstown, Md.

### RACING ON TV

12:00am	Goody's Sportsman 150	PRIME
12:00pm	NHRA, Atlanta, Ga.	ESPN
3:00pm	NHRA Today	TNN
3:30pm	Inside Winston Cup Racing	TNN
4:00pm	Busch Grand Nat'l, Nazareth, Pa.	TNN
6:00pm	Indianapolis Race Preview	PRIME



# APRIL 19-MAY 30

## SUN APRIL 26

### TODAY'S EVENTS

NASCAR Winston Cup, Hanes 500, Martinsville, Va.  
 IMSA Camel GT, Nissan GP of Road Atlanta, Braselton, Ga.  
 IMSA Zetex-Saab Pro Series, Road Atlanta, Braselton, Ga.  
 IMSA Firestone Firehawk, Road Atlanta, Braselton, Ga.  
 IMSA Bridgestone Super Car, Road Atlanta, Braselton, Ga.  
 FIA Sportscar World Championship, Monza, Milan, Italy  
 FIA British F3, Donington Park, Derby, England  
 USAC Copenhagen-Skoal National Midget Series, Louisville, Ky.  
 NHRA Winston Drag Racing, Fram Southern Nationals, Atlanta, Ga.  
 SCCA Subaru PRO Rally, Prescott Forest, Ariz.  
 SCORE San Felipe 250, San Felipe, Mexico

### RACING ON TV

3:30am	Firestone Indy Lights, Phoenix, Ariz.	ESPN
4:00am	Indy 500-A Race for Heroes	ESPN
4:30am	Legends of the Brickyard	ESPN
6:00am	Speedweek	ESPN
10:00am	Winners (Roger Means)	TNN
10:30am	NHRA Today	TNN
11:00am	Inside Winston Cup Racing	TNN
11:30am	Raceday (race reports)	TNN
2:30pm	NHRA Today	TNN
3:00pm R	Inside Winston Cup Racing	TNN
3:30pm	Winners (Roger Means)	TNN
7:00pm	Raceday Update (race reports)	TNN
8:30pm	Raceday (race reports)	TNN

## MON APRIL 27

### No events scheduled at press time

### RACING ON TV

1:00am	Winners (Roger Means)	TNN
3:30am	Saturday Night Thunder	ESPN
5:00am	Legends of the Brickyard	ESPN
6:00pm	Checked Flag	ESPN
8:00pm	NASCAR, Hanes 500	ESPN

## TUE APRIL 28

### No events scheduled at press time

### RACING ON TV

12:30am	Checked Flag	ESPN
1:00am	NASCAR, Modified Series	ESPN

## WED APRIL 29

### No events scheduled at press time

### RACING ON TV

3:30am	NASCAR, Hanes 500, Martinsville, Va.	ESPN
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## SAT MAY 2

### TODAY'S EVENTS

IROC Talladega, Ala.  
 NASCAR Busch Grand Nat'l, Radford, Va.  
 USAC Indianapolis Speedway opens for practice  
 USAC National Midget Series, IRP, Clermont, Ind.  
 World of Outlaws, Tulsa Speedway, Tulsa, Okla.  
 MTEC Phoenix, Ariz.

### RACING ON TV

3:00pm	NHRA Today	TNN
3:30pm	Inside Winston Cup Racing	TNN
9:30pm L	USAC Midgets, Ventura, Calif.	ESPN

## SUN MAY 10

### TODAY'S EVENTS

Indy Time Trials, Indianapolis, Ind.  
 FIA Sportscar World Championship, Silverstone, Towcester, England  
 FIA Formula 3000 Championship, Silverstone, Towcester, England  
 World of Outlaws, Copenhagen-Skoal Shootout, Hagerstown, Ind.

### RACING ON TV

10:00am	Winners (Bobby Allison)	TNN
10:30am	NHRA Today	TNN
11:00am	Inside Winston Cup Racing	TNN
11:30am	Raceday (race reports)	TNN
12:00pm	NHRA Supernationals, Texas	PRIME
2:00pm L	Indy 500 Time Trials, Indianapolis, Ind.	ESPN
2:00pm	NHRA Today	TNN
2:30pm	Inside Winston Cup Racing	TNN
3:00pm	AC Delco Challenge, Milwaukee, Wis.	TNN
4:00pm L	Indy 500 Time Trials, Indianapolis, Ind.	ABC
5:00pm	International Race of Champions, Talladega, Ala.	ABC
5:00pm R	Winners (Bobby Allison)	TNN
6:00pm L	Indy 500 Time Trials, Indianapolis, Ind.	ESPN
7:00pm	Raceday Update (race reports)	TNN
8:30pm	Raceday (race reports)	TNN
11:30pm	NHRA Supernationals	PRIME

## MON MAY 11

### No events scheduled at press time

### RACING ON TV

1:00am	Winners (Bobby Allison)	TNN
2:00am	Chevrolet MotorSports Hour	PRIME
8:30pm	NHRA Supernationals	PRIME
10:30pm	Countdown to Indy	PRIME

## TUE MAY 12

### No events scheduled at press time

### RACING ON TV

4:00pm	Countdown to Indy	PRIME
10:30pm	Countdown to Indy	PRIME

## WED MAY 13

### No events scheduled at press time

### RACING ON TV

4:00am	Chevrolet MotorSports Hour	PRIME
5:00am	Prime Time Motorsports	PRIME
5:30am	Countdown to Indy	PRIME
1:00pm	Countdown to Indy	PRIME

## SAT MAY 16

### TODAY'S EVENTS

Indy Time Trials, Indianapolis, Ind.  
 NHRA Winston Drag Racing, Memphis, Tenn.  
 World of Outlaws, Parkersburg, W.Va.  
 SCCA Subaru PRO Rally, Palmdale, Calif.  
 USAC National Midget Series, IRP, Clermont, Ind.  
 NHRA Nevada 500, Pahrump, Nev.

### RACING ON TV

2:00pm L	Indy 500 Time Trials	ESPN
3:00pm	NHRA Today	TNN
3:30pm	Inside Winston Cup Racing	TNN
4:00pm	Busch Grand Nat'l, Gainesville, Ga.	TNN
6:00pm L	Indy 500 Time Trials	ESPN
6:30pm	The Winston, Concord, N.C.	TNN
9:00pm L	USAC Sprints, Indianapolis, Ind.	ESPN

## SUN MAY 24

### TODAY'S EVENTS

NASCAR Winston Cup, Coca-Cola 600, Charlotte, N.C.  
 USAC PPG World Series, Indianapolis 500, Indianapolis, Ind.  
 World of Outlaws, Copenhagen-Skoal Shootout, Hagerstown, Md.

### RACING ON TV

12:00am	Goody's Sportsman 150	PRIME
10:00am	Winners (Bobby Rahal)	TNN
10:30am	NHRA Today	TNN
11:00am	Indianapolis 500, Indianapolis, Ind.	ABC
11:00am	Inside Winston Cup Racing	TNN
11:30am	Raceday (race reports)	TNN
12:00pm	Indianapolis Race Preview	PRIME
1:00pm	Coca-Cola 600, Concord, N.C.	TBS
2:00pm	Copper World Classic, Phoenix, Ariz.	TNN
2:00pm	Globy Days	ESPN
2:00pm	Chevrolet MotorSports Hour	PRIME
3:25pm	Raceday Update (race reports)	TNN
3:30pm	NHRA Today	TNN
4:00pm	Inside Winston Cup Racing	TNN
4:30pm R	Winners (Bobby Rahal)	TNN
7:00pm	Raceday Update (race reports)	TNN
8:30pm	Raceday (race reports)	TNN

## MON MAY 25

### TODAY'S EVENTS

IMSA Camel GT, Lime Rock, Conn.  
 IMSA Zetex-Saab, Lime Rock, Conn.  
 IMSA Bridgestone, Lime Rock, Conn.  
 IMSA Canara Cup, Lime Rock, Conn.  
 World of Outlaws, New Oxford, Pa.  
 FIA British F3, Brands Hatch, England

### RACING ON TV

1:00am	Winners (Bobby Rahal)	TNN
1:30pm L	IMSA GTP, Lime Rock, Conn.	ESPN

## TUE MAY 26

### No events or racing on TV scheduled at press time

### WE REMEMBER

† Jim Clark, F2 race, Hockenheim, Germany, 4/7/67  
 † Gilles Villeneuve, Belgian GP qualifying, Zolder, 5/8/82  
 † Lorenzo Bandini, of burns from Monaco GP, 5/10/67  
 † Harry Schell, British GP practice, Silverstone, 5/13/60  
 † Elio de Angelis, F1 test, Paul Ricard, France, 5/15/86  
 † Bill Vukobrat, while leading Indy 500, 5/30/55

## WED MAY 27

### No events or racing on TV scheduled at press time

## SAT MAY 30

### TODAY'S EVENTS

NASCAR Busch Grand Nat'l, Dover, Del.  
 FIA F3 Championship, Monte Carlo, Monaco

### RACING ON TV

1:00pm	NHRA Today	TNN
1:30pm	Inside Winston Cup Racing	TNN
2:00pm	Busch Grand Nat'l, Dover, Del.	TNN

## THU MAY 28

### No events scheduled at press time

### RACING ON TV

1:30pm	Prime Time Motorsports	PRIME
3:00pm	Chevrolet MotorSports Hour	PRIME
8:30pm	Prime Time Motorsports	PRIME
10:00pm	Chevrolet MotorSports Hour	PRIME
11:00pm	This Week in NASCAR	PRIME

## FRI MAY 29

### TODAY'S EVENTS

USAC Midgets, Holes Corner, Wis.  
 World of Outlaws, Mechanicsburg, Pa.

### No racing on TV scheduled at press time





The season opener at Kyalami underlined the huge strides made by Williams and Renault over the winter, as Nigel Mansell wandered off to win as he pleased, and Riccardo Patrese rode shotgun, fending off Ayrton Senna to preserve a convincing Williams 1-2. Already, however, come whispers of discord. Suggestions that Patrese had been given a new automatic clutch gizmo that allows off-the-shelf banzai starts to help him out of his fourth slot on the grid behind Mansell, Senna and Gerhard Berger. Whatever it was, Patrese came off the line as though fired from a gun, slammed between the McLaren-Hondas and held second for the rest of the afternoon. If Patrese did have the cannon-clutch, Mansell will be convinced the team is favoring the Italian. Not that Nigel needed any help, but he did rather play down the advantage of the latest Patrick Head active suspension. Was this Mansell feathering his own nest and claiming credit as a super driver, or was it a team ploy to make the technical advantage seem less than it actually is?

Senna didn't need to listen to Mansell. He had seen for himself out on the circuit, and if rumor is to be believed the Brazilian paid a private visit to Frank Williams as soon as he stepped off the plane in South Africa. He could have been merely passing the time of day or asking after Frank's health, but he could also have been putting himself in the front of the line for a Williams-Renault in '93, if the new McLaren doesn't match the Williams when it debuts at the Brazilian GP.

Alain Prost must have congratulated himself that he wasn't involved with the Ligier-Renaults as they battled to look competitive all weekend. The word among the French journalists is that far from pushing him to join Ligier, Renault is stalling because it wants him free to place in a Williams next season. If the little Frenchman ends up in front of a Renault engine at Williams next year, it would mean Mansell leaving because the two haven't seen eye-to-eye since their days together at Ferrari. There is even less likelihood of Mansell staying at Williams if Senna moves from McLaren, but if that happened, there would be an opening for Prost back at McLaren.

**MAX IN MOTION** FISA president Max Mosley was deftly "working" the press-room at Kyalami, casual in an open-neck shirt in direct comparison to the blazered blustering of his predecessor, Jean-Marie Balestre, who was also in South Africa. Max was talk-



**AT THE HELM** Mosley discussed world situations with British press cartel.

ing of his efforts to bring American and European racing closer together, saying that while you couldn't mix American and English football, for instance, the differences between European and American motor racing are purely artificial. With Mosley at the helm of international racing, it seems perfectly feasible to expect a Grand Prix at Indianapolis, using the incredible facilities of The Speedway with a road course built on the infield. Mosley is fluent in French and German, and fielded questions from the foreign press in South Africa with the polished multilingual ease of a Senna. Mosley said his candidacy had been proposed by Morrie Chandler and Ron Frost in New Zealand, and he acknowledged their courage, since defeat for him would have meant a virtual FISA excommunication for the Kiwi pair.

**HOME IMPROVEMENT?** Kyalami, you will be interested to know, is Zulu for "my home," but the new Kyalami is a shadow of its former self, tight and modern Mickey Mouse, running counter-clockwise. With the long, swooping downhill straight from Leeukop to Crowthorne on the old circuit lost to the alterations, there is no stretch to call a straight on the new track. Qualifying was further complicated by continual traffic, now that qualifying tires are a thing of the past since Goodyear has regained its monopoly following Pirelli's withdrawal.

**WITCHES' BREW** The "greenies" are beginning to make moves on F1. The specter of a ban on tobacco advertising continues to come ever closer, but now there's talk of barring the latest lethal brews that pass for regulation pump petrol but is far from user friendly, judging by the number of mechanics wearing hospital face masks in the garages at Kyalami. The petrol companies know that their technology is worth up to 30hp, but the green element points out that if FISA were serious about its place in the world community it would ban the witches' brews and make GP powerplants run unleaded. The failures of the Ilmor V10s, running for the first time in the Tyrrells with similar Elf fuel to Williams, were put down to the new fuel eating the seals on the engine.

**SPIRIT OF '76** There are those who wonder if Niki Lauda will be tempted to get back behind the wheel of a Formula 1 Ferrari during tests at

Fiorano—if only to catch up on developments while he's been away building up his airline. When engineer Rudolf Uhlenhaut found himself having problems relating to what the Mercedes-Benz GP drivers were telling him in the mid-'50s, he was known to hop in one of the Formula 1 cars and set

off on a long lap of the old Nurburgring, often as fast or faster than the driver who had been complaining.

Lauda's return to Ferrari is part of Luca di Montezemolo's "Spirit of '76" program, an attempt to recreate the winning combination he and Niki put together then. There is no doubt that Lauda will be able to help Alesi and Capelli, if only discussing race craft over breakfast. Once a racer, always a racer, and Lauda was a master technician as well as a proven race winner with 25 victories—fourth equal in the all-time standings with Jimmy Clark and behind only Prost, Senna and Jackie Stewart. He's also



**NIKI LAUDA**

fourth equal (with Nelson Piquet) on pole positions, behind Senna, Clark and Juan-Manuel Fangio. Proof of his staying power is that his three world titles are spread over nine years (1975, '77 and '84). When he quit F1, Niki began establishing his airline, Laudair, and now combines both his passions.

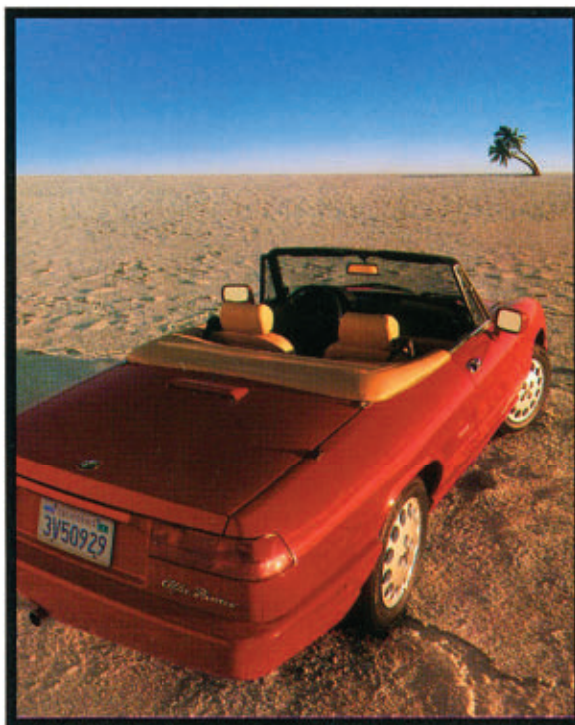
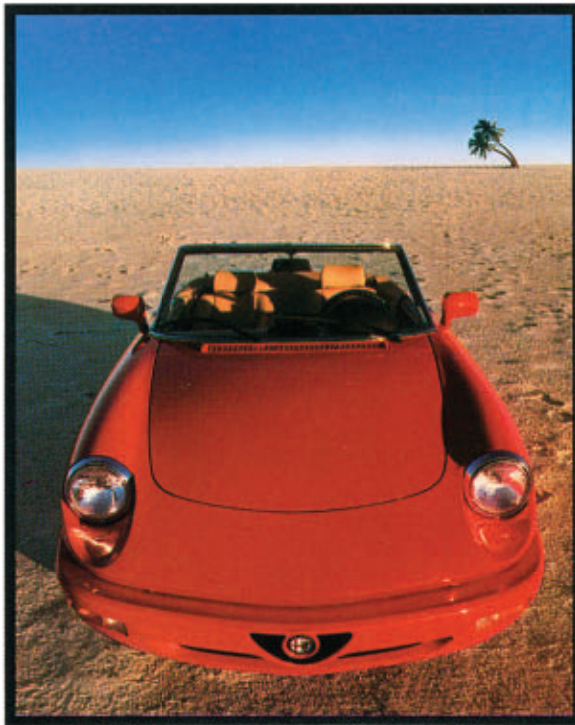
There is more to the airline business than flying the planes (he flies 50 hours a month in his big, passenger jets!) and at Johannesburg, Lauda took time off to go politicking and attend South African foreign minister Pik Botha's cocktail party for the Russian foreign minister, presumably for a word with both men about new routes for his airline.

**FOND MEMORIES** Gordon Murray was wandering the pit lane on Friday morning at Kyalami, meeting old friends and perhaps casting a thought back to the old track, where in 1983 Patrese and Piquet finished first and third as Piquet clinched the World Championship for Murray's Brabham-BMWs.

**UPSET DENIED** John Love was at the new Kyalami track this year, bearded and fit, wearing shorts and belying his 67 years. The Rhodesian driver came close to winning the South African GP in 1967 in the ex-Bruce McLaren 1964 2.7-liter slimline Cooper built for the 100-mile Tasman races. Love fitted two extra pannier tanks for the Grand Prix. They had reckoned on being two laps down on the leaders by the end of the race, but Love instead found himself in the lead, although aware he was likely to run out of fuel. Then a Bendix pump in the makeshift system faltered and he was forced to pit.

Whitney Straight won the first South African GP in a Maserati in 1934 and Pedro Rodriguez won the first World Championship GP in South Africa—that 1967 race—with the works Cooper-Maserati.





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