PRACTICAL CLASSICS **BUYING** FEATURE

FINELY TUNED PERFECTION?

Chris Graham discovers whether or not the Lotus Europa is a viable practical classic

In the now glittering world of the multi-million pound classic car sales circus I find it refreshing and heartening to write about cars which have yet to come under the ring-master's orders. Cars which are, as yet, undiscovered by those speculators seeking to make a 'quick killing'. Cars which remain largely untainted by ugly financial power games but yet possess unquestionable qualities nonetheless. Cars which are still available to the enthusiast. One such car, I believe, is the much-maligned Lotus Europa.

For those of you looking for a vehicle of innovative design, individualistic styling, cracking performance and a terrific pedigree, the Europa is your car. It has everything you could want and more but at what price? There is, of course, the ever-present spectre of unreliability. All Lotus models seem to have been cursed with this reputation but is it wholly justified?

Colin Chapman designed his cars with ultimate performance in mind and the results of his efforts speak for themselves – a succession of cars possessing flair, agility and wonderful crispness. However, achieving such greatness has its penalties and the way Chapman chose to pay was by paring everything down to the bone and keeping weight to the minimum. Consequently the cars are fragile. Lotus racing cars were designed around the philosophy of building in the minimum strength required to do the job. Anything more represented over-engineering which

was a dirty phrase at the Hethel factory. If a car broke down immediately after winning a race, so be it. It had fulfilled its function which was all that was expected.

Inevitably some of this thinking found its way into the road cars. Vehicles like the Elite, Elan and Europa are finely tuned performance machines. They demand exacting standards in maintenance and care if they are to perform to their full potential.

Europe or Europa?

The creation of the Lotus Europa (Lotus 46) was somewhat of a departure from Colin Chapman's tried and trusted road car formula because it was mid-engined. He took his cue from the many successful sports racing cars that were winning races in the early 1960s.

Originally, it seems that the car was intended for the European market. Chapman arranged for it to be fitted with the lightweight 1470cc Renault R16 engine producing 82bhp with gearbox to match. In late 1966 the first batch of the new Series 1 Lotus Europe (as it was initially known) was sent to France in lhd form. Production cost was kept down with the use of Triumph Herald front suspension and an independent, radius arm set-up at the rear, a bonded-in chassis and sealed door windows.

An internal ventilation system had been devised which was considered to be so effective as to make conventional opening door windows redundant (it also saved weight!). An air-tight plenum chamber ahead of the driving compartment, under the 'bonnet', was pressurised and supplied air to the occupants via ducts in the dash. Ventilation slits above the letterbox-like rear window were intended to draw out the air once the car was on the move to create a refreshing circulation. However, the system was not a success in everyday use. It worked perfectly on the open road but, with the car stuck in traffic, problems arose. Because the intake at the front was so low down the occupants were treated to a hideous supply of choking carbon monoxide straight from the exhaust pipe of the car in front! The only relief from this came by opening the doors because, of course, the windows were sealed.

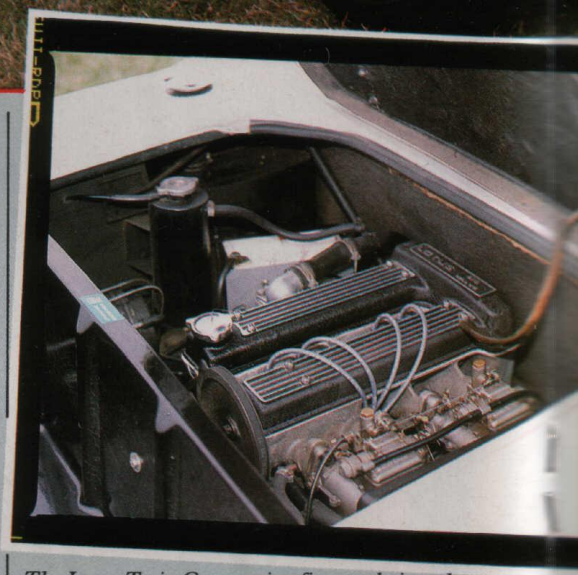
Lotus very quickly realised that they had problems and so wasted little time in creating the Series 1 Mk1 version in 1967. The name was changed for the better to 'Europa' and opening windows became standard. However, there were still big problems with the bonded-in chassis. This design technique involved moulding the chassis within the glassfibre construction of the body. It certainly produced a very strong structure – a fact well emphasised by its successful use on the racing version of the Europa, the Lotus 47 – but, for road use, it was rather less practical.

The problems came if and when the car was involved in an accident that broke or bent the chassis. To reach such damage, sections of the body had to be cut away which involved great cost and expertise. Another disadvantage was that the interior seating was cramped by intrusive glassfibre sill members which ate into the available space either side

The Europa is a driver's car. All models should top 100mph with ease with the Special being the fastest at 124mph. Acceleration from 0-60mph for the Special is quick at about 7secs, the Renault-powered car is a bit slower at 9.8secs.

The Europa Special is distinguished from its forbears by the chopped buttresses behind the passenger compartment and the stainless steel sill covers. Alloy wheels were standard on the Special, optional on the TC cars and not available for the Renaults.

This immaculate example has been owned from new by Peter Fouracre. The odometer reads just over 22,000! The chrome 'loop' that he has fitted beneath the bumper is to protect the gearbox linkage input shaft. Reversing into kerbs does the gearbox internals no good at all!



The Lotus Twin Cam engine fits snugly into the engine bay at the back of the car. On the left of this picture you can just see the space set aside for luggage.

Note the original shape of the flying buttresses behind the passenger compartment on this early, Renault-engined Europa.

Inside the Europa is well-equipped and reasonably comfortable. In most cases you will find that the original steering wheel has been replaced because it was too big. It trapped fingers between screen and rim! Seats in the Special are wider and more comfortable than those fitted in the earlier Series 1 cars. Fibreglass Services offer a recovering service which costs £150 a time.

of the compartment below the doors. Therefore, in 1969, the Series 2 Europa (Type 54) was unveiled. It utilised a separate chassis with bolt-on body in true Lotus style. The interior and seating were also improved.

In January 1970 a Federal Series 2 (Type 65) was released to tackle the potentionally lucrative American market. The car was fitted with the 1565cc Renault engine which was suitably modified to comply with the strict American emission standards. Also the level of the headlights was raised.

Back on the home front the development that everyone had been waiting for finally happened. At last, in 1971, Chapman decided to fit the gutsy 1558cc Lotus Twin Cam engine into the Europa. The reason for delaying this 'obvious' fitment appears to have been linked with doubts surrounding the strength of the Renault gearbox. When the decision was finally made the Renault 336 gearbox was used which was the unit which had thrown up the doubts in the first place! The result was the Europa Twin Cam (Type 74). Later they used the 352 four-speed and the 365 five-speed Renault boxes. Other alterations included a fairly dramatic change to the body shape. The flying buttresses immediately behind the passenger compartment were cut away allegedly to give improved rearward vision. Alloy wheels became an option on this model too.

The last step in the development story is the Europa Special which appeared in the summer of 1972. It was fitted with the Lotus Big Valve engine and equipped with everything that the factory could lay its hands on in terms of extras. This model is now considered by many enthusiasts to be the most desirable of the lot. Production of the Europa officially ended in September 1975 with a total of 9,320 (5,200 were Renault-engined) cars having been built.

Potential problems

Buying a classic Lotus can be a minefield of potential disasters for the unsuspecting purchaser if they have not done their homework properly. To get some well-informed comment on the matter I went to see Miles Wilkins who, as well as being a Lotus enthusiast through and through, runs the well-known and much renowned Fibreglass Services (Charlton Saw Mills, Charlton, Singleton, nr Chichester, Sussex, Tel: 024 363 320). Miles is a Classic Lotus dealer and specialises in the restoration, repair and servicing of all Lotus models (old and new) and is also involved with parts remanufacture with full factory approval.

Miles considers that when buying a Europa there are four main areas for major consideration. These are the chassis, the glassfibre body, the engine/gearbox and the rear suspension.

Chassis

It is unlikely now that you will find an early Europa with bonded-in chassis in England at any rate. If you do, though, be very wary because accident damage or, indeed, ordinary corrosion will be very difficult to put right. On the cars with separate bodies two types of chassis were used. Although they appear basically the same their differences allow for the fitment of either the Renault or the Lotus engine. Unfortunately, both, like the chassis on any classic Lotus models, are prone to corrosion and distortion. The latter can be caused by impact damage or careless jacking. The front T-piece is particularly prone to rusting thanks to a 'conveniently' positioned foam pad which holds water like a sponge. Check also all the suspension mounting points, in particular those for the front wishbones and the rear radius arms. It would be a sensible idea, if you are in any doubt at all, to seek the advice of a Classic Lotus dealer who will know exactly what to check for.

Encouragingly though, if you find a badly corroded or distorted chassis it's not the end of the world because new replacements are available. Lotus themselves still supply the Twin Cam chassis and Fibreglass Services make, under licence, the Renault-engined Europa version.

Bodywork

Everyone knows that, although glassfibre does not rot, it can throw up problems in

terms of stress cracking which can be awkward to put right. Miles says that you must check very carefully that what you are looking at is, in fact, the genuine article. Repair sections are available for most areas of the Europa's body but the art comes in fitting them correctly. Bodged bodies can be made to look very presentable with careful filling and spraying but this will only be a temporary affair. Badly made repairs can be a nightmare to put right and, in particularly bad cases, it is perhaps worth bearing in mind that replacement shells are also available.

Star-shaped crazing around door apertures, headlamps, radio aerial and door handle drillings and other stressed areas will be common. Although these cracks, which are in the smooth gel coat used to finish the body, are not terminal they are unsightly and will continue to return unless properly treated. In an effort to save money and weight, Lotus tended to make their panels very thin which does not make them terribly durable.

Another typical problem to watch for is dropped doors which can lead to chipped and cracked door frames and water leaks. The hinges and their mountings do not have the strength to cope with the advancing years. The steel pins become rusted into their bushes which means that the whole assembly then starts to turn in its bobbin 'glassed' in the body. This rapidly becomes 'ovalled' and the door drops. Repairs are horribly difficult but one easier alternative is to fit the new hinge repair kit developed by BSS Parts of Southport, Cheshire (Tel: 0704 27059). These cost £75 per door and BSS Parts are convinced that the fully adjustable, cadmium-plated assembly provides a lasting solution. Finally, it should be noted that the doors themselves leak and fill with water which rots away the trim.

Being glassfibre the Europa is a sucker for a good fire so it is sensible, when looking at a car, to keep an eye out for the tell-tale signs that the wiring has been tampered with. Obviously the cars do not just burst into flames themselves and such disasters can usually be attributed to 'owner interference'. The first and most obvious of these is for the bodger to fit cheap and inferior fuel lines. The consequences of this are obvious. Electrical fire is also a risk which is heightened by badly fitted, non-standard accessories. Powerful car hi-fi systems, for example, or high power headlamps, can put an unacceptable load on the electrical system which leads to overheating wires and possible fire. If the bodywork has been cut about to facilitate such additions then for goodness' sake make sure that, where wires pass through glassfibre panels, rubber grommets have been used to prevent chaffing.

Engine and gearbox

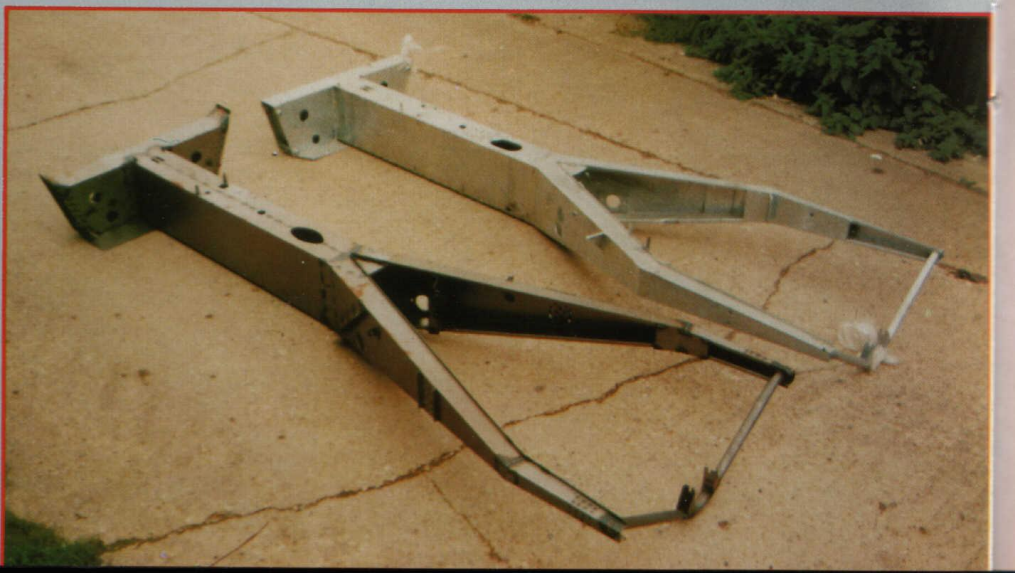
A lot of the horror stories about Lotus cars centre around the engine. The Twin Cam has been labelled, over the years, as a troublesome unit but Miles Wilkins believes passionately that this is rubbish. He says that a properly set-up and well-maintained Lotus engine will run for 80,000-90,000 miles before needing surgery. He places the blame for engine troubles squarely at the door of owners who fail to appreciate what is required. Parts availability for the Twin Cam unit is good with the exception of the block which is now virtually unobtainable.

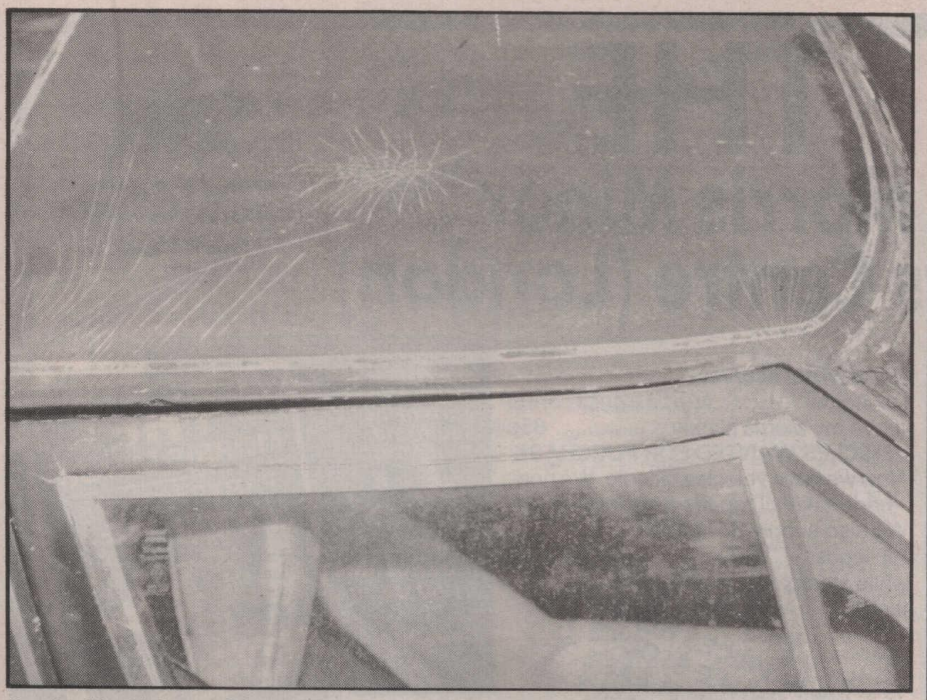
This 'fine' example cost its owner £4,500 two years ago! It is, in fact, two different cars which have been glued together and resprayed as one. Really it needs to be re-shelled. The original bumper is missing and the one you see here has been applied with silver paint! ▲

The area under the 'bonnet' is divided into two sections. The one nearest the screen is the plenum chamber which is pressurised by a fan and supplies fresh air to the driving compartment. Forward of this is the radiator on the left which is balanced by the spare wheel on the right. ▼

The two Europa chassis. The one nearest the camera is for the Renault-engined car and is fabricated by Fibreglass Services, the one behind it comes from Lotus for the TC cars. The differences are slight but crucial.

As you might imagine, the Renault engines are much more of a 'cooking' unit and are not placed under the same stresses as the Twin Cam. Consequently, they should last very well indeed which is fortunate because spare parts are a problem. It is on the cards that you may find the original unit having being substituted with the engine from something like a modern Renault 16TL/TS/TX or with anything else from the Renault range which will fit! Gearboxes too are also swapped about





Crazing like this is one of the most common faults to afflict the glassfibre body. Lotus tended to make their panels on the thin side and wherever they flexed or became stressed through use cracks in the gel coat resulted.

The price of spares

Bodyshell – £2,348 (inc. doors, 'bonnet', engine cover) Bodyshell – £1,660 (bare shell)
Chassis – £656 Nose section – £440
Doors – £117 Bonnet – £140
Engine cover – £214 Windscreen – £70
Rear window – £9 Dash panel – £145
Centre console – £70 Crash pad – £70
Org. W/manual – £46 Org. P/book – £39
Org. H/book – £10.

with gay abandon and this can cause problems.

The gearchange has always been a major snag with the Europa because the mechanism is very involved. Miles tells me that there are no fewer than 12 linkages between the lever and the box! Once each of these has worn a little bit the overall action becomes awkward and imprecise making correct selection a problem. It sometimes gets so bad that internal gearbox damage can result and this is serious.

Another problem to watch for concerning the gearbox is that the driveshafts are correctly shimmed to remove any lateral movement. This also can be disastrous, resulting in very expensive internal gearbox damage if slackness is allowed to go uncorrected.

The radiator for the engine's cooling system is located under the 'bonnet' at the front of the car, together with its electrically operated cooling fan. It is important that this is working correctly (check also the bleeder valve on the radiator) because cooling is of paramount importance to the engine. The hoses need to be checked carefully together with the header tank which is found in the engine bay.

Rear suspension

The rear suspension is of vital importance to the well-being of a Lotus Europa. Its correct function determines the handling of the car. To begin with it is terribly important that the shock absorbers are in good order. Miles says that they were designed to last for only between 30,000 and 40,000 miles so be careful. The rear springing has a drastic effect on the handling of the car which is light at the front anyway. Check for play in the rear wheel bearings because this can also lead to serious handling defects. The bearings must be correctly torqued. It is also worth making sure of the type of UJ fitted. It is important that the greasable type with nipples are used rather than the sealed variety. The latter wear out too quickly and the former should be greased every week for prolonged life.

The supply of replacement body repair sections is good. However, fitting them correctly is a skilled and exacting business.

It is important to remember that the Europa was perfectly balanced for road use the day it left the factory. If you are looking at a car which has obviously been altered you should be very suspicious. The suspension and steering were designed around the technology of the day and attempting to make it better using today's advanced materials may do more harm than good. Fitting wider wheels and tyres is not advisable because Miles says that you could end up ripping the suspension to pieces. Fiddling about with 'go faster' attachments is certainly not the recipe for success with the Europa.

What to pay

As I hinted at the beginning of this feature the Lotus Europa is still available at affordable prices. Miles considers that, at the bottom end of the market, you can pick up a Renault-engined Europa awaiting restoration for about £1,500. A Twin Cam model in similar condition is likely to cost up to £3,000. Cars which are usable but scruffy are obviously more expensive. A well-used Twin Cam should be available for between £4,500 and £7,000 while the Renault versions sell for £3,000 to £4,000 in this condition.

At the top end of the condition scale things take on a rather more rarefied air. A pristine, original Europa Special (in JPS colours) could fetch anything up to about £25,000 and its Renault-powered counterpart anything between £10,000 and £12,500.

Conclusions

The unfortunate facts of the matter are that the speculator's spotlight is bound to fall on the Europa soon. Demand for Lotus Elites and Elans is high and a great many are now, regrettably, being exported to far-flung places like Japan. It will only be a matter of time before the supply dries up and the buyer's attention becomes focused on the Europa. Even now there are stories of people paying silly prices for very ropey Europas. Now is the time to buy before the big money moves in.

Until recently the Renault-powered Europa was thought of very much as the poor relation to its snappier Twin Cam brother. However, it seems that people are now starting to regard it with greater respect and interest. Miles says that the car has a lot going for it and he considers it more flexible to drive. Obviously it is noticeably slower but the engine is rugged, long-lived and powerful enough to push the car along in a very sporting manner.

Form a DIY point of view Miles believes that the car holds no real hidden pitfalls mechanically. The body can throw up problems but these can be overcome with sound knowledge, care and patience. The cars are not hard to live with if they are PROPERLY MAINTAINED – this is the key to owning any Lotus. Miles is of the opinion that you must budget carefully for any eventuality because these cars are specialised machines which do not take kindly to being bodged.

The Europa as a whole is a beautifully balanced car which is a joy to drive. The weight distribution is excellent, making it every bit the street-legal road racer. Peter Fouracre, who owns the immaculate white Special featured here, told me that when he bought the car he had a choice between it and an Elan Sprint. He concluded that it was no contest and has never regretted his decision. He used to race go-karts and considers that the Europa is the car which most closely recreates the thrill and sheer driving pleasure which he gained from the karts. He says the car can be manoeuvred at high speed with pinpoint accuracy but, of course, this is exactly what Colin Chapman intended.

My thanks go to Peter Fouracre and Miles Wilkins for their kind help with the preparation of this feature.