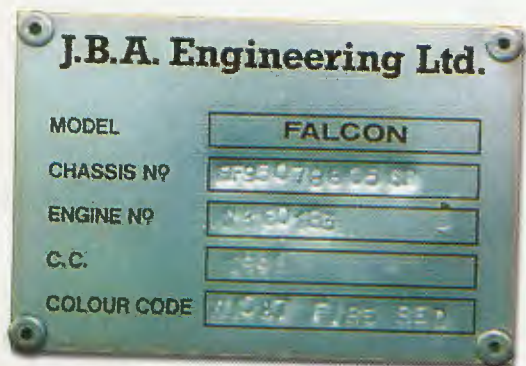


# THE JBA FALCON



**The JBA Falcon is a permanent fixture in the traditional roadster sector of the kit car market. It was one of the first Cortina-based kits appearing in 1982 and now PETER COXHEAD casts his eye over its Sierra-based successor.**

**O**ver the years we have conducted many road and track tests of the Falcon, the latest being at the Three Sisters circuit when three drivers evaluated the company demonstrator. While it is quite evident that the car was designed as

a tourer and is not exactly at home on a race track, using such a facility did allow us to take the car near to its limits in safety.

Fitted with a 2-litre 8V Ford DOHC driving through a type 75 gearbox, the car accelerated remarkably quickly considering its quite heavy construction. With comfort, rather than race-car characteristics in mind, the Falcon's springing is designed to be soft and compliant, so it rolled a little when cornered hard. Nevertheless, it was extremely well-mannered when abused by our somewhat over-enthusiastic driving on that day.

When near to its limits the front washed out safely in understeer so that it tended to drift to the outside of a bend, rather than pirouetting down the road, or into the scenery, in an inelegant spin. All-round independent suspension kept the contact patches firmly in

touch with the tarmac and the disc brakes were excellent - even though they ran a little hot sometimes! When sensibly driven the Falcon is a well-mannered, quick and comfortable touring car.

While its performance is equal to many of the more expensive production cars, it's the detail finishing that makes a lie of the wrongly held assumption that kitcars always compromise on quality. Whether built at the factory or constructed in someone's garage, Falcons always seem to be well put together, and that really is an endorsement of the quality of the kit.

We've been out in some terrible weather during our various tests of the JBA and always the interior has remained free of water and draughts - the hood and sidescreens fit so well. For a car that is intended for long distance touring and everyday use, the importance of good weather equipment cannot be stressed too strongly.

On the demonstrator, plenty of leg and shoulder room, a good driving position and well-placed controls combined with a very nicely upholstered interior to make us realise that here was a proper, practical car. No rattles, squeaks or bangs; it felt reassuringly solid. What's more, it looked good. You'd be hard put to place an age of the car, late fifties, early sixties maybe - it's one of those designs that seem to live for ever.

Unpretentious, practical, sensible, sweet mannered and forgiving, we found the JBA Falcon to be an excellent example of one of the better kitcars. It may not have the performance and handling of a Lotus Seven, but neither is it a compromised copy of any other car. The Falcon has its own identity as a touring sports car, and it carries it off with aplomb.





**A**s one of the founder members of the modern kitcar industry, JBA Engineering Ltd has been in business for nearly 20 years. It all began when three design draughtsmen forsook the security of the then giant Leyland Vehicles to plunge head-first into the uncertain and dangerous waters of the kitcar industry.

David Ashley, Ken Jones and John Barlow (later to leave the company to set-up The Royale Motor Company) had faith in their ability to design and produce a highly individual open-top car that offered driving pleasure at a modest cost - things that contemporary major motor manufacturers seemed unable to deliver.

Working in garages alongside their homes, they mocked-up a chassis in wood to check that it would perform as planned, before committing themselves to actually taking a hacksaw and a welding torch to metal. The original chassis was designed to take Ford Cortina components but later versions accept the more modern components from the Sierra. Also, the prototype buck of the two-seat tóurer bodyshell was made from wood and plaster to see if the concept looked right. Subsequent events were to prove that the considerable effort spent in development paid off. That first Falcon (a name settled on following a TV competition) shape has run and run, and the family resemblance is still clear in the car being manufactured today.

Apart from producing a Capri-based Javelin kitoar that was not particularly successful, the company has remained faithful to the Falcon, it being right at the core of the business. Over the years many improvements have been made to the specification, a major step being the change from Cortina to Sierra mechanical components. Although spares for the Cortina version are still available, and the company would probably produce a Cortina-based kit if asked to do so, the Ford Sierra-based car is the current model.

The company reports that business is good but a major shift in buying patterns is now evident. Many customers want part-built or turn-key cars and they are prepared to spend whatever is necessary to enable them to get on the road quickly. JBA Engineering is geared-up to provide this service in addition to kit production.

All of the metal fabrication work is carried out in-house, but the GRP body panels are produced by sub-contractors. This has enabled the company to keep overheads to a minimum. So that the workshops are housed in a single large building with the offices being located in a portable cabin alongside the main work area. In addition to the two partners, an additional full-time engineer is employed.

Two models make up the current Falcon range, the two-seat Falcon SRI and the slightly longer TSR - the latter being a 2+2 with greatly increased luggage space. Both the SRI and the TSR share the same basic construction that consists of a sturdy, steel-panelled ladderframe chassis and a single piece GRP main body tub.

Over the years the company has successfully built a reputation for producing very good quality cars and components at a fair price. All kits and components supplied meet the current SVA requirements and providing the cars are built to the instructions supplied, no registration difficulties will be experienced. Customers comment favourably on the way the company conducts its business and owners club members endorse this. JBA Engineering appears to be stable, straight dealing and financially sound.



Ken Jones (blue jumper) and David Ashley, the two partners who run JBA Engineering

## JBA - A two-man team



All of the metal fabrication and build work is carried out in the single large workshop - the GRP mouldings are sub-contracted



Many of the necessary holes in the front bulkhead are pre-cut at the factory





ABOVE: Fabricated wishbones and coil damper units replace the Sierra components.

## Discounts available on comprehensive kit orders

### BUY2BUILD THE KIT

As we have already mentioned, there are two versions of the Falcon available. The SRI is the two-seat version while the longer, TSR has a larger body and doors, and space behind the front seats for luggage or plus 2 seats. Both models have lockable boots. For the purposes of this article we'll mostly be talking about the SRI, however, the construction principles are the same and the kit contents differ only in detail. For a complete price list and specifications you should contact the company for an information pack.

In common with most kitcar manufacturers, JBA offers kits in various stages and this enables the customer to spread the cost over a period of time. However, if all three stages are purchased at the same time a useful 10% discount is offered. Additionally, the car can be supplied to any stage of build, including a fully built turn-key version. Conveniently, all prices quoted in the company literature include VAT, so you don't get a shock when you come to calculate the true cost of the project.

The comprehensive Stage One kit for the SRI costs £1779.84 and the kit contents are as follows - note that both SRI and TSR kit contents are the same but the latter kit is a little more expensive because clearly more materials are used in its construction.

Steel chassis with all locations for Ford Sierra mechanical components; body fitted to chassis and drilled for location of various components (see separate panel); top wishbones; wishbone bushes; wishbone pivot brackets; wishbone bolts, nuts and washers; ball joint adaptor bushes; steering shaft; handbrake cable; handbrake bracket; clutch cable location bracket; steering column support moulding; air intake moulding; brake pedal; clutch pedal extension; brake push rod adaptor; heater location

(pre-fitted); rear suspension spacers; seat belt diagonals; fastener pack; heater retaining brackets; build manual; ball joints; steering joint; scuttle loop (steel); chassis plate.

**Stage Two kit (£956.87 - 5% discount applies if ordered with Stage One)**

Stainless steel bonnet hinge; aluminium bonnet tops; aluminium louvred bonnet sides; aluminium bonnet lower sides; doors; door hinges; door hinge support brackets; door rear support brackets; stainless steel radiator surround, stainless steel grille support; stainless steel 'L' brackets, stainless steel windscreen frame; stainless steel hood location frame; inner top windscreen section; windscreen bottom channel; windscreen inner side frames; boot; boot lid; stainless steel boot hinge; fastener pack; set rubber bonnet seals; battery carrier.

**Stage Three kit (£960.37 - 10% discount applies if all three stages ordered at the same time)**

Aluminium front body section; front wings; rear wings including rear light casing; front wing support brackets; windscreen glass laminated BS 857/2; set windscreen seals; brass JBA badge; stainless steel grille bar pack (polished); GRP dashboard moulding; GRP interior rear side trim panels; GRP interior door trim panel (SR only); GRP rear body infill panel; fastener pack.

**In addition there is a small optional extras list that includes:**

Fuel tank - £141.00; black mohair hood - £296.00; hood frame - £44.00; pair stainless steel bumpers - £146.75; carpet set - £180.00; new propshaft - ££99.80; GRP hardtop - £255.00; front & rear suspension package - £215.28; wiper arms & blades - £39.64; pair seat belts - £67.00; pair side window frames £128.16; set side window glazing - £60.38; centre console moulding £49.30; donor vehicle package - PDA.

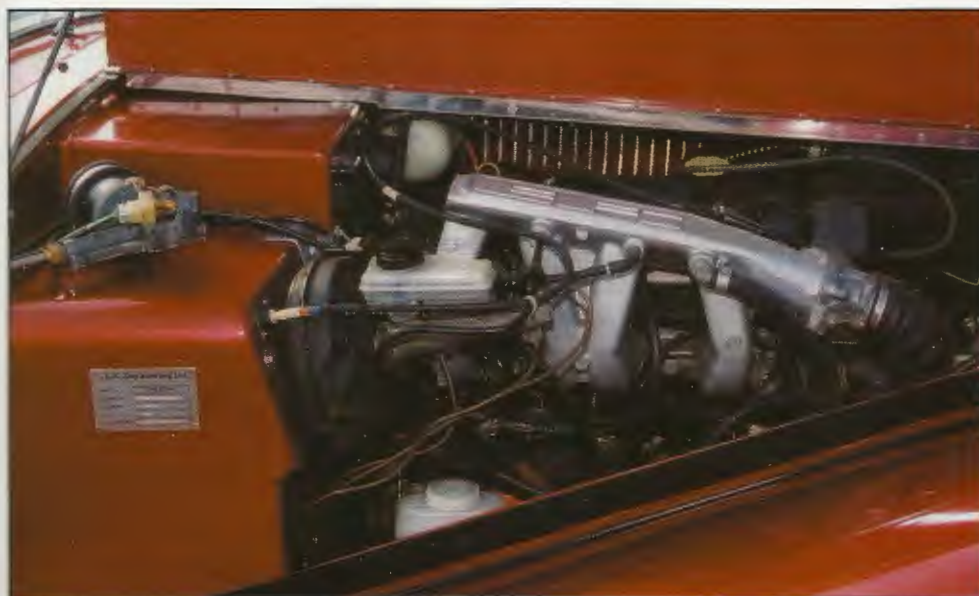


The single-piece main bodytub is fitted to the chassis at the factory. Complete with integral floor that sits on the galvanised steel panelling of the chassis the moulding has cut-outs to take the seat belt mountings shown here on the left of the picture



An unpainted chassis sits next to some wings and moulded body parts. Perhaps not the most elegant structure, it is nevertheless very strong and most effective. All the necessary mounting points are incorporated and its final design was the result of much development





ABOVE: The spacious engine bay can accommodate many different engines, including the Rover V8. Here the donor car's DOHC 8v fits in very nicely

## A Straightforward Build

The suggested build sequence is listed in the right-hand column. You don't have to follow it slavishly, there's room for individual preference for doing things, but this is the way JBA describe it in their build manual. The manual itself is double sided on A4 paper and 35 pages long. Plenty of descriptive text is combined with drawings and photographs to give what seems to be a pretty comprehensive guide to the build procedure. Having said that, we found that some of the descriptions of procedures are a bit vague and sparse of detail, and needed reading a couple of times before we got their meaning. Additionally, there are hints and tips on building the car to meet SVA requirements and a useful fastenings list.

### Donor Parts Required

The JBA Falcon is based on the Ford Sierra saloon and the following parts are required, including all the associated fasteners

The front suspension unit including the steering rack and anti-roll bar (but not the McPherson struts and coil spring/dampers), steering column assembly including the stalks and shroud; rear suspension assembly, including springs, rubber moulding and bump stops (but not the shock absorbers), final drive assembly; engine &

gearbox including mountings and ancillaries; exhaust system (front section); braking system, including servo, balance valve and T-piece; clutch and accelerator cables; handbrake; pedal frame assembly (modified); accelerator & bracket; wiring harness, engine bay loom, column stalk plugs, relays & reversing light switch; electric fan; battery; radiator hoses; gear lever; interior handles including connecting rods; coil; heater hoses.

There isn't room here to give a complete blow-by-blow account of the build and the sequence of operations listed above omits many detailed jobs that are described in the manual, such as fitting hinges to doors, locks and so on. However, because the Falcon build uses mostly unmodified components from a single donor the procedures are pretty straightforward. A Ford Sierra workshop manual is essential, especially when refurbishing mechanical components - the Haynes manual is perfectly adequate for this. No special tools are required, normal hand tools, plus a rivet gun and an electric drill are about all that are necessary.

Very few modifications to the Sierra components need to be carried out. The McPherson struts are discarded at the front and a strut-to-ball joint



LEFT: Easy to erect, the hood is completely water tight and draught proof



RIGHT: The Falcon design responds to careful detailing and it's unusual to see a poorly finished example. JBA Engineering supply a neat set of instruments especially for the car

### BUY 2 BUILD

#### THE BUILD

#### THE BUILD SEQUENCE

- Remove the necessary parts from the donor vehicle
- Remove the McPherson struts from the spindle carrier
- Bolt complete front suspension to the chassis
- Fit coil/damper units at front
- Fit front flexible brake pipes
- Install final drive and rear suspension
- Assemble rear brake drums
- Fit rear flexible brake pipes
- Run in static brake lines
- Run fuel line
- Fit fuel tank and sender
- Fit engine and gearbox
- Install exhaust
- Prepare central body unit for fitting to chassis
- Bolt CBU to chassis
- Fit seat belt diagonals & fuel breather pipe
- Fit pedal assembly & steering column
- Fit boot lid
- Fit doors
- Install windscreen frame
- Fit sidescreens
- Install handbrake & propshaft
- Fit grille
- Fit front & rear wings
- Install front aluminium tray
- Fit headlights, rear lights, indicators & side lights
- Pre-fit dashboard & interior trim panels
- Fit bonnet assembly
- Install wiper system & washer nozzle
- Fit bonnet
- Pre-fit seats
- Trim interior & fit seat belts
- Fit hood and frames
- Prepare for paint. Paint and refit items
- Carry out final checks
- Arrange SVA & registration





**ABOVE:** Classic design combines with modern mechanical components to give a traditional-looking but thoroughly practical motor car



**ABOVE & BELOW:** Amateur-built by customer Bernard Telford, this example illustrates just how well the Falcon lends itself to a beautiful finish



## ABOUT THE CAR

The chassis is manufactured in-house and constructed from 100 x 50 hollow section steel. Simple but strong, it is of perimeter frame design with galvanised panelled steel floors. It comes painted with one coat of rust inhibitor and one coat of enamel, but a second coat of enamel is recommended after the holes have been drilled for brake pipe clips etc.

Mounted on the chassis for delivery, the one-piece main GRP bodyshell is removed while the chassis is built up. It comes in a base white gel-coat ready (after final preparation) for spray painting and it is ready drilled for the location of the brake servo, clutch cable, accelerator cable, pedal frame, heater pipes and air intake.

Designed to use the Ford Sierra saloon as a single donor vehicle, just two other components are sourced from other vehicles - a Fiesta Mk 1.1 heater and a Cortina or Escort radiator. Many different engines other than that from the donor car have been fitted, including Fiat and Rover. Arrangements can be made to fit alternative engines at the factory if required.

### JBA Falcon SR Specifications

- Wheelbase - 105.5 ins. (2603.5mm)
- Track front - 57.2ins. (1453mm)
- Track rear - 57.8 ins. (1468mm)
- Length - 150 ins. (3810mm)
- Height - 45.5 ins. (1156mm)

conversion kit is supplied by JBA. If the donor is pre-1984 the chassis engine mountings will need to be modified by simply cutting off a section with a hacksaw.

An exhaust system is supplied by the company, and only the front part that fits onto the manifold is used from the donor car. It's worth noting that two different front exhaust pipes were used on the Sierra and the JBA uses the shorter one from the later model Ford.

Other alterations that have to be carried out by the builder include modifying the clutch pedal and shortening the brake servo rod. Both are very simple to do and involve just a few minutes work. In the case of the clutch pedal, the Ford pedal is cut and a new part supplied by JBA is bolted in position. The servo push rod is simply shortened and an extension, again supplied in the kit, is pinned in position.

Some cutting, drilling and trimming of fibreglass parts is necessary but no fabrication is required and the diagrams accompanying the text are clear, if not always very professionally drawn. Where necessary, templates are provided, such as in the case of fitting the door catches where accuracy is essential.

While it is perfectly possible to re-use the donor car wiring loom, we certainly would not advise it. No instructions are given in the manual and our experience is that trying to recycle a bunch of wires that have seen better days is a thankless task. Far better to invest £190 on the specially made loom supplied by JBA that has all the correct terminals in place and it comes with a set of instructions. Strangely, the company do not include this in the list of accessories.

If you do wish to fit a power unit other than the donor car item, you should discuss this with the people at JBA before committing yourself to purchasing the engine and gearbox. While many different engines have been fitted in the past, special mountings may be necessary and the layout and dimensions could make the unit you have in mind unsuitable for use.

## MORE INFORMATION

JBA Engineering Ltd, Unit 56B, Bradley Hall Industrial Estate, Standish, Wigan, WN6 0XO.  
Tel/Fax 01527 424549 Website [www.avnet.co.uk/jbacars](http://www.avnet.co.uk/jbacars).  
Email: [jbacars@post.avnet.co.uk](mailto:jbacars@post.avnet.co.uk)



**BUY2BUILD  
THE OWNER 1**

Alan purchased his Cortina-based kit way back in 1986. He began the build, helped by a mechanic friend, and initially it all went pretty smoothly. Every part fitted as it should and the quality of the components was such that they just bolted into position. The construction manual was OK but, in truth, it wasn't referred to very much because the process was a logical one.

However, unfortunately, work came before pleasure and the project was put on hold. "Our plumbing supplies business gradually began to take over our lives and the pressure of work meant that we had very little spare time," said Alan "I put the car into a container and locked the doors. There it stayed until my recent retirement, when I decided that I had to have it on the road quickly."

He was determined to see the project through because somehow it had become part of his life. Consequently Alan approached JBA Engineering who agreed to complete the build for him. It is now in the final stages and it should be on the road by the time you read this.

Why did Alan choose the Falcon? "I wanted a 2+2. I used to have a Lotus Excel that my wife loved and we wanted a sports/touring car that was equally distinctive. Having researched the market, we

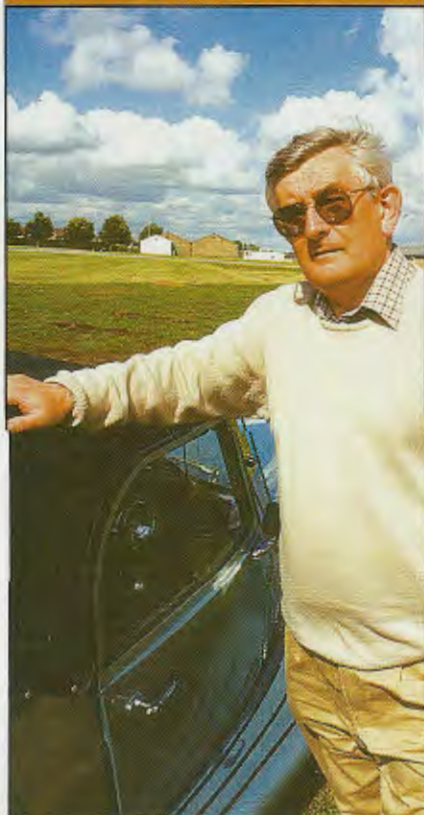
## An Owner's View - Alan Lane

Alan Lane - determined to get his car on the road



decided on the Falcon because not only did it look right, but the quality of the components and the personal attention we received from the people at the company were both outstanding." He said. "That was some years ago and I haven't regretted my decision, I still think the car is very pretty and the company has always been extremely helpful and good to deal with."

No record has been kept of the hours spent on the car but the all-up cost, including the work carried out at the factory will bring the total spend up to around £9.5K. Not a bad price to pay for a distinctive looking car like the Falcon.

**BUY2BUILD  
THE OWNER 2**


## An Owner's View - Burman Parker

**Most people are quite happy with the performance of the Falcon when fitted with one of the standard engine options but Burman Parker wanted to fit a Rover V8 engine.**

As an industrial chemist he wasn't professionally qualified to make changes to the chassis and as a keen amateur he knew what he could and couldn't get away with. So he went to JBA with his ideas and they made the necessary modifications at their workshops. In fact, because there is so much room in the engine bay of the Falcon, there wasn't too much re-engineering involved. As it happens, the people at JBA had been intending to offer the Rover V8 as an option and all it took was Burman to jog them into action. So the Rover chassis is now available to all customers.

As for the build itself, Burman says he really enjoyed the experience and you only have to see the car to realise what an excellent job he made of it. The workmanship is outstanding but as the man himself pointed out "The difference between a good build and a shoddy one is really down to paying attention to detail. No great engineering

expertise is required to, for instance, make a neat job of a burr walnut door capping, it just takes patience."

Neither need it be a question of throwing money at the car. Mr. Parker says that he spent about £7000 on his Falcon and that includes everything, wheels, tyres, the lot. It took 15 months of his spare time and as far as he is concerned it was a labour of love. "I really enjoyed building the car" he says, "Of course some jobs were easier than others. The V8, fitted with twin SU's, was quite a tight squeeze and it took a bit of patience before it finally went in but apart from that, things went pretty smoothly."

He says he found that understanding the build manual was a bit of a challenge at times, but as he acknowledged, it's difficult to describe every operation in great detail. In any event, the workshop manual was used for all of the Ford related parts and JBA's construction guide covered fitting the kit items. The company was very helpful with advice and the overall service was excellent - even Passing Single Vehicle Approval proved to be no problem at all, the kit being designed to meet the necessary criteria.