

LOLA AT 60



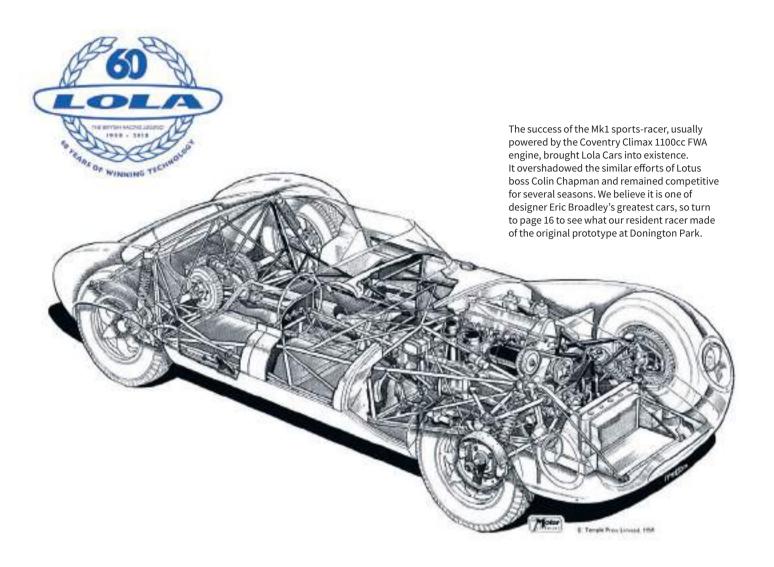
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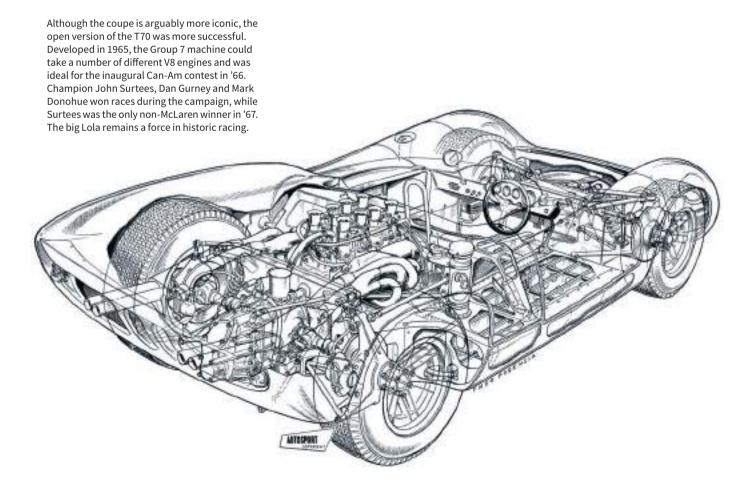
FROM BROADLEY TO BIRRANE

GREATEST CARS

LOLA'S SECRET WEAPON

THE AUDI CHALLENGER







COVER IMAGES: JEP/PETCH



Celebrating a racing legend

Lola is one of the great names of motorsport. Eric Broadley's firm became one of the leading providers of customer racing cars and scored success in a diverse range of categories.

Despite an emphasis on engineering rather than profit, Broadley led Lola for nearly 40 years before the company's 1997 Formula 1 debacle took its toll. But former customer Martin Birrane stepped in and gave the British constructor a new lease of life in the 2000s.

In this special Autosport supplement, we celebrate 60 years of Lola and speak to some of the key figures involved. There have been some wonderful cars - and painful failures, too but Lola's exploits were rarely dull. We've tried to give a flavour of the broad spectrum of categories and eras, from Broadley's remarkable 1958 Mk1 to the successful LMP1 and LMP2 sports-racers of the 21st century. We've also stuck our necks out to choose our 10 greatest Lolas – an almost impossible task - so please let us know what your favourites are.

One of the highlights of the project was the track test at Donington Park, where Ben Anderson got to drive three special Lolas (page 16). Our thanks to circuit operator MotorSport Vision, and owners/preparers Keith and Susan Ahlers, Chris Beighton, Steve Chaplin and Simon Hadfield.

Another was a visit to the impressive Huntingdon facility Birrane helped create and which continues to operate under the auspices of Wind Tunnel Developments Limited. It is now up for sale and, if the right buyer comes along, there is a chance we could soon herald Lola's third era. That would be a fitting tribute to Broadley and Birrane.







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SUB-EDITORS Peter Hodges, Damien Smith CONTRIBUTORS Ben Anderson, Neil Briscoe, Paul Fearnley, David Malsher, Marcus Pye, Gary Watkins ART EDITOR Lynsey Elliott PHOTOGRAPHERS Mike Petch/JEP, Motorsport Images ADVERTISING ENQUIRIES Don Rupal EMAIL don.rupal@motorsport.com

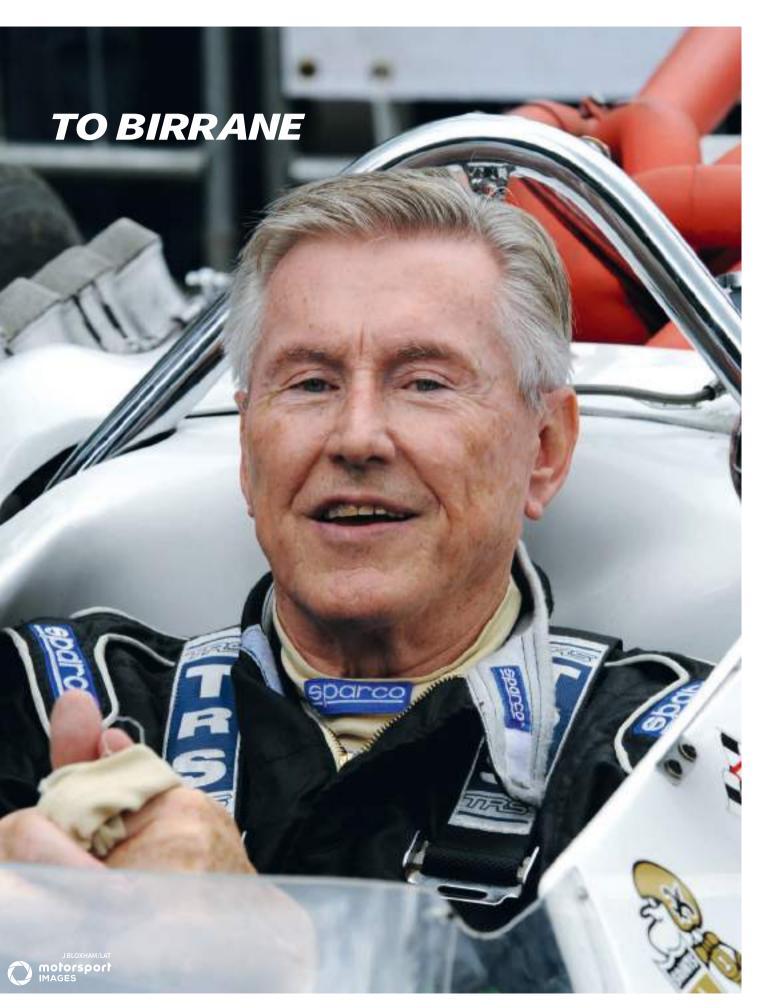


















M

ark 1, brilliantly conceived and superbly executed with an artistic flourish in just six months in the borrowed corners of a Bromley machine shop and West Weybridge bodyshop, promptly upstaged Colin Chapman's "cheap and cheerful" Lotuses.

Mk2 was the best — faint praise admittedly at a transformative time — of the front-engined Formula Juniors. Its Mk3 replacement bristled with good ideas, including a quickly detachable rear superstructure (with Hewland gearbox), but flopped and almost turned the company belly up. Mk4 was on pole for its Formula 1 world championship debut in 1962. Mk5 was middling though good enough to win Monaco's Junior support race in Richard Attwood's hands. And as for Mk6, well, it all but invented the modern supercar and revitalised sportscar racing — giving Chapman a case of green-eye on both counts — but drove its originator to distraction: operating under Ford's weighty auspices was stifling.

Eric Broadley, quiet and unassuming son of a gentleman's outfitter from Kent, held firm convictions: quantity surveying for one was dull, dull, dull — though it provided him with a firm and handy grasp of stress calculation — whereas motor racing was exciting; too exciting — and dangerous — in his inexperienced hands. He soon realised that becoming world champion was beyond him and it was to be an innate talent for creating user-friendly machinery that was affordable, competitive and for its time reliably safe that would put him on the global motorsport map.

Lola Cars (International) Ltd would until 1997 generally thrive and prosper, though occasionally stutter and stumble, across a bewildering variety of categories with many top-of-the-bill customers — Aston Martin, BMW, GM, Honda, Lamborghini and Nissan; Graham Hill, Paul Newman and John Surtees — plus myriad 'Joe Clubman'.

Martin Birrane, dapper and extrovert son of a tailor from County Mayo, acted, butlered — for Canada's ambassador in Turkey! — and crooned to make ends meet before garnering

a fortune from property. Motorsport was his release — he started in a Ford Anglia in 1967, and in '85 won his class at Le Mans in a BMW M1 — and enthusiasm no doubt swayed acumen when he saved Lola — as he had Mondello Park "from the cows" in '86 — after a flawed F1 fling. But though he propped/invested, promoted and diversified to revive its fortunes, particularly in the US, the company went into administration in May 2012 and ceased trading five months later.

It exists today as a high-tech provider for aerospace, automotive, communications and defence and also in the assets and licensed intellectual property obtained by Toronto's Multimatic Engineering and Carl Haas Automobile Imports Inc of Chicago — long 'family' relationships with petrol in their veins, grease under their fingernails and trophies on their shelves.

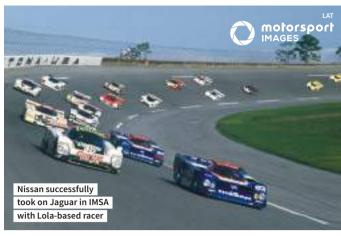
Broadley's abrupt jumping of the Ford Advanced Vehicles ship in the summer of 1964 was the making of him. From the same Yeovil Road in Slough Trading Estate, his cars would win '66's Indianapolis 500 and inaugural Can-Am Challenge Cup plus the '67 Italian Grand Prix: Lotus had required three attempts to win at the Brickyard, Lola just two; T70, Broadley's favourite, was the design that he'd wanted the Ford GT40 to be; and 'Hondola' — or T130, as he knew it — had been amalgamated in just six weeks.

If you wanted something fast and needed it quickly, Lola was your first port of call. With no road-car side to distract (or bolster) it, no unhealthy desire to take all (if any) of the credit and a powerful work ethic, it filled the void left by Cooper's collapse and the rise (at no matter the cost) of Lotus. Lola was sensible, strait-laced, structured and productionised — no bullshit, great spirit; a place of empowerment and learning for the flashing French curves and slide rules of Tony Southgate, John Barnard and Patrick Head — Broadley couldn't half pick 'em — and of security and fun for loyal lieutenants such as works manager Rob Rushbrook, accommodating owner of that machine shop and its adjoining land, and long-time chief designer Bob Marston.



THE BRITISH RACING LEGEND









When cocky 'Oxbridge' rival March was winging it - with remarkable results, one has to say - 'from a phone box', Lola was planning a move to a purpose-built 22,000sq ft facility in Huntingdon Trading Estate, Cambridgeshire; surveyed and schemed by Broadley, it had its own engine shop and scope for a fivefold expansion. There it joined Specialised Mouldings and Arch Motors. Broadley had in 1958 been the former's first customer for GRP bodywork, and the latter, founded that same year, had knitted Mk1's frame using pioneering bronze welding.

By 1971, with effective, straight-talking test-and-development engineer Frank Gardner on a two-year contract, Lola was getting to grips with Formula 5000 - a category it would come to

dominate on both sides of the Atlantic and taking the Can-Am fight to McLaren with Jackie Stewart. It was also scoring stealthy back-to-back Indy wins courtesy of Al Unser Sr's Lola-based Johnny Lightning Special. Despite the upheaval of relocation, it built 135 cars that year - 90% for export thanks to the bravura salesmanship of Carl Haas

and turned over £500,000.

But still it skirted F1, considered too much of a risk. The draw of Embassy Racing with Graham Hill persuaded Broadley otherwise, but the T370 of 1974 was a warmed-over F5000 and nobody seemed to mind when its reworking was rechristened Hill GH1. Broadley admired Chapman's charisma and chutzpah but as his antithesis was unable to capitalise the financial deals and unwilling to venture the technical leaps necessary to prevail at the highest level. His entrepreneurial resilience was of a more measured order: bottom line rather than headline.

Having ruled Can-Am's new-look roost with five consecutive titles during the late 1970s/early '80s and scored another Indy 500 win courtesy of Unser - his being the only Lola in the field of '78

- Lola was intent on knocking March from its Indycar perch using designs by ex-Lotus development engineer Nigel Bennett: Mario Andretti's title was the first of 11 for Lolas from 1984-2006.

F1 came a-knocking again, too, and Broadley's worst fear and better judgement were confirmed once more: Ford's superteam of 1985-86 proved substantially worse than the sum of its starspangled parts and nobody seemed to mind when consultant Lola was squeezed out. His subsequent five-year spell with Gerard Larrousse's low-key squad was highlighted by Aguri Suzuki's emotional third place at Suzuka in '90 but blighted by the team's false registration of that chassis as being of its own making and the imprisonment, for the murder of his wife, of team co-founder

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Didier Calmels. One was ruled an honest mistake, the other a crime of passion; Lola's design for Scuderia Italia for 1993 was arguably both. Beyond its F1 travails, Lola was fast becoming the world's most prolific commercial producer of racing cars. Its Super Vees of the 1970s and Sports 2000s of the '80s had been big hits in the

US and were the bedrocks upon which a precipice would be built. Lola provided Electramotive with the original chassis that in increasingly modified form would win three consecutive IMSA GT titles for Nissan from '88. It had by '90, the year that Mark Blundell so dramatically put its R90CK for Nissan on pole at Le Mans, reduced March to a single Indycar team. By '93, the year it superseded March entirely and Nigel Mansell won its most highprofile title, it was providing an exclusive chassis for Indy Lights. And by '96 it was doing the same for International Formula 3000.

Ironically Broadley, appointed an MBE in 1991, now found himself at his most vulnerable – spread too thinly across tightening margins – since F1 sponsorship pioneers Bowmaker had rescued him in '62. A survivor battling an undiagnosed













heart problem, he had sensed the danger to his company but let his guard down: he'd fallen out with Haas, had failed to get his composites business up and running sufficiently quickly and been backed into a corner. The decision he felt he faced between F1 with a works team (and planned in-house V10) or a supercar was in reality no choice at all. The disaster brought forward a year at F1 sponsor Mastercard's blind insistence, the embarrassment might have been survivable - pragmatic Broadley always reckoned on a duff project or three – but the £6million debt was not: team and backer had been singing from different spreadsheets.

This was the Lola-coaster that Birrane boarded. Like Haas, whose Lolas, in conjunction with Newman and Chaparral's

Iim Hall, had won hundreds of races across Indycars, Can-Am and F5000, and like Multimatic's Larry Holt, who'd caught the bug as a teenager spannering a T212 for a friend of his father's, Birrane and Lola went way back. His T292, with Chris Craft driving, had won the 1973 European 2-litre Sports Car Championship for Makes. He admired

"BIRRANE BROUGHT MONEY, PIZZAZZ, SMARTS; BROADLEY SAW THAT AND WELCOMED HIM. THEY WERE AN ODD **COUPLE EVENLY MATCHED**"

Broadley's understated brilliance and stoicism and felt there to be mileage in the brand that he had created given injections of money, pizzazz and smarts. Birrane brought all those; Broadley saw that and welcomed him. They were an odd couple evenly matched.

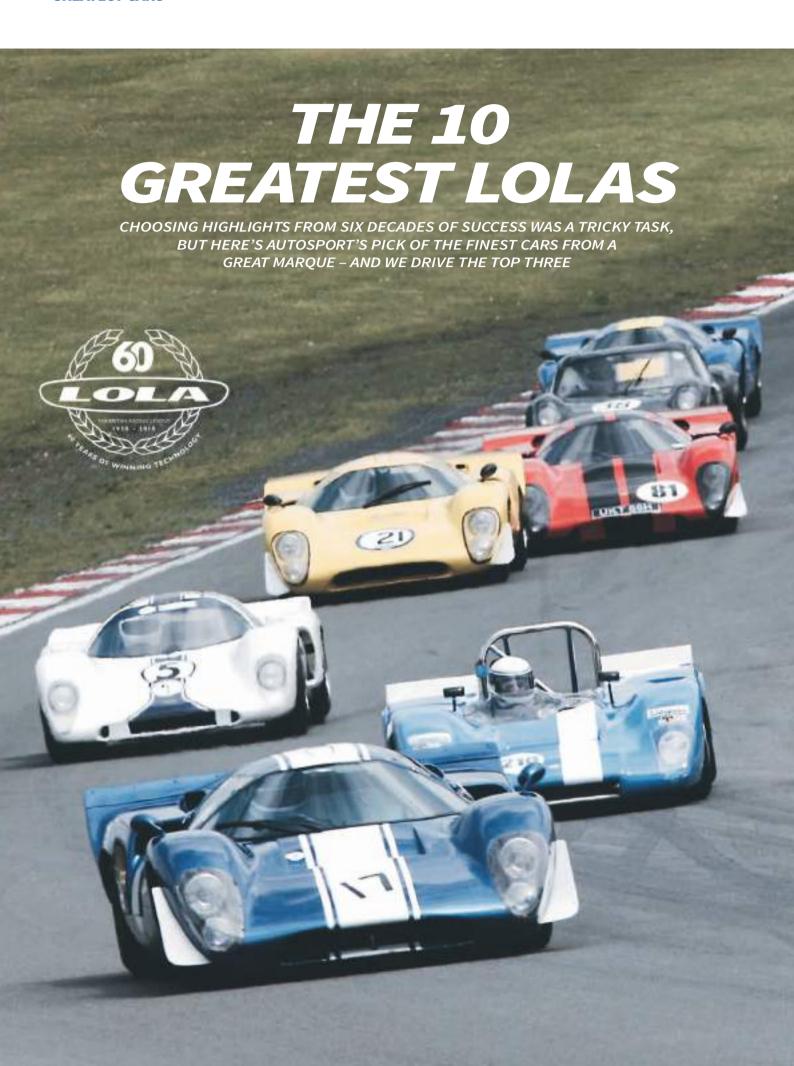
Le Mans was Birrane's first love but restoring credibility Stateside was his priority. Reynard — another racing empire created by a talented club racer/designer, burned by F1 and ultimately spread too thinly – had done to Lola in Indycars what Lola had done to March. Birrane gradually restored old alliances, therefore, and in 2002 Cristiano da Matta was crowned champion. In '03 Lolas won all but the last of 18 rounds and by '04 they had the series to themselves. But Birrane missed the competition - Reynard had gone bust in '02 - and though he struck deals with Formula Nippon (from '03) and built 50 chassis for A1 Grand Prix ('05), they were not hugely profitable. Meanwhile Dallara, winner of the Indy Lights (then called Infiniti Pro Series) contract from '02, was on the rise having correctly backed the rival Indy Racing League and fended off Lola's effort to break its Formula 3 monopoly.

Birrane got his longed-for success at Le Mans with five category wins that included four consecutive LMP2s from 2004. The 76 LMPs that Lola built earned 11 titles – six in the US, five in Europe, three of them outright LMP1 honours – and most of them covered their costs. Hey, it was tough out there even before the economic downturn of '08. Plus Lola's bold plan to be part of a consortium seeking to buy MG and perhaps build a road car had come to

naught - as would its (very) hopeful bid to enter F1 in '10. Sound familiar? When it lost to Dallara the Indycar pitch of 2012, an iconic marque that had beaten Ferrari in its first season of F1, that had won 181 CART/Champ Car races and three Indy 500s - it's more than 200 and five if you include Unser's USAC campaigns from 1968-71 - plus a USAC Triple Crown,

plus a 24 Hours of Daytona and two Formula Ford Festivals had run its incredible 54-year course after constructing by its reckoning more than 5000 cars across more than 400 distinct designs.

Lola's was a name that Broadley had had no say in - he was too busy to be bothered – and was not entirely fond of; he tried to change it once. Disinclined to reveal its derivation – he was always too busy — popular belief has it stemming from the song Whatever Lola Wants, Lola Gets. And that wasn't Broadley. Nor was it Birrane. Neither wanted it all. And what they had, they'd earned and paid their dues for. No doubt both would have enjoyed succeeding in F_1 – not that Broadley's efforts were a total bust – but very few have proved so conclusively that motorsport is so much more than that.









B98/10 sportscar

Martin Birrane loved Lola, loved sportscar racing and loved the Le Mans 24 Hours. So it was only natural at a time when prototype racing was beginning to boom that he should set his new acquisition to work on a car for the LMP900 and SR1 categories. The result was the open-top B98/10, the first ground-up design to carry the 'B' prefix to its type number.

The project was led by Peter Weston, one of

the first wave of newcomers to join after Birrane saved Lola at the end of 1997. Within months, he'd been put in charge of the sportscar programme and given a simple remit.

"The brief I was given was to design a car that could beat the Ferrari 333SP and the Riley & Scott MkIII," recalls Weston. "They were the benchmarks of the day and Martin wanted something that was better than them."

The Lola hit its target. On the day after the inaugural Petit Le Mans enduro at Road Atlanta, James Weaver tested the first B98/10 with a Lazano-built Ford V8 in the back. He was immediately quicker than the cars it was designed to beat, as well as the Porsche 911 GT1-98 that had claimed pole.

"Pole had been a 1m13.7s [set by Allan McNish] and we did a 1m12.4s or something like that with James," recalls Weston.

On the back of that performance, Lola sold eight B98/10s with various engines for the 1999 season. Among them was a Judd V10-powered car for the French DAMS team for an assault on the Sports Racing World Cup. They would go on to win four of the final five races with Jean-Marc Gounon and Eric Bernard driving.

Gounon has fond memories of the car: "It had exceptional agility. It was a real racing car, so you needed to be aggressive with it on turn-in. If you did that, it would just stick to the road."

And he has no doubts that Weston and the design team met their brief. "I drove the Ferrari as well and it was better in the slow-speed corners," he says, "but anywhere quick, the Lola was better."

The B98/10 was swiftly followed out of Lola's Huntingdon factory by its replacement for 2000, the B2K/10, as well as the B2K/40 and the MG EX257. Lola Cars International continued making prototypes, more than 70 in total, throughout its life. The tone had been set by the B98/10.



T210/T212 sportscar

Lola had not built a tubular sportscar chassis since the last of Eric Broadley's Mk1 masterpieces in 1962. Experience gained over five years with monocoque T70s – which, in John Surtees' hands, won the inaugural Can-Am title in '66 – proved that unitary construction worked with big V8 engines. Its first 'modern' small-capacity chassis for four-cylinder units was also a success.

The short-wheelbase T210 of 1970, year one of the European 2-Litre Sports Car

Championship, was a great compromise. Stiff and robust, it enjoyed high-speed corners yet was kart-like and precise in slower turns. Clothed in stubby open bodywork, its aesthetic was very different from its rivals', particularly Derek Bennett's Chevron B16 – a tubular design, stiffened by sheet metal panels under a curvaceous coupe shell – in its second season.

Like most British marques, Lola favoured the iron-blocked 1790cc Cosworth Ford FVC engine,

carried low and mated to a five-speed Hewland FT200 gearbox for the 490kg T210. Eleven were documented as built and European agent Jo Bonnier headed up the driving strength.

The veteran Swede qualified the sole Lola on pole for Le Castellet's series opener and set fastest lap, but finished second, three laps behind Brian Redman's Chevron B16, in the 200-mile race. It wasn't until Anderstorp, where Bonnier repeated his Salzburgring victory, that Karl von Wendt arrived with a second T210.

The Bonnier/Lola steamroller continued at Hockenheim, but privateer Carlo Zuccoli chased three Abarth 2000SPs on the rugged Mugello road circuit. The ultra-fast lap of Sicily's Lake Pergusa suited the Bonnier/T210 combo, but Vic Elford in the works Chevron B16 capitalised on its absence on the Nurburgring's Nordschleife, where Redman debuted a cut-down B16 Spyder – the blueprint for 1971's B19. At Spa's decider the title fight raged to the final corner, where Redman snatched victory, and the manufacturers' crown, from drivers' champion Bonnier.

While European wins were spread in 1971, when Ronnie Peterson (above) strengthened the updated T212 squad, Austria's Dr Helmut Marko emerged champion. Bonnier's win at Jarama's finale also helped Lola secure the makes' title.

Lola launched the stunning new T290 family of cars in 1972. Chris Craft won the '73 European crown in the Crowne Racing T292 fielded by future Lola Cars owner Martin Birrane.

MARCUS PYE

T90/50 F3000

Junior single-seater categories were rarely the happiest hunting grounds for Lola, and Formula 3000 proved a tough nut to crack (see page 22). This slot could have been taken by the T89/50, which was well-liked by its drivers, but its successor was the car that finally delivered in the F1 feeder category.

Erik Comas romped to the 1990 crown with four victories from the 11 rounds in the T90/50, while DAMS team-mate Allan McNish (right) and Forti's Gianni Morbidelli helped restrict arch rival Reynard's tally to four. Kazuyoshi Hoshino also won the All-Japan F3000 title in a T90/50, making it the only car to take both the International and Japanese drivers' crowns in the same year during the F3000 era.

"The 1989 car was very easy to drive," recalls McNish. "The front turned and the rear was very light – it just followed you round. Traction wasn't brilliant, but it was very fast.

"The 1990 car was a big step forward aerodynamically. It was much more stable. It still had a good front-end, but a bit more of a front-to-rear balance."

"The T89/50 was already a great car," adds Comas. "The T90/50 was an evolution mainly on the aero side, but it was actually a little more difficult to set up. To be fast it needed to be quite low on the rideheight, which was not the case on the T89/50.



"The car was better on aero, as we saw at Monza [where he won], but sometimes it could catch you out, at street tracks in particular."

Mark Williams, who designed both the T89/50 and T90/50, agrees the later car was more capable and that the 1989 machine was easier for category rookies. "Aerodynamically the '89 car was the best I'd ever done in terms of downforce and driveability," he says. "The T90/50 had much more downforce, but was less driveable. I knew that because the least experienced Lola drivers

were further off Comas in that car. Erik could drive the pants off it, but I should have realised we were developing a peaky car."

Nevertheless, Comas still wanted his title-winning Lola at season's end. "I did a deal with a sponsor and borrowed some money to get the car and I have had it ever since," says the 54-year-old. "I don't see the point in running it again because for me it is like a very nice trophy and a beautiful-looking car, and successful."

KEVIN TURNER



T800 Indvcar

This was the car that re-established Lola in Indycar and paved the way for its successes -11 CART/Champ Car titles and nearly 200 race wins - over the course of 24 seasons. The British constructor had re-entered the premier league of North American single-seater racing in 1983 with the T700, but the T800 put it at the forefront of the CART World Series for the first time.

North American Lola importer Carl Haas had joined forces with Hollywood legend Paul Newman's squad for 1983 and brought in Mario Andretti to lead the Newman/Haas assault on the fledgling CART series. But Lola's first take on a ground-effect CART contender wasn't a success.

"The T700 was quite frankly awful," recalls crew chief Tony Dowe. "We threw everything but the kitchen sink at it to make it successful."

The Cosworth-powered T700 did score a couple of wins, but that wasn't enough for Andretti, who was in his second year back racing open-wheelers full-time in North America.

He and Haas managed to persuade Lola boss Eric Broadley that he needed a designer fully focused on CART to challenge the dominance of March, and they had someone in mind. Nigel Bennett had worked with Andretti at Lotus he'd been in charge of development – and was already working in the series. He modified the design that started out as the Ensign N182 Formula 1 car into the Theodore 83 CART contender run by George Bignotti.



Bennett carried over one of the key elements of that car when he joined Lola. A carbonfibre top section to the monocoque, which would become de riqueur in CART, made the car immensely stiff. But there were other tricks up his sleeve.

Mounting the Cosworth DFX engine's turbocharger, which traditionally sat on top of the bellhousing, as low as possible was one of them. "Nigel put it right down almost on the input shaft," recalls Dowe. "That didn't impress Hewland." But it did enable Bennett to lower the car's centre of gravity and the rear bodywork.

The T800 made a stunning debut at Long Beach. Andretti put the car on pole by six tenths and took victory by a minute. The all-American hero would win a further five times on the way to his only CART title. Danny Sullivan also took three victories for the T800 after the Shierson team ditched its own chassis early in the season.

"Nine times out of 10, the Lola was a better car than the March," says Bennett. "It had a very stiff chassis and good aerodynamics, but we also had a good driver and very good team."

GARY WATKINS



B2/00 Indycar

The B2K/00 should have won the championship in its debut season in 2000 and stopped the Reynard-Honda-Firestone domination that had enabled Jimmy Vasser, Alex Zanardi (twice) and Juan Pablo Montoya to win the previous four CART Indycar drivers' titles for Chip Ganassi Racing. Had Chip switched only chassis supplier in 2000, Montoya would surely have won his second consecutive title, the team's fifth, and

this time with a Lola. Instead, Ganassi also ditched Honda for Toyota, whose engines were powerful but lacking Honda's reliability.

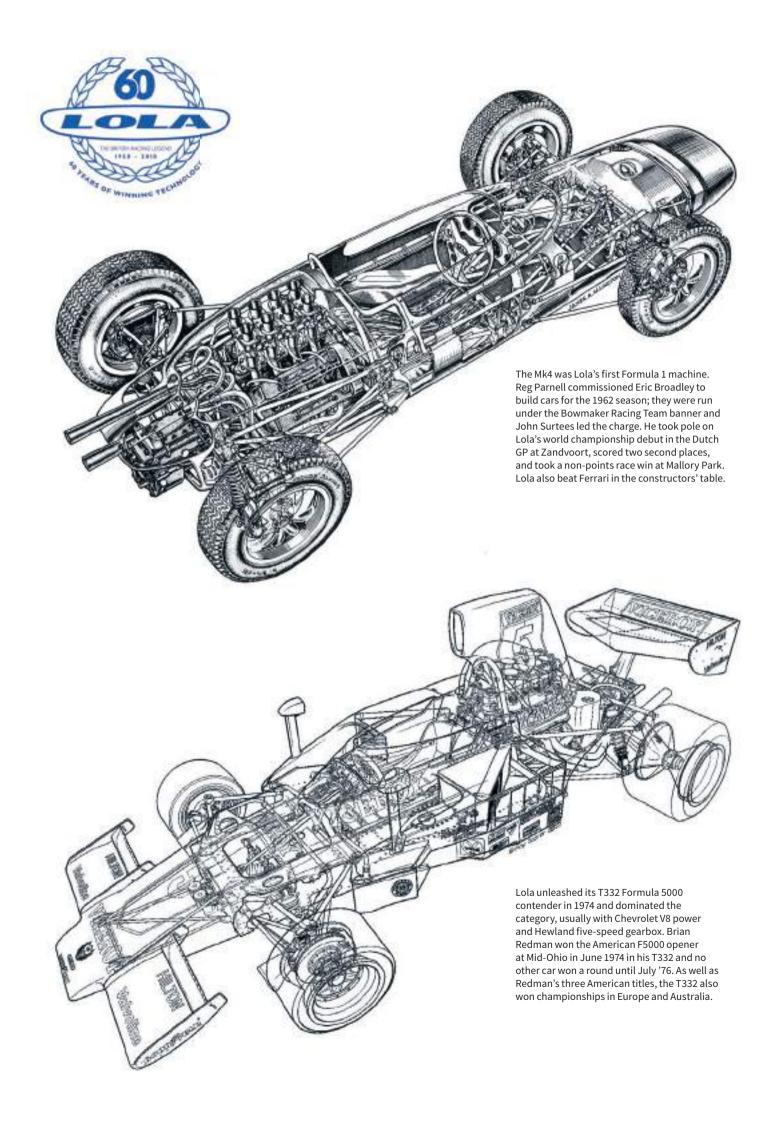
Montoya took seven poles that year, but just three wins - only finishing eight of the 20 races. Thus it was that Gil de Ferran won the title for Penske, which had ditched its woeful line-up of self-built chassis, Mercedes engines and Goodyear tyres for... Reynard-Honda-Firestone.

In 2001, the Penske/de Ferran/Reynard combo again prevailed, although Kenny Brack in the Team Rahal Lola won twice as many races. In '02, however, with Penske gone to the Indy Racing League, Lola importer Carl Haas saw the team he ran with Paul Newman spring to the fore once more, and Cristiano da Matta (left) dominated the championship for Newman/ Haas in the B2/00, a logical development on the theme. In fact, Patrick Carpentier of Forsythe was the only Reynard driver in the top six in the table, as the team that would become Andretti Green Racing (and ran Paul Tracy, Dario Franchitti and Michael Andretti in '02) switched from Reynard to Lola after just three races.

So convinced was Tracy by the Lola that, when AGR headed to the IRL for 2003 and he decided to stay put in CART/Champ Car with Forsythe, he urged his new employer to switch to Lola. When they acquiesced, he took seven wins and the title.

The majority of the grid had followed the same path, since Reynard had gone bankrupt in 2002. Lola was still making little development tweaks that ensured Reynard's R02I became obsolete. The last Reynard win came courtesy of Ryan Hunter-Reay at Surfers Paradise in '03.

By the time Lola's B02/00 was pensioned off at the end of 2006, it had become the spec car of the category. However, series owners Kevin Kalkhoven and Gerry Forsythe switched to Panoz for '07 which would prove to be the series' final year.





T600 sportscar

The T600 is one of the forgotten Lolas that deserves to stand up there with some of the more revered cars built by the Huntingdon marque. It won two World Endurance Championship rounds – and should have won more – in 1981, but it was in North America that it racked up the greatest successes of its brief front-line international career. It dominated the IMSA GTP ranks that season.

That was only fitting because the car was conceived in the USA, though admittedly by a Lancastrian. Sometime Formula 1 driver and multiple Formula 5000 champion Brian Redman had taken to selling cars for North American Lola importer Carl Haas to make ends meet and reckoned there were races to be won and cars to be sold in the new GTP prototype class IMSA had announced for the 1981 season.

"On reading the rules, I said to Carl that Lola could build a car that could win the series," recalls Redman. "Carl agreed and said, 'Go talk to Eric'. He declared that he could build a modern version of the T70, but that wasn't the right way to go and he should design a car with the new ground-effect technology."

The result, with aerodynamics conceived by French consultant Max Sardou, was the T600. Not only was it the first ground-effect Lola, but it was the first of the marque's cars built around a full aluminium honeycomb monocoque.

The T600 made its respective North American



and European debuts within a week of each other in May 1981. Redman claimed an out-of-the-box victory at Laguna Seca with a Chevrolet-engined car entered under the Cooke-Woods Racing banner and run, initially, by Bob Garretson out of California. A week later, the British GRID team should have given the Group 6 version of the car a debut win in the Silverstone 6 Hours.

Guy Edwards and Emilio de Villota had a clear lead when fuel pick-up problems intervened. GRID team manager Ian Dawson subsequently found that there were "four

or five gallons" still in the tank.

Redman (above) would win another four races on the way to the IMSA title, while Edwards and de Villota triumphed at the Enna and Brands Hatch WEC rounds. A second IMSA crown followed in 1982 when John Paul Jr claimed the honours in a season split between a Chevy-engined T600 and a Porsche 935.

The T600 claimed 12 international sportscar wins over the course of just two seasons. It doesn't deserve to be forgotten.

GARY WATKINS



T90/00 series Indycar

Lola's Indycar forces were growing in 1989. Galles had switched its affiliation back from March to Huntingdon for Al Unser Jr, while Newman/Haas expanded to two cars, so that Michael Andretti could join father Mario.

In the T89/00 these two second-generation racers scored three wins between them, but it was Bruce Ashmore's T90/00 design of 1990 that proved the breakthrough. Thanks to rule

changes, the car was significantly different from its predecessors and, though the tub's lower section was still aluminium honeycomb, it had a carbon/Kevlar upper half.

Little Al (above) took six victories and the championship, while Arie Luyendyk won the Indianapolis 500 for Doug Shierson Racing. The T90/00 thus became the only Lola to win the title and Indy 500 in the same year and the following

season anyone who was anyone (and who wasn't Penske) was running a T91/00, essentially a refinement of the design. This time Michael Andretti took the crown with eight wins, while Galles' Bobby Rahal and Unser Jr completed a 1-2-3 for Lola in the points standings.

Over the winter, Galles switched to a chassis of its own design, the Galmer, and Rahal departed. He and Carl Hogan bought the assets of Pat Patrick Racing and, in 1992 driving a Lola-Chevrolet T92/00 (that featured improved aero) for his own team, Rahal beat Andretti to the crown.

Michael's problem was not with speed no-one before or since has led a higher percentage of laps in a single Indycar season but Newman/Haas had switched to Cosworth's new XB units, which were not yet reliable.

By the time those difficulties had been ironed out for 1993, Michael was heading to Formula 1, giving up his seat to reigning world champion Nigel Mansell. He promptly became the fourth consecutive Lola-mounted title winner and helped deliver the fourth consecutive constructors' title for the company with the T93/00, the final iteration of the Ashmore design, with more carbon and a wider monocoque.

More rule tweaks for 1994 meant that the Keith Knott/John Travis T94/00 was a departure, having a full carbonfibre monocoque as opposed to the aluminium honeycomb/carbon mix, finally consigning the T90/00-T93/00 series to history.

DAVID MALSHER >



Mk1 sportscar

The car that started it all. Following on from his Broadley Special, Eric Broadley designed and built the Mk1, helped by cousin Graham.

Fitted with the 1100cc Coventry-Climax FWA engine, the lightweight and strong sports-racer had a multi-tubular chassis and included such humble donors as the Morris Minor (steering rack) and Triumph TR2 (drum brakes). Maurice Gomm crafted the first aluminium body, though later cars had fibreglass panels.

The use of drum brakes, rather than discs, could have been a weakness, but proved more than adequate, given the Mk1's light and stiff construction. It was perhaps an understandable decision for a car built in a lock-up garage behind the Broadley family's tailoring shop in Bromley.

Despite rolling it at Goodwood in a Members' Meeting, Broadley immediately started to show his brainchild's potential in British events against the hitherto pacesetting Lotus 11s with the very

car in our Autosport track test. Production cars were not planned initially, but interest proved overwhelming. Orders started to come in, leading to the formation of Lola Cars Limited.

A 1-2-3 in the Chichester Cup at Goodwood and a class win – with a remarkable sixth overall – in the RAC Tourist Trophy at the same venue were highlights of 1959. Demand increased, causing Broadley to move from Gomm's Byfleet workshop to new premises back in Bromley (where chassis prefixes changed from 'BY' to 'BR').

"No success story has ever been quite so sudden and complete as that of Eric Broadley and his Lolas," said Autosport's John Bolster after testing a Mk1 in 1959.

"The Lola corners as though one or more natural laws were suspended for its benefit," enthused James Carter in *Sports Car Graphic*.

There were world sportscar championship class victories at the punishing Sebring 12 Hours and Nurburgring 1000Km in 1960 and the worksentered car led its class at Le Mans (left) until suffering engine failure. The American and German wins were repeated the following season and there were successes as far afield as Australia.

Tweaks and bigger engine options arrived before production ended in 1962, with around 40 having been built. The Mk1 remained competitive and even Colin Chapman's response – the Lotus 17 – failed to overcome it. The Mk1 proved Broadley could beat Lotus, establishing the Lola hallmarks of light weight and fine engineering. **KEVIN TURNER**

"IT'S A JOY TO DRIVE AND EASY TO SEE WHY IT WINS ITS CLASS SO OFTEN.
THE Mk1 REWARDS COMMITTED DRIVING"

Reith Ahlers gives Independent of the perfore his wiki debut





AUTOSPORT DRIVES

WHEN I FIRST CLAPPED EYES ON ERIC BROADLEY'S original prototype, I just had this gut feeling the car would turn out to be something significantly more than the sum of its parts.

The Mk1 and its bare aluminium body is not much to look at, and the dents tell you it has been well-used, but when celebrated Morgan racer Keith Ahlers, who also competes very successfully with the Mk1 in historics, tells you this car "blew the Lotus 11 out of the water", you know it's got to be something special.

The car still has its original chassis and body. Ahlers has raced the Mk1, owned by wife Susan, at Goodwood and done plenty of giant-killing in the Motor Racing Legends Stirling Moss Trophy, where it dominates its class and is capable of overall podiums.

"I couldn't believe how much fun it was," says Ahlers of his maiden voyage in the Mk1 at Goodwood. "It's so agile. It's light -400kg - so you barely use the brakes."

Which is just as well really, as drum brakes always feel a bit vague and obviously lack the proficiency of later technology though they are still surprisingly effective so long as you're not trying to slow down something with enormous weight behind it.

The Mk1 weighs about the same as a Formula Vee single-seater and, with a 1200cc engine chucking out roughly 115bhp, twinned with near 50/50 weight distribution, it's easy to see why this particular technical marvel is the face that launched a thousand ships, so to speak, and put Lola on the map as a constructor.

"The Mk1 is only two seconds slower than my 500bhp Cooper Monaco around Goodwood, because you just don't slow down," says Ahlers, as he shows me around the car. "A light touch of brakes as you apply steering to get some weight transfer and that's it.

"It's light and nimble, more like a single-seater or a go-kart. It hasn't got any vices, which makes it nice to drive. Even if you get it out of shape, it's so easy to get it back together. It can outbrake anything. And it's absolute dynamite in the rain."

The rain is nowhere to be seen for our summer outing at Donington Park, and after a single installation lap from Ahlers to check all is working as it should, I cram my gangly legs into the cockpit to begin Autosport's outing.

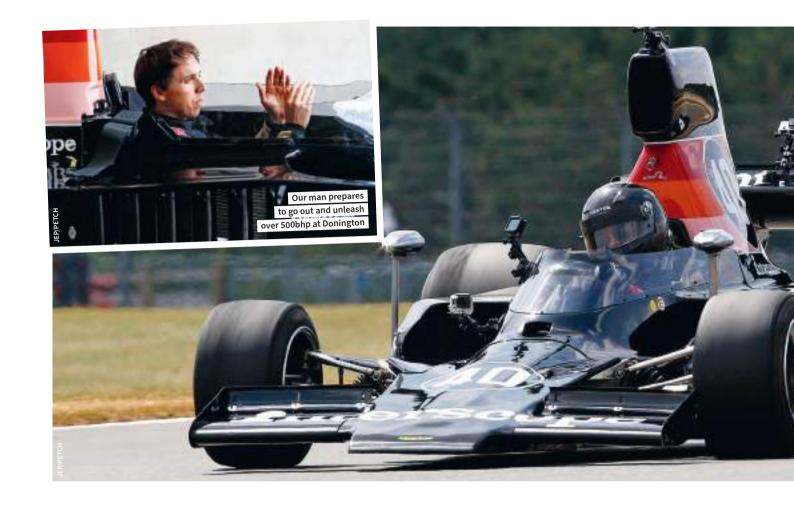
I'm always amazed by how upright the seating position is in 1950s racing cars. It feels like you're sitting on top of the car rather than in it. But the important thing is I can reach the controls easily and without compromise, so can begin pressing on. In a run of about a dozen laps, I work down to a 1m23.1s best, which is just over a second off Billy Bellinger's SMT class pole time (1m21.975s) at May's Historic Festival here.

As user-friendly as it undoubtedly is, the Mk1 still exhibits traits that command respect - you can't just throw it around willy-nilly. If you try to go full-beans at the Craner Curves, for example, you run out of grip and spoil your line for the Old Hairpin. You can't rush the gearshift (as is typical with old cars) and a couple of times I misjudge the entry to Old Hairpin and end up running wide onto the grass.

To get the most from it you need to tip the car into corners on the brakes, to make sure the weight of the front-mounted engine stays over the nose. Otherwise you just get punished with understeer. That's not difficult to deal with, but it is slow. The required driving style is like Caterhams, but with the extra challenge of judging and feeling the correct braking point and technique without the benefit of modern performance. It needs careful hustling to extract lap time from it.

It's a joy to drive and easy to see why it wins its class so often. The Mk1 is just so straightforward, and rewards committed driving. The engine has such a flat torque curve and wide power band that it pulls brilliantly through most of its rev range, and means you only need third and fourth gears on Donington's National circuit. This will make it easier to drive in the wet too.

It's an impressive piece of kit for a car that's 60 years old. As Ahlers says: "It's almost beyond belief what it's able to do." **BEN ANDERSON** ▶





T332 F5000

The T332 was arguably Formula 5000's greatest design. Its predecessor, the 1973 T330, applied 'big' thinking to the category in terms of maximum width and maximum length. Brian Redman could probably have beaten future Formula 1 world champion Jody Scheckter to the American F5000 crown had he not been forced to miss rounds due to his sportscar commitments with Ferrari, but T330s still won six of the nine races.

Rules tweaks – rear wings having to move forward and the need for a deformable structure – and development led to the T332 of '74 and it set a new benchmark.

Bob Evans won the European crown, but the category's highest level was in North America, where the United States Auto Club joined forces with the Sports Car Club of America. Redman, Mario Andretti and David Hobbs shared all seven rounds in Lolas, with the consistent Jim Hall and

Carl Haas-run Redman taking the title.

Only Al Unser (also in a T332) broke the Redman-Andretti dominance in 1975. They took four wins apiece, with Redman again beating the American legend to the crown.

By now Lola had introduced the T400, but so good was the T332 – particularly in developed T332C form – that it refused to be usurped. Warwick Brown won the Tasman Series in 1975, while Redman completed his American hat-trick the following season, the final campaign before the championship gave way to the second era of Can-Am. Even then, modified 'sportscar-bodied' versions of the T332 continued to find success.

"I consider those four years with Jim Hall and Carl Haas as the best of my racing career," recalls Redman. "The T330 and T332C were really great race cars. Lola brought out two new models in that period – the T400 and the T430 – and neither was as good as the highly developed T332C.

"Balance could be easily accomplished with small changes to the wings and/or rollbars. I could have gone to any meeting and started a race without practice. It was really nice to drive, with no inherent faults."

Historic racer and preparer Simon Hadfield, who has successfully raced in F5000 machinery, believes the T332 was a milestone in 1970s racing car design. "Like the T70 it was a maximum-dimension car, with large overhangs," he says. "It set the template for how to make a large-displacement single-seater."

KEVIN TURNER





AUTOSPORT DRIVES

ALMOST ALL RACING DRIVERS DREAM OF BEING IN Formula 1 when they are young. I know I certainly did. And if you were racing in the 1970s, Formula 5000 was about as close as you could get without actually being there.

And that's not 'close' in the sense that Formula 2 is close, it's 'close' as in 'near-as-dammit equal'. As historic F5000 ace Simon Hadfield puts it: "Mario Andretti is adamant that, at the height of tyre development, F5000 was at least a match for F1."

That means we're talking about near enough the height of mid-1970s racing technology on the Lola T332, which period category ace Brian Redman describes as best of the bunch. Chassis 52, owned by Steve Chaplin, features the ubiquitous steel-block Chevy V8 engine, which is fuel-injected as opposed to carburetted, the awesome sound of which on fire-up alone is enough to make me just sit in the car laughing my head off.

"The [F5000] engines are probably 30lb lighter [than they were in period] because they're allowed aluminium heads today," says Hadfield. "But it's still quite a bit, and it's high up, which is the big thing. The tyres are probably not as good as they were for Andretti, but they last longer. We have about the same horsepower as an F1 car, much more torque, but of course much more weight.

"I would imagine Nick Padmore would do 60s [in a Historic F1 car around Donington, if you had everything dead right. The Hesketh F1 car would only be about a second faster than the F5000 car. I did a 63.2s in the Penske on the old circuit, so that's probably a 62.2s now. I think Michael [Lyons] has done a 63.8s in a F5000.

"In the middle of Craner Curves, if you're a foot off the apex. you're a foot off the apex! You are committed and it just carries on going. With an F1 car, you have the ability to have a bit of a hustle.

"On my very best 5000 lap it's a sort of lift, lift — just take the weight off the back, but you just can't keep it full throttle."

I have been lucky enough to drive a Formula 5000 car previously, competing in the ex-Peter Gethin Chevron B37 at the 2012 Silverstone Classic. Hadfield informs me the Lola has been set up in a deliberately benign fashion – to help look after its current owner, who doesn't race it regularly - so "will probably understeer more than you would like".

I have the track all to myself for this one, as we are piggybacking a closed-wheel open test day for our Lola anniversary celebration, so the single-seater can only run in a bespoke session. Although I have driven in F5000 before, I'm immediately surprised by just how bloody quick they are. It doesn't have much downforce, but you feel everything it has through the Craner Curves.

What always holds these cars back is the fact you can't tip them into corners on the brakes, because of the potential pendulum effect of the weight of the engine at the rear. You must prepare the car for each corner, then focus on carrying speed as best you can.

As you start to lean on it you really have to pay attention. This car won't look after you. It doesn't do anything for you. The slick tyres take it into a whole new realm of grip and make it that much more feisty. It's just raw power and simple mechanics – all happening at lightning speed. It's absolutely brutal to drive.

On my third flying lap, I hit 1mo5.1s (which would put me second to Lyons on the grid for the Derek Bell Trophy race at the Historic Festival) and, as my confidence builds, I'm just starting to lean properly on it coming out of Coppice when the engine lets go unexpectedly as I exit the chicane. A 1mo4s lap was easily possible but my run is sadly curtailed by a suspected crank failure – the T332 bleeding oil all over the main straight.

It's a sad end to an incredible experience, but poignantly 1970s in its mechanical drama – the car sending shivers of raw power down the spine before obliterating itself in spectacular fashion.

But even that short run is enough to leave me utterly thrilled. For a fleeting moment, I was Mario Andretti – as close to being an F1 driver as I'm ever likely to be. The sheer, raw, brutal joy of driving a car such as this will always be difficult to top.

BENANDERSON >



T70 sportscar

In some ways the T70 was a failure. It only won one world sportscar championship race – a fortuitous success courtesy of Penske in the 1969 Daytona 24 Hours - and in coupe form it never fulfilled its potential. But the T70 is iconic, the machine most think of when the name Lola is mentioned, and is widely regarded as one of the best-looking sports-racers of all time.

Although initially involved with Ford's GT project, which eventually led to the GT40 and four Le Mans victories, Eric Broadley soon fell out with the management. His vision was rather different and the lighter T70 was closer to what he had in mind than the GT40, notwithstanding the fact his Lola Mk6 formed the basis of Ford's programme.

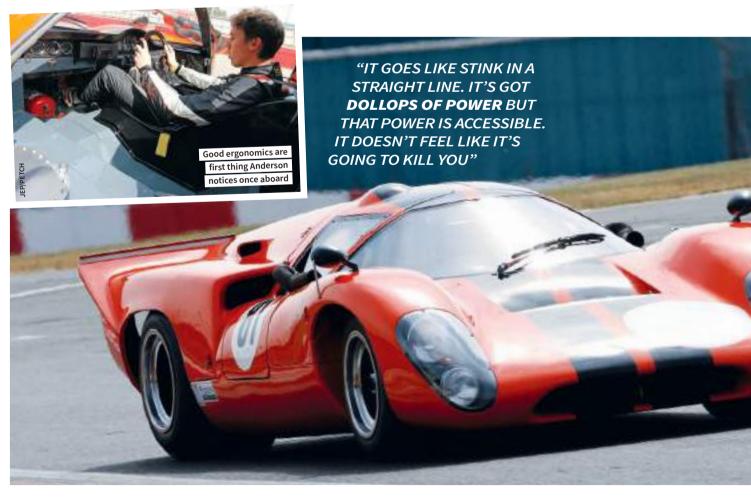
Things started well with the early Spyder versions. John Surtees (above) took the inaugural Can-Am crown in his T70 and Lola won all bar one race of that 1966 season. Thereafter, however, McLaren gained the ascendancy.

In coupe form the Mk3 was a fine customer sportscar and took many domestic successes. On the world stage, however, it was overshadowed. Surtees' 1967 Aston Martin-engined version was a disaster and, while Chevrolet V8s ultimately proved to be better, no Lolas could consistently get among the Ford v Porsche fight in '68.

The Mk3B was a significant redesign, arguably requiring a new designation but for the need to meet homologation rules. Privateers occasionally showed flashes of the stiffer car's potential most notably at the 1969 Spa 1000Km (where Paul Hawkins took pole ahead of all the Porsches) and Osterreichring 1000Km (where Jo Bonnier/ Herbert Muller battled the new Porsche 917) - but the theft of Penske's T70 denied the car its best chance for international success. It had qualified second at Sebring after taking its Daytona win, behind only Ferrari's new 312P and ahead of all the Porsches and GT40s. Otherwise, the T70 never had a top-level outfit, such as the JW Automotive team that kept the GT40 competitive.

By 1970 the T70 had been left behind by Ferrari's 512 and the 917, but Brian Redman, who raced both T70 and 917, is in no doubt about its abilities: "The 917 in its original form with a 4.5-litre engine produced a reliable 570bhp, compared to the Chevrolet's unreliable 500bhp. I have no doubt that if the Mk3B had the power and reliability of the Porsche the T70 would have been a very formidable competitor. It had no real weakness, apart from the damn engine!"

KEVIN TURNER







AUTOSPORT DRIVES

CHRIS BEIGHTON'S LOLA T70, CHASSIS 148, IS JUST a beautiful sight to behold when it rolls out of the Hadfield truck and into the Donington Park pitlane, replete in dark orange colours and recently rebuilt.

Weighing in at just 86okg it is "so light – you could drive it for three or four hours. It's night-and-day better than a GT40," according to historic ace Simon Hadfield.

What appeals to me about this car is that it represents the sportscar version of Formula 5000 — harbouring a similar 500bhp-plus stock-block Chevy V8 within that sleek and elegant rear end. The engine is good for up to 8500rpm, but today is limited to 7000, working best between 5500 and 6000rpm.

As the T70 has recently been rebuilt, Hadfield takes it out for a shakedown while I'm lapping in the Mk1. It's an awesome sight to behold as it thunders past on the back straight, spitting fumes and blowing combustion residue in my face.

Hadfield posts a 1mo9.1s lap on his second run. I spent time watching a video of Oliver Bryant (another well-respected historic racer) lapping a T70 around Donington's National circuit in 1mo9s, so Hadfield's effort must be pretty near the mark.

His advice as I climb aboard is to not surprise it, and remember the historic treaded tyres do not afford the car the grip it would appear to have based on its shape. It looks like it belongs on slicks, even though it wasn't designed for them.

The first thing that strikes me is how ergonomic everything is. I can reach all the pedals with absolute comfort, I can heel-andtoe without difficulty, and the steering wheel is in exactly the right place. And visibility is excellent too.

The next thing you notice is that it absolutely goes like stink in a straight line. It's got dollops of power but that power is accessible. You've got to feed it in carefully, but it doesn't feel like it's going to kill you, so that gives you confidence.

The brakes are good for a racing car without slicks, so that gives confidence too. You can't rush the gearshifts, so that helps give you some extra time to think in the braking zones. I work down to a 1m10.8s in a handful of laps before my run is cut short by red flags.

This is where I'm most out of my comfort zone in this test -asuper-powerful sportscar on treaded tyres. It is a lot of racing car for the circuit, and it gives you very little flexibility in terms of where you can place it. You turn in and it goes where you point it – there's nothing you can do to change it except play with the throttle a bit. You can't really hustle it or manhandle it heavily, but you can't be too lazy either. It's a tricky balancing act that happens at such speed it requires serious concentration.

In everything else I've driven you get the first apex at Coppice and just power out — the second part is just the beginning of the back straight. In the T70 it becomes two corners, and any imprecision forces you out of the throttle on the exit for fear of understeering straight off the track! The T70 redefines the circuit in terms of car positioning for me, though Hadfield reckons Coppice can be one corner, but the grip level was too low on this particular day. The Craner Curves require short-shifting from third to fourth and a lift off the throttle in order to make the Old Hairpin possible, while Schwantz Curve (another nothing corner ordinarily) becomes something you need to think about in this car.

It is here that I overtake a McLaren GT4 car around the outside - a modern machine I have absolutely no trouble keeping up with. It's not an absolutely fair comparison of course, but it does make you wonder what they've learned over the past five decades when this old sportscar is so capable and so much quicker.

I bet on a circuit with longer straights, like Spa, it would be absolutely phenomenal. We are not even using fifth gear at this test, thanks to the car running what Hadfield calls "Imola ratios"...

I'm a single-seater guy at heart, but the Lola T70 is truly something else. It is, without a doubt, the coolest thing I've ever driven with a roof on it.

BEN ANDERSON



t its height, the Formula 3000 International Championship featured intense multi-make competition and helped drivers and engineers prepare for the final step into Formula 1. Lola was a key player throughout the category's life, but at times it was a tough experience.

Right from the start Lola was up against it. F3000 was introduced to replace F2 in 1985 and provide a home for the Cosworth DFV, which had finally been usurped by turbos in F1. While Ralt and March were able to use versions of the F2 machines they'd planned, the time constraints hurt Eric Broadley's team. The To50 was the marque's first 'big' European single-seater since the days of F5000 in the 1970s.

"Eric wandered in one day and said, 'We're going to build an F3000 car'," recalls Lola designer Mark Williams, who had worked on its Formula Fords and was helping Nigel Bennett on the Indycar programme. "He slapped a copy of Autosport on

the desk that had a picture of the [John] Barnard F1 McLaren and said, 'Do something like that'.

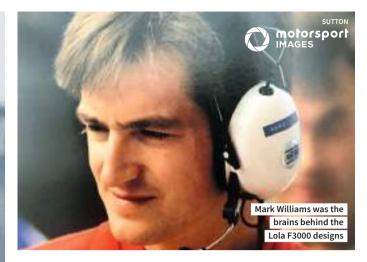
"At that time I was quite naive – we didn't have much time but I thought we'd make a go of it. I subsequently learned that when he said that you had to really seriously question the amount of time you'd got."

The T950 borrowed the monocoque from the successful T800 $\,$ Indycar and used Toleman F2 running gear, which Lola had bought the rights to. The time limitations meant the design hadn't seen a windtunnel before it was built, so aerodynamic development took place during the season, along with efforts to bring the weight down to the minimum limit, which sometimes hurt reliability. Those were the factors identified publicly as being Lola's problems it was outclassed by both the March 85B and Ralt's RB20 − but Williams says the biggest flaw was a hidden one.

"Generation one wheel bearings had become very popular in the automotive world - nice sealed units - but they were











designed for road cars, not racing cars with sticky tyres and downforce," he explains. "We didn't realise you had to modify them for racing.

"At the end of the year we replaced them with a Timken taper roller-bearing pack. We didn't change anything else on the car and went from the back of the grid to being players at the front.

"Everyone was sniffing round the car looking to see what bits of aerodynamics we'd bolted on, but we'd just changed the wheel bearings. Now the wheels were always pointing in the right direction!"

With the problem solved and Ralph Bellamy, the veteran designer who had won the inaugural title with Christian Danner, joining from March, 1986 promised more. They combined ideas, with Bellamy being broadly positive about Lola's direction, but his rear suspension geometry raised eyebrows.

"Eric and I looked at it and said we'd never have got there," recalls Williams. But the car was quick in testing - in Danner's hands - so things looked good. Even more so when Pascal Farbre took pole for the Silverstone opener and won, but it didn't last and the Frenchman slipped to seventh in the final standings.

"I think that pole was down to the conditions and other people not being that organised," reckons Williams. "It slowly became apparent that the car wasn't every driver's cup of tea, particularly the less experienced guys.

"We did a test with Gary Evans, who was engineered by Dave Luff. Dave said Gary couldn't drive the car, so we put geometry on that we would have done without Ralph. Gary went out at Snetterton and was immediately happier and faster. So I concluded only Christian could drive Ralph's geometry!"

By 1987 Williams was in control of Lola's F3000 project and also race engineering the lead car for Lola Motorsport, the works team owned and run by Jean-Francois Mosnier. In '87 the lead driver was Luis Perez-Sala, who took two wins in the driveable T87/50, and went to the season finale with an outside chance of the







"ERIC BERNARD WOULD HAVE

WON THE CHAMPIONSHIP IF

HE HADN'T GOT AN F1 TEST

AND LOST FOCUS ON F3000"

Mark Williams





crown against Onyx March driver Stefano Modena.

While Lola Motorsport's other driver, John Jones, put his car on pole, both Sala and Modena qualified near the back, 18th and 23rd respectively. Both opted to start on wet tyres in mixed conditions, until Perez-Sala came storming into the pits at the end of the parade lap to fit slicks. He charged to fifth from the back, but it wasn't enough.

A Lola driver was second again in 1988, but it wasn't one of the works racers. Lola Motorsport ran Mark Blundell and Paul Belmondo, but "we had a car that understeered off the planet and Mark hates understeer" says Williams of the T88/50, which appeared late. The result was that Williams swapped

with the engineer that had been assigned to GBDA Motorsport, Duncan McRobbie, and advised the customer squad instead, where he got to know Jean-Paul Driot.

GBDA driver Olivier Grouillard took two wins late in the season to finish second to newcomer Reynard's Roberto Moreno, but more importantly Lola discovered

that the rear wheel bearings were again proving unable to take the new increased aerodynamic loads.

The specification was improved for 1989 and Driot's new DAMS squad led the charge with the T89/50, running French duo Eric Bernard and Erik Comas.

"We went with Lola because of Mike Blanchet, who was a very good commercial salesman and was with Lola for years, and because we were a new team," says Driot. "There were teams that were very well connected to Reynard and I thought [in order] to have a good relationship with a manufacturer it was better to go with Lola.

"We were developing the car with them. The relationship was very nice. They were very natural people, really straight people.

We could discuss any matter. It went very smoothly. Even in the hard times we never had any battles or problem with them."

Williams also believes the T89/50 was one of his best: "That was quite a good car and we had a pair of equal drivers. Eric was anticipated as the team leader, but it turned out that Erik was also blindingly fast. Bernard would have won the championship if he hadn't got an F1 test and lost focus. Comas came up and we ended up having points sharing."

As well as problems and crashes not normally of Bernard's making, there was also a crucial race at Brands Hatch. A DAMS one-two in qualifying was turned into a three-four — behind Jordan Reynard pair Martin Donnelly and Jean Alesi – in the race

thanks to a "formation cock-up" at the start, as Autosport described it. "I take the blame," says Williams. "I'd done enough Formula Ford around Brands to know the sloping grid was tough. Eddie Jordan had also taken wing off, as it was his chance to get by us, so we couldn't get near them on the straights. I was so pissed off."

Comas - "the revelation of the season" according to Autosport's Tony Dodgins – ended up as Alesi's closest rival. He tied on points with the future F1 victor, only losing out on wins countback, but it should be noted that Alesi skipped the final round, having already put the championship out of reach.

Dodgins also reckoned the Lola was the 'car of the year': "The T89/50's strong suit was its mechanical grip, the car in possession of a very positive turn-in and tremendous high-speed stability. The Lola, it was generally felt, also used its tyres better.

"A greater number of poles [6-4] and fastest laps [7-3] proved that the Lola was probably the quicker car, but the Reynard saw more chequered flags. It came down to strength in numbers."

Things came together in 1990. The T90/50 was more tricky



LOLA WAS ONE OF THE WORST

CARS I DROVE IN MY LIFE.

IT JUST DIDN'T WORK ON

AVON'S RADIAL TYRES"

Allan McNish

than its predecessor, but it had more downforce. Comas won the Donington Park opener, though that event was overshadowed by his new team-mate Allan McNish's huge crash, which claimed the life of a spectator. Remarkably, McNish won the next race at Silverstone before Comas led at Pau until sliding off.

"I managed to place the car on pole ahead of many Reynards but the car was low and it was on the edge, which is why I crashed - it sat down at the Foch statue corner," recalls Comas, who bounced back to win the next rounds at Jerez and Monza.

"I worked with Mark Williams and had a nice relationship. It was a smart move of Jean-Paul [Driot] to get close to Lola in 1989 and develop the link with the factory. We were not officially a works team, but quite close. Mark was very intelligent and a good designer "I'M SORRY TO SAY THE 1991

and engineer. I think it is important to

have this relationship."

Comas hit a tricky patch midseason, but none of his rivals scored consistently. A dominant win - his fourth success of the campaign and seventh for Lola - in the penultimate round at the Le Mans Bugatti circuit

secured the crown. Finally, Lola had done it.

"There was a lot of pressure on me because in 1989 I ended level on points with Jean [Alesi] in my very first international season," adds Comas. "This meant that in '90 there was no chance of being second: I had to win, nothing else.

"It was not an easy season because of this pressure but looking back it gave me good experience for when I went to F1."

But what should also have been a great launchpad for Lola — in a category that Williams reckons was worth £5million to the firm at the series' peak — was utterly ruined in 1991, despite the highly rated McNish staying on at DAMS. One problem was control tyre supplier Avon switching from crossply to radial (see panel, right).

"I'm very sorry to say the T91/50 was one of the worst cars I drove in my life," remembers McNish. "It just didn't work with the radial. It worked with the Bridgestones in Japan a completely different animal. All year we were just fighting with different problems – front grip, rear grip, every type of grip, stability..."

As well as not being able to make the new rubber work, Williams recalls another fundamental problem that affected the car. Changes were made to the Cranfield windtunnel, which had been the home of Lola's aerodynamics work for many years, that included dropping the rolling road. The result was erroneous data, something that wasn't identified for some time.

> "The boundary layer didn't work so we went from a fantastic tunnel that developed our early cars to one with a problem we didn't realise," explains Williams. "In Japan our importer put our old underbody and front wing on the chassis and it worked, so I knew there was something wrong, I just didn't know what. "We went into the tunnel one day and the technician said, 'I'm really sorry, you've got

to ignore the last six runs because I've just realised the boundary layer fans are switched off'. So we did another run, boundary layer on and boundary layer off, and the results were the same. It wasn't doing what it was supposed to do. That explained why our front wing work was against what we'd always known and why the diffuser wasn't working."

There were no Lola wins in 1991 and Paul Stewart Racing's Marco Apicella was the marque's highest driver in the points, in fifth. That, combined with Reynard's ability to undercut Lola's pricing, meant that only DAMS and, to begin with, GJ Motorsport, bought Huntingdon's F3000 products in Europe for '92.

"It was a question of fidelity," says Driot. "If you are with









someone who is doing well for you, you don't drop them at the first corner."

But Lola was still trying to sort its problems and Jean-Marc Gounon's win for DAMS in the Magny-Cours finale was its only success. It was not enough to keep DAMS from finally moving to Reynard, making it an all-Reynard grid for 1993.

But Lola wasn't finished with the championship. With the windtunnel sorted and Williams gone, Andrew Broadley led the design of the mediocre T94/50 before Lola finally returned to the winner's circle with the T95/50. Indeed, Nordic's Marc Goossens finished third in the 1995 drivers' standings, the final year of multi-make competition in International F3000.

Reynard had taken more wins and titles, but - to a certain degree – Lola had the last laugh. As Autosport put it when discussing the new one-make F3000 era in March 1996: "In the war to land the contracts, Lola beat Reynard in the race to build the simpler, cheaper chassis."

That car became the T96/50. And Lola secured the next two reduced-cost F3000 deals too, producing the T99/50 and Bo2/50, thus supplying the category until its replacement by GP2 for 2005.

One could argue that it had won the war despite losing most of the battles. But it had proved a bruising contest.

A DIFFERENT STORY IN JAPAN

While Lola's results in International Formula 3000 were up and down, its record in Japan was formidable. Japanese F3000 ran for nine seasons, from 1987-95, and Lola drivers won the title seven times.

One of the key differences was the use of Bridgestones and the tyre development that went on. Lola's F3000 designer Mark Williams saw a graphic example of this when he ran Damon Hill in a test at Nogaro in late 1991 with the T91/50, a car that proved troublesome in Europe.

"The purpose was to do a little bit of set-up work on the Bridgestone for Japan and to try a super-stiff front suspension," says Williams.

"We sent Damon out in his standard car and he came in and went, 'It's still shit' - perhaps not his exact words! Then Damon went out on the Bridgestones, came

OUT ON THE BRIDGESTONES AND SAID 'WHAT HAVE YOU DONE TO THE CAR?" **Mark Williams**

"DAMON WENT

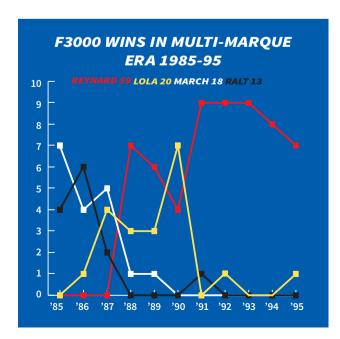
in and said, 'What have you done to the car? It's beautiful.' He couldn't believe we'd only changed the tyres.

"There was nothing wrong with the Avons; they just had a front radial that was incredibly powerful and we didn't have enough chassis stiffness to handle it. The Bridgestones were beautifully balanced front to rear so the chassis stiffness was less important."

Williams also believes the Japanese approach helped Lola: "If there was a problem with the car, they'd sort it with tyres. I think we were let off the hook in Japan. And the Japanese had no qualms putting last year's bits on if they thought it was quicker. They were very good, very hard-working."

Williams is also quick to praise his counterpart at Reynard, Malcolm Oastler. "The Reynard was a better car, stiffer," he says. "It was very Formula 1 - at the time F1 front tyres were mega-powerful.

"For his 1992 F1 car, which didn't come to fruition, Adrian Reynard had employed a bunch of F1 engineers, including ex-Benetton designer Rory Byrne, so naturally there was F1 expertise fed into the 91D."





he early decades of Lola's story were marked by the design genius of founder Eric Broadley, but as racing cars became more complicated and sophisticated – and aerodynamics came to the fore - more was required. Lola's

answer was the Technology Centre.

The facility, owned and operated by Wind Tunnel Developments Limited and now up for sale, played a key part in Lola's post-1997 revival under Martin Birrane and has proved its worth far beyond motorsport.

Negotiations to purchase and transport the BAE Systems windtunnel from Warton began during the Broadley era. When Lola went bust, Birrane stepped in and invested heavily in the multi-million-pound project, which included a Formula 1-quality windtunnel and seven-post vehicle-dynamic test rig.

Renowned for its excellent tunnel-to-track correlation, the windtunnel has been involved in many varied projects over the years. Howard Dawson, MD of Peer Group that owns WTD, and former Lola designer Chris Saunders, who designed the windtunnel and now runs the facility, helped Autosport pick out some of the highlights.

FIVE KEY STRENGTHS OF LOLA'S WINDTUNNEL

- 1) Airflow quality
- 2) Quality of load cell for data collection
- 3) Motion system for attitude control
- 4) Repeatability and accuracy
- 5) Quick model changes for customer testing

Le Mans success

Sportscars were always key to Lola's story and that was no different under Birrane. The B98/10 - the first Birrane-era car and the first with a 'B' designation instead of 'T' – was developed at Cranfield, but once the Huntingdon Wind Tunnel facility was up and running from 1999, work moved there.

The continuous development produced a series of successful sportscars, including the B2K/40 (one of Birrane's favourites), the B05/42 that took Lola's fourth consecutive Le Mans 24 Hours LMP2 win in 2007, and the subsequent coupes that scored multiple successes in the American Le Mans Series in LMP1 and LMP2, and which RML used to top the LMP2 standings in the '10 Le Mans Series.

The most famous of the line was probably the LMP1 Lola-Aston Martin B09/60 (above right) that won the LMS and finished fourth at Le Mans in 2009.

"When you've got a good windtunnel you can trust it," says Saunders. "It's all about front









Indycar revival

The Indycar revival, during the CART/Champ Car days, was one of the success stories of the Birrane era. When he bought the company he inherited the troubled T97/00.

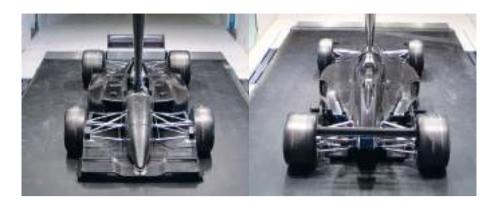
"The 1997 car was my nemesis," says Saunders, who did the aero on that and subsequent Lola Indycars. "It's the one car I truly screwed up.

"We'd been handed a Reynard aero manual. When we looked at the numbers we thought we were cool because we had more downforce. But the car wasn't nice to drive and wasn't stable. It got critical because people were talking about switching to Reynard.

"I asked Patrick Head if we could put the car in the Williams windtunnel, which I'd put in, and we were miles off the downforce we were showing in the Cranfield tunnel. Then we realised we had a fundamental problem.

"It was the underbody. We'd tried a Reynard-esque underbody but we hadn't gone the whole way. Martin paid to do the tooling for the changes we needed and at the final round Adrian Fernandez finished third."

There was only one Lola on the grid the following year, but now it had a better product. Development continued and Lola regained a



foothold. When Michael Andretti took his Newman/Haas B2K to victory at Motegi in 2000, it was Lola's first CART win for nearly four years – and the first for Birrane.

The B2/00 provided the final breakthrough, with Newman/Haas driver Cristiano da Matta taking the drivers' crown in 2002. It was the first non-Reynard title since 1994 and Lola's old rival was bankrupt by the end of the year. With no Reynard development, Lola was left to dominate the CART/Champ Car market and provided every car on the grid in '05.

Thanks to its mix of ovals, road courses and street tracks, the Champ Cars had to work over

a broader range of set-ups than most singleseaters. On a street track, the rear rideheight could be 80mm, with the front at 40mm, while on ovals the cars would run much flatter and lower. The Wind Tunnel played a key role in meeting the aero challenge (above).

"We developed the bodywork in the windtunnel, including bringing in three elements on the front wing, and engineered Reynard out of Champ Car," adds Saunders.

"Once we'd got our head around it and got the windtunnel the pace of development was rapid. We just got it right. That was nice as it was from zero to hero."



The World Cup of Motorsport

Having won all three single-make Formula 3000 contracts, the last of which came in 2002, Lola got the deal to supply A1GP. Although the car was based on the last F3000 tub – the B02/50 – it provided quite a different project.

The 'swoopy' shape required by founder Sheikh Maktoum Hasher Maktoum Al Maktoum meant there were some challenges to overcome, particularly when it came to cooling. "The design was artistic-based, so we had to engineer a solution that had good cooling, was safe and stable," explains Saunders. But the 500bhp+ B05/52 proved a success, helping A1GP to establish itself during its first three seasons, with some fine racing. A move from Lola to Ferrari contributed to the series' demise after one more year.

"Lola had a great history producing single-make cars for F3000 and A1GP was a great showcase for us," says Dawson.









Mitsubishi rally car

Not all of the motorsport work at Wind Tunnel Developments has been about performance. In 2004, Ralliart had a very specific target for its World Rally Championship Mitsubishi Lancer.

"Quite often rally cars aren't running straight ahead and the drivers are looking through the side window," explains Saunders. "They had a project where they wanted the driver's window to self-clean when it was sideways. We had it at 20% vaw in the tunnel to do it, so it looked like there had been an accident before we even started!

"There was also performance work, with the rear wing."

Return to F1 thwarted

With cost-capping and three spaces for new teams set for the 2009 F1 grid, Birrane decided to commit to a new Lola project. "In '08 Martin had been given an indication Lola would get one of the F1 slots, so he instigated a separate programme for an '09 car and invested in a separate project," says Dawson. "The windtunnel model [right] was built and by the time the news came through that we hadn't got on the grid we'd done 98 runs. It was a personal setback for Martin and we never understood it. F1 was a challenge that Martin relished."





Bevond motorsport

Wind Tunnel Developments has been involved in a range of non-motorsport programmes, with its diversity in delivering aerodynamic results expanding across automotive, aviation, defence and even the development of bobsleighs.

Hybrid Air Vehicles needed help with its Airlander vehicle, with the resulting data used to develop the full-size thrusters and keep the Airlander 'on station' for extended periods.

One of the longest-running examples is with Scania, which has been doing truck work in Huntingdon for much of the facility's life. "It's all about cab design," says Saunders. "A lot of the work is to accommodate bigger things on the inside – minimising internal dimensions by being clever with the aero on the outside to help drag, fuel efficiency and cooling systems."

For further information about the windtunnel visit lolatechnicalcentre.com







THE LITTLE CAR THAT (ALMOST) COULD

SMALL, LIGHT AND AGILE, THE MG-LOLA EX257 COULD HAVE TAKEN THE FIGHT TO MIGHTY AUDI AT LE MANS. IF NOT FOR ONE, VITAL COMPONENT: MONEY Neil Briscoe

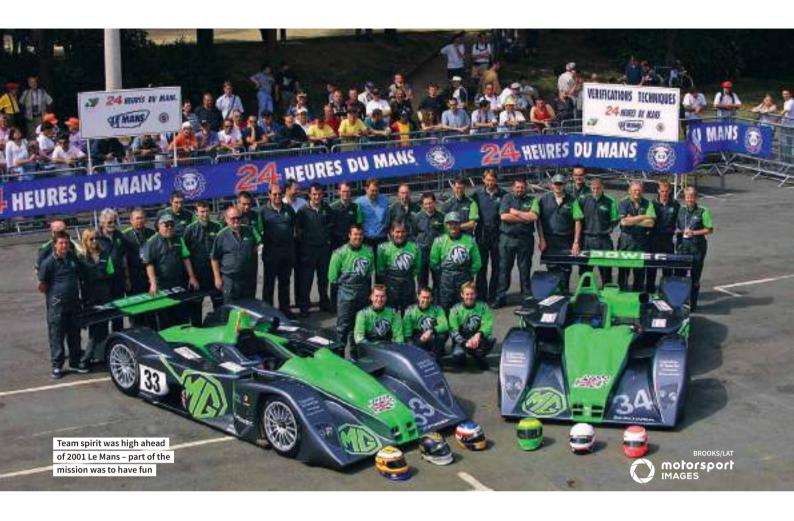


udi's dominance of Le Mans in the early 2000s was complete. While winning the greatest of endurance races was never as easy as it looked from the outside, the Audi team in its various guises romped home every year from 2000-14, aside from solitary wins for Bentley ('03) and Peugeot ('09).

Could it have been different? Well, maybe. With one or two better decisions and a slightly larger budget, Audi's winning streak could have been stopped before it really got started - by a tiny team running a tiny car, the MG-Lola EX257, which came about because of a chance conversation.

Martin Birrane, the Irish-born owner of Lola from 1997, told the story shortly before his death in June: "The car came about following a meeting I had with Alain Bertaut, who was the vicepresident of the Le Mans organiser l'Automobile Club de l'Ouest at the time. I had this meeting with Alain at Sebring.

"I'm standing looking out over the paddock with him, and he turns to me and says, 'I wonder why no-one has ever done an LMP675 car.' And I said that, well, I'd been around motor racing for quite some time, and if I'd never heard of a 675 car, then probably no-one else had either. And what is a 675 by the way?"



The LMP675 moniker referred to the weight of a potential alternative prototype category at Le Mans — smaller and more lithe than the front-line LMP900 big-bangers, but crucially not so slow that they couldn't win, in theory at any rate. LMP900 cars were allowed more power and wider tyres, while LMP675s had the advantage of being 225kg lighter.

With MG looking to get back into motorsport and talking to Lola, Birrane sensed an opportunity: "The car that weighed 675kg, assuming you could get it down to that, was going to be allowed the same tankage: 90 litres of fuel. If the car was capable of lapping within eight seconds of the P900 cars, then they would dead-heat, theoretically.

"So I said I'm going to see when and if I could use that. He wouldn't tell me but I always assumed it was a category designed for maybe Peugeot or Renault or one of the French teams that they were trying to tempt to come in, who didn't



want to spend the money on the top category."

Money would become the defining element of the tale of this particular car, but at first it seemed that Birrane and his team at Lola had created something truly special. "The car was designed in-house at Lola," added Birrane. "It was far from being ordinary, it was what we called a little jewel. A ground-breaking jewel. And you can see that as soon as you look at it. [Designer] Frank Dernie had a lot to do with it. He allowed others to take the kudos for it. These guys are artists really — they can see and reach further."

The jewel was about to be hitched to a millstone of an engine, though, thanks to a fateful deal with a resurgent MG. Sold off by BMW, once Munich had decided that nothing could make the Birmingham-based car maker profitable, MG Rover as the company was then known was, supposedly, on the comeback trail. It had created a new and sporty range of hatchbacks and saloons based on existing Rover designs, and was looking for various ways in which it could promote both brand and product.

"I had an MD [David Bowes] at the time who was ex-Rover, and Nick Stephenson, MG's chief engineer, contacted him to invite Lola to join with Mayflower, the pressed-steel tier-one supplier, and we were already collaborating with them on a potential road car," said Birrane. "But, the MG people insisted, their marketing department led Nick. He was a knowledgeable engineer, and I was pitching the programme to him, but in the background they were insisting that we had to use an MG engine, even though they really didn't have the capacity to make the right engine.

"They decided to tender out for the engine, and I said, 'Why are you going to waste all that time and money when it therefore won't be a proper MG engine anyway?' They did it all the same. Cost them £2.5million or something, out of my budget by the way, and the worst thing is that there was an engine that would have done the job reliably. But unfortunately this new MG engine was our Achilles' heel the entire time."

Though there is some debate about the alternative options





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for the powerplant, for which Advanced Engine Research was contracted by MG, one possibility Birrane pointed to was a two-litre Nissan unit.

"That Nissan engine, which was what we should have gone with, was tried and tested," said Birrane. "It had about 20-30hp less than ours, but that would have been neither here nor there in the scheme of things. Reliability was all that was needed.

"It's not that it was a four-cylinder engine, either. We actually got to within five seconds of the big cars. If you look at the timing, you'll find that the times of the MG-Lola were almost with the Audis, and we only had to be within eight seconds to get there.

"It was more than just MG not wanting to put their name on another engine. The Nissan one was a known

engine and some modifications could have been done - it could have been hijacked a bit by the engine builders – and it was still the base that they started with. That was still the base engine, that they changed and did lots of unreliable things to, changes that were intended **Martin Birrane** to deliver more power. And then, when it didn't work, they had to

reduce the boost anyway. It was probably on similar power at the end, when it was going. But too much of the time, it wasn't going."

Still, spirits were high when the Chamberlain Motorsport team arrived at Le Mans in 2001. The cars were decked out in a striking green-and-black colour scheme and, better yet, they were a delight to drive. The driver line-up for those two chassis was a collection of nascent and established UK talent, including Anthony Reid, Warren Hughes, Jonny Kane, Mark Blundell, Julian Bailey and Kevin McGarrity.

Reid reckons the fact that the car was a Lola in the first place meant a lot, not least personally. "A Lola probably saved my life," says Reid. "The biggest crash I had was

just after I'd won the Japanese F3 championship [in 1992] -I got a test for an F3000 team, with a Lola chassis. I had a crash on the fastest corner at Fuji, my crash helmet came off, the car shot up in the air, inverted and came down upside-down. Had it been any other chassis, I would have had my head taken off, but the way the Lola was constructed it just kept my head off the road, thanks to the design of the tub, and it saved me."

That one saved him, but the Le Mans racer delighted Reid, and he still waxes lyrical about it: "The MG-Lola was probably the best racing car I've ever driven. It had tremendous aerodynamics, probably thanks to their experience of racing in Indycar. So that

led to fantastic handling, which then gave you tremendous confidence.

"The car was light, the powerto-weight ratio was high, plus they were working very closely at that time with Michelin, so the tyres helped the performance too. We traded lap times with Audi. The car could run as quickly as the LMP900s."

That was when the rest of the pitlane sat up and started to take notice of what until to that point had looked like a flag-waving publicity stunt for MG. "The other competitors didn't take us seriously at all," reckoned Birrane. "They started taking us more seriously when they saw the lap times. Because, without even trying, the car was so far over the pace of what was needed for winning pace against the other cars.

"They had a huge crowd waving MG flags. We sold out of all the gear and clothes – there was a huge response to us in the crowd.

"Bentley was there, of course, with Richard Lloyd, and he was being interviewed and was asked how great it was to have two British marques out there, and he tried to say something about all the Brits being there to support Bentley. And of course I

piped up with, 'I wouldn't be so sure about that Richard...' It was a nice little sparring match."

There was a sparring match between the drivers, too. McGarrity grabbed the MG-Lola drive as a lifeline for a career that was struggling to break through to the big-time, and wasn't going to let himself be intimidated by bigger names in the squad. "We were testing at Spa ahead of Le Mans," recalls McGarrity. "And I think Mark Blundell was determined to be the fastest guy in the car at the test. And he was quick, no doubt, but I saw the lap times on the readout afterwards and I was actually quicker than him. We still had to say that Mark had been the fastest, though..."

The 2001 Le Mans was horrendously wet, which also helped the lightweight car against the big LMP900 runners. The EX257s quickly moved up from their 14th and 17th starting positions, but the result was a bust, perhaps not surprising given that the cars had only been up and running for about a month beforehand. Blundell briefly got up to third overall before water got into the electrics during the night and engine issues eventually put both cars out.

"The concept of the engine was fantastic, a turbocharged two-litre with 550bhp," adds Reid. "Whether it was budget or that the wrong engine builder was used at the time, the combination of those factors meant it just wasn't reliable enough. The chassis was strong enough and the team was great, but the engine and the drivetrain, the gearbox, were the weak points."

Le Mans the following year should have been so much better, particularly after more work on the engine. The MG-Lola team returned, this time with more sponsors on the car, but actually even less money in the coffers. "It became clear, towards the **QUICKER THAN THE AUDIS** end of the first year – and we had a AND RUNNING THIRD..." three-year contract, because that's usually how long it takes to mature **Anthony Reid** a design and get it winning - we realised that they wanted to get out of

the deal," said Birrane. "It was a nasty old set-to. They didn't break the contract, but they did roughly halve the amount that we had to run the team with. That caused its own problems.

"We could have succeeded in the first year, if we hadn't been tripped up by the insistence on having the in-house engine. I think it was seven months we had for the whole programme, and we managed to do the work."

The cars qualified sixth and 12th at the 2002 Le Mans. Reid could see that the lack of cash was holding the team back, but frustratingly could also see the chassis was good enough to beat the best that Audi could do with the R8. "I remember in 2002, I got into the car just before midnight; as I came around past the pits to complete my first lap of the stint, I could see ahead of me, about 200 yards, an Audi, which had just come



out of the pits" says Reid. "So I set off to try to catch it up, and did so over the course of several laps, and I could see that it was Tom Kristensen.

"Immediately, you could see the strengths and weaknesses of the car. We were probably about 5mph slower on the Mulsanne Straight, but in terms of braking and acceleration off the slow corners, we were quite a bit superior. In the fast corners, we

> were equal to the Audis. Overall, at that moment, we were quicker than the Audis and running third..." Reid/Hughes/Kane were still in the battle for a podium position when the transmission failed just after one-third distance, while Blundell/ Bailey/McGarrity retired when the engine broke following a gearbox change. "It really was a lot of fun," recalls Reid nevertheless. "The directors of MG Rover,

the Phoenix Consortium, part of their remit was having fun. I liked the sense that we were an all-British company, all-British drivers, we enjoyed ourselves. I suppose secretly, at the back of our minds, we were thinking that the budget wasn't enough, that there hadn't been enough development, not enough spent on reliability. Look at Audi at the time - they would run five 24-hour tests over the winter — but we did take the fight to them in terms of speed, and put on a great show."

But it could have been greater still. There are many tales of unfulfilled potential and near-misses in racing, but the EX257 unquestionably had the right elements, as was proved a year later.

With the MG deal foundering, Birrane started offering the car, with back-up from AER on the engine side, to privateers. Dyson Racing was one that took up the offer and, at the



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Grand Prix of Sonoma in 2003, James Weaver and Butch Leitzinger made good on the Lola's promise by at last beating the factory Audis. It wasn't Le Mans, but for Weaver it felt pretty good to win in the American Le Mans Series. It was the first ALMS victory for an LMP675 machine, as Joest's R8 driven by Frank Biela/Marco Werner and the similar Champion car of JJ Lehto/Johnny Herbert were outpaced.

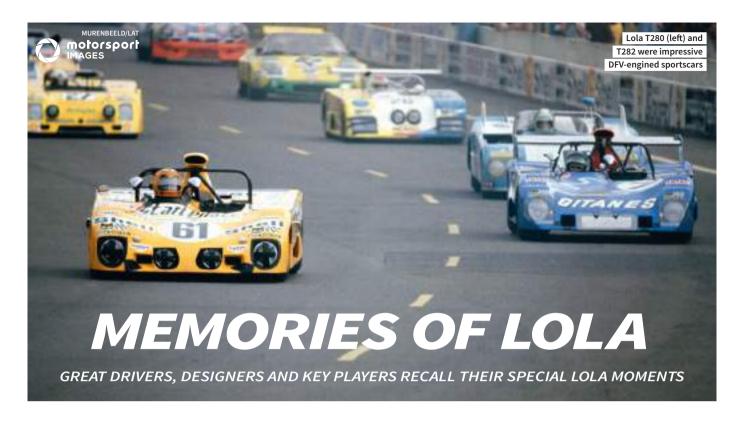
"When we first got the MG-Lola, that car enabled us to compete against the Audis," says Weaver. "For a small, private team to go up against Audi was an extraordinary achievement on Lola's behalf.

"We'd been getting better and better, and Sears Point is in Sonoma wine country, so it's beautiful around there. The track itself is fabulous because it follows the contours of the land, and it really suited our car. Butch had put it

on pole, and we were quickest in the morning warm-up. In the race, the Audis were really strong, but they started getting pick-up on their tyres – they were running Michelins. I think Johnny Herbert stopped because he thought he had a puncture. But we were on Goodyears, and as the race wore on we were getting more and more competitive, and we got past the lead Audi in the closing stages. And we were able to hold them off to take the win. The tyres really tipped it on our favour that day."

It wasn't the last victory either. Weaver and Leitzinger won again at Mosport in 2004, then Mid-Ohio and Mosport in '05 – more than four years after the car's rushed debut.

The last word goes to Birrane: "Speak to anyone you like and they will tell you what a jewel it was. No other car that we made lived up to it, and that was nearly 20 years ago."



Derek Bell LE MANS LEGEND AND SOMETIME LOLA DRIVER

I think Eric Broadley designed the greatest sportscars out there for many years, especially the three-litre and the twolitre cars. I went testing with Eric at Paul Ricard. I'd driven the Mirage, but this was the Cosworth-engined T280 and it was a glorious car to drive. I went, 'Wow, I wish this was the car that I had experienced more of'.

Eric used to spread out all the drawing sheets of the car and say that we could raise that and you could see him changing pick-up points. They made a really great car and Eric did it all — Formula 3, 2 and Formula 1 and then Indycar and sportscars. He was just incredibly versatile. To work with him was just brilliant: he was so meticulous.

John Barnard JUNIOR DESIGNER AT LOLA

The only Lola that I can claim to have worked on solely from scratch is the T250 SuperVee. We tended to share out a lot of the work and I did a lot on the T260, the Can-Am car that Jackie Stewart drove, and worked on the two and threelitre sportscars, plus the Atlantic car. We gained so much experience by being involved in all these other cars.

Lola was one of the main production racing car manufacturers at the time, but the next move I made was to McLaren and F1 was a very different environment. Even then, the ratio of cost-to-part design was already on a scale totally different to Lola — at Lola you were making stuff to sell so you couldn't just do something that was super-complicated. The attitude in F1 was, 'What's the best part I can do for this job?'

Eric Broadley was great, a super bloke. He didn't get the recognition he deserved, but he had one annoying habit. You'd be drawing up a chassis, and you'd carefully worked out all the pickup points for the suspension geometry that he'd given you, then Eric would come along and say, 'I've been thinking, we ought to change the roll centre, make this wishbone longer, move this point up'. And you'd just think, 'Oh Eric!' But we just got used to it. It teaches you to get around problems.

Nick Mason PINK FLOYD DRUMMER AND LOLA RACER

Our T297 has done far more Le Mans that anyone would believe. I think the chassis was old when we got it and Dorset Racing was run on a shoestring budget. The car was so good, when the requirement was for the chassis to be modernised they went to the factory and bought another chassis plate. It's absolutely gorgeous to drive.

I went from historic cars straight into that at Le Mans and it felt terrific. I never had a moment of thinking, 'Wow, this is really difficult'. Partly, I think, because the wing really works on it. I'd never driven anything with ground-effect or a wing, so in this regard the stability was absolutely stunning. It was a fantastic car. I drove it at two Le Mans in 1979 (below) and '80 and then in '81 at the Nurburgring. It finished every time and as most of my collection is about history connected to me, I'd be loath to part with it.

We've probably rebuilt it a couple of times now but it's one of those relatively modern racing cars where it all works rather well, with a proper tub and all the bits are interconnected.

I raced at Le Mans with Martin Birrane, he was a lovely man. I think Lola were very lucky to have him on board because he'd driven the cars and knew how good they were.





Julian Bailev 1982 FORMULA FORD FESTIVAL WINNER

The reason I ended up racing the Lola T640 in Formula Ford 1600 in 1982 was that Ralph Firman turned me down for a Van Diemen works drive. I'd seen a picture of Michael Andretti racing this new Lola over in the States in Autosport, so I gave Eric Broadley a call and asked if I could have a car. Eric was really helpful and I remember getting some kind of deal out of him. He came to some of our tests, and then for the Formula Ford Festival at Brands Hatch I had two cars and two works Minister engines.

I won the Townsend Thoresen title and should have won the RAC championship, too, but Mauricio Gugelmin in one of the works Van Diemens took me off when I only had to finish second to beat him. He went out of the Festival trying to overtake me for the lead at Clearways. It was poetic justice really.

That Lola was a great car and certainly a match for the Van Diemen everywhere. Ralph regretted his decision. During the year, he tried to get me to drive for him.

He offered me a free seat and £100 a week.



Mark Williams LOLA DESIGNER

When we were doing the T800 Indycar (below) there was only Nigel Bennett and myself doing the design and drafting. I was doing everything from the engine-tank interface backwards, which included two separate geometries for road courses and ovals that were significantly different. One Friday I told Eric I was running out of time to do the bellhousing.

The next morning I went in and on the bench was a DFV block and behind it, balanced on a tea cup and some blocks of wood, was a turbocharger. And there was Eric, ruler in hand, sketching a bellhousing. It was like a proper artist's drawing and looked 3D. When the part came back [made

from this life-like drawing] all it needed was a bit of grinding which was normal at the time and the turbo dropped straight in.

Eric loved doing windtunnel stuff if you were making big gains. Everyone says he was just a chassis and suspension man, but it's not true. The reason we often did cars without putting them in the windtunnel was time – he'd sign the deals so late.

During the Indycar aero development if we had a good week and found lots of efficient downforce he would treat us to dinner at his favourite Chelsea restaurant. If we had a bad week it was straight back to Huntingdon via McDonald's in High Street Kensington.

Mario Andretti 1984 INDYCAR CHAMPION WITH LOLA

Eric Broadley embraced the idea of getting back into Indycar and he was eager to be part of this new Newman/Haas team. The problem with that first 1983 car [the T700] was that he wasn't totally sold on ground-effects and we had to convince him that making roll centre changes wasn't enough to improve the car's handling and get the suspension strong enough for ovals. It was mechanically quite good but it was still an aluminium tub so it was a bit of a flexible flyer.

It was really a handful at Atlanta, the first race that year.

But it helped that Eric was a bit of a maverick, so if an idea didn't work, he was willing to go testing and think outside the box, and I think we were all enthusiastic. I always liked being more than just a driver in the team, and I think we all got really motivated about this project working together.

[Race engineer] Tony Cicale was on my side, thankfully, and we started making aerodynamic gains and the car got better and better. I got pole at Road Atlanta and then we started getting some consistency too. That was very rewarding, and I think of that time as being very like when I joined Lotus in '76 — the car was a piece of crap at the start of the year, and by the end it was competitive [Mario finished

> third in the '83 championship], and led to great things.

Nigel Bennett joined the team for 1984 and we were off and running. I'd pushed like hell for Nigel to be on the team because he'd done some great work at Lotus and really understood aerodynamics, and the combination of him and Tony was fantastic. We were competitive pretty much everywhere and we won a bunch of races and the championship in the T800.

We should have won a lot more, especially in 1987. We switched from Cosworth to the Ilmor-Chevy and we couldn't get a finish. We got so many poles and led so many races that year, but only got two wins. We had Adrian Newey on the team and he and I really connected.

I remember at Indy that year, we were on pole and just before the start,

he looked at the ambient temperature and the way the wind was blowing, and we changed the front springs – just a slight percentage change in the overall scheme of things – but I tell you, that car was so dialled in. I never had a car that was so well balanced the entire race, whatever the track temperature, whatever the fuel load. It felt like I could have lapped the field five times!

And then the engine let go due to the harmonics of running it at lower revs. Taking it easy actually cost us.



Al Unser Jr 1990 INDYCAR CHAMPION IN LOLA

About one-third of my wins came in Lola cars, and I won my first championship in a Lola, so the brand still means a great deal to me – which is why I've named my miniature schnauzer Lola.

When I first ran a Lola in 1985 for Doug Shierson, I pretty quickly discovered it had a much wider envelope of operation than the Marches I'd raced in my first two years. They had been very sensitive to changes in conditions, so it was much harder to find a set-up that worked at each track. With the Lola, you could get close on set-up and be fast, and then you just finetuned it to be faster than the other Lolas.

So I was heartbroken when Doug called me at the end of 1986 and said we were switching to March. I was like, 'You've got to be kidding me', but he said, 'Hey, they offered me a better deal'. At the end of that year, I switched to Rick Galles' team, even though they were also running Marches, and actually we got that '88 March running good [he was second in the championship]. But still I was dying to get back in the Lola and Rick Galles agreed that's what he'd do for '89.

Towards the end of the '89 season we found some development areas that we could explore and made some steps with the T89/00 that we hoped to adopt on the '90 car, and sure enough they worked. The car worked well everywhere that year, and we scored six wins and won the championship. And we beat Michael Andretti with the same car... or I should say, what started out as the same car.

All the teams back then could make their own engineering changes and build their own pieces for the basic cars we were supplied, and we also had unlimited testing. I do believe it was our work from the year before that gave us that slight edge in '90 that we maintained throughout the season. That was very satisfying, to feel that we'd created our own advantage and saw it pay off.







Allan McNish F3000 RACE WINNER WITH LOLA

The company was started by a bit of a mayerick and run by a bit of a mayerick. and then became a business because the maverick was extremely good at what he did. You could see by the results they got in such a wide variety of championships, it was incredible - and it wasn't one-make championships like now.

When I came out of Formula 3 I wanted to drive a Lola in Formula 3000 because it was the car that would perform and they were doing other things as well, so it could also progress your career. Lola staved very close to its roots and built on its engineering; it was an engineeringbased company rather than necessarily a profit-based company.

They were engineers and racers at heart, which is always a good thing in my view.

Chris Saunders LOLA DESIGNER AND WINDTUNNEL CONSULTANT

The guys in the Lola design office had been designing a downhill soap box racer, codenamed 'Secret Soap'. It was drawn on CAD and made out of office hours, and they wanted to put it in the windtunnel.

One evening, we put it in there, but the special tyres are very hard - 120psi - and the contact patch was so hard it melted the [rolling road] belt and split it in three! We changed the belt and ran the tyres much softer; it ran OK, and we did some development on it to reduce drag. It was good for morale and didn't really cost any money, but Martin Birrane never knew!"



Michael Andretti 1991 INDYCAR CHAMPION WITH LOLA

The 1990 car really got us going and set off this run of success for Lola. The T91/00 was an evolution of that car and earned us the championship. Because the Lolas were a natural progression from year to year, we understood how they worked and how each change would affect the car. That knowledge had made us efficient.

But 1992 was a heartbreaker with the new Cosworth. The T92/00 was basically the '91 car but with a lot of horsepower. We led over half the laps that year and led 12 or 13 of the races and won five, but we dropped out of a quarter of them. It was disgusting! And then the year when it all came together and they got reliability, I gave it to someone else [Nigel Mansell]. We might have won all the races that year!

Coming back to Newman/Haas and Lola in 1995 and '96, again we retired from too many races. In '96, we nearly beat Chip Ganassi's Reynard-Honda-Firestone with a Lola-Ford-Goodyear because that T96/00 was really good. It deserved a championship.





David Brown WEST COMPETITION F3000 TEAM MANAGER AND RACE ENGINEER

We had two iterations of the Lola Formula 3000 car. I spent a lot of time going back and forth – we used to test in the Lola windtunnel, which is actually a really good facility.

At the time Lola was an established, successful car manufacturer and produced a good product that was wellsupported, with knowledgeable people with experience that you could talk to about getting spares or any problems you had with the cars. I always thought that they represented the best a product could be at the time, and I thought Lola did a really good job.

Sam Smith LOLA PRESS OFFICER

The great thing about working for Lola was the variety and diversity. One weekend it was Le Mans, the next Champ Car and then maybe a defence or aerospace industry exhibition. It was a great place to work.

There were some fine achievements on the track during the Martin Birrane era but perhaps my favourite was in Formula 3.

In 2002-03 the Lola-Dome was born and the early signs were not good. In fact, Adam Carroll, despite his very best efforts, effectively disowned the car.

Dallara had not been properly beaten for around a decade and, after a largely disastrous 2003 debut, all we had in the British Championship for '04 was a shoestring effort with Danny Watts and Promatecme. We were all on our uppers in one way or another, but this just seemed to galvanise everyone more. This was the era of Nelson Piquet, Carroll, Lucas di Grassi, James Rossiter and others so the competition was strong.

The early signs that year were not that great despite a massive amount of work by the engineers, especially designer Adam Airey, a fiercely ambitious, headstrong guy whose determination was a real force of nature.

We arrived at Castle Combe in June that year thinking it could really suit the car. Danny was on a mission to make sure the industry didn't forget about him. The mission was accomplished as he dominated the first race from pole and won at a canter.

The main thing I remember after the race is Adam and I, rather childishly, recreating that famous photo of Peter Warr welcoming Ayrton Senna back in to the paddock after Estoril in 1985! Danny hadn't a clue what these two idiots were doing.

To be the only Lola-Dome on the grid and vanquish all those Dallaras with such strong competition was highly satisfying and a great memory of my time at the company.







HOWARD DAWSON

PEER GROUP/LOLA MD

hortly after I joined Martin Birrane's Peer Group in May 1997 he made a call to Eric Broadley, having heard Lola was in trouble. Eric said things were OK, but shortly afterwards it was announced Lola Cars had gone into administration.

Martin put in an indicative bid to buy the assets of Lola Cars and the administrators initially dismissed it. They spent the next six weeks going through the management buyout option and the dreamers and no-hopers, and ended up coming back to Martin in July 1997. The deal was completed on September 23 '97.

Many people think Martin bought Lola because of his passion for racing, but there was always an underlying business reason why he did things. He wanted to make Lola successful on the race track again, but he also knew he had to diversify the business. He immediately set about investing in facilities and people. We grew the workforce from 68 to a peak of 220. Martin put investment into composite manufacturing and the Wind Tunnel facilities.

Martin and Lola went back a long way – his Crowne Racing T292 had won the European 2-Litre Sports Car Championship with Chris Craft in 1973. The manufacturers' trophy still went to Lola, even though Martin had beaten the works team, and not long after Martin bought Lola, Eric Broadley came to the factory and presented him with the trophy. That meant a great deal to Martin.

When Martin bought Lola, the Wind Tunnel wasn't there. Chris Saunders was already negotiating with BAE Systems to buy the steelwork for the tunnel but it was an enormous engineering challenge – most of the tunnel and all the plant and supporting equipment was designed from scratch. Martin had to decide whether he wanted to carry on with the project and he didn't hesitate. He knew the success of racing cars was dependent on great aero.

Chris led the engineering project and I was asked to oversee the building contract and the budget. The hardest job was keeping Chris under control because every week there was something new and shiny he wanted to put into the windtunnel! But we didn't

compromise on quality. You can't really modify windtunnels so you have to get them right from the start. Martin believed in the engineers and provided them with the best facilities he could.

Martin always had a passion for sportscars – he did Le Mans 10 times as a driver and won his class in a BMW M_1 in 1985 – and the SR1, SR2, LMP1

and LMP2 cars were the DNA of the business under Martin. He wanted success at Le Mans and he delivered in spades – the cars won lots of races.

Lola took MG back to Le Mans in 2001 with the EX257 and, after developing our open cars and the coupes, we did the Lola-Aston Martin. We continued to have success and it was a source of great satisfaction for Martin.

But he also knew Indycar was important. In 1997 there was a problem with the car and even before completion of the acquisition of Lola Martin wrote a cheque to allow the engineers to go to invest in research and development to identify the problem, which they did. We knew we had the makings of a competitive Indycar after that and we got more and more Lolas onto the grid after '98.

We also kept the Formula 3000 contract for 1999, which was important, and again in 2002, though by then the pressure on



cost-capping was beginning to bite and profit could only be derived from spares sales.

Lola's reputation has always been that it can produce competitive cars that have engineering integrity and are safe. Martin said they had to be quick, safe and beautiful – he took great interest in the final product.

By 2012 the recession had been with us for four years and it was deeper and longer than anything we'd experienced previously. Motorsport was changing as well. Single-make racing was getting harder and the market for customer Le Mans cars was diminishing, so in April '12 we took the difficult decision to stop trading Lola Cars.

Martin felt the next chapter of Lola needed to be written by a new investor. For three years we kept everything together so it could be sold, with the brand, to reignite Lola, but in 2015 we decided we needed to let out the factory.

"MARTIN DIDN'T HESITATE

TO INVEST IN LOLA AND

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Wind Tunnel Developments continues to operate the tunnel and Lola Group Holdings still has the Lola IP, brand and heritage. The tunnel has proved to be a successful and sustainable business in its own right. Between 2000 and '02 we had Toyota in the tunnel, taking about half the available time, and other F1 teams used it over the years. It allows for a

quick changeover between customers and has partitioned servers so they can maintain confidentiality.

The tunnel is one of the finest, technically advanced and commercially available facilities in Europe, with excellent repeatability and the tunnel-to-track correlation is recognised in the industry as being of the highest order.

It's also had a versatile range of uses - it's been used for F1, automotive, rallying, Scania trucks and a number of defence projects. The diversity of the projects that have come in and worked is impressive, and now our ambition is to sell the tunnel, along with the seven-post vehicle-dynamic test rig.

We will either sell the facility alone or, in the right circumstances, sell it with the Lola brand. The heritage of Lola stretches back 60 years and over 4000 cars, and it's ready for someone with the same passion as Martin to write the next chapter.



Based in the UK's famous 'motorsport valley' in Cambridgeshire, and used by many Formula 1 teams, the Lola Technical Centre is now offered for sale. Boasting one of the world's most advanced moving plane wind tunnels, a 7-post chassis rig, model shop and support facilities, this R&D facility has a glowing reputation across the motorsport, automotive and aerospace industries.







Sales enquires

David McRobert | T: +44 (0) 7552 012 755 | E: d.mcrobert@flyfive.co.uk

Howard Dawson | E: hjd@peergroup.co.uk

