

# car



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Britain's sexiest  
two-seaters



# GIANTTEST

## MARCOS V6 v TVR TUSCAN V6

FORD'S THREE-LITRE V6 ENGINE has become the staple of the small manufacturers. Marcos, TVR, Trident, Reliant and Gilbern all use it for their sports coupés. Among these, though, the Reliant and Gilbern are both four-seaters of sorts and therefore compete head-on with Ford's own three-litre Capri. The Trident has yet to make a sizable impact on the market. So for most potential buyers the field is automatically narrowed down to the Marcos and TVR.

Although their appearances hardly suggest it, these two have much more in common than a shared power unit. Their backgrounds, too, are far from dissimilar. Both firms started in the dim and distant days when small-output manufacturers were thick on the ground. They have weathered the storms that sank most of their rivals and have achieved the stability of finance and production that is essential nowadays for survival.

The Marcos enterprise has been headed from its inception by Jem Marsh, a man who bears comparison with Colin Chapman in that he is a combination of designer, development driver and businessman. TVR, conversely, has passed through many hands and taught not a few sharp lessons in the economics of car building, though it has settled into a quiet maturity now under the guidance of Martin Lilley.

Both companies have appointed a limited number of dealers around the country. This is as well, for not so long ago it was the practice among the minor firms to dispense with the middleman, thus saving on expense but making sales and service a major headache from the owner's point of view.

All that has changed now, though even if it had not one cannot imagine either the TVR or the Marcos in their present forms presenting too many specialist problems. Just as the engine and transmissions are Ford products, so the vast majority of the rest of the running gear comes from volume-produced cars; an owner's major difficulty might be to identify a given component's source. Damage to the glassfibre bodywork should present no repair snags to specialist garages either, since the makers supply replacement panels that can be grafted into afflicted areas. The chassis frames, welded up in each case from mild steel tube, should



Photographer: John Brink

be similarly easy to repair and maintain.

The saving in cost for the home-builder is a substantial one. On the TVR the price is brought down by £457 and on the Marcos by £580, the equivalent of around 25 percent of the price of a ready-made car.

## STYLE AND ENGINEERING

Marcos and TVR have followed similar policies, sticking to one basic model on which the changes can be rung as necessary without disrupting production. Thus the Marcos, while best known today in Britain in the three-litre form under evaluation here, can also be had with a Ford V4 two-litre engine or, primarily for export markets where exhaust emission control is required, the Volvo 164 three-litre six-cylinder in-line unit. All three versions look very much alike. Indeed, the basic Marcos shape has changed only in detail since the firm first sloughed off the original, ugly gullwing body and took up the Adams design.

Similarly, the TVR has been around long enough in its present guise to become well established in the public eye. One basic body and chassis is used for both the Tuscan and for the Vixen, which has the 1.6litre Ford Cortina GT unit.

The stumpy TVR styling has changed rather more than that of the Marcos, having been tidied within recent years (that will give you some idea of just how old the basic shape is) around the nose and tail. It has also sustained a welcome increase in wheelbase.

There is some similarity in the chassis. Right from its inception the TVR has had a multi-tubular frame of backbone configuration—once even shorter than it is now—with outriggers to support the occupants and the body. It is not a true space frame in that it relies on comparatively few large diameter tubes rather than a complex fully triangulated structure, but the end result appears robust enough. The shape of a backbone frame lends itself to the adoption of wishbone suspension fore and aft, and this the TVR has. The front end is wholly conventional but the back rather more interesting. Upper and lower wishbones are used in conjunction with a cast alloy upright. The damper units are duplicated to spread the load evenly. Most unusually, provision is made for adjusting both camber and toe-in, as on a racing car, which is just as well since the negligible amount of compliance built

into the system calls for precise geometry.

Marcos also has a multi-tube frame nowadays, having soldiered on for years with the original stapled and glued plywood structure, only to be forced into dropping it for reasons of economy just when the public seemed finally convinced of its worth. The frame, like the TVR's, is practical rather than scientific. It relies mainly on sturdy rectangular-section tube and is a compromise between the pure backbone and layout of the TVR and the high-sided setup normal in a track car, leaving depth enough at the cockpit sides for reasonably large doors. One suspects that it was designed with production convenience more in mind than pure science. The suspension is simpler than the TVR's, using the usual double wishbone arrangement at the front in conjunction with a live rear axle on leading arms and a Panhard rod for lateral location. There was a time when Marcos used a de Dion tube instead of a back axle; purists with an eye for originality in design will bemoan its passing, just as they regret the demise of the plywood chassis, but there is no disputing the fact that the Marcos of today, if more mundane beneath the skin, is a much more practical proposition to own and maintain, and no less enjoyable to drive. Some less desirable peculiarities remain, like the dual locks as well as catches to secure the bonnet against villains (and make opening it a lengthy task) and the wholly useless glassfibre bumpers.

Neither the Marcos nor the TVR has sufficient ground clearance. On both, the chassis/body structures are low enough already, making exhaust systems that project beneath dangerously vulnerable. The Marcos grounded lightly but audibly on a bump in a roughly surfaced car park. The TVR was caught out by the same bump, being most vulnerable at the rear where the twin tailpipes dip before sweeping up beneath the transom stern. We had expected the sumps of the Ford engines to ground too, but in both instances they proved high enough to stay out of trouble as long as one stuck to reasonable driving conditions.

Both cars, regrettably, are saddled with the accompanying Ford gearbox with its notoriously low second ratio. There were hopes that the advent of the three-litre Capri would mean a better choice of gears, but this has not proved the case. So a steady market for an uprated second set remains

to be filled by some enterprising gear maker. By way of consolation, though not compensation, one can have either car with overdrive on third and top, which are the gears the majority of owners will find themselves in almost constantly. Overdrive, standard on the Marcos, is £75 extra for the TVR (on our test car, by some quirk, it worked on all four gears!).

## USE OF SPACE

No one expects a sports car to utilise space in the way that, say, the Austin Maxi does. This pair, however, prove to be positively extravagant with it.

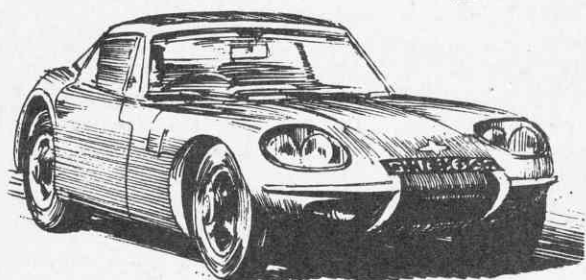
The Marcos is the worse offender, being as long as a saloon yet an uncompromising two-seater. The initial foot or so of drooping snout is there for nothing more than styling and penetration. The engine has perforce to live in the elongated cavity necessary for the Volvo inline six. Advantage of this has been taken to site the Ford unit well back in the chassis in the interests of weight distribution. Surprisingly, the rest of the underbonnet space is fully taken up by the ancillaries, plus two footwells projecting in from the cockpit. The cockpit itself is intimate, not to say claustrophobic. As usual in such cars there is a problem with stowage for odds and ends. The fascia locker is rather small, but there are two shelves—one atop the scuttle, under the steeply raked and curiously veed windscreen, the other beneath the back window. Articles placed on either are likely to be grilled on a warm day and are free to slide around. The rear shelf is also extraordinarily inaccessible. These areas apart, one is reduced to leaving odds and ends on the floor.

The boot is not so roomy as it looks, partly because it shares its space with a poorly protected fuel tank and partly because the bulky spare wheel reposes naked on the floor. The glassfibre panels have a rough, unmoulded finish to the underside. This boot in its present form is not a place in which one would care to leave good quality suitcases—not that many of them would go in.

No such criticism applies to the TVR's boot for the reason that it does not have one. The double wishbone suspension takes up a lot of room at the back and the fuel tank grabs what is left. The result is that one is left with the shallow space directly beneath the huge back window, and even this has to



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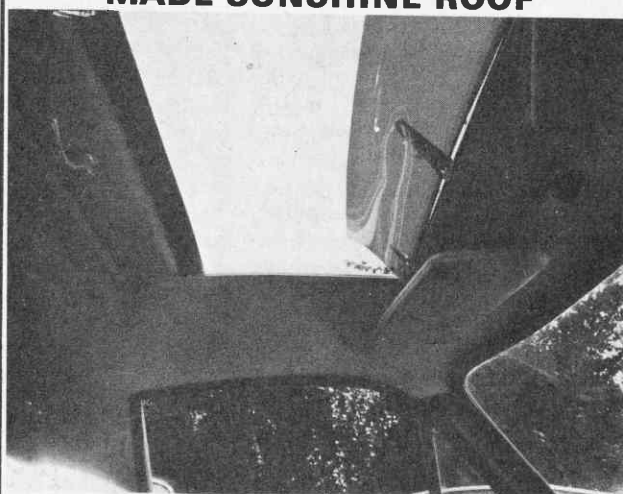
# OPEN UP

A WHOLE NEW SCENE IN

# TVR

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**VICTORIA LANE, BARNET, HERTS**

►be shared with a vinyl-covered spare wheel. Loading is not easy, since in the absence of a tailgate suitcases have to be brought in through the recently widened but still narrow doors and then humped over the seats. One would be ill-advised to pile them high in case they pressed against the window under acceleration or toppled forward under braking. In any case, they would spoil rearward vision.

The TVR's dashboard compartment is too small to be of much practical use. Still, one does feel rather less constricted than in the Marcos and there is the carpeted deck behind the seats to park odd items.

Up front, the TVR is extremely compact, the V6 engine just squeezing into a space which seems no more than adequate even for a Cortina four-cylinder. The abrupt cutoff of bodywork front and rear reduces overall length to the bare minimum necessary to contain an engine, two people, a final drive assembly and a fuel tank in that order. The TVR is, in fact, a mere inch over 12ft long and therefore comparable with a small saloon like the British Leyland 1300.

### COMFORT AND SAFETY

Both cars have seats that give excellent lateral grip and are comfortable on long journeys despite sparse padding. On the Marcos you still recline more than is usual (though less than on early examples), making the built-in neck restraint more of a headrest—and an effective one too for once, as it does not transmit the car's vibrations to one's cranium. The seat is a fixture with no adjustment at all. Instead the entire pedal assembly can be wound in and out by an ugly handwheel on the recently revised, padded dash. The steering column is adjustable also, calling for five minutes' spanner work on a clamp under the bonnet (Herald/Vitesse/Spitfire/GT6 owners will be familiar with the process). Both pedal and column travel is limited, the Marcos being scaled around the lanky Mr Marsh just as Lotus fits the compact Colin Chapman. Marcos drivers under 5ft 10in will need to spend another £7 15s to get a removable, elongated bolster that pads the seat up but eliminates its bucket-like side grip.

The seats in the TVR are just as gripping as those in the Marcos and less sharply reclined. The backs are fixed, in fact, with

no rake-adjustment option. As on its rival, The TVR steering comes from the Triumph and has the same cumbersome method of column adjustment. Both cars have fashionably small-diameter steering wheels, the TVR's with too thick a rim for some tastes and the Marcos's set at a slightly awkward, near-vertical angle.

The pedals in the Marcos are set close together and arranged perfectly for heel and toeing. In the TVR the throttle is much too far forward of the brake to permit either heel and toeing or, indeed, a quick transition from one pedal to the other. Neither car has anywhere to rest the left foot.

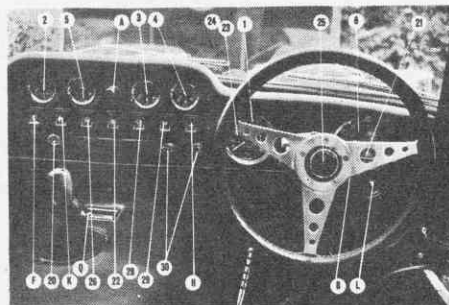
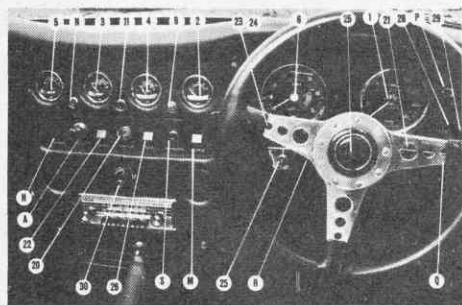
A gearchange that seems satisfactory in the parent Fords inexplicably loses something when transplanted into a sports car. Undoubtedly, part but not all of the explanation lies in the fact that one is sitting beside and not above the transmission and so has correspondingly less leverage over it. At any rate, the TVR's change was woolly and no more than reasonably light while the Marcos's was downright resistant, even when allowance was made for the stiffness of a new box. The transmission remains the weak spot of all these V6 Ford installations.

The great width of both chassis spines, making for transmission tunnels as big as a truck's, make it hard to find a satisfactory location for the handbrake. The TVR people have managed, nonetheless, but the Marcos's is thrown in as an afterthought to prod the left knee.

Both models suffer from engine and exhaust heat and noise entering the cockpit, a fault difficult but not impossible to cure in such instances where the occupants are in close proximity to the poorly silenced machinery (there is room to fit a proper air cleaner). Ventilation systems are inadequate and rudimentary, lacking face-level outlets, and one has to rely on opening the windows. The ones in the Marcos have power operation as standard.

The cockpit of our TVR still had a trace of resin odour, which experience indicates wears off as a car ages. The Marcos had that authentic, luxurious smell of leather upholstery and trim. Obtaining it costs another £40; Cirrus and Ambla are the standard wear.

All round visibility is extremely good in the TVR, thanks in large measure to the vast



**Instruments:** 1 Speedo 2 Fuel 3 Water Temp 4 Oil Pressure 5 Amps 6 Tacho **Warnings:** 8 Ignition 9 Main Beam 11 Indicators 12 Water Temp 14 Handbrake **Controls:** 20 Ign/Start 21 Indicators 22 Lights 23 Dip 24 Flash 25 Horn 26 Panel Lights 28 Wipers 29 Washers 30 Heater **Special Items:** A Cigar Lighter F Interior Light H Blower K Fog & Spot Controls L Pedal Adjustment M Reversing Light N Reversing Light Warning P Brake Fail Light Q Overdrive R Stereo Control S Generator Warning Light

### PRICES

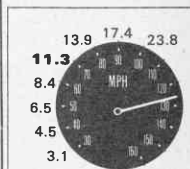
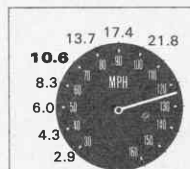
#### MARCOS

Competitively priced at £1770 in component form, making it only £180 more than the two-litre V4 version. The addition of purchase tax, payable on ready-built cars, pushes the figure up to £2350, at which level the Marcos is competing with the E-type Jaguar

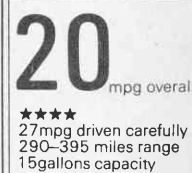
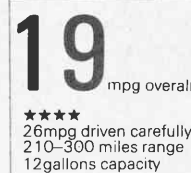
#### TVR

At £1558 on component form the TVR undercuts the Marcos by £212 (or only £137 if the overdrive option is taken into account) and is £316 more than the basically similar but Cortina GT-powered Vixen. Purchase tax takes the price of the Tuscan up to £2015

### ACCELERATION from standstill in seconds



### FUEL



### SPEEDS IN GEARS

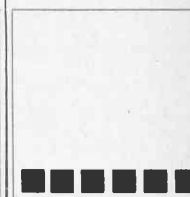
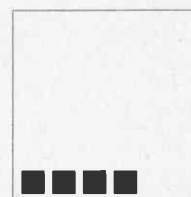


### HANDLING

Very high cornering power on Avon radials. Slight initial understeer, changing through a neutral period to controllable oversteer as adhesion finally goes. Steering rather heavy. Basic characteristics unchanged in the wet

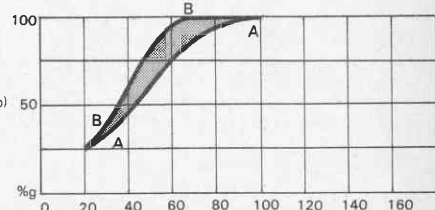
Equally high cornering power, also on Avon radials, but can be joggled off line by bumpy surfaces. Handling neutral, changing to final oversteer. Steering heavy at low speed but lightens considerably as speed increases. Excellent adhesion maintained in the wet

### LUGGAGE CAPACITY cubic feet



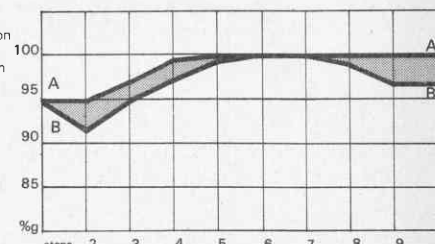
### BRAKES

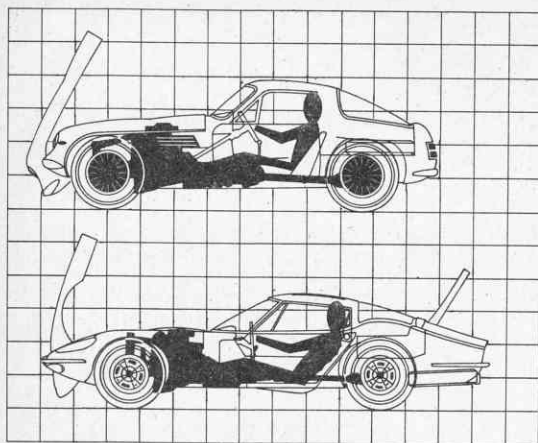
RESPONSE in normal use. Deceleration (percent g) vs pedal load (lb) A= Marcos B= TVR



### FADE

peak deceleration achieved in 10 crash stops from 60mph at one minute intervals





	MARCOS	TVR
<b>DIMENSIONS</b>	inches	inches
wheelbase	89	90
front track	50.5	53
rear track	51	54
length	164.25	145
width	62.5	64
height	43.25	48
ground clearance	6	3.5
headroom	33	34
legroom	29	30
<b>ENGINE</b>		
material	iron/iron	iron/iron
bearings	4	4
cooling	water	water
valve gear	pushrod ohv	pushrod ohv
carburetors	1 Weber 40 DFAI	1 Weber 40 DFAI
capacity cc	2994	2994
bore mm	93.67	93.67
stroke	72.42	72.42
compression to 1	8.9	8.9
gross power bhp	144	147
rpm	4750	4750
gross torque lb ft	192.5	192.5
rpm	3000	3000
<b>TRANSMISSION</b>		
control	floor lever	floor lever
synchronesh	1-2-3-4	1-2-3-4
ratios to 1		
1st	3.16	3.16
2nd	2.21	2.21
3rd	1.41	1.41
o/d ..	1.16	1.16
4th	1.00	1.00
o/d D	0.82	0.82
final drive ratio	3.58	3.31
Tyre size	175/13	165/15
rim size	5.5	5.5
<b>SUSPENSION</b>		
front	double wishbones, coil springs, and telescopic dampers	double wishbones, coil springs, and telescopic dampers
rear	live axle, twin leading arms, Panhard rod, coil springs and telescopic dampers	double wishbones, coil springs, and telescopic dampers
<b>LUBRICANT</b>		
Engine oil	20W/50	20W/50
Sump pints	9.75	9.75
change miles	6000	6000
other lube points	3	7
lube intervals	6000	3000

<b>AIR</b>	26psi	rack and pinion	25psi	rack and pinion
<b>BRAKES</b>	disc 9.7in		disc 10in	
<b>STEERING</b>	31ft turning circle	2.6 turns lock to lock	27ft turning circle	3.5 turns lock to lock
<b>AIR</b>	26psi		26psi	
<b>BRAKES</b>	drum 9in		drum 9in	
<b>WEIGHT</b>	1948lb		2000lb	

► rear window. The view ahead could be improved, perhaps, by making the seat a little higher but the way things stand now it is no worse than on most other sports coupés. At the same time, the mirror could advantageously be lowered an inch or so. In its present location it relies too much on the view through the top of the back window, where the low angle unavoidably introduces distortions. Neither of these criticisms will apply, however, for drivers of six feet or more.

Again, tall drivers will be at home in the Marcos. Short ones will curse the huge central hump in the bonnet and will have to park gingerly because the nose droops away out of sight. Regardless of one's height the back window reduces to a narrow slot when viewed through the mirror, nor is rear three-quarter visibility good enough.

Headlights on both cars are acceptable by the standards that continue to apply, although on near 130mph vehicles like these double quartz-iodine systems are desirable and could be arranged without much difficulty. The Marcos three-litre uses rectangular Cibie halogen units, but perspex covers reduce their power to about the level of the TVR's Lucas equipment. You have to pay £7 10s to get reversing lights on the Marcos. They are standard on the TVR, with a manual switch.

Facia layouts are remarkably similar, with the usual matched pair of speedo and rev counter visible through the wheel and the minor instruments aligned along the centre of the panel. Neither car uses wood or simulated wood any longer. Instruments in both are clearly legible, easily read even at a glance. Beneath them in both instances is a row of rocker switches. The TVR has only a few, because a steering column stalk controls the lights, while the Marcos has a confusingly numerous array.

Neither the Marcos nor the TVR suffered nearly as much from wind roar as we had anticipated. In fact they were comparable with saloons in this respect. Mechanical noise levels were relatively high, of course, as one still expects on a sports car. Both exhausts came close to being raucous—they were certainly suitably impressive to bystanders—yet were not overpoweringly audible within the cockpit.

TVR and Marcos alike continue to live in an era in which ride must be sacrificed for roadholding. Other, more sophisticated designs have succeeded in combining both. In these two, you learn to live with the extreme harshness at low speed, even steering around the worst potholes. As speed builds up the ride progressively softens until at 70mph and above it is really quite satisfactory.

Both cars are strong on primary safety—the sort of handling that enables you to avoid an accident in the first place. If the worst happens there is the token protection of well-padded facias, smooth-faced switches, unobtrusive door handles (but bonnet catches that threaten the knees on the TVR) and collapsible steering columns.

## PERFORMANCE, HANDLING, BRAKES

On an mph-for-£sd basis you would be hard put to find a pair of road cars that could better these, provided you ignore the Morgan V8 tested elsewhere. The beefy Ford engine makes short work of their low weight and frontal area, providing terrific acceleration that shows no sign of tailing off before you are well into three figures. As you can see, there is nothing to choose between them—the Marcos feels faster because one sits so low in it, but with such torque available the TVR can use its higher gearing to advantage and manages to keep up. At the top end, the superior aerodynamic form of the comparatively low-g geared Marcos helps it to stay on a par with the longer striding TVR.

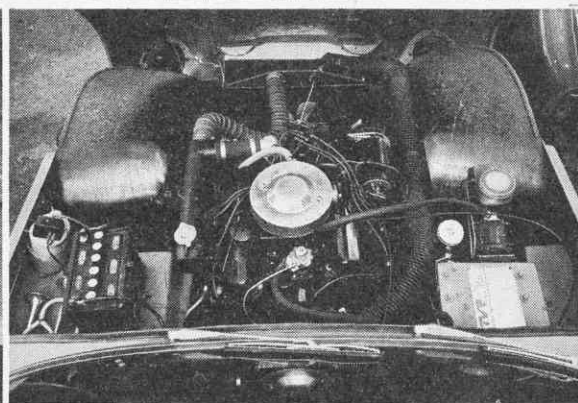
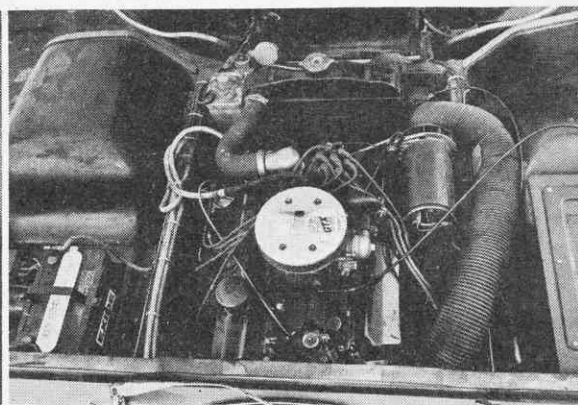
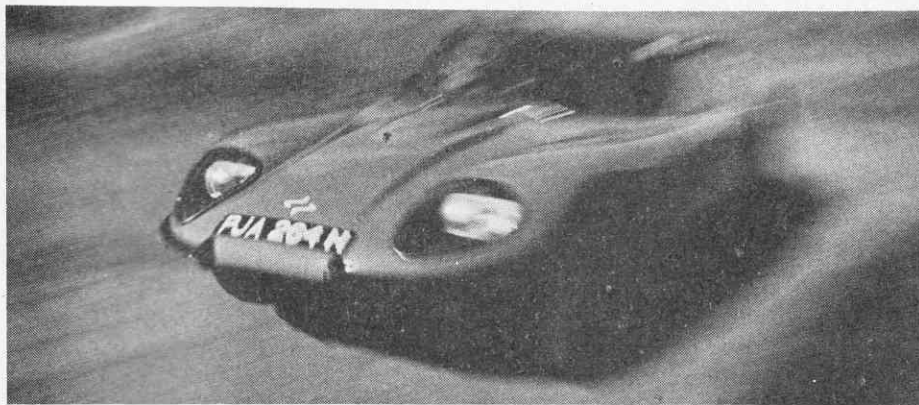
Best of all, both cars are immensely flexible and can spend most of their working lives in third and top yet still show a clean pair of heels to almost anything else one is likely to meet. Making full use of the higher ratios also benefits fuel consumption which otherwise can slump disastrously into the mid-teens. Exuberance with the revs is both unnecessary and expensive.

The Ford engine peaks at a leisurely 4750rpm. The Marcos's rev counter puts the red line at 5500 and the TVR's goes another 500 revs beyond that. Well, 6000 rpm is theoretically available from the V6 in its latest form (early ones bust at 5000!) but should be used only momentarily. It comes perilously close to mechanical disaster as well as being quite unnecessary for all normal purposes. The only time we felt the need of it was when in that hopelessly low second gear.

In the handling department both cars feel much closer to the track than to the road. They have the nature of detuned, softened sports-racing cars—unlike the majority of volume-produced sports cars, which never fail to betray their saloon parentage. Accordingly you must be prepared to accept certain shortcomings in order to reap the benefits. The first is the lack of ride comfort. Then the steering of both cars is heavy at low speeds, especially when manoeuvring, and that of the Marcos never really lightens up. The TVR's does, however, but it also still feeds a great deal of kickback up to your hands—a long-standing fault. There is a dead feeling to the steering in both cars, partly as a result of negligible castor, particularly on the Marcos. In return for putting up with all this you get steering that keeps the driver fully informed about what the road wheels are up to, and to which the car responds completely, precisely and instantly.

Simple roadholding, sheer cornering power, is excellent in both. Even on roads the driver knows, his nerve is likely to run out before the adhesion starts to fade. The roadholding, in fact, particularly of the low-slung Marcos, is infinitely better than might be expected with such a heavy engine in a forward location. The anticipated understeer is entirely absent in the TVR. It is virtually





neutral, oversteering mildly and controllably under power. The Marcos has slight understeer which can be killed completely with judicious application of the throttle. Both cars respond best to being carefully set up for a bend and taken through with plenty of power on.

Unlike the TVR, the Marcos lacks a servo for its brakes which with hardish pads and linings felt correspondingly dead for low speed use around town but reassuringly competent once out in the country.

Wet or dry, though, their directional stability was no better than average at high speed and one can never really relax behind the wheel. Conversely, it is at just these speeds that they really begin to gel, getting an all-of-a-piece feeling that is absent at anything much under 60mph.

## IN CONCLUSION

This is a pair entirely in the sports car tradition. An owner must be ready to put

up with shortcomings like a hard ride, high noise level, poor ventilation and dismal luggage space. In return he is given unusual looks, roadholding that few other cars can match, responsive handling and tremendous performance, of which the most impressive aspect is the flexibility of the big, lazy engine.

And all this comes at prices that—as long as one sticks to the kits and does not pay purchase tax—seem quite reasonable. Among the dwindling ranks of uncompromising two-seaters both the Marcos and the TVR turn out to be not that much more expensive than the MGB GT and the TR6. They are in fact in the same price band as the Lotus coupés though they have a different appeal, more muscular and less elegant.

*Our thanks are due to Tony Cosgrove Sports-cars, of 268 High Street, Sutton, Surrey—TVR dealers—for the loan of the Tuscan tested here.*

The Marcos (above left) leaving a corner with perfect charm, while the driver forces himself to keep the power on. The car was quite happy through most corners as long as the driver kept his nerve—if you backed off, as was sometimes the temptation, then the rear wheels were beside you in a flash. The TVR (centre left) here shows slightly more body roll than its rival, but generally it sat on the road quite nicely and behaved just as one would expect a big three litre sportscar to behave. Both engine compartments suffer a little from poor accessibility and with TVR (centre right) things seemed even more cluttered by the extra piping for the side mounted radiator filler. Life inside the cockpits of both cars was quite pleasant once you had finally mastered the art of getting in. The Marcos's super large transmission tunnel (bottom left) and the more conventional TVR tunnel both seemed to be a bit of a waste of space since in both cars the switches were all clustered together in the centre of the fascia it was difficult to locate one from another. One might have thought that some of the major controls might have been moved on to the tunnels.