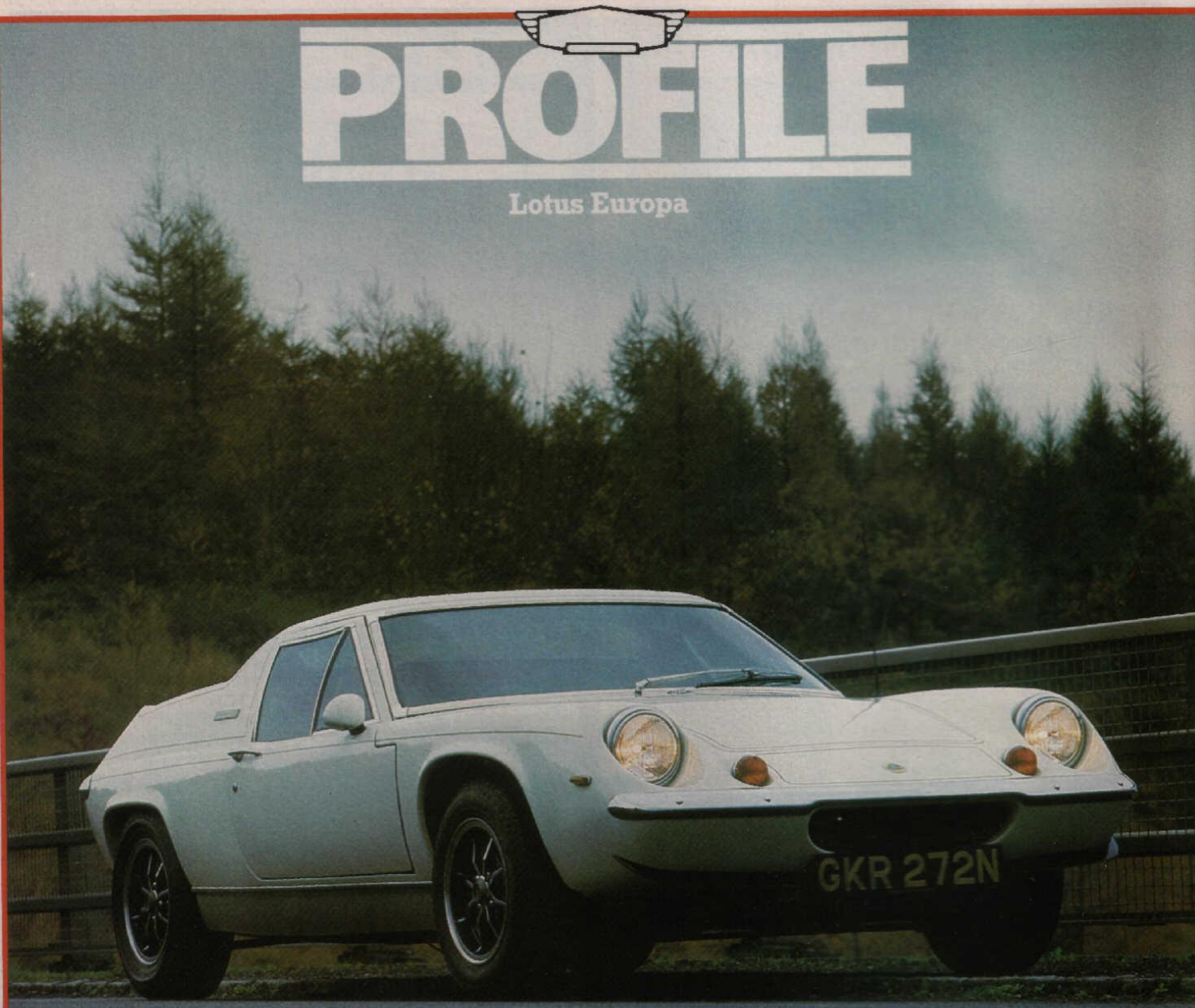
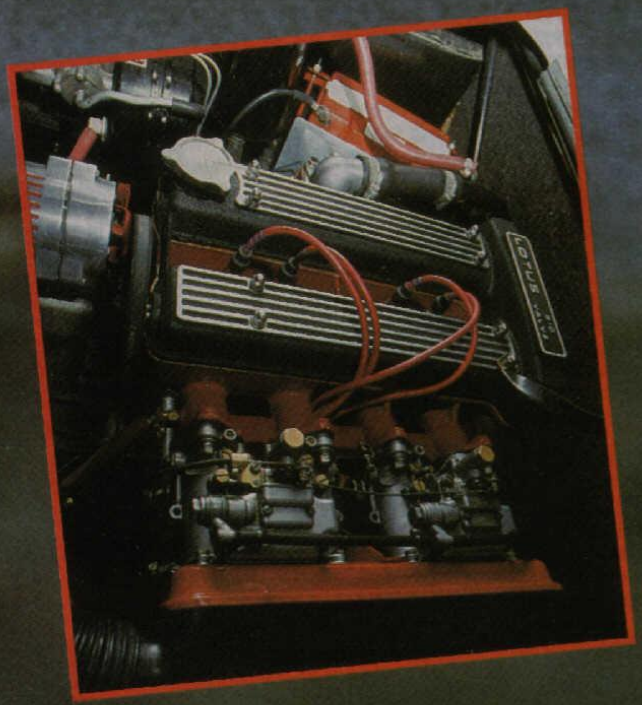
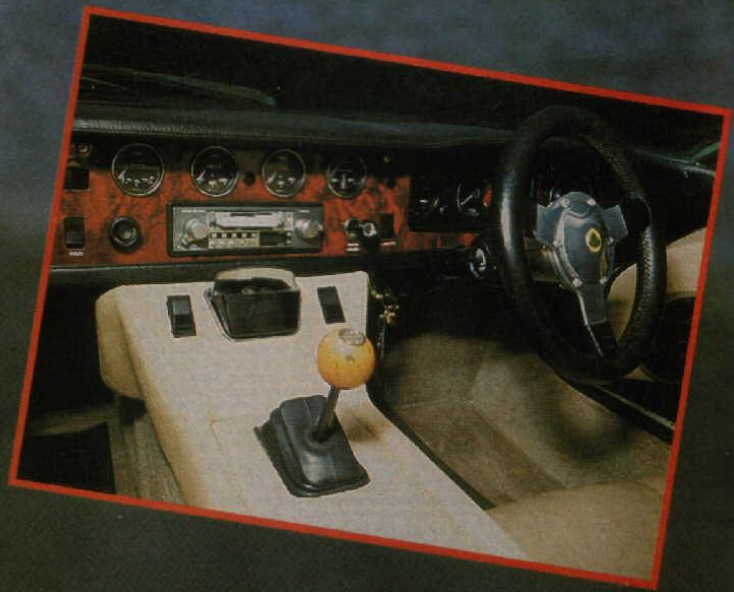
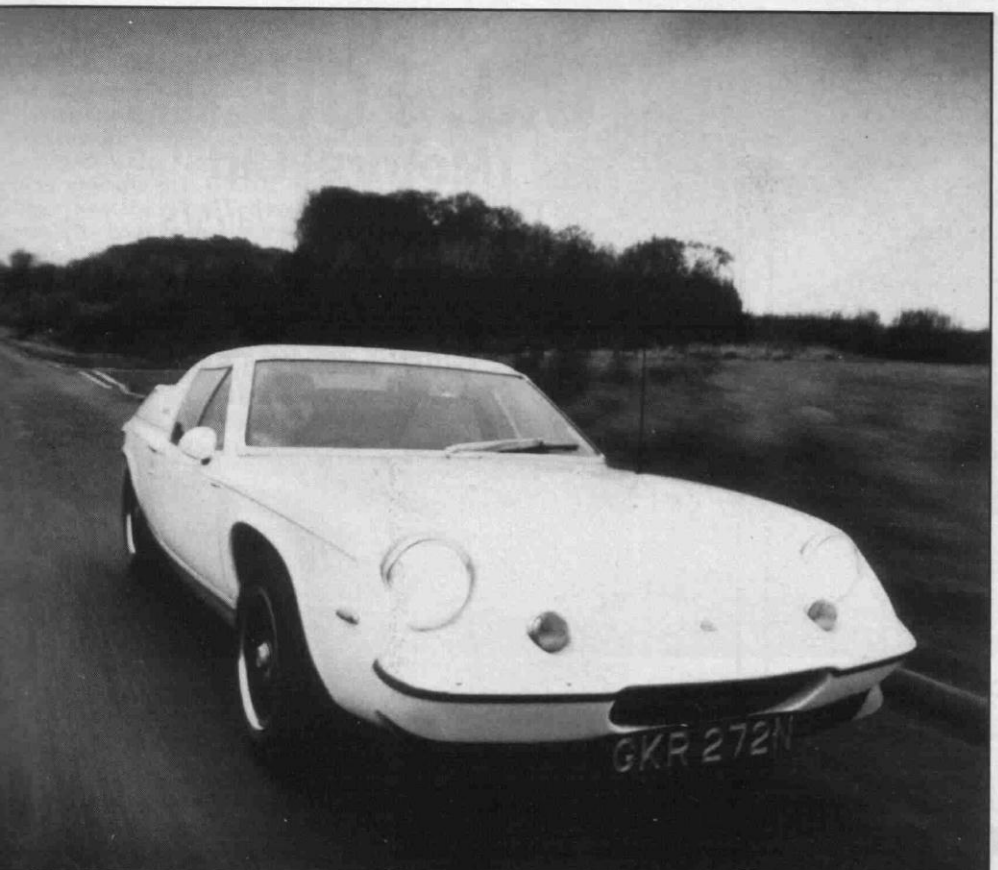
# PROFILE

## Lotus Europa






# TRANS-EUROPE EXPRESS

**The Lotus Europa was conceived as a cheap mid-engined road burner. In reality it proved quite expensive, with a long list of design faults. Chris Harvey and Mike Walsh find out how good a buy it is today**

whichever way you look at it, the Lotus Europa was a talising machine for Colin Chapman. And it was ally tantalising to anybody who owned one, ning close to perfection in previously uncharted as of handling, yet far away in aspects normally en for granted, such as ventilation and gear nging.

Chapman's frustration stemmed from a brilliant ncept with the initial price-tag visualised as £650— e more than an MG Midget. In the event, despite stic economies, it cost nearly twice as much and en Lotus eventually got it sorted out, it was ctively competing with their Elan!

While the concept of the Lotus Europa was liant, the execution — at first — was distinctly ggy and the faults tended to border on the hilarious. was intended as a replacement for the Lotus Seven, ich by the early sixties was looking decidedly -fashioned.

Chapman was convinced that the replacement uld be produced more profitably than the Seven, h an Elan-style backbone chassis that needed less ed labour than the earlier car's space-frame. The ning gear would be much the same except that a d-engined sports racing type layout would dispense h the propellor shaft. A glass-fibre body could be de — hopefully — from only two moulds, one top and one bottom, the idea of a single-mould body having been temporarily abandoned. If the engine bay was kept large and boxy, almost any unit from a cheap four-cylinder to a V8 could power the new car. All Chapman needed was somebody to fill in the details, and there were plenty of keen young men at Lotus who could do that.

The obvious power unit was the Ford Anglia's — the notchback window 105E, not the older sit-up-and-beg sidevalve 100E. Bits and pieces like the bumpers, which cost a fortune for small manufacturers to produce, would come in handy too. The only trouble was that there was no cheap gearbox available to harness a 105E engine running back-to-front behind the car's occupants. And the Ford engine, having been designed quite deliberately for a frontal installation, had all its vital orifices — such as the oil filler cap — in the wrong places for a mid-engined car. Why Chapman did not use the new Hillman Imp engine (based on the Coventry Climax unit used in his late-departed Elite) with its transaxle is one of the sweet mysteries of life.

But the fact remains that as the Europa progressed from drawing board in 1964 to production in 1966, there was a desperate hunt for running gear. The crisis was solved when Renault launched the brilliant new 16 saloon in 1965. With a typically-French lack of regard for conventional design, it had a cheap four-cylinder engine mounted in the front which was ideal for running in the back! All the little bits you needed to get at every day — such as the dipstick — were in the right places and, wonder of wonders, it had a transaxle to drive the front wheels. Turn it all back to front and the only problem that resulted was that you had four reverse gears and only one forward. That little matter was sorted out when one of Chapman's bright young sparks discovered that the crown wheel could be swopped to the opposite side at little extra cost.

Doubts about the engine's uninspired output were quickly discounted when Renault viewed the idea of installing their power train in a Lotus as a massive publicity exercise and the opportunity to put one over on Ford. When Chapman asked them how much they wanted for the transaxle with the idea of linking it to something else, they said: 'Why not take the engine, too? You can 'ave it for another tenner!'

## Easy servicing

Such an opportunity was too good to miss and vigorous tuning by Renault raised the power output from 59 bhp to 82; they also managed to squeeze 80 bhp out of a larger-capacity US Federal version, which caused much gleeful hand-rubbing. The torque of these over-square 1.5-litre wedge-head engines was hardly any better at 79 lb ft, and generated at 6500 rpm rather than 2800, but it didn't really matter because the Europa weighed only around 1450 lb against the 2100 of the family dreadnaught.

Once this all-alloy power train was in place in the Y-prong of a sheet steel backbone frame, the only drawbacks were that the gear selectors and a cable operated clutch were at the furthest point from the driver. In an attempt to avoid expensive hydraulics, plastic joints were used to combat friction and save maintenance.

A car as cheap as this should be possible to service in any back-street garage, said Chapman. Road-going reliability had long been one of Lotus's biggest problems, so anything you could fit and forget was welcome.

The front of the chassis had a cross-piece to support the wishbone and coil front suspension, which was basically the same as the Elan's except that it was modified to allow a lower noseline. There was no point in trying to lower the Elan's nose because it housed a tall engine — but Chapman was keen to score every possible point with the mid-engined format, notably in drag factors.

The Triumph Herald-style uprights and steering gear were the same as the Elan's except that the rack was solidly mounted to make the action more precise. It had to be because of the suppleness of a new Formula 1 style rear suspension. Fixed-length driveshafts with Hooke joints at either end formed the upper links with tubes below linking the hub carriers to the gearbox casing. Massive steel radius arms provided the vital lateral location, following the line of the Y-shaped rear chassis legs.

The Achilles heel of this system was that, for simplicity, the power train had to be used as an integral part of the suspension. This was fine on a racing car where noise, vibration and harshness was of little importance providing the wheels did not fall off. But a lot of rubber bushes had to be used to make it acceptable for road use, which resulted in a tendency for the rear wheels to steer the car if they hit a big bump. Hence the very precise steering to counter such vagaries. These deficiencies might sound awful, but in reality the new Lotus was so well balanced that its handling was far ahead of almost any other car in its time. The steering was in the realms of the fantastic.

Chapman laid out the bodyshell around Anglia bumpers to save money — his stylist, John Frayling, worked out the details in his customary brilliant manner. The nose was like a flattened version of the Metier, a prototype Elan Plus 2, while the back was inspired by a notorious Ferrari 250GT, called 'The Breadvan'. This private copy of a 250GT had a unique body that took the theories of one Professor Kamm to their limit. He opined that a car's roof should be extended almost parallel with the ground for as long as possible in keeping with the airflow above it. Then it should be cut off sharply at the back to save weight. The problem of rearward vision was solved — to a certain extent — by flying buttress-style bodywork rather like that on later versions of the 250GTO.

*ing page: This Europa is one of the desirable m-Cam Special models. Inset are details of the maculate engine bay and cockpit*

Extensive use was made of a wind tunnel with the result that the drag factor was reduced to 0.29 despite having to use fixed headlights to save the cost of the Elan's pop-up mechanism. But that was not the entire reason for using a wind tunnel.

Chapman had strong ideas about car windows. He thought glass which had to be raised and lowered was a hideous anachronism. Fixed glazing was far more efficient, lighter, cheaper and made the doors — and as a result the body — much stiffer. All a car needed for ventilation was proper ducting. So the new Lotus was designed to suck in air at the front, part of the stream being used to cool the radiator, and part for the cockpit. Air passing over the cockpit roof created a low-pressure area between the flying buttresses, which sucked out exhausted cockpit air through a vent above its letter box-shaped rear window. Cooling air for the engine bay went in through the rear wheel arches and out the same way as the cockpit fug.

## Choking ventilation

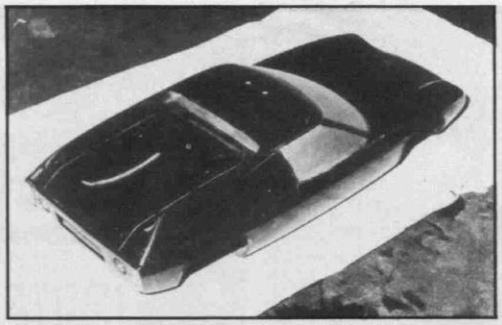
This all worked very well in theory and even during pre-production testing. As Lotus employees ranged far and wide in search of the ultimate performance and reliability they wasted as little time as possible in traffic jams. So it was not until early cars were tried that the ventilation system was recognised as a real choker. If you drew up behind a vehicle with an exhaust pipe at your nose level, with the demisters working, poisonous fumes were sucked into the cockpit. And you couldn't even open a window . . .

The next time such problems occurred was when you parked beside a high kerb. The car was so low you couldn't open the door and had to wriggle out the other side . . . providing you hadn't stopped at a Continental-style motorway booth with high kerbs both sides, a barrier in front and a hooting queue behind. Then you were trapped unless you could drive underneath the barrier and pay up — perhaps at gunpoint — on the other side. And they called it the Europa . . .

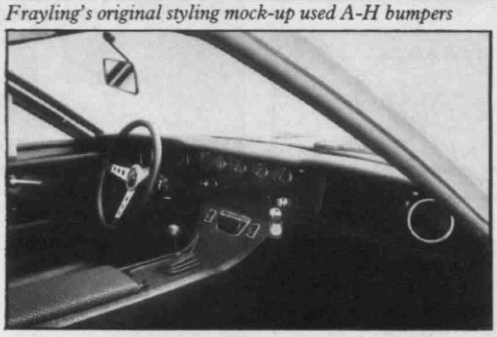
Chapman wanted to call it the Elfin. But his ace salesman, Graham Arnold, who now runs Club Lotus, moved mountains to talk him out of it. Elfin meant The End in Italian . . . Arnold suggested Concorde, but that Anglo-French airliner project wasn't going too well, so they compromised on Europa.

Everything possible was done to save money, including bonding the body to the chassis (which also made it stiffer), but the price still came out at nearly £1100. So the Europa was produced at first for export in 1967 to avoid competition with the Elan.

North America was the first target after Europe, with headlight height the chief problem. They were raised 1.5ins by transposing the wishbones to increase the ride height at the front; this got the Europa through customs and the customers were then advised informally to swop the wishbones back if they didn't want to take off!



*Frayling's original styling mock-up used A-H bumpers*



*S2 Europas had adjustable seats and electric windows*

Then the plastic gearlever joints started popping out and the linkage was re-engineered with metal joints that sometimes needed the strength of 10 men to operate. Owners were also asked not to fit a sunroof as an escape hatch because if they opened it when the car was speeding along it would suck in all manner of road debris, such as apple cores and discarded cigarette packets. But a number of small improvements produced the Europa series 1A in October 1967.

Next the insurance companies ganged up against the bonded-on body which made repairs very expensive even for small accidents. To get a decent rating, the Europa had to be redesigned in April 1968 as the type 54 with a detachable body like that of the Elan. The trim was improved at the same time with Elan-style electric windows fitted for obvious reasons. And while they were at it, adjustable seats were fitted for people of a different height to Mr Chapman, who happened to be 5ft 8ins tall. This series 2 Europa was eventually released on the home market in July 1969.

As the front suspension ruses became common knowledge in America, deeper springs were fitted and owners advised confidently to tune them by cutting out one and a half coils . . . and when this practice was discovered the body had to be redesigned as the Federal Europa, or type 65, in 1969.

By now the price of a Europa was so near the Elan's that it seemed politic to make it more civilised. Chief engineer Tony Rudd and a new chassis man from Jaguar called Mike Kimberley were detailed to sort it out. They grouped all known complaints into four categories: poor acceleration by Elan standards; rearward vision too limited; gearchange too stiff; and cockpit too cramped.

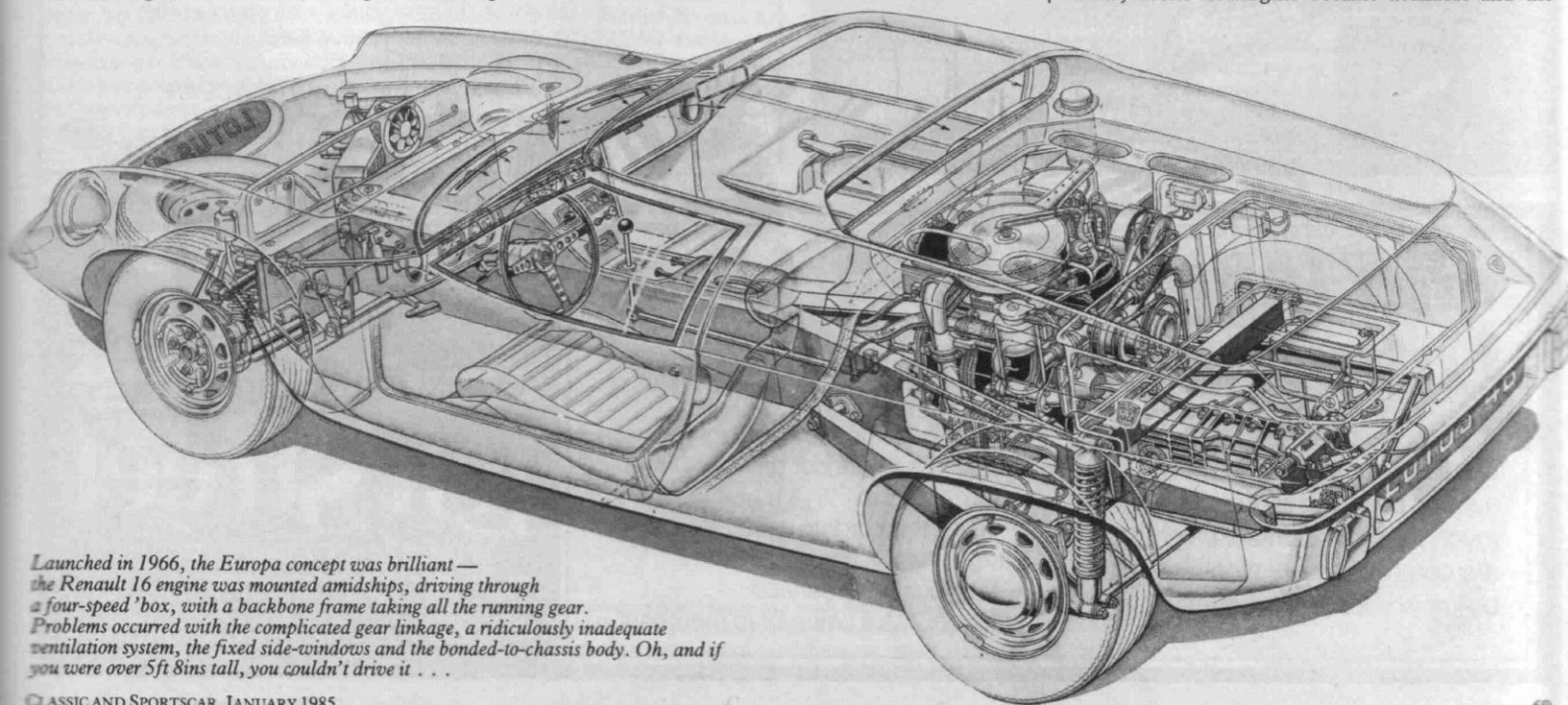
Solution number one was to drop in an old-style Elan twin-cam engine so that the existing gearbox could be retained; the rear suspension was re-engineered to reduce bump steer at the same time; the gear linkage was re-routed and subject to all-known fiddling, but it remained obstinately stiff; the floor of the cockpit was lowered and the toe boxes enlarged until 6ft 5in tall Mr Kimberley felt comfortable; and the flying buttresses were cut back to lessen the van-like blinkering. With a host of other improvements, this was the superb type 74 Twin-Cam Europa that went even faster in December 1972 when a new Renault five-speed gearbox allowed the use of the Elan's more powerful Big Valve engine. Production continued until 1975 when today's Lotus line took over, with the Kimberley-Rudd duo making sure we never see another Lotus like that first Europa!

## Production history

Approximately 300 Series 1 Europas were built — almost entirely for export — between December 1966 and October 1967. Their chassis numbers ranged from 46/0001 with a 47 prefix for a competition version powered by the Elan twin-cam engine. Around 350 series 1A cars followed between October 1967 and April 1968, a number of which went to America, all having chassis numbers from 46/0300.

About 2750 series 2 cars followed between April 1968 and August 1971 with chassis numbers from 54/0645 and 0001P or Q; between January 1970 and December 1971 865 further cars were built to US Federal specification with a higher front wing line. Between September 1971 and August 1972 900 Twin-Cams were built bearing chassis numbers from 1000P or Q with approximately 680 Federal Twin-Cams in the same period. Around 1080 Europa Specials followed between August 1972 and March 1975 on chassis numbers from 1783P and 1101Q with about 2050 Federal Europa Specials numbered from 2684R.

In addition to the basic changes made for the series 1A, and series 2, the original instrument panel was replaced with a neater wooden-faced version in April 1968 and the car listed in kit form for £1275 when it was introduced in Britain in July 1969. Between these dates, better headlights became available and the



*Launched in 1966, the Europa concept was brilliant — the Renault 16 engine was mounted amidships, driving through a four-speed 'box, with a backbone frame taking all the running gear. Problems occurred with the complicated gear linkage, a ridiculously inadequate ventilation system, the fixed side-windows and the bonded-to-chassis body. Oh, and if you were over 5ft 8ins tall, you couldn't drive it . . .*

# LOTUS EUROPA


## Series 1, 1A, 2

| SPECIFICATION | |
|---|---|
| **Engine** | In-line 'four' |
| **Capacity** | 1470cc (UK and Europe), 1565cc (USA) |
| **Bore/stroke** | 76mm × 81mm (UK and Europe), 77mm × 84mm (USA) |
| **Valves** | Pushrod ohv |
| **Compression** | 10.2:1 |
| **Power** | 82bhp (UK and Europe), 80bhp (USA) |
| **Torque** | 79lb ft |
| **Transmission** | Four-speed manual |
| **Final drive** | 3.56:1 |
| **Brakes** | Disc front, drum rear |
| **Suspension front** | Ind by wishbone and coil spring, anti-roll bar |
| **Suspension rear** | Ind by trailing radius arms, links, coil spring/damper units |
| **Steering** | Rack and pinion |
| **Chassis** | Steel box section backbone |
| **Body** | Glass-fibre, two-door, two-seater |
| **Tyres** | 155-13 radial |
| **DIMENSIONS** | |
| **Length** | 13ft 1in |
| **Width** | 5ft 4.5in |
| **Height** | 3ft 7in |
| **Wheelbase** | 7ft 7in |
| **Kerb weight** | 1450lb |
| **PERFORMANCE** | |
| **Max speed** | 110mph |
| **0-60mph** | 9.8secs |
| **Standing ¼ mile** | 17.3secs |
| **Fuel consumption** | 30mpg |

## Twin-Cam

| SPECIFICATION (where altered) | |
|---|---|
| **Capacity** | 1558cc |
| **Bore/stroke** | 82.55mm × 72.75mm |
| **Valves** | Twin ohc |
| **Compression** | 10.3:1 |
| **Power** | 105bhp |
| **Torque** | 113lb ft |
| **DIMENSIONS** | |
| **Length** | 13ft 2in |
| **Wheelbase** | 7ft 8in |
| **Kerb weight** | 1568lbs |
| **PERFORMANCE** | |
| **Max speed** | 117mph |
| **0-60mph** | 8.0secs |
| **Standing ¼ mile** | 16.1secs |
| **Fuel consumption** | 31mpg |

## Special

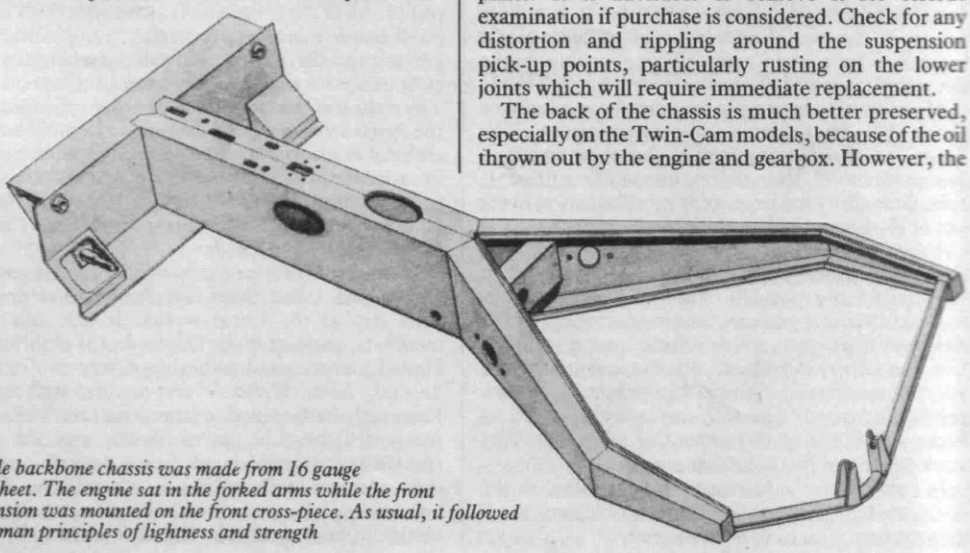
| SPECIFICATION (where altered) | |
|---|---|
| **Power** | 126bhp |
| **Transmission** | Five-speed manual |
| **Final drive** | 3.77:1 |
| **Tyres** | 185/70-13 |
| **PERFORMANCE** | |
| **Max speed** | 123mph |
| **0-60mph** | 6.6secs |
| **Standing ¼ mile** | 14.9secs |
| **Fuel consumption** | 24mpg |

indicators were recessed in nacelles above the front bumper to make them more conspicuous.

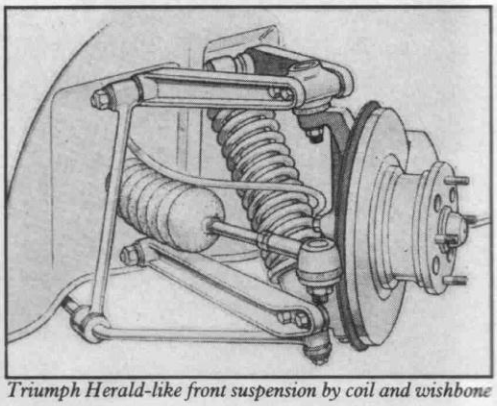
Detail changes made to the Twin-Cam, launched in December 1971, included a belt and pulley drive from the inlet camshaft to the alternator on the back of the bellhousing so that it was not buried by the bulkhead in its more normal position at the front of the engine. The water pump could not be moved economically from that area, but lasted twice as long because its bearings were not subject to the pressure of the alternator drive belt. A new free-flow exhaust system was made up to pass under the sump and give the piping its most efficient length. Springs and dampers were altered to lower the rate of wheel movement and suspension settings modified to keep the wheels more upright under heavy cornering. The wheelbase was lengthened by an inch to keep the weight distribution with the 40lb heavier Elan engine the same as before. Seat belt mountings were strengthened and the clumsy old fly-off handbrake improved. The pedals were spaced wider in the new footboxes and the throttle cable's run was smoothed out. A larger silencer was fitted — chiefly to meet German legislation over the engine's characteristic bark — and a lot more sound deadening material used on the bulkhead. A spoiler was fitted at the front to reduce lift and, in most cases, Brand Lotus alloy wheels were adopted as standard. They took the makers, GKN, quite some time to perfect, however. Two fuel tanks were fitted to cope with an increased consumption. The ultimate Europa Special with the Elan Sprint engine had its chassis changed slightly.

## Buyer's spot check

Sports cars of any type generally lead a hard life, and the Europa is certainly no exception. Its fragile construction and low ride height make it prone to all forms of structural fatigue and accidental damage. The model's ingenious design may have looked all very good on the drawing board, but to the casual DIY enthusiast it presents a multitude of problems.



*Simple backbone chassis was made from 16 gauge steel sheet. The engine sat in the forked arms while the front suspension was mounted on the front cross-piece. As usual, it followed Chapman principles of lightness and strength*



*Triumph Herald-like front suspension by coil and wishbone*

Consequently, when prices reached rock bottom during the late seventies many Europas were literally driven into the ground, particularly when vital spares became unobtainable.

Starting with the body, the early car, with its bonded chassis and body shell, is much cheaper to buy but will cost considerably more to restore and is certainly no task for the amateur. In fact, any major correction to the main plastic body is best carried out by experienced specialists. All the body sections are readily available, but panels vary enormously in quality. Several suppliers formed their replacement wings from an existing car (which may have shrunk), and not the original mould. Anything other than genuine parts will present a headache when fitting.

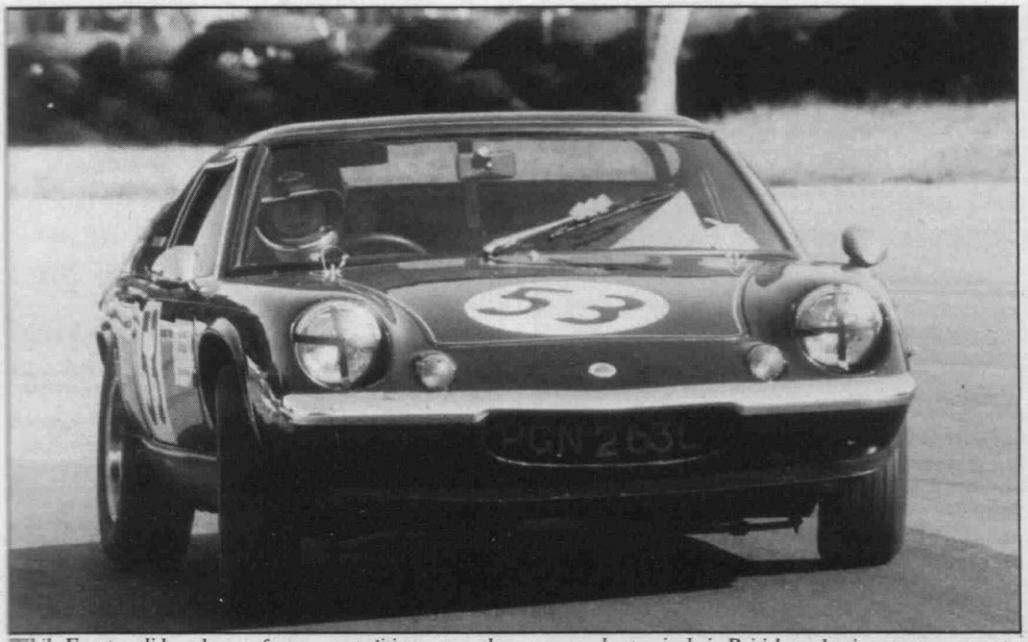
Although the Europa obviously has no rust problems in the body department, the main shells must be checked carefully for crazing (generally caused by accident knocks), and, more importantly, for short cut 'repair' work. Because of the expense of wing replacement (as much as £200 for a single front wing), many frustrated owners bodge the task. Too often the wings are badly cut, the replacement wing pop-rivetted, and then carefully filled. The strength with this 'repair' is in the filler, which may look superficially presentable, but cracks will soon appear after road use. Only a laminated process will produce a lasting, strong bond, so check the body surface meticulously for the slightest blemish or disturbed contour.

It is important to check the door hinges. Any sign that the doors are dropping will soon mean hinge replacement, which requires extensive dissecting of the hinges for removal. Even experienced specialists have assured us that this is one of the worst tasks on any car, even a Lotus. It almost goes without saying that good Europas are rare, and factory-built cars are almost always preferable to home-built kit ones.

The chassis is very difficult to straighten, and it is far quicker — and cheaper — to renew the frame completely. Frames are still available from Lotus. The chassis, although more complex than on the Elan, is stronger, the box sections are far better sealed, and less exposed to rust.

The front end is deceptively covered with a splash panel. It is advisable to remove it for serious examination if purchase is considered. Check for any distortion and rippling around the suspension pick-up points, particularly rusting on the lower joints which will require immediate replacement.

The back of the chassis is much better preserved, especially on the Twin-Cam models, because of the oil thrown out by the engine and gearbox. However, the



*While Europas did not have a factory competition career, they were raced extensively in British production sports car events*

rear suspension radius arms can rust badly, and have been known eventually to puncture the bulkhead.

Rear driveshafts are another expensive problem, as they wear badly on the splines. The shaft and the flange can cost as much as £200, so it is worth checking for any play in the wheel splines and the UJs. Wheel bearings are a weak point on Series 2s because the lock nuts come loose.

It is crucial to check the wiring, particularly on home-built examples. Remember that with all glass-fibre cars, the electrical components have to carry their earth to the chassis, so are time consuming to repair. Many owners may have taken short cuts in maintenance. The electrically operated windows are often sluggish in operation due to curved panes, but generally the motors are trouble free.

Special problems are presented by ventilation, basically because it never works. The system relies on a seal around the front lid, and when the rubber is perished not only does the ventilation stop but also the contents of the boot get soaked when it rains.

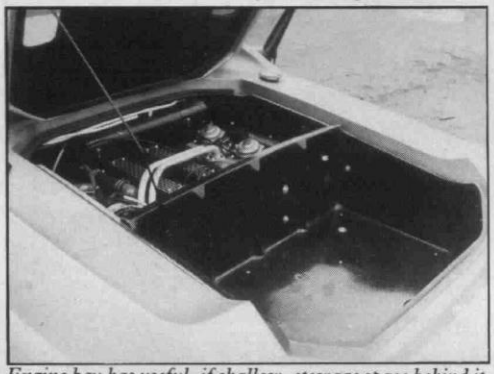
The windscreen, although bonded in, frequently leaks. New ones are readily available, but you will wish you never bothered when you try to replace it. Another task for the experts!

Engines in general cause the fewest problems when checking a Europa. With the Renault engine, the wet liners are prone to leaking — and parts are now difficult and expensive to acquire. Both types of engine are generally very oily, so don't worry unnecessarily about excessive oil leaks. Oil pressure should hold around 40lbs when hot and running at 50mph. Any traces of water in the oil would possibly indicate that attention is needed to the water pump, which requires engine/gearbox removal. Attention to the distributor could also mean that the carburettors have to be removed. Excessively noisy tappets might be caused by a worn cam follower rocking in the sleeve, which is a £100-plus task to rectify.

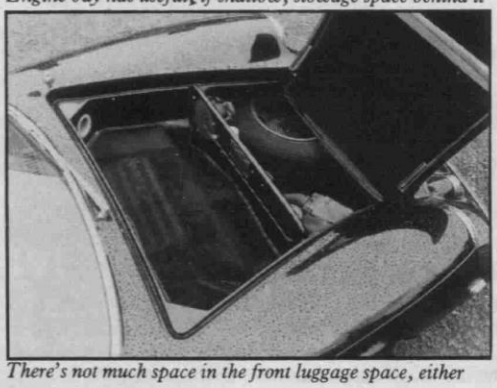
Most Twin-Cam engines have now been rebuilt, so check bills and service history carefully. The Twin-Cam is a comparatively cheap performance engine to rebuild. Even routine maintenance presents ridiculous effort and time, and accessibility was never one of the Europa's finest points.

There are three different gearboxes — the Alpine five-speed, from the Special, is the most desirable. The design is reportedly strong and trouble-free, although Renault parts are now in short supply. The linkages are a nightmare, requiring constant lubrication and expert alignment, otherwise you will find yourself constantly fishing for gears. Their low positioning means that they are easily damaged by kerbs and the joints are expensive to replace. Any work on the handbrake linkage requires agility.

In conclusion the Europa is ideally suited to the committed masochist, who enjoys tinkering more than driving. You have been warned!



*Engine bay has useful, if shallow, stowage space behind it*



*There's not much space in the front luggage space, either*

## Clubs, specialists & books

There are three major clubs catering for the Europa owner. All of them have their advocates. Club Lotus publishes a monthly newsletter, but probably its greatest appeal is its technical seminar scheme and the close liaison it has with major classic Lotus specialists. The technical seminars are not factory approved, but the specialists who conduct them are reputable. The club also holds an annual concours, sprints, pub meets in each of its areas and organises plenty of other social activities. Subscription is £12 a year, the contact address is PO Box 8, Dereham, Norfolk NR19 1TT (tel: 0362 4459).

The official, factory recognised, organisation is Club Team Lotus, who organise the ever popular open day at the Lotus works. It now has 3000 members, making it the largest Lotus club for the Hethel marque, and publishes a very professional journal, *Lotus World*, every month, with strong historical, racing and current car features. The technical aspect is played down, and the only specialists it recognises are Lotus dealers — which does seem a trifle unfair to those who do an outstanding job on cars that dealers do not really want to touch. Subscription for this club is £15 in Britain, £18 abroad. Details from Lotus Marketing Services, Wymondham, Norfolk.

Finally, there is the Lotus Drivers Club, based in the West Midlands, and with a bias in that area. The club publishes a monthly magazine, *Chicane*, and offers technical phone-in advice, a list of recommended specialists as well as the usual fare of pub meets, concours and autojumbles. The club also offers the competitively minded Lotus driver a number of sprints each year. Membership details from Jenny Barton, Lee, 15 Pleasant Way, Leamington Spa, Warwicks CU32 5XA.

The reverse side of the coin to the sorry tale we have so far related about the Europa is that there is a number of helpful and highly reputable specialists. Of those who cover most aspects of running a Europa, from bodywork repairs, parts supply and engine rebuilds up to full scale restoration, two names stand out. They are Mike Spence Ltd at School Green, Shinfield, Reading, Berks (tel: 0734 883140), who are generally regarded as excellent, especially for parts; and Fibreglass Services at Carlton Saw Mills, Carlton Singleton, Chichester, Sussex (tel: 024363 320), which is run by arch-Lotus enthusiast Miles Wilkins.

Other firms covering most aspects of Europa sales and servicing are: Christopher Neil Sportscars, Middlewich Road, Northwich, Cheshire (tel: 0606 47914); Automobile Workshops, Lancaster Mews, Richmond, Surrey (tel: 01-940 9252); Paul Matty Sports Cars, 12 Old Birmingham Road, Bromsgrove, Worcs (tel: 0527 35656); Len Street Ltd, Drayton Gardens, London SW10 (tel: 01-373 7200) — they hold the largest stock of Europa parts in the country; and Kelvedon Motors, Bourne Road, Spalding, Lincs (tel: 0775 5457).

Engine specialists number the following firms: Quorn Engine Developments, Soar Road, Quorn, Leics (tel: 0509 412317); Vegantune Ltd, Cradge Bank, Spalding, Lincs (tel: 0775 4846) — they can tackle other aspects as well; Performance Unlimited, 290 Westborough Road, Westcliff-on-Sea, Essex (tel: 0702 40954); Dave Smith Racing Engines, 214a Wanstead Park Road, Ilford, Essex (tel: 01-554 4144); Norvic Engines, Little Staughton Airfield, Bedford, Beds; and Vulcan Engineering Ltd, 185 Uxbridge Road, London W7.

Other parts suppliers include Yardley Wood Service Station, Yardley Wood Road, Birmingham (tel: 021-474 6981); and the London Lotus Centre, Ballards Yard, High Street, Edgware, Middx (tel: 01-952 5578) — they also do engines, glass-fibre work and so on.

Finally on our list, there are specialists who cover bodywork only, transmissions or chassis frames. They are Robin Alabaster, Halfway Garage, Bath Road, Padworth, Berks — bodywork only; Nicol Transmissions, Kidderminster (tel: 0562 62651) — gearbox work; E.M. Winter, 9 Witham Close, Bedford, MK41 7YT (tel: 0234 68803,— gearboxes; and Midas Metalcraft, Unit 41, Little Staughton Airfield, Bedford, Beds — chassis work.

It is to be stressed that this list does not cover all Lotus Europa specialists, but it does include firms and individuals whose work has been recommended by enthusiasts.

The definitive book on the Europa is yet to be written, having so far had to share pages with the Elan and Elite. John Bolster was never a great Europa fan, so it is hardly surprising that the model takes rather a supporting role in the MRP Collector's guide treatment, *The Lotus Elan and Europa*. For £7.95 it offers a good general guide to the types, and is invaluable if you are indecisive.

Chris Harvey's *Lotus: The Elite, Elan, Europa* (Haynes) is a far glossier package with a good selection of colour. The title not only gives the Europa production history, but chapters on contemporary road test reports, competition history, buying, restoring, running, and modifying your Europa. All this is excellent value at £14.95.

Brooklands Books have produced two volumes of road test reprints on the model. *Europa 1966-75* at £5.50 is mostly British tests, and a more recent edition, *Lotus Europa: Collection No 1* at £4.50 reprints from wider sources, including *Car* and *Road & Track*.

## Prices

One thing is very clear about Europas: they are almost as difficult to sell as they are to buy. Prices vary enormously, and the best advice that the specialists we talked to could offer was that potential owners should buy the very best car they can afford. Any restoration will far outweigh the extra cost of a 'sounder' car.

Starting with a Series 2 with a Renault engine, an original pristine example (if you can find one) might sell for £3500, but abused examples are almost worthless as this is the least desirable of the models.

A Twin-Cam in immaculate condition could realise £5500 if a keen buyer could be found. A more realistic price for a sound, tidy example is between £2500 to £3000. During the late seventies the Europa reached an all-time low on the secondhand market, with prices regularly under £1000. Consequently, new owners who found the spares situation very desperate ran their cars until terminal problems developed, eventually pushing the cars to the back of the garage in desperation. These cars present almost impossible restoration projects and, although relatively cheap to buy, are definitely not for the faint-hearted.

The rarest and most desirable of the range is the Special, with five-speed box, big valve head, oatmeal interior and sundym glass, which could realise £7000, but only to a fanatical Japanese collector. The Special is worth £1000 above the average Twin-Cam price, being the rarest and most collectable of the breed.

The mere fact that the spares situation has been totally transformed has seen the Europa return to favour in the classic car market.

## Rivals when new

It would be presumptuous to say that the Matra Bonnet MA1 inspired the Europa, but it was certainly one of the first mid-engined road cars. With a simple steel backbone chassis and stylish glass-fibre body, it was introduced in 1962 and continued in production until 1968. Although very rare this side of the channel, the 'Djet' was aimed at the sporting enthusiast with definite competition aspirations.

A more direct competitor was the 'Djet's' replacement, the Matra 330A, revealed to the public at the 1967 Geneva Show. This practical — yet undeniably ugly — creation used a steel platform chassis powered by the Ford 1.7-litre V4, and was clothed in glass-fibre panels. Described appropriately by the French as 'jolie laide', the 530A was neither stylish nor fast enough to compete with the Lotus.

The Porsche 914 was a more serious challenge at the mid-engined mass market, but was in reality rather an over-priced package, fitting somewhere between the rich man's VW and a down-market Porsche. Like the Matra, the styling was no match for the Europa's smooth lines and its performance was embarrassing for the price.

On the secondhand market, more recent mid-engined cars can provide better value for money and fewer headaches in everyday motoring. The most successful candidate is the Fiat X1/9, with its crisp styling by Bertone around a pressed steel monocoque. Introduced in 1972, and still comparably modern in concept today, the 1500 version offered 106bhp and 0-60mph in 11secs, but a rather unfortunate 'hairdresser' image.

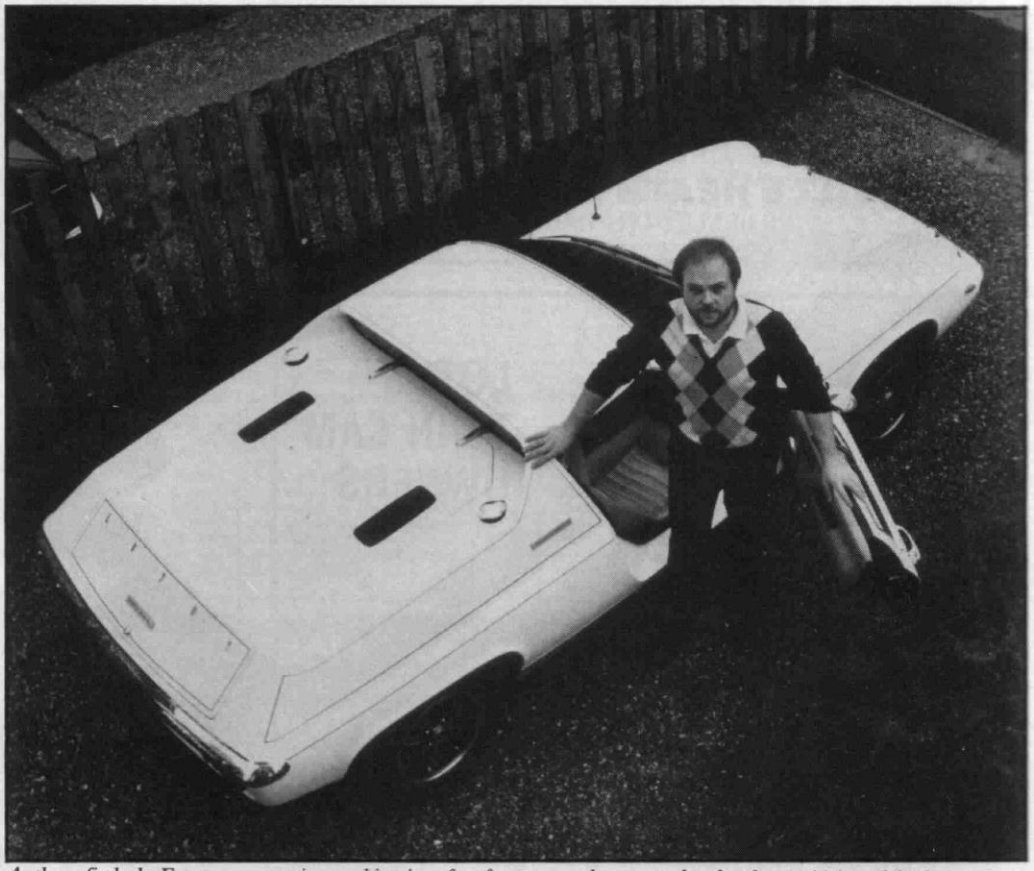
The Lancia Beta Montecarlo was altogether more macho, probably because of its almost unbearable internal engine noise! Prices secondhand for this Pininfarina beauty make it a bargain today.

A more exclusive package is the Matra Bagheera launched in 1973, the result of Matra's new links with Chrysler France in 1969. The novel bench seating arrangement for three sadly eliminated any chance of a right-hand drive version, but the multi-tubular chassis frame and distinctive glass-fibre body styled by Matra themselves deserved more success.

| 1969 | Price | Speed | 0-60 |
|---|---|---|---|
| Lotus Europa S2 | £1667 | 107mph | 9.5s |
| Matra 530A | N/A | 95mph | 15.6s |
| **1971** | | | |
| Lotus Europa Twin Cam | £2741 | 117mph | 7.0s |
| Porsche 914S | £3689 | 102mph | 14.8s |
| Ferrari 246 Dino | £6245 | 148mph | 7.1s |

# OWNER'S VIEW

### Anthony Howe explains his affection for the Lotus Europa



*Anthony finds the Europa an amazing combination of performance and economy, but does have criticism of the design*

Anthony Howe ('Fred' to his friends) reckons that you need arms like a gorilla in a Lotus Europa, especially when you are trying to pay the cashier in a multi-storey car park — "The low door line and atrocious steering lock are just two of the things you have to put up with if you run a Europa." His car is the white Big Valve depicted on our 'Profile' colour page, and it certainly is in fine fettle. The engine bay just has to be seen to be believed, and the body shell and interior are up to that same high standard. Despite such a high standard of preparation, this is no show car, Anthony believing that it should be driven.

"Before I bought the Lotus, I had a Triumph GT6. While I enjoyed running it, I didn't care much for the handling. A friend of mine had a Europa, and after driving that one I just had to replace the GT6 with a similar car. Mind you, it took me nine months to find a good example, and when I saw GKR 272N it looked so gorgeous that I think that I would have bought it even if it hadn't an engine in it! I suppose I paid over the odds for it, but it was worth doing so.

"I'm the third owner of the car. It had 10,800 miles on the clock when I bought it — the figure is now around 25,000. That fairly low annual mileage is because I find it easier to get to work at Austin Rover at Cowley by motor bike. I love the looks and handling of the car, and those aspects are so good that you are inclined to forget all the small faults that seem inbuilt . . .

"Driving it in town isn't particularly easy, as the clutch can be difficult, and the rear three-quarter vision is diabolical.

"I haven't had too many problems with the Europa, partly because whenever something has needed renewing, I've got on and done it. The first difficulty was some six months after I'd acquired the car — the water pump seized, which not only meant a new pump and cover, but also that the head had to come off. After a hefty bill, I became inclined to do more of the mechanical things myself . . .

"Rather more worrying than that, though, was the car's tendency to wander at high speed, and to cure that I replaced the radius arm bushes and ran different tyre pressures — 26 front/32 rear, instead of the recommended 18/26 standard settings. Both of these modifications were suggested by Pat Thomas of Kelvedon Motors.

"More recently, I've had a complete engine rebuild at Oselli Engineering in Oxford, following a cam follower failure. I stripped the unit down, sent it over to Oselli's who built it up, making improvements, such as lightening the flywheel and balancing the bottom end, in the process. I would have carried out the whole operation myself, but felt it safer to give the unit to a specialist engine builder.

## Hearing horror stories

"I suppose that I've been quite lucky with my car. You hear so many horror stories about them, but I'm sure that buying right and being prepared to spend quite a lot of time in maintenance at least irons out some of the difficulties you can face. One pleasant factor about ownership is that so many people in the trade have been really helpful. The parts department at Mike Spence in Reading have been excellent, so has Robin Alabaster who repaired the door after a minor scrape, while Dave Saunders at Ewelme who services the car has been superb. All are just what you need when you have an 'enthusiast car'.

"The proof of the car's worth to me is that I couldn't think what to replace it with, even if I had to. Everything remotely comparable in performance is so much more expensive, and it really is amazing that you can hammer it and still return around 30mpg. Considering that it's a 1971 car, it really is remarkable."