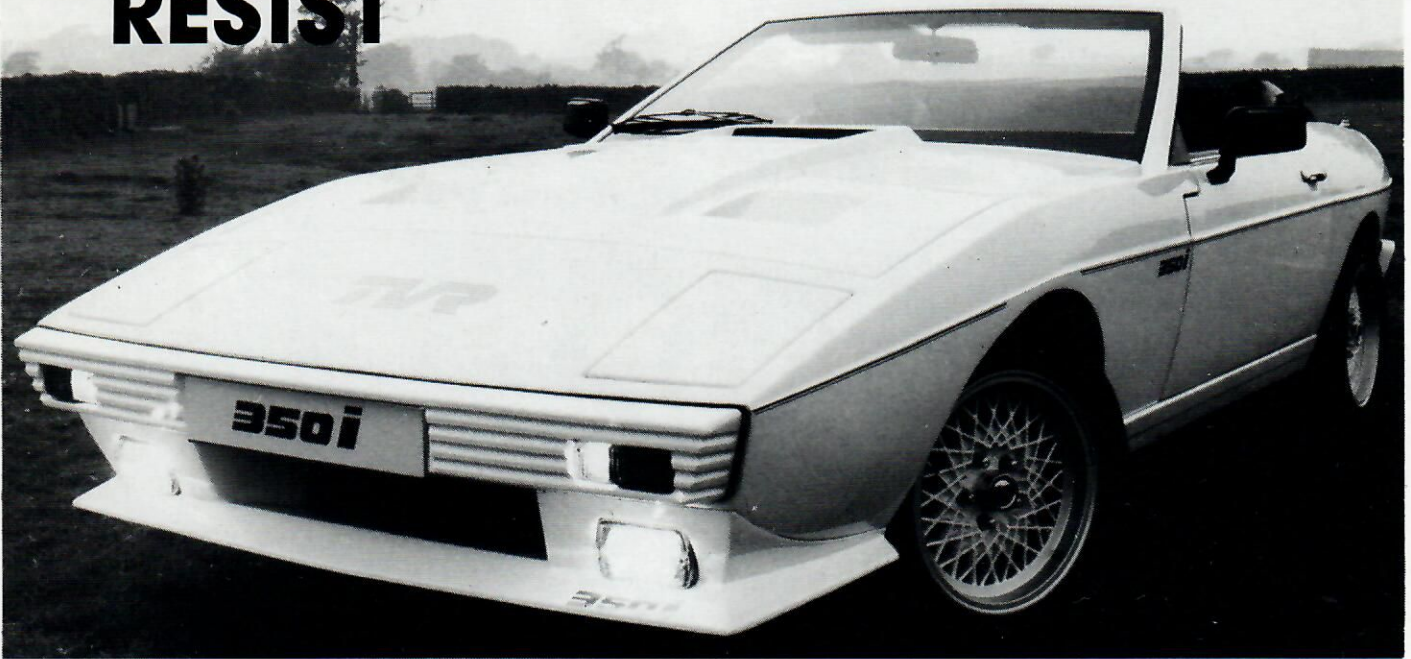


HAND MADE AND HARD TO RESIST



Laurie Caddell visits TVR and finds that quality comes cheap at the price

The sports car, especially in open trim, is part of Britain's heritage and it wasn't that long ago when you could look at a list of new cars and pick out the roadsters and sports cars from even the biggest manufacturers. With the recent advance in design of the average car, those wanting something sporty were first tempted by '2+2s', then sports coupes and finally by sports saloons, vehicles having the performance and roadholding of the familiar sports car yet being more practical in comfort and space utilisation.

IN DEMAND

As the larger manufacturers have moved away from the sports-car concept, smaller concerns have sprung up supplying the demand for something different, something sporty and something fun. All of a sudden sports cars are in demand again. BL would no doubt love to market and make a profit from a small X1/9 type car; they did design one a few years ago and got cold feet. Lotus are soon to launch a new open sports car in the Elan mould, realising that after their 1974 up-market jump with the Elite, their devout followers could not after all follow them. Caterham Cars decided to build the Lotus 7 and they still do today with a very healthy order book.

Through all these market changes TVR Engineering of Blackpool, the seaside

town on the blustery Lancashire coast, have steadily turned out their distinctive brand of pure sports cars through thick and thin with just a minor problem facing them at the moment of how to build enough cars to keep up with an insatiable demand from an ever increasing market in all corners of the world.

The history of TVR goes all the way back to the 1950s, a time when innumerable backyard operations set up supplying body and chassis units to transform ordinary saloon-car engines into motive power for distinctive sports cars. The company takes its name from Trevor Wilkinson (TreVoR) who built the distinctive grand touring Grantura. The company faced numerous financial difficulties in the early 1960s and in 1965 was taken over by Martin Lilley, a twenty-two-year-old whose flair and business sense soon put the marque, on the way to recovery.

The cars which Martin initially marketed were the Vixen and the Tuscan, the former with a 1600cc Ford Cortina engine and the latter with both V6 and V8 power. Although in quality and design far superior to the Grantura, the new cars still sported the distinctive TVR look with short wheelbase, Cortina Mark 1 rear lights and the intricately curved rear screen over the luggage area. The little Vixen went from S1 to S4 forms while

many Tuscan were exported, initially with the legendary 289 Ford engine, 4.7 litres of unrestricted muscle which gave the lightweight sportster a top speed approaching 150mph and 0-60mph acceleration somewhere around 5.0secs.

NOT FOR THE FAINTHEARTED

With so much power in such a short wheelbase car, the V8 Tuscan was more than a handful and not for the faint-hearted but it was successful in America where the similarly hairy-chested AC Cobra achieved cult-car status. For the home market the Tuscan became available with the Essex 3.0 litre Ford V6 unit, the motor which was to become synonymous with later TVRs. In 1972, both these cars ceased production and were replaced by the 'M' (for Martin) series. These new cars were longer than their predecessors and even better finished and available again in 1600 Cortina or 3000cc Capri-powered forms. For the important export market to the USA, TVR used a carbureted 2.5 litre Triumph in-line six engine. After another prototype was constructed with a 302cu in Boss Mustang unit, it was decided in 1975 that a turbocharged 3.0 litre V6 would provide the car with a good turn of speed; indeed its top speed was over 140mph.

The only major criticism levelled at TVRs over the years was that their beautiful and distinctive window did not

TVR VISIT



1979 3000S Convertible TVR

open, but that was rectified in 1976 with the arrival of the Taimar. It was around this time that Martin Lilley built a 'chopped' 3000M with aero screens purely as a fun vehicle, but the seed of an idea was formed and a proper convertible appeared in 1978. Not as pretty as the closed coupe, the Convertible nevertheless proved extremely popular not least with the exceedingly well developed turbo motor.

NEW IDEAS

It was in 1977 that the company decided to break away from that original glass-back shape car whose past could be traced to the Grantura and development got under way on a car which was to appear at the 1980 Brussels Motor Show as the Tasmin. Initially available as a two-seater fastback hardtop, the 2.8 litre, fuel-injected Tasmin was soon available as a plus 2, albeit with the most meagre of accommodation in the rear, and as a convertible, which thus far has proved the most popular. In order to take advantage of certain countries' taxation laws and also to broaden further the car's appeal in this country, a 200 series of cars was launched utilising the 2.0 litre straight-four Ford engine. This also had the advantage of dropping the car's price below the important £10,000 barrier and thus neatly into the 'senior management company car' bracket.

If that isn't enough of a line-up, a Turbo Tasmin has also been developed, available as a fixed head but with more aggressive

looks than the normally aspirated car to go with its 150mph top speed and 0-60mph acceleration of 5.8secs. Further to complicate matters, an Arab delegation decided that they would like to order 400 Tasmins with the proviso that the car would not be fitted with the politically unacceptable Ford engine. TVR have now got yet another prototype running, this time with a Rover V8 engine which is both more powerful and lighter than the V6. The chances are that production cars will come with the Vitesse version of that unit as standard, near 200bhp and startling acceleration.

FULL ORDER BOOK

The problem remains that at the moment the ninety-eight employees at Blackpool turn out at best eight cars per week, each of which consumes no less than 400 man hours in construction! The manufacturer's Canadian importer wants 100 cars to market in the USA, there are still the 100 cars wanted by the lady importer in Singapore, who also would like to sell some in Taiwan and 100 for the Middle East who will have to make do with 100 rather than the 400 they wanted. This does not take into account the home market and Europe who will simply have to wait their turn in the queue.

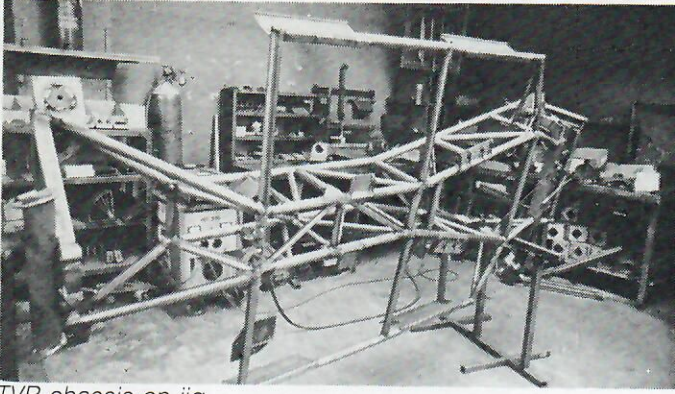
Last year Martin Lilley gave up TVR after the death of his father and the company Chairman is now Peter Wheeler, a chemical engineer by trade who also made a fortune from North Sea Oil. His

Managing Director is former Sales Director and ex-TVOR Production Sports Car racer Stewart Halstead. No longer does the company promote the image which Martin Lilley pushed with naked models draped over the cars at Motor Shows for front-page publicity; now the policy is simply to build the cars and get them into the customers' eager hands and hope that the public has the patience to wait.

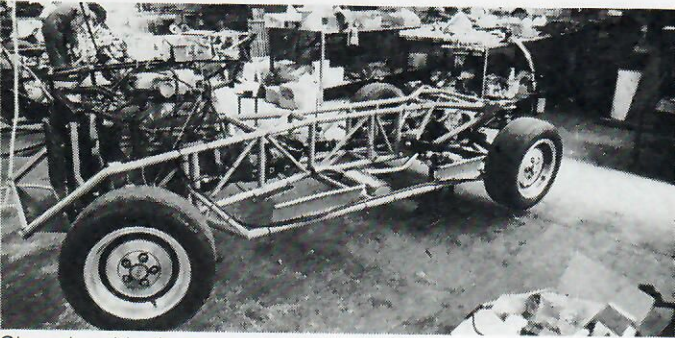
DEDICATED WORKFORCE

TVR are trying to increase production to ten units per week, 80% of which will be in convertible form, and this involves taking on an extra twenty staff for a night shift. The right people are not easy to find these days and if they are found, the day shift will have to be split so that a proportion of experienced staff will be both operating day and night. One problem TVR doesn't have is any lack of dedication: the workforce were busy through most of the Easter holiday trying to make headway into the backlog of orders. A large increase in production or the opening of newer and larger premises is not, however, envisaged. In their thirty-odd year history, TVR have seen enough ups and downs in the fickle sports car market to know that although the problems they have at the moment are the best sort to have (more orders than cars), just as suddenly things can turn about and the company could be left with a larger factory and staff than needed.

TVR VISIT



TVR chassis on jig



Chassis with dummy wheels



Laying the glassfibre

At best TVR will, in the foreseeable future, turn out no more than 500 cars per year, although there may be a chance that the cars could be manufactured under licence in other countries. The public will just have to be patient. Stewart Halstead doesn't want to get into a similar situation to Morgan with an order book stretching into years. He realises that their situation is unique with a car that has no tangible opposition. If TVR buyers had to wait nearly as long as that they would go off and buy something else, perhaps not as good, but similar. In the meantime the company is producing its small batch of cars with near-perfect quality control whilst the management hope that demand will remain constant but not excessive. Wouldn't the rest of the British motor industry enjoy having problems like that?

JUSTIFIABLE COST

After the 'casual enquirer' has received his answers regarding 'what'll it do' and 'how much is it' and having been told that under the TVR's bonnet lurks a Ford 2.8 fuel-injected V6 as fitted to a Ford Capri, the next question is invariably 'how comes the Capri costs eight grand and this is over twelve then?' You can spend hours trying to justify the fractions of a second the Tasmin can shave off the Capri's 0-60mph time, the way it will return a little bit more for each gallon of four-star and how it will generate that much more g-force in corners and therefore be that much quicker, but when it comes down to it if the 'casual

enquirer' doesn't understand that hand-built quality costs money, you could be wasting your time. Not that a Ford Capri isn't well made; indeed in 2.8i form it is a thoroughly nice car, but all the same it takes a matter of tens of hours to build whereas a TVR has no less than 400 man hours of construction and checks in its build, and time is money.

CONSTRUCTION

The base of the Tasmin is a tubular-steel spaceframe chassis which, as well as being strong, is also built for longevity. Before the ends of the tubing are sealed off, a residue of oil is sprayed inside to protect against corrosion whilst the finished frame is given a baked-on plastic coating which is guaranteed for twelve years.

While the three men in the chassis shop prepare their work, a further twenty-three are busy in the body shop, laying the glassfibre in the upper and lower body moulds. Several layers are applied and the two halves are bolted and bonded together and left in the mould overnight before the completed unit is taken outside to be left in the open for up to a month to cure. At the end of the outdoor period, any air bubbles trapped in the laminate come to the surface and the body is taken back into the body shop where any other blemishes can be filled and excess material trimmed off. The completed shell is then force-cured either in an oven or under an infra-red arc, before four coats of acrylic-based primer are applied prior to a matt black guide coat

which when rubbed down makes any remaining blemishes or hollows easily visible.

When it is finally decided that the body is passable, it is sent to be painted with three coats in whichever colour the customer wants. If the car is metallic, three layers of lacquer are applied after the initial painting.

By now the chassis will have moved into the construction shop where a three-man team install the engine and assemble the suspension and steering components to get to a rolling-chassis stage, the car in fact rolling on dummy wheels and tyres so that the finished items are not damaged in any way whilst the car is being assembled. Other major components like fuel tanks and wiper motor will be installed on the body as it is due to be mated with its chassis while all bought-in electrical components will be individually checked before they are joined to the wiring loom and installed, as the final touches are put to the seats and interior trim. The windows are fitted using a Swiss-manufactured cold-bond system which TVR were first to use in this country and, as the rolling chassis is pushed around the factory various other items are fitted.

PATENTED SOFT TOP

An interesting point is the roof panel for the convertible Tasmin. Soft top cars are very prone to leaking through poor sealing and generally weak design, but the TVR top, which is under patent, uses a rear

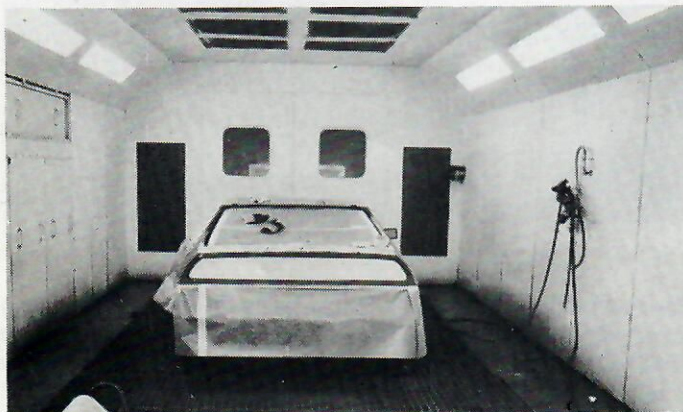
TVR VISIT



Bodies are cured in the open . . .



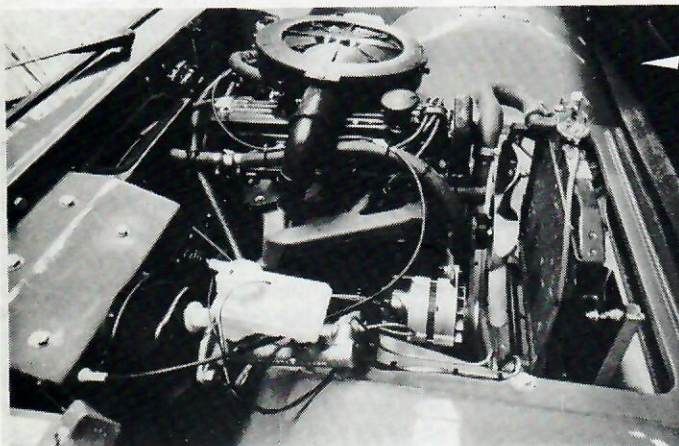
. . .blemishes are then smoothed out in the body shop



A TVR in the spray booth for painting



A body after the first spray



The 2.0 litre Ford engine



Cars are water tested using a hosepipe!

folding hood section which incorporates a roll-over hoop and solid glassfibre panel which extends from the edge of the screen to the hoop and which is held in place under tension by the folding section's struts. In essence it is extremely simple, but TVR make sure it works properly by tailoring each solid panel individually to each car so that a tight fit is ensured. The means of checking the finished item is not quite such a high-technology procedure as the robot 'sniffers' at BL's Cowley plant: at Blackpool a man turns a hosepipe on the roof and waits to see whether any water

gets in; if the car remains moisture free, he ticks his list and the car gets moved on to the next stage.

The final construction stages take place on a ramp where the petrol and exhaust systems are connected and the motor charged with all the essential fluids. The car is then started and by means of diagnostic equipment final adjustments are made before the car's twenty mile road test. If all goes well, the car will move on, but if not further adjusting and finishing will ensue before another road test. Finally, the car is masked again for a final

coat of paint in the spray booth. It seems like an awkward way to go about painting a car, but TVR do it because they believe it is the best way.

After one final check, the car will be ready for dispatch to the dealers and its history build book filed away at the factory. The finished product is a thoroughly developed and tested sports car which, in terms of build quality, will leave many a foreign supercar in its wake. After seeing how they are made, they seem cheap at the price, but you have to appreciate quality to appreciate TVRs.