CHAPTER ONE

GETTING THE SHOW ON THE ROAD

Colin Chapman's career as a racing car builder was founded on a structural engineering degree course at University College, London, in 1945. He augmented his student income by dabbling in second-hand cars. When post-war petrol rationing made this unviable, he turned his attention to transforming a 1930 Austin 7 into a sporting special. It was a tried and tested formula for enthusiastic motoring, but Chapman developed it successively into the Lotus Mk 6, which became the mainstay of the club racing fraternity in the early 1950s. In 1957 it metamorphosed into the Mk 7, better known as the Seven, which was arguably Lotus's most successful car, insofar as it lives on today in the Caterham Seven.

Chapman's Austin 7 special of 1948, registration number OX 9292 and named the Lotus Mk 1, was based on the chassis of a fabric-bodied Austin 7, clad in alloy panels over bonded plywood, which endowed it with greater rigidity. He extended the rear of the Mk 1 body to accommodate passengers or trialling ballast. Chapman discovered that inverting the rear leaf springs cured the Austin 7's propensity to oversteer. He also created an independent front suspension system by splitting the front axle beam and pivoting it in the centre, thereby ensuring that the wheels were vertical during cornering. The Austin 7 Special was assembled in a lock-up garage belonging to the father of Chapman's girlfriend Hazel Williams, and the pair campaigned it successfully in the mud and ruts of trials competitions all over England.

As a student, Chapman was a member of the London University air squadron, and designed the car along the principles of aircraft construction. He spent much of his time mulling over technical treatises at the Institute of Mechanical Engineers' library in order to ascertain what stresses cars were subject to on the limit, and what could be done to counteract them. This was not something that contemporary car designers devoted much thought to, and it accounted for much of the success that the Mks 6, Seven and Eleven enjoyed.

He spent his National Service in the RAF, and learned to fly a Harvard two-seat trainer. This skill became a passion that stood him in great stead when he commuted from home base to race circuit, often flying out for practice and then home again before going out once more on race day.

Meanwhile, back in 1950, Chapman had built the Mk 2 Lotus in his spare time. Based on another Austin 7 chassis and clad in an aluminium cigar-tube body, it was thus more sporty looking than the Mk 1, and its main chassis members were boxed in, with tubular braces replacing the existing cross members. It was powered by an engine from a Ford 8, subsequently replaced with a Ford 10 unit, and the Austin 7

In 1951, Colin Chapman became friendly with 750 Motor Club members Nigel and Michael Allen who had a workshop in Wood Green. The brothers acquired a pair of Lotus Mk 3s – Colin and Michael deliberate over the front suspension on a makeshift drawingboard – and they were closely involved in the design of the Mk 6. While Chapman drove the works' car in 750 championship events, Michael Allen and Hazel – the future Mrs Chapman – drove it with no less gusto at minor meetings.

rear axle was retained. As an example of his dogged resourcefulness, Chapman obtained a 4.55:1 ratio final drive by pairing up an unmatched 42-tooth crown wheel with a 9-tooth pinion. He achieved this by filling the diff with metal polish and driving it for 50 miles. The bearings were ruined, but the crown wheel and pinion meshed perfectly.

Special building was still very much a hobby, and at this point Colin worked for British Aluminium as a construction engineer. He was nevertheless very much abreast of contemporary motor sport, and noted that Holly Birkett of the 750 Motor Club had just established the unsupercharged 750 Formula for Austin 7s in club racing. Chapman based his next creation on that formula. With the Mk 2, Chapman and Hazel were active most weekends in trials, rallies or some 750 Formula club event, and they had many successes. Chapman's first proper race in the Eight Clubs meeting at Silverstone on 3 June 1950, in which he beat Dudley Gahagan's Mk 37 Bugatti, spurred him to build a car that could win on the road rather than the less predictable terrain of a trials course.

To this end, he created the equally austere and spindly Mk 3 Lotus in 1951. The basis for the prototype was a 1930 Austin 7, the chassis of which was given the same beefing-up treatment with side-members boxed in and cross-members replaced with 14-gauge tubular beams. Every component was weighed prior to installation,

and if deemed too heavy, was worked on or discarded for something lighter. Around this time Chapman became friends with the Allen brothers, Nigel and Michael. They were 750 Motor Club members who lived in Wood Green, and had reasonable workshop facilities. They were fired by Chapman's enthusiasm and built a pair of similar cars to the Mk 3 Lotus. They were also closely involved in the gestation of the seminally important Mk 6, which came out in 1953. In the chronology of Lotus models, the Mk 3 was superseded by the Mk 4, which was ostensibly intended as a trials machine, and the Mk 5, which was never completed, was intended to be a circuit racer.

There was sufficient interest at club racing level to find buyers for these cars, which were little more than one-off specials. Chapman's strategy for selling them depended on race successes to produce publicity and inspire potential buyers, and his prowess generated sufficient interest for him to consider productionising the concept, which is what led to the Mk 6. Chapman was therefore at the forefront of the kit-car industry, and as customers began to approach him for their own Mk 6, it wasn't long before he was selling the vehicles in component form.

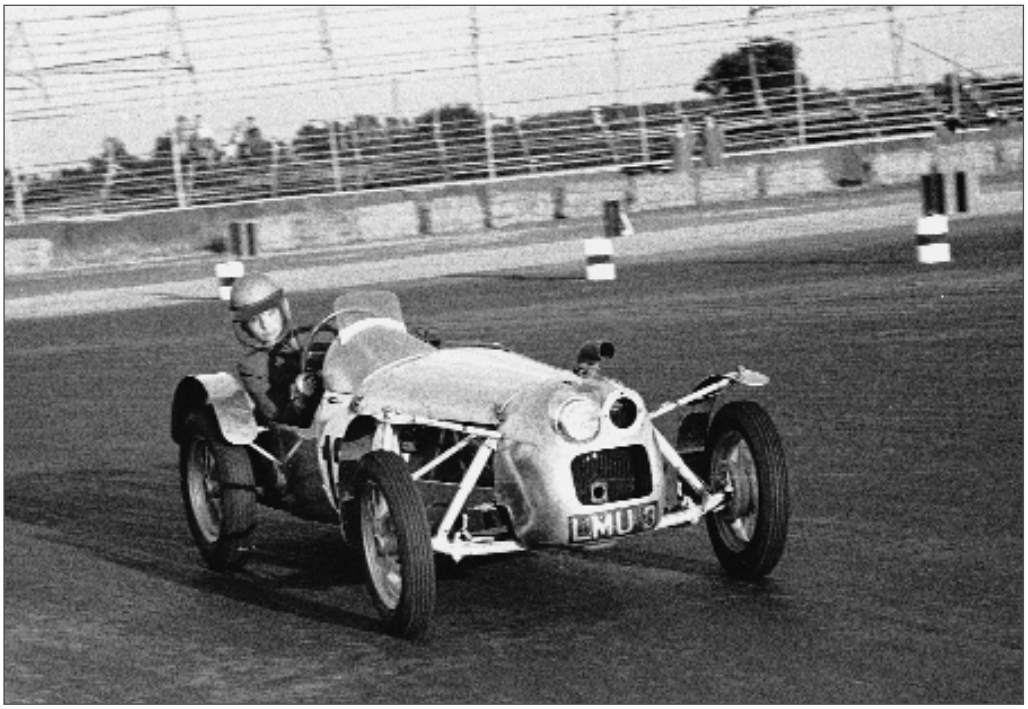
He established two companies, one from which to dispense the kit car components, the other to manufacture complete cars. Lotus Components Ltd constructed racing cars for sale, and marketed Lotus Sevens in kit form. The company earned a modest revenue selling tuning equipment to members of the 750 Motor Club, but it wasn't enough to maintain the kind of business that Chapman had in mind. His workshop and drawing office was a former stable behind father Stan Kennedy-Chapman's Railway Arms Hotel, at 7 Tottenham Lane, Hornsey, in residential London N8.

After university, Chapman had served an apprenticeship at De Havilland aircraft factory at Hatfield, and in 1953 his day job was still as a structural engineer at British Aluminium. His personal transport was a Lotus Mk 6, which meant he was apt to arrive for work soaked to the skin. These were heady times in aviation, with the frontiers being thrust back all the time, and Chapman and his circle were similarly inspired. Three De Havilland design engineers – Mike Costin, Mac Macintosh and Peter Ross – frequently joined Chapman and his associate Michael Allen in their nocturnal activities, and were instrumental in honing Lotus chassis development. Macintosh was responsible for designing the early tubular space frames, and Ross, an alloys expert, did the castings. This background in aviation and familiarity with state-of-the-art technology manifested itself in Chapman's quest for lightness and evaluation of stresses in the chassis. Eventually this work would bear fruit in the monocoque chassis, and it was also born out by Chapman's adoption of refined aerodynamics. When the company moved to its present location at Hethel in Norfolk in 1966, Chapman the pilot had the factory's reception area built facing the airfield, so convinced was he that the aeroplane would be the inevitable mode of arrival. Even at this early stage in the development of the Lotus organisation, the charismatic Chapman commanded unswerving loyalty. This devotion would later be manifested in the willingness of Team Lotus mechanics to work 'all-nighters' – with no dinner – to fix crashed or blown-up cars, or simply to incorporate a component introduced by Chapman on a whim. The ability to inspire went back to his childhood, when as the leader of Hornsey Air Scouts he had been able to motivate his troop to construct and win soap-box derbies.

The Mk 3 was very successful in the 750 Motor Club events and Chapman received several orders for replicas, one of which was this 1951 car being driven in the 1953 AMOC meeting at Silverstone by J.B. Davidson. Lotus Engineering was founded in the wake of this enthusiasm.

The prototype Lotus Mk 6 attracted much interest in the paddock at the MG Car Club meeting at Silverstone on 5 July 1952. Michael Allen finished second in the novice's handicap after a tussle with Peter Gammon's MG TC; Gammon was later to fit his overbored, alloy Laystall-headed 1497cc MG engine and close ratio gearbox in a Mk 6 of his own. This was UPE 9, probably the most famous Mk 6 of all, and for the last twenty-nine years residing in the tender custody of Caterham's Graham Nearn, who restored it – with Len Pritchard beating out the body panels – and kept everything as was, except for fitting Spax dampers and 145SR × 15 radials. UPE 9 ran on skinny Elektron cast magnesium alloy split-rim wheels, far more sophisticated than Chapman could provide.

Chapman drove the prototype Mk 6 in the Silverstone relay event, in which they placed second after Chapman made contact with the oil drums lining Woodcote bend. The car promised much, but was subsequently wrecked en route to the *Daily Mail* 100 miles International race meeting at Boreham aerodrome, through no fault of driver Nigel Allen. In the wake of the Mk 6's demise, with no tangible assets apart from his day job, Chapman elected to go for broke and set up the Lotus Engineering Company. In February 1953, Hazel Williams as co-director brought the princely sum of £25 – a month's wages then – into the business and this formed the basis of the Lotus Engineering Company's working capital. The Chapmans were sole directors, but Mk 6 production began in earnest at this point. Chapman built eight Mk 6s virtually single-handed, taking a fortnight to construct one car, working mostly at night. The aluminium panelling that clad the chassis was fabricated by another small firm called



Hazel Williams – the future Mrs Chapman – drives a Mk 3 to victory in the five-lap handicap race at Silverstone in July 1951. One headlight is absent and there appears to be a ram-air induction pipe.

Williams and Pritchard. The company had moved to Tottenham Lane, and produced the panels by day, while at weekends, Chapman was more often than not at a race-track. The company's fortunes were assured at Crystal Palace on 19 September 1953, when Chapman held off the leading 1500cc contenders in a Ford 10-engined Mk 6, and all of a sudden there were customers for the cars. During the next four years, over 100 Mk 6s were sold, with some going to the States, Canada and Australia.

The Mk 6 chassis was built by Dave Kelsey and Johnny Teychenne's Progress Chassis Company, set up specially and operating from garage workshops at Edmonton. Their methods were typical of a small engineering company setting up in the make-do-and-mend climate of post-war austerity. The original chassis jig was made out of an angle-iron bed-frame, and suspension and other bracketry fashioned from whatever light-gauge steel was around. Williams and Pritchard was soon to be based in the same complex and the car was fettled by Chapman and Mike Costin. Very often the layout was assembled before its design was committed to paper on the drawing board, but that was true of evolving Lotus racing cars in the 1960s too.

The Lotus Mk 6 chassis broke new ground in Britain, because it was the first proper triangulated spaceframe, as opposed to traditional sports cars that had bodies based on a ladder chassis that was stout but crude by comparison. The Mk 6 chassis was composed of lengths of 1 inch and 1⅛ inch diameter circular and square-section tubing welded together in lengths and diagonals and braced at crucial stress points. The Mk 6 chassis was not only light, at just 55lb, but coped well with bending and torsional stresses generated at racing speeds. All loads in a spaceframe are in tension

Adam Currie's Mk 3B displays negative camber angles at Beckett's corner, Silverstone, in 1953. Three of these cars had grilles modified from the original Mk 3, and ran with much-modified Austin 7 engines and A-frame chassis, panelled in aluminium. Chapman devised siamesed head ports to improve performance. Currie, meanwhile, went on to marry Chapman's cousin.

When Chapman was starting to work on the Mk 6 in 1952, the Clairmonte brothers commissioned him to make a one-off front-engined Formula 2 car. Although Lotus designed the chassis, suspension and body as the Mk 7, Chapman virtually disowned the project when the designated ERA engine blew up. The Clairmontes raced their Special with a Lea-Francis engine.

Chapman in the prototype Mk 6 rounds Woodcote at the end of the Silverstone Club straight in 1953 ahead of P.A. Desoutter in another Mk 6. Chapman's car still has the hood hoops in place, while the second car has modified rear wings and external headlamps – turned back to front.

It's September 1954 and the Mk 6s of Mike MacDowell and F.V. Lambert dual for position during the SUNBAC meeting at Silverstone. It's interesting to note the varying treatment of aero screens and headlights.

The future Team Lotus works driver Alan Stacey in his Mk 6 at Silverstone on 10 September 1955. He drove five races that day, posting two wins, a third, a fourth and a one from last.

A wild and windswept West Essex Car Club meet at Snetterton on 13 August 1955. The 5 gallon oil drum serves as an apex marker for Alan Stacey's Mk 6 and John Coombs' Connaught-engined Mk 8. Forty-five years later, this Mk 6 was rebuilt by Ian Bentall and driven by Stacey's nephew Alan.

and compression. The floor and side panels of the Lotus were in aluminium, and the scuttle and undertray were riveted to the chassis rails to provide additional stiffness. The Mk 6 set the stage for every subsequent Lotus chassis up to the revolutionary Lotus 25 monocoque of 1962.

The stock Ford engine chosen by Chapman, and also coveted by Sydney Allard for one of his cars, was the Consul's. It would be reliable, economical and potentially long lasting because of its efficient oil supply and large bearings. This contrasted with the Climax engine, which used a lot of oil because it had originally been designed as a wartime fire pump unit that could be run at maximum revs from cold. But because the Consul's 1508cc engine was so new, no dealers had a spare to sell, and despite correspondence between Stan Chapman and Ford Chairman Sir Patrick Hennessy, the manufacturers wouldn't sell one. So the resourceful Colin Chapman assembled an engine out of individual components, sourced by doing the rounds of Ford dealers in the Greater London area. Michael Allen did much of the assembly work, reducing the stroke to bring the cubic capacity down to 1499cc, which brought the car into a different class of racing. Among the tomes available to Chapman in the course of his research was tuning guru Sir Harry Ricardo's book on high-performance engine design, and although it was written in the 1920s, the guidance it provided would not have been lost on Chapman.

The Mk 6 chassis had mounting points for five engines: the 1172cc Ford 10, the 1500cc Consul, the 1100cc Coventry-Climax, and 1500cc MG TC or TD units. Its suspension consisted of the split front swing-axle fabricated from modified Ford parts. The beam axle was sliced in half and plates welded over the ends. A pair of bushes fitted here pivoted on a bracket fixed to the lower front chassis cross-member, and a pair of radius arms was made by splitting the V-shaped Ford tie rod, while separate track rods incorporated a slave arm. With track rod divided and working on a central slave arm, the steering box and column were turned through 90 degrees and mounted by the base plate; a track rod then ran from the slave arm to the arm of the steering box. The regular Mk 6 used a Ford 10 back axle with shortened prop shaft and torque tube. It was located laterally by a Panhard rod, and suspension front and rear was completed by coil springs and Woodhead Monroe dampers. Brakes were regular Ford units, and consisted of cable operated $10 \times 1\frac{1}{4}$ inch Girling drums, which were adequate for cars powered by the 1172cc motor.

START OF THE LEGEND

At the beginning of 1954, Colin Chapman formed Team Lotus to distinguish his racing activities from the business enterprise of Lotus Engineering Ltd, although neither he nor Mike Costin gave up their day jobs to concentrate on Lotus until the end of the year. The Mk 8 that appeared in 1954 was a sports racing car and was a major step forward for the fledgling company in terms of chassis design and body styling. It was built up on a fully triangulated space frame chassis, made of $1\frac{1}{4}$ inch 20- and 18-gauge tubing, with two sections front and rear of a central bulkhead. The fore section was triangular in plan and the rear part was triangular in side elevation. One of Chapman's band of helpers at the time was Gilbert 'Mac' Macintosh, who worked in the stress analysis department at De Havilland aircraft. He made the calculations that dictated the stress points on the Mk 8 chassis, and it

Styled by Frank Costin, the Mk 8 was the first aerodynamic sports racing car built by Lotus, and it was powered by a 1.5-litre MG, Connaught or Coventry-Climax engine. A relaxed-looking Chapman drives the works' car – SAR 5 – at Aintree in 1954. Ten of these cars were built.

was built accordingly. Chapman, on the other hand, tended to design for lightness, subsequently strengthening whatever component failed.

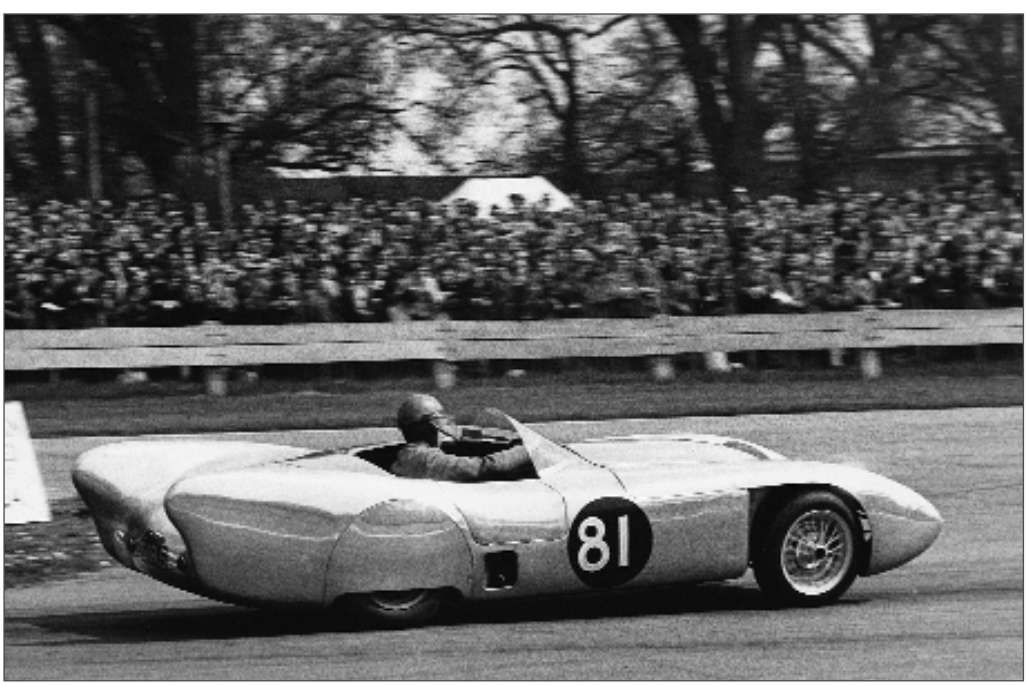
The Chapman front swing-axle and coil spring and damper suspension was located on a triangular frame of sheet steel, the base of which was mounted across the top chassis rails, with the upper chassis members running through the top to absorb the front suspension loads. A pyramid of four steel tubes formed the engine mountings. The downside of this layout was that it took some 12 hours to remove the engine, and twice that to replace it. At the rear, a designated mounting at the back of the chassis located a de Dion axle, transverse coil spring and Armstrong piston-type dampers.

Initially, the Mk 8 was powered by a 1467cc MG-based engine, with certain Morris components, and a Laystall-Lucas alloy cylinder head. It was fed by twin SU carburettors, and drove through a four-speed MG gearbox. Lockheed hydraulic brakes with Alfin drums, outboard at the front and inboard at the rear, slowed it down. Power output was said to be 85bhp at 6200rpm.

The aerodynamic body came as a something of a surprise after the spindly, if effective, creations seen previously. After the design had been thrashed out on the tablecloth of a West End restaurant, the definitive rotund panelling, featuring a low nose, faired-in rear wheels and prominent twin tail fins, was drawn by Frank Costin (Mike's brother). Frank was an aerodynamicist and stresses man for the De Havilland Aircraft Company. Lotus's by now customary body shop, Williams and Pritchard, expertly crafted the idea into a reality. The drag produced by underbody

componentry was countered by a full-length undertray, with ducting for the rear brakes. The passenger seat could be covered by a metal tonneau for racing, and a small perspex screen around the cockpit provided a decent wind break. Instead of being prominent at the front of the wings, the headlamps folded down into the engine bay. In the days before pop-up headlights, they had to be raised by hand so they stood up through apertures in the engine cover. On the prototype SAR 5 that was campaigned by Chapman himself, the front section was the only removable part of the bodywork. The rest was riveted firmly in place, although on further models access was less restricted.

The Mk 8 debuted at the British Empire Trophy meeting at Oulton Park in April 1954. It wasn't an auspicious first appearance. In fact the car nearly didn't make it at all, since it was crashed en route to the circuit. But after the kind of feverish activity that would come to characterise Team Lotus's presence at a race circuit, Colin Chapman contrived to start from the back of the grid. The Mk 8 expired in its heat with a blown head gasket. Chapman was on a steep learning curve, and after a luckless Easter Monday at Goodwood, he posted the car's first success in the Sports Car race at Silverstone in May, winning the 1500cc class. The car was also driven to fourth place by Erwin Bauer in the Eifelrennen at the Nürburgring. Following a crash in the wet at Aintree in May, Chapman won the 1500cc class in the Sports Car race at the Whitsun Goodwood meeting. This was followed by a first at Crystal Palace, and a second place for Peter Gammon's Mk 6 at Brands Hatch. There was victory in the 1500cc Sports Car race supporting the Grand Prix at Silverstone, vanquishing even Hans Herrmann's works' four-cam Porsche 550. This achievement



Looking shark-like in its bare aluminium finish and showing off the fabulous lines of its tail fins, Chapman's works SAR 5 takes to the track at Goodwood on Easter Monday 1954 for the five-lap Chichester Cup race. The Mk 8's MG engine promptly went onto three cylinders.

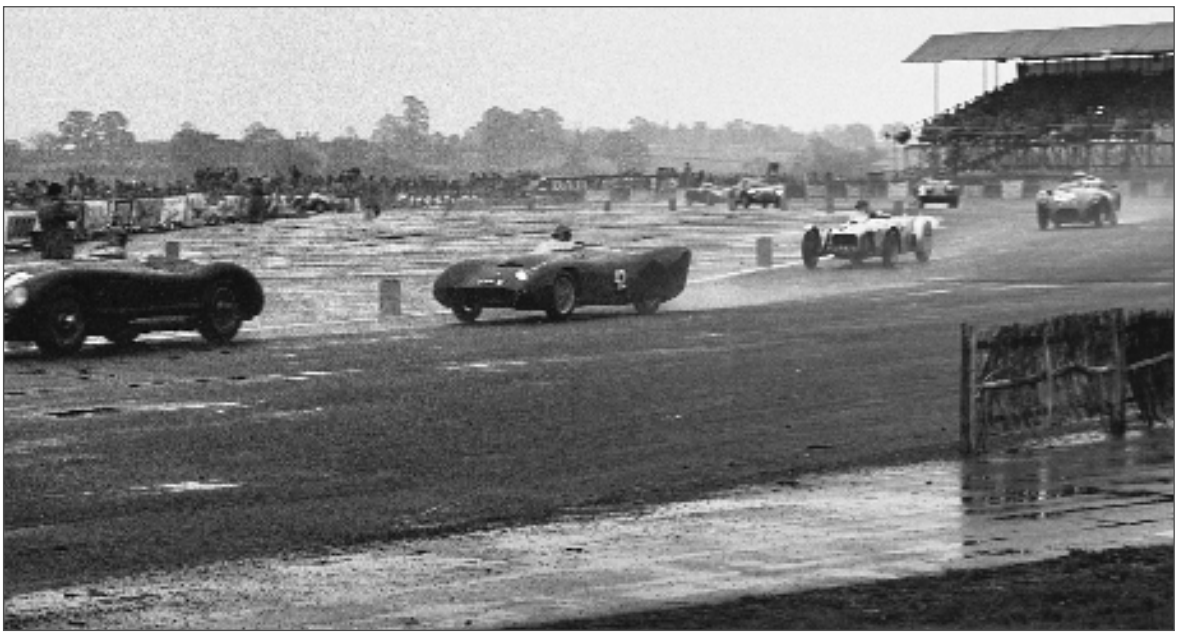
also satisfied one of Chapman's long-held ambitions – to beat one of the up-and-coming German sports cars.

Chapman took another 1500 class win at the Fairwood track in Wales, but holed the crankcase in the Unlimited category event. Such was the demanding calendar of racing every weekend that he began to examine ways of improving access to the car's internals. Even extracting the engine proved exceedingly frustrating for mechanics Mike Costin, John Standen, Peter Mayes and Tony McKusker.

With the engine rebuilt, next stop was the Nürburgring. Two privately owned Mk 8s were also present for Nigel Allen and Danny Margulies, but the Lotus trio retired, Chapman's with a snapped de Dion tube. The hectic schedule was maintained, however, and Chapman drove two further events the same weekend – at Brands Hatch, where he came fourth in his heat, then whizzed up to Crystal Palace, only to retire on the second lap due to carburettor settings that were more in keeping with German fuel. Then it was back to Brands Hatch, where he drove the Mk 8 of Nigel Allen in the Sports Car final, only to retire again with fuel feed trouble.

Meanwhile, Frank Costin and some of his De Havilland colleagues carried out aerodynamic tests on SAR 5, covering it with tufts of cotton wool and observing how they behaved in the airstream at 110mph on a disused Cheshire airfield. Costin found that the tufts weren't ruffled until the car reached 80mph, at which point the airflow appeared to go in a forward direction. His observations were projected into future Lotus bodies.

Colin's forays to race circuits tailed off at this point due to the realities of running a business building, selling Mk 6s and Mk 8s, and his impending wedding to Hazel Williams. But he logged a third at Castle Combe behind Roy Salvadori's Maserati and



The first victory for the works Mk 8 was at a damp Silverstone at the International Trophy meeting on 15 May 1954. Chapman won the 1100–1500cc class ahead of John Coombs and Peter Gammon at an average speed of 76.42mph and was fifteenth overall, just three-quarters of a lap behind Gonzales' 4.9-litre Ferrari.

Archie Scott-Brown's Lister-Bristol, while at Ards in Northern Ireland for the Tourist Trophy he crashed out. Further placings included sixth overall and 1500cc class winner at Crystal Palace, and second to McAlpine's Connaught at Aintree. He also had a run in with the Lister of arch-rival Archie Scott-Brown at Snetterton.

At the end of the season, SAR 5 was sold to Lotus racer Austin Nurse for the 1955 season, and subsequently went to Roy and Jean Bloxham. After an errant excursion into the weeds at Mallory Park, SAR 5 was rebuilt minus its fins. In an *Autosport* magazine road test in November 1954, John Bolster recorded a top speed of 121.5mph, 0–60mph in 8.0 seconds, 0–100mph in 23.8 seconds, and the standing quarter-mile in 15.5 seconds. All this performance and 30mpg as well.

Further MG-engined Mk 8s were commissioned by Brian Naylor (JBN 1), Alan Brown (VPD 97), and Tip Cunane – who mostly went hillclimbing – while John Coombs installed his Connaught engine in the Mk 8 Lotus. Following the example of Kieft's 1954 Le Mans entry, Dickie Steed fitted an 1100cc Coventry-Climax FWA fire-pump engine in his Mk 8 (HUD 139). In spite of teething troubles, this was the start of a long association between the two manufacturers.

On New Year's Day 1955, Chapman and Mike Costin began their full-time careers at Tottenham Lane. While Costin ran the offshoot Racing Engines Ltd, Nobby Clarke was production manager of the car side. There was already a degree of overlap in Lotus type numbering – the Seven had yet to appear, and the Mk 9 was conceived as a smaller engined version of the Mk 8. Chapman was already draughting the more substantial chassis of the Mk 10, which it was intended would accommodate the bigger Bristol engine advocated by Mike Anthony.

The essence of the Mk 9 was that its multi-tubular triangulated chassis was more compact than the Mk 8's, thanks to smaller-section tubing, which was thus lighter yet stronger than its predecessor. There was also a revised de Dion rear end set up with beefier hubs. The bodywork was subtly reworked by Frank Costin so that it was rather shorter overall but with higher tail-fins. The frontal treatment was altered to provide better airflow to the radiator and somewhat shrouded front brakes. Crucially, accessibility was vastly better, so that the top half of the front bodywork could be removed for engine and suspension access as well as the instrument panel. A panel could be removed from the back end to give access to the final drive and the inboard brakes. Cockpit access was addressed, with hinge-down doors provided on both sides of the car, while the perspex windscreen was a lower wraparound shape. Fuel tanks ranged in capacity from 7 to 11 or 19 gallons, installed at the rear of the MG-engined car and, to improve weight distribution, the tank was located alongside the passenger seat in the lighter Climax-engined cars, with the battery at the rear. Auxiliary tanks could be accommodated within the passenger side of the car for long-distance competition. Headlight installation remained as for the Mk 8.

Examples of the Mk 9 were sold to overseas buyers at £1,150 with Coventry-Climax FWA 1098cc power. This was a tax-free price, elevated considerably on the home market by the addition of purchase tax. The loophole was to sell the cars in kit form so that purchase tax could be avoided. This kind of production also required less space in the assembly area than constructing complete cars would have done. Team Lotus started off building a pair of Mk 9s for its own use. They were an MG-powered car (9 EHX) that Chapman frequently drove, and a Coventry-Climax-engined car (XPE 6) seen

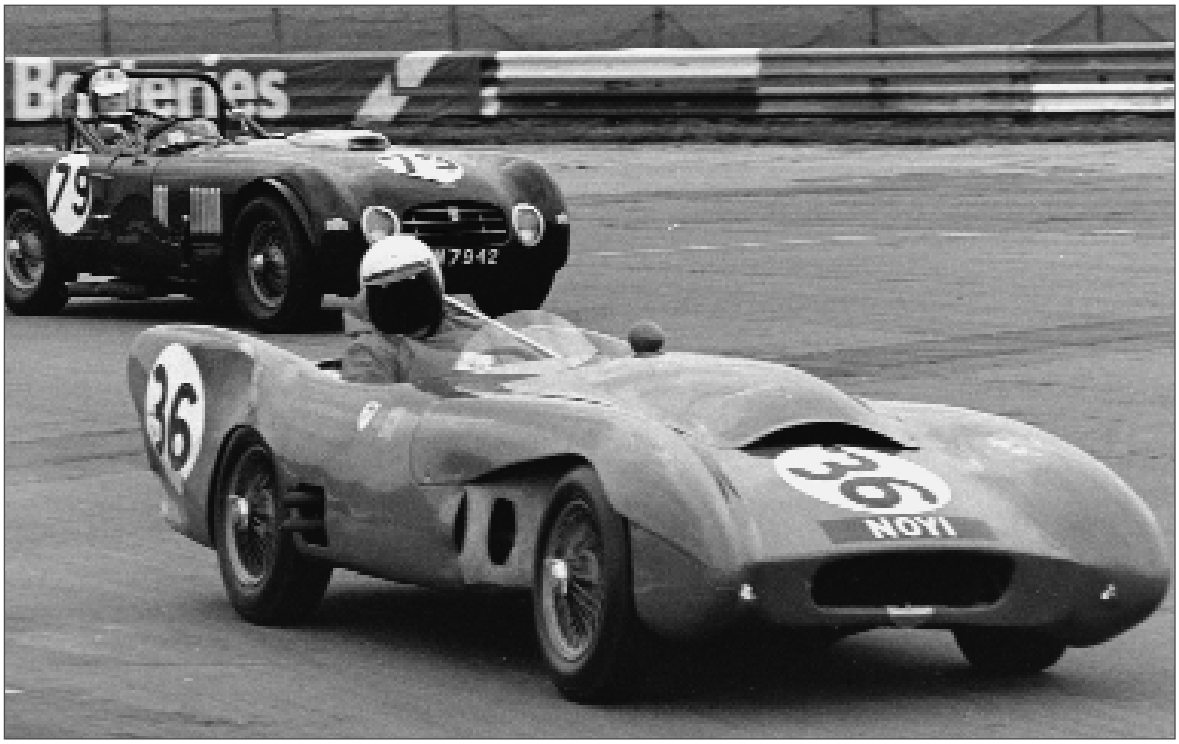
A Mk 9, looking slightly sorry for itself more than a decade after its introduction, demonstrating its fold-down driving lights – the headlights were mounted in the grille aperture – and tail fins. It was basically an improved edition of the Mk 8 and intended for smaller capacity classes. Twenty-three units were made during 1955, using 1098cc and 1460cc Coventry-Climax or 1487cc MG power.

in the hands of Peter Jopp. In both cases MG J2 crash gearboxes were fitted, although private buyers qualified for an MG gearbox with synchromesh on the upper ratios.

Two of the first customer cars were dispatched to Florida in March 1955 for the annual Sebring 12-Hours, running with Coventry-Climax engines and 1954-spec 9 inch brakes. For a while all went well and the Mk 9s led the 1100cc class. But one crashed and damaged its sump, while the other was disqualified for being push-started in the pits.

The beginning of the 1955 UK season started off with Chapman's back-of-the-grid dash through the field at Oulton Park, only to retire with overheating. He hit a concrete post at Goodwood, and broke a crankshaft at Silverstone. There was, however, the satisfaction of having set fastest lap at Goodwood. With a rebuilt and now dry-sumped MG engine, success came at Snetterton and Goodwood over the Whit weekend, where Chapman was victorious in the 1500cc class, and Jopp won at Brands Hatch.

Chapman had always cherished the prospect of tackling the Le Mans 24-Hours marathon with his own cars, and Team Lotus was present at the 8.35-mile Sarthe circuit for the first time in 1955. The 1100cc Climax-engined works car was to be driven by Chapman and the experienced Ron Flockhart. Other British manufacturers running in this class were Cooper, Kieft and Arnott. For this particular race, the works Mk 9 was panelled in heavier 22-gauge aluminium cladding, and its headlamps were housed in the front wings under perspex covers. Girling disc brakes were fitted to cope with the stresses of heavy braking.



Lotus built seven units of the Mk 10 during 1955. It was a strengthened version of the Mk 8 and was designed to take bigger engines, such as the 1971cc Bristol or 1960cc Connaught units. Here is R. Waldron's example during a BRDC event at Silverstone in 1977.

As became customary, the Team was billeted some 18 miles south of Le Mans at Mayet in the Auberge de St Nicholas under the patronage of M et Mme Mica. The car was prepared in the hotel's garage, and after scrutineering hassles involving the relocation of the retractable spotlights into the nose, the evening practice sessions took place. The problem of oil leaking onto the clutch via the rear main bearings was sorted during an all-nighter in the Cunningham garage. Early in the race, with Chapman leading the class, clutch slip was cured with the contents of a fire extinguisher, and subsequently by Flockhart casting sand from Tertre Rouge sandbank into the bellhousing. Around 10pm Chapman slid off into the sand at Arnage, and because of the presence of a stranded Jaguar, he reversed back onto the track without permission from the marshals. This was an infringement of the rules and the Lotus ended up being disqualified, mainly because the authorities were justifiably shaken by the appalling accident involving Levegh's Mercedes-Benz and could ill afford a further disaster.

Back on home territory there was better luck, with Chapman tying with Bueb's Cooper T39 for second place at Brands Hatch in July, duelling with the big-engined cars in the sports car event supporting the British Grand Prix meeting at Aintree and winning the 1500cc class. There was a victory at Crystal Palace on August Bank Holiday Saturday, followed by a third at Brands Hatch on the Monday. The Goodwood 9-Hours was an interesting venture. Chapman and Jopp were partnered in the 1500 and Flockhart and Cliff Allison in the 1100, with privately entered Mk 9s for John Coombs/John Young and R.A. Page/Paul Emery. Chapman's car shed its flywheel

while leading the 1500 class, Flockhart was hit by a wayward DB3S, Coombs' car lost a wheel, and the Page/Emery car came eleventh overall and fourth in the 1500 class. Both MG and Climax works cars retired in the *Daily Herald* International Trophy at Oulton Park – Cliff Allison crashed the smaller engined car and Chapman suffered the oil-on-clutch syndrome with the MG-engined Mk 9. By now the Mk 10s were on the scene, and Peter Scott Russell and Mike Anthony came first and second in the under-2000cc class to uphold Lotus's reputation. A week later, Chapman won the 51-mile 1500cc sports car race at Aintree, setting a new lap record, and followed home by Brooks' Connaught and Edward Lewis in his Mk 9.

The Tourist Trophy race at Dundrod found Chapman/Allison in spectacular form, leading the 2000cc class by an astonishing 9 minutes – until an oil pipe broke. Once repaired, the works Mk 9 recovered to finish eleventh overall and second in class. Around forty Mk 9s were built, and Lotus Engineering Ltd was now welcomed into the fold as a member of the SMMT – the Society of Motor Manufacturers and Traders – thus qualifying as an exhibitor at the Earls Court Motor Show.

Privately entered Mk 9s running with Ford engines were successful in 750 Motor Club events in 1956, and Peter Lumsden was quick with his Climax-powered car. He was awarded the Brooklands Trophy for cumulative performances during the year at BARC Members' meetings at Goodwood.

Following the promising showing at Le Mans, customers were offered race replica Climax-powered Mk 9s called the 'Le Mans', while Ford 1172cc engined cars were marketed as 'Club' versions. These were rather more basic, running Ford Popular gearboxes, back axles and drum brakes, although discs were optional.

BRISTOL MOTORS

The concept of the Mk 10 had been under consideration since 1954, when Mike Anthony lobbied Chapman to produce a version of the Mk 8 that could accommodate the 2.0-litre Bristol motor. The Mk 10 was thus based on the Mk 8 chassis with a larger engine bay, but incorporated the lower driveline and rear axle layout of the Mk 9, which culminated in a Salisbury hypoid bevel final drive. The fuel tank, fuel pumps and battery were located behind the rear axle for better weight distribution because of the heavier engine. Visually, the Mk 10 differed from its siblings in having no rear wheel spats, and a somewhat disfiguring hump on the bonnet. Dunlop disc brakes were fitted front and rear as standard, but only seven chassis units were made, mainly because there was more interest in the Climax-powered models. Among the non-Team owners of Mk 10 chassis were Mike Anthony (PCD 13), Cliff Davis (NOY 1), George Nixon, Bill Short (RCR 520), Peter Scott-Russell (JBW 648), Mike Young, and Dr Vaughan Havard. Teen idol and silver screen rebel James Dean ordered a Mk 10 chassis into which he planned to fit an Offenhauser engine, but he was killed before it could be delivered.

In the 2000cc category, the man to beat in 1955 was Archie Scott-Brown in the better handling Lister-Bristol, and while other Lister drivers could be bested by Mk 10 protagonists, Archie was virtually invincible. Possibly the Mk 10's finest hour was in the Goodwood 9-Hours of 1955, when Cliff Davis and Reg Bicknell finished second in the 2000cc class, although Mike Anthony and Peter Scott Russell notched up some victories and high placings in club events. Both continued to run their cars in 1956, but Scott-Russell's car was incinerated at Silverstone. Meanwhile, Cliff Davis was still racing his Mk 10 in 1957