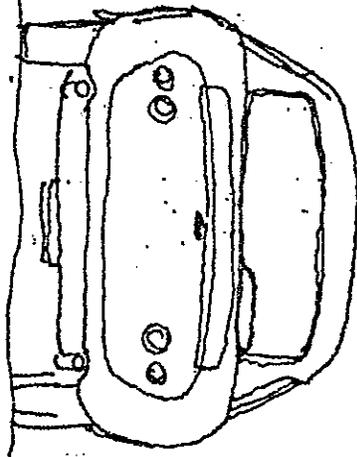
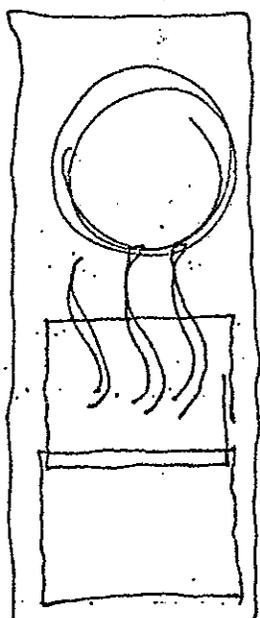


CLUB ELITE OF NORTH AMERICA P.O. BOX
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CLUB ELITE OF NORTH AMERICA
{AFFILIATE OF CLUB ELITE OF GREAT BRITAIN}

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MAY

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Dear Member,

Front Cover: A sketch of the front and a rear view of a possible envelope design offered to us by Mr. Hal Hoseley. If no one objects, we may pursue this envelope design idea if the local printing shops will give us a break.

Pocono: We are about to wind up all the preparations for the July 1 & 2 club meeting at the Schaffer 500 U.S.A.C. race at Pocono, Penn. After viewing Indy on the tube last Sat., my interest in the race itself has increased considerably, but our main interest is of course getting ^{to know} each other. All our rooms are confirmed for Friday, Saturday, and Sunday nights at the Swiftwater Inn which includes the morning and evening meal at \$31.00 per day per couple. The manager informed me to pass on the word that you should bring your fishing gear as a good trout stream is near the lodge. Perhaps the rods could be carried above the exhaust pipe in the tunnel!

Donald Plettenberg has decided to camp during the weekend rather than stay at the Inn, therefore his twin room is available and it may be the only room available on the mountain. So, don't hesitate you late comers. Contact Don at 10301 Society Park Drive, Cockeysville, Maryland, 21030. Tel: (301) 666-3154 evenings or write Club Elite with a \$20.00 deposit check made payable to Donald Plettenberg.

If any members should encounter any problems during travel, please call the Swiftwater Inn and leave a message for Club Elite. Telephone (717) 839-7206. The following is a list of other motels that we are told may possibly accommodate persons for less than three days stay if they have any vacancies.

Bon Air Motor Lodge (717) 839-9282
Norway Hotel (717) 839-9331
Mt. Pocono Motel (717) 839-9407
Ashever Hotel (717) 839-9918.

We have passed on to the Morgan Club reservations for seven couples to attend the Saturday night banquet honoring Mr. Peter Morgan, who definitely will attend. Therefore, Club Elite will be well represented.

Those of you who might want grandstand seats for the race should write Pocono International Raceway, Inc., P.O. Box 500, Mt. Pocono, Pa. 18344. Tel: (717) 646-2300, but we expect to be able to see most of the track from our infield parking/display area.

Robert Green informs me that he may not be able to complete the paint job on his Elite by July, and if not, Leo Tschanner has offered to loan Bob his Elite for the trip. How about that Morgan Owners?

Best Wishes

Barbara and Bill Hutton

FOR SALE

Elite EB 1486, R.H.D., 1961, HG, Owned 5 years, Dual SU'S, Rebuild engine and fully restored interior and exterior, 17,000 miles. \$3750.00. Ted Peterson, 319 North Vine Street, Hinsdale, Illinois, 60531 Tel: (312) 325-1257

#1486

The following is an article from Car Magazine, January 1966 issue. It compares the design, development and components of the Elite with the Elan. For this article they used a Lotus Elite that had been stored since the end of the production run and compared it with two Elans - a roadster and a coupe.

Lotus Elite / Lotus Elan

The Elite has been out of production for nearly two years - how could we possibly get our hands on one that wasn't either clapped out or so tarted up as to be unrecognisable? 'Ah' murmured the Lotus man, 'we can fix that', and sure enough it turned out that some 18 months earlier, Lotus had taken a day off from being chaotic and done something really clever for a change. Colin Chapman had decided he must have an everyday production Elite kept in storage unaltered for future reference. So his sales staff had taken one of their demonstrators just as it was out of the works car park, driven it round to a local lock up, drained it all of the usual liquids and stuck it up on blocks. For Ever. This was the car that Lotus proposed to loan us and when the car arrived at our office we were even more delighted for we had road tested this selfsame car in December 1962 when it had barely 1000 miles and we were the first to try it. Truly this would be an ideal way of making up our minds whether production problems had driven the men at Cheshunt backwards or forwards in the interim.

But first, a word or two about the development program of both cars. The Elite was the first car Colin Chapman sponsored with series production rather than competition success foremost in his mind. His tiny factory had just moved from a converted stable in Hornsey to a brand new factory in the industrial satellite of Cheshunt, Hertfordshire. The Seven sports car had begun to catch on in Britain and elsewhere as a cheap, stark and thoroughly exhilarating fun-machine. Lotus sports-racing cars had dominated their class in circuit events at home and won the index of efficiency at Le Mans. The Company was beginning to look like a future threat in the Grand Prix field. The time was ripe for something new from Mr. Chapman, and sure enough, the world got something new. If the Elite were to appear tomorrow instead of in 1957, it would still be hailed as advanced if not revolutionary. One production car (The Rochdale Olympic, whose designer later went to Lotus) has appeared since with a stressed monocoque body, chassis structure moulded entirely from fibreglass. Very few cars even now can boast a suspension layout as advanced as the Elite's with its patented Chapman strut system at the back and matching wide based tubular wish bones in front. Few rival designs can claim to get as much power from an engine so light as the Elite's all aluminum single overhead camshaft Coventry Climax FWE. Possibly no current car is as efficient aerodynamically.

The philosophy behind the Elite was partly born of expediency, Chapman had no money to invest in elaborate tooling so that glassfibre was almost a must for as many parts as possible. If he was going to persuade a supplier to install necessary modest equipment for plastic bodies, why go elsewhere for expensive steel chassis stampings - or come to that, why indulge in the usual frustrating search for welders skilled enough to build up a spaceframe in quantity from tubes? Why not make the whole thing of glassfibre and be done?

Similarly, would it be asking too much to expect customers to step forward in sufficient numbers for an untried design from an unknown firm costing as much as other GT cars - say five thousand pounds or more. Chapman's car would have to be much cheaper, and for that reason it would have to be light, small using an engine which existed already and yet which offered enough glamour and enough performance to suit a connoisseur clientele. One obvious way to get extra speed for nothing was to employ a cracking hot aerodynamicist like Frank Costin. Another was to make his car go round corners almost as fast as it would travel on the straight - and that meant virtually competition suspension of a type that would allow plenty of wheel travel and thus a reasonably absorbant ride.

The elegant body structure was indeed made wholly from plastic - from epoxy resin bonded glass strand laminate to be exact. It was made up from three main mouldings or groups of mouldings each bonded together from smaller parts which made up easily manageable replacement units. The main body mould consisted of the whole of the outer skin from the sill line up, roof and all. Doors, boot and bonnet lids, each double skinned so as to present a smooth and adequately stiffened surface, both sides were hinged to this and bright work such as bumpers and headlamps surrounds bolted and clamped in place. Then there was the undertray, a complex piece of work which included the wheel arches, the engine and suspension mountings and such tiddly bits as the built in box which was to

house the chassis mounted final drive unit. Finally, came the inner skin, a moulding which ran under the car (but over the undertray) from front to rear enclosing most of the mechanicals in a plastic sandwich, helping aerodynamics underneath as well as lending strength all round. It was in two parts - an upper lining for the cockpit and a main structure which formed the sides and bottom of the engine compartment, the transmission, tunnel and cockpit floor, the boot and radiator cowl. The same structure also included moulded-in steel supports for the door hinges, and a steel hoop running over the roof and forming a frame round the windscreen. Into this, the mechanical parts, people and luggage all fitted so neatly that looking at it today, you wonder why fast cars ever needed to get any bigger. The FWE was a 1220 c.c. racing engine that developed directly from the 1098 cc racing unit as used for years in Lotus XI's a powerplant which was itself descended from the famous high speed firepump which had given Coventry Climax its first postwar entree into the automotive field. In basic form as chosen for the Elite, the FWE had tremendous reserves, since its fully counterbalanced three bearing crankshaft, robust forged steel conrods, dry lined alloy block and chain driven overhead cam gear were already known to be capable of holding much higher revs than the modest 6200 limit set for this application. Yet even with a single SU carburettor, the little engine could still churn out a lusty 80 gross bhp (75 nett) on 10 to one compression which for a 210 lb. dry weight complete with accessories is pretty respectable. Even more important was the very respectable torque figure at modest rpm, and other useful considerations included the fact that the FWE unusual in those days - was actually designed to operate on the slant, so that it was easy for Chapman's designs to contrive a sharply sloping bonnetline and a low scuttle. The canted block was also an aid to accessibility, since the engine's wedge shaped combustion chambers effectively concentrated inlet (by simple longitudinal tubular spreader manifold and individual stub ports) and exhaust (by fabricated bunch-of-bananas) on the same, downward side with the carburettor out on a limb by itself and all the auxiliaries neatly laid out on the exposed driver's side, together with steering gear, distributor plug and hydraulic master cylinders.

The power train was straight forward with an eight inch Borg and Beck clutch and MGA gearbox with EMC remote control linkage leading to a short propeller shaft and a simple chassis mounted hypoid final drive unit. Brakes were unassisted discs all round mounted inboard next to the diff unit at the back and outboard at the front. It was the use of these inboard rear brakes in conjunction with single laced wire wheels that gave the car its characteristic look of fragility.

Suspension was probably the Elite's most interesting aspect. The design was based largely on Chapman's experience with racing cars and for virtually the first time on a British car there was no compromise about it, in the original version the arrangement at the back centred on the double jointed halfshafts, themselves which provided all of the lateral location with a patented inclined coil spring/damper strut to carry the hub and provide vertical guidance plus a simple bent tube trailing link by way of triangulation. The system at the front was almost a nut and bolt copy of the layout featured on Lotus racing cars at the time with a single wide base lower wishbone built up from steel tubes, a forged vertical member and a single tubular top link again with combination coil springs damper units as the suspension medium. Steering was by rack and pinion with a twin jointed column giving symmetrical driving position as well as providing crash insulation. A torsional stabiliser bar complete the suspension arrangement with terminal mountings at the tips of the top links.

As time went on, a lot of the details of the Elite's specifications came to be modified. Multiple teething troubles kept the car out of production for what seemed an eternity and even a year or so after the original announcement journalists privileged to drive the prototype complained of incomplete cockpit design, twitchy handling and loud noises rattling round inside the glassfibre shell from a multitude of obscure sources. Early production models in turn suffered from seemingly incurable bugs, faulty moulding was rife, spares were hard to get - in fact things seemed to be in a pretty bad way up at Cheshunt. Then came news of a Series Two version which got finally underway in mid-1960, with a redesigned chassis unit structure built by a subsidiary of the Bristol aircraft concern. The new shell incorporated a much strengthened box for the final drive unit to eliminate the constant breakages which had dogged early models. A new production process eliminated most of the unsightly coachwork ripples the cockpit interior was cleaned up to the point where it won praise as one of the most functionally 'organic' ever designed and there were a lot of detail mechanical changes. At the same time came a redesigned rear suspension with angled links to make handling more predictable and later still a Special Equipment model appeared at extra cost with a more powerful twin carburettor engine, a German built ZF gearbox with better ratios and much more powerful synchro mesh (on all four) plus a heater as standard and one or two other refinements including various dual colour paint combinations.

It was an SE Elite that we tested for this feature although even that was not the last of the line. A faster version called the Super 95 followed it, again as an extra cost option with a twin choke Weber carburettor replacing the SE dual SU's and boosting the engine output to 95 bhp at 7000 rpm. A brake servo became standard on this model and so did high speed Pirelli Cinturato tyres.

And the Elan? Well with its hopelessly long gestation period and the seemingly endless production and service troubles that followed one another in rapid succession throughout its life, the Elite must have come close to forcing Colin Chapman to throw in his hand altogether. On paper it was superb. To drive fast it was sheer delight, but right to the end of its life it remained expensive to produce, difficult to service, costly to repair, noisy to ride in and temperamental to maintain.

Yet at first nobody thought of canning the Elite altogether. During the late 1950's Lotus had formed a proper design, and redevelopment ^{dept} under Ron Hickman. One of its functions was to look at new ideas and two of the first to come under scrutiny happened to be an occasional four seater version of the Elite and a very cheap and fundamental Ford powered replacement for the Seven. The almost inevitable decision that project No. 1 wouldn't work co-incided quite by chance with the discovery that the second project could be built by a development of the Elite construction process which would eliminate nearly all of its snags. This process, called around the factory the Monolithic technique because it meant producing the entire glassfibre shell in a single mould instead of as countless glued together bits, so excited Chapman and his staff that they started to get more ambitious in their plans for it. First it grew an independent rear end. Then Harry Mundy came along and suggested a twin cam head for what was then the 998 cc 105E engine. Then Ford revealed plans for bigger versions of the same unit. In fact before long the so called Seven replacement was costing out as a virtual Elite replacement at rather less cost. Why not make it an Elite replacement and kiss all their troubles goodbye?

This in turn brought problems. For one thing the stark little monster, Hickman says it looked just like a Mark I Spite - was visually hardly the thing to take over from such svelte and sophisticated styling job. For another, the open one piece body-chassis unit may not have enough stiffness to stand up to all the power its suddenly expanded engine could give. It was time for another Chapman brain-wave. Why not take the rough and ready X-form steel backbone which they'd already built as a crude mobile testbed for the new car's mechanicals and shove it inside the monolithic structure as a source of extra strength?

If this sounds like accident, it was really no more so than the Elite's development had been. The original idea had come from Lotus Director Peter Kirwan Taylor and with prompting from Frank Costin it had soon developed into a zany freak with fully enclosed front wheels, a way-back driving position and a tiny track. Only when stylist John Fraling got to work on the first scale model did its final beautiful shape emerge - and now it was up to Hickman to do the same thing for the Elan.

The Elan as it finally appeared was about as different from the Elite as it could possibly be. The backbone replaced the older car's monocoque shell as the main load-bearing structure. A box girder split at both ends with the deeper slit at the front forking out to embrace the engine. The body in sharp contrast to the original became a semi-stressed shell which simply bolted on to the backbone via insulated mounts. The arrangement meant that it was possible to provide wide doors without weakening the structure and that the original open bodystyle need be no less rigid than the coupe which would obviously follow. Even though the new car was slightly shorter and slightly lower than an Elite, space for passengers and their luggage was greater. This involved some sacrifice in the handling department since the wheelbase had become correspondingly shorter and the spare wheel had been banished from its optimum space hogging position directly over the rear axis. Aerodynamics were still a consideration and even the hood appeared with elaborate internal stiffening to stop it upsetting the airstream.

Mechanically, the Elan emerged as an intriguing compromise between production expediency and performance. The engine was basically the five bearing 1.5 litre version of Ford's successful Anglia/Classic/Cortina series - but with a totally new and simple twin overhead cam cylinder head conversion designed by Mundy (now with Jaguar) and built in aluminum with totally machined combustion chambers by JAP of motorcycle fame. With twin dual-choke Weber sidedraught carburettors fitted as standard together with a single exhaust system using a rather unadventurous four-branch collector manifold and tortuous transverse silencer, its output was a lusty 100 bhp gross at 5700 rpm. Surprisingly the new unit offered quite a good low speed performance with 102 lb. ft. of torque at 4500 rpm and despite its uncompromising height from sump^{pot} to rock boxes together with its much greater weight, it represented fair exchange for the Elite Climax FVE if only because of its far greater development potential.

Another advantage of course was that it came with a very good ready made gearbox needing only closer Lotus built ratios to bring it up to the best sporting standards. A short universally jointed propeller shaft as in Elite carried the drive back to a new, much quieter final drive unit bolted up to the chassis with short double jointed half shafts to each wheel. Unlike the Elite's, these were designed to have a certain amount of end-float, but instead of the more usual splines they used special doughnut type u/j's (as in Minis and Imps) which did double duty by allowing flexibility in all directions at once.

The fact that the halfshafts were relieved of all their locational duties meant that the rear suspension had to be redesigned to incorporate a single very wide ladder type tubular A-frame each side acting as lateral and fore and aft location combined. The only other suspension component was an inclined coil spring, damper strut of much the same type as the Elite's. At the front, prefabricated pressed steel double wishbone suspension replaced the costly Elite system - again with coil springs and integral telescopic dampers. Steering was again by rack and pinion, but this time it was a Triumph unit instead of a special one and the rack was mounted ahead of the front axis, together with an anti-roll bar, which worked between the lower transverse suspension members instead of the upper ones.

Brakes? Again discs were the medium, but the rear ones were mounted outboard between hub and halfshaft at some sacrifice in oscillating weight - presumably to make cooling easier. A servo became standard too. The Elan was unusual among sports cars in being designed from the beginning to look right with steel disc wheels another sensible economy measure.

The 1500 as it was called went into production at Cheshunt alongside the Elite in January of 1963. For a year the cars ran concurrently, largely because Lotus wanted a fixed head coupe and the Elan version wasn't ready - held up, it is said by cooling problems associated with the high ratio differential which Chapman believed was essential to give it as much speed as the earlier model. But before long there were changes to the newcomer itself. A 1600 cc engine with a special 'stroker' crankshaft appeared. Then in late 1964 came a revised version called the S2 with certain external changes (including single taillight clusters) and a less futuristic rather more luxurious interior. All of these changes were rumoured to be countermeasures against customers who claimed that the new Lotus still stood up badly against Jaguar's E-type and one or imported coupes when it came to acceleration and more particularly refinement. Slowly the market changed. Steadily production picked up. Unconspicuously the Elite disappeared.

The Elans we tried for this Giant Test were both the latest S2 models - the standard open roadster and, more briefly, the new fixed head coupe which finally appeared for Earls Court last year. Both had the Chapman patented knock on disc wheels which are a roadster option at 34 pounds the set, but the roadster wasn't provided with the detachable hardtop which has been an extra since 1964.

Visually, all of our staff were unanimous in declaring the Elite the best looking of the three cars we assessed. The Elan coupe came next, the roadster last. Reasons for the Elite's wayahead win are partly unfair. For example its much lower engine allow a more elegant bonnet line and its somewhat spartan drop out windows make it possible to use doors with such dramatic tumble home top and bottom that they are almost V-shaped. In other respects, the Elan is less excusable. Despite obvious stylistic similarities, particularly at the back and around the bonnet opening, it seems to lack the sheer inspiration that gives the Elite its beauty. Accordingly it emerges merely as a functional looking car rather than an aesthetically stimulating one - although the more dramatic lines of the coupes glasshouse top, plus its chrome plated bumpers and extra brightwork all round, give it a compensating visual lift over the monotone roadster.

Moving closer, we were surprised to discover the boot space in the Elite and in the Elan roadster is roughly the same. The Elan coupe loses out through having its battery located in the boot instead of in the space behind the seats - which grows correspondingly though, and which is in any case greater in both Elans than in the Elite, which offers only a rather nicely shaped shelf on top of the spare wheel cover between those famous sexy bumps over the suspension units. The Elan coupe's boot lid is the same shape as the Elite, with a curled edge to reduce the height of the shelf over which you must lift the heavy luggage. The roadster's is only a symmetrical hatch with a much higher lip. Consequently the hood stick and plastic elbow pieces are rather a tight fit. We found the hood itself needlessly elaborate considering that it still flaps at speed and that the shortest time in which

we managed to put it up was just under three minutes. You can get jolly wet in three minutes - and spare a thought for the poor novice who can hardly hope to do the job unaided in less than five or six.

Engine accessibility is better in the Elite. In fact there are many things to discourage even a fairly competent garage mechanic from working on either of the Elan models at all. Not least among them is the fact that the distributor is mounted directly underneath the massive Weber carburettors.

On the other hand structural repairs are easier on the Elan, spares (except for the carburettors) are cheaper and easier to get and the running gear is less likely to go wrong anyway.

Getting in is easier for Elan Owners too, and they get a better driving position. The doors are wider but perhaps in consequence they tend to flex slightly in a vertical plane and to make horrid noises when you close them through not making proper contact with their zero-torque locks. The Elan roadster has windows which slide up and down with the aid of steel thumbgrips on their top edges. They never disappear altogether. The Elan coupe has electric windows with conveniently placed toggle switches on the door themselves. The mechanism works rather slowly and noisily and frost or ice can choke it. The Elite has hinged quarterlights and a unique system whereby the panes in the doors drop out and stow away behind the seats; the result is that you have either full ventilation (and adequate scope for hand signals) or none at all. It is arguable whether this is worse than having a power operated pane which will only move at a snail's pace because its runner are frozen up.

Looked at in 1966, the Elites seats, which seems so marvellous five years ago are impossibly upright and unyielding. They allow too little fore and aft range for a tallish man to drive at arm's length and there is no adjustment for the backrest or steering wheel. The wheel itself has a solid wooden rim and spike type alloy spokes, an arrangement which must surely do rather nasty things in a bad smash. It is mounted very high but has a good thick rim and a nice feel to it. Pedals are set dead ahead and well spaced with a neat supplementary system of floor switches - one to the left for dipping the headlamps, another between brake and clutch for squirting the screen. The gear lever is ideally placed within handspan of the wheel rim; its movements are short, sharp, and unmistakable. Instrument layout is simple, with five black rimmed dials set in a wonderfully shaped matt alloy binnacle - two big ones for the 140 mph speedometer (with trip recorder) and 8000 rpm tachometer, two smaller flanking indicators for fuel level and battery charge and another small dial in the middle with twin scales for oil pressure and water temperatures. Minor controls are set in a row on the left, all with identical serrated knobs. They can be very confusing and are mostly stiff to operate. A long toggle to the right of the wheel flashes the headlamps and sounds the horn. The handbrake is a T-handle affair under the dash to the right; on our car it was inoperative, although in 1962 we praised it as stubborn but effective. The thermostatically controlled electric radiator fan which has no manual override and which we criticised originally for allowing the engine to overheat in traffic, work perfectly this time. The heater control looks untidy and gets in the way of the driver's left knee. As for trim, there is no headlining apart from the handsome but unyielding glassfibre inner skin. The door pockets double effectively as armrests and pull handles and there is a parcel shelf on the passenger's side as well as the one behind the seats. Visibility is rather poor because of the thick pillars and low, downswept seats.

The Elan has much better seats, still with no backrest adjustment (and no need of it) but with plenty of fore/aft adjustment and a built in attitude that allows almost any driver to get comfortable. The steering wheel of the same dubious type as the Elite's but with a thinner rim adjustable with a spanner and some difficulty for reach. Pedal layout is less satisfactory than in the Elite, partly because the chassis shape dictates a sharp offset to the right and partly because the bulky universal joint on the bottom of the steering column interferes with the driver's feet on corners. Instrument layout is much the same except that there are only four dials (no ammeter). The dashboard is literally just that - a substantial hunk of veneer walnut with a distinct Standard Triumph look about it and a hinged but nonlockable (why) glovebox on the passenger's side. Minor controls are rather STI too, and very scattered. If we had charge of the job, we would put the choke where the wiper switch is now, down beside the ignition starter control. As things stand, the wipers always manage to hide behind the gear lever when you want them in a hurry. The controls for the lights are quite well arranged considering the limitations of the pop up system with the main control knob by the driver's left knee and a selector switch to the left. Pull the knob with the switch off and the headlights

come out fighting IE. pop up already flashing vigorously, to the great delight of any bystanders. With the switch halfway down you get side and tail lamps without changing the flashing arrangement. Push the switch right down and the headlamp beam stays steady for night driving. The dipswitch is an independent column mounted stalk with a matching one opposite for the wipers. A cigar lighter is standard, plus (on the roadster) a dash mounted map light which almost blinds the driver. The coupe features an extremely complex set up with three interior lights all working from the same multi-position switch. We never mastered it.

The Elan's gear lever, like the Elite's is well placed. It used the normal Ford remote linkage, but the shorter lever makes it feel different and there is a very racy click as you change. The handbrake again is under the dash - this time an umbrella handle which worked quite well on both cars.

The Elite is always easy to start on the choke, even in the depths of winter, and its thermostatic fan allows it to warm up very quickly. The Elan has a built in automatic choke which suffices for most cold starts provided you engage it by first flooring the accelerator, but there is a supplementary manual control which gives more controlled warming up in frost. The engine in any case takes longer to reach operating temperature than the Elite's and will spit back in typical Ford fashion, it can also be temperamental after a short stop on a hot day. The gearbox is stiffer than usual on a cold morning, whereas the Elite's never varies."

In conjunction with their assessment of the faults and advantages of the design and functional aspects of these cars, CAR magazine presented a see-at-glance test table which includes some of the items they discussed in the above article and a summary of a road test of a direct comparison between an Elite and an Elan. As we do not possess a comprehensive direct road test between these two cars, we are also publishing these results. However, this report was made in 1966 and since that time the power and acceleration of the Elan has increased.