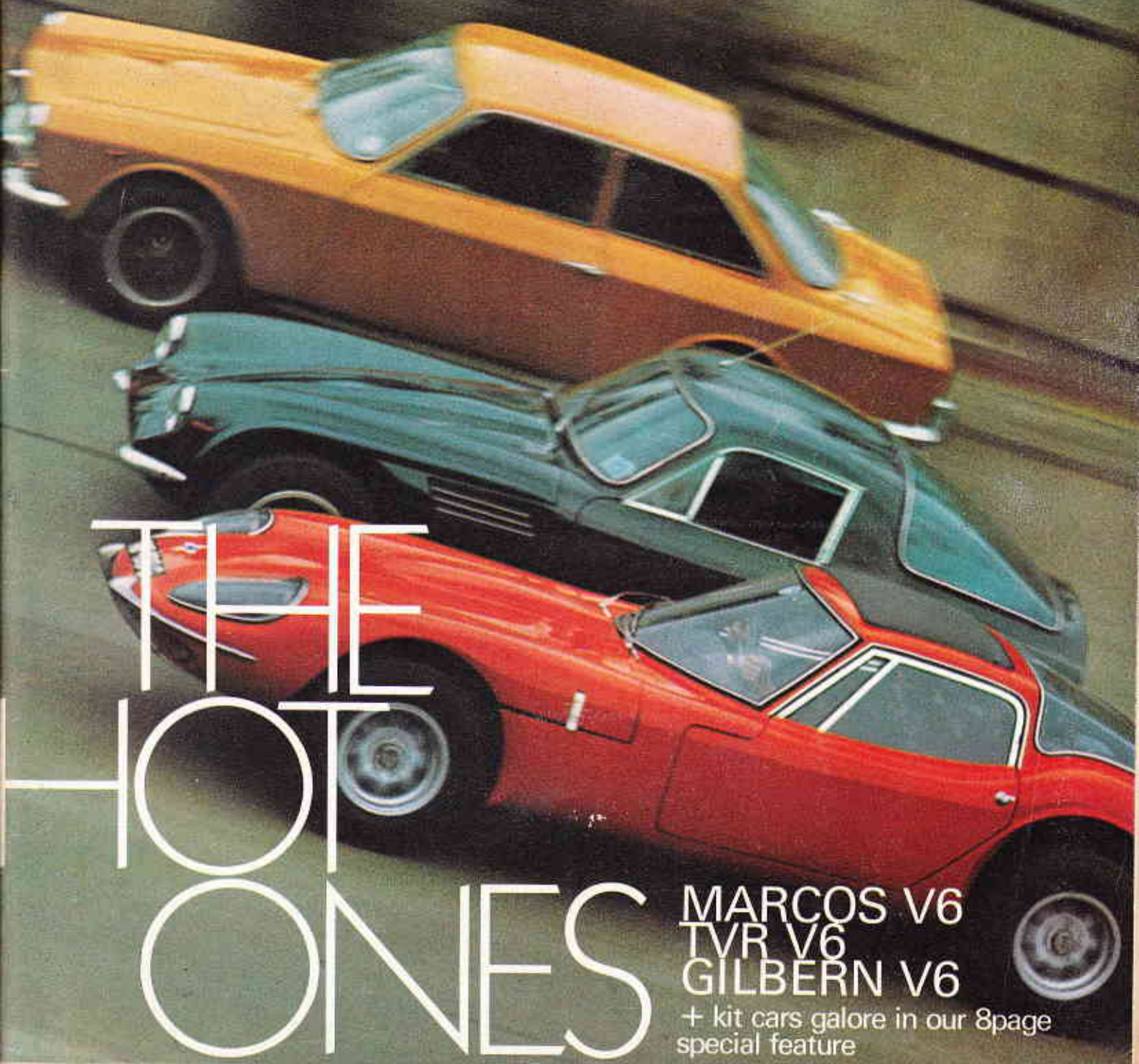


# car

JUNE 1969 3 shillings



# THE HOT ONES

MARCOS V6  
TVR V6  
GILBERN V6

+ kit cars galore in our 8page  
special feature

The advent of Ford V6 power has given Britain's specialist builders the chance to offer real performance

# THE HOT ONES



WHEN THE FORD ZODIAC FIRST appeared, almost the only specialist builders who appreciated its significance for them were Reliant. They, of course, had a close and long-standing association with Ford, and they saw in the three-litre V6 engine the means of making the Scimitar into the car it had always tried to be. In very large measure they succeeded; look in a forthcoming issue for a pre- and post-V6 comparison of two Scimitars to see what we mean. The difference is very marked.

In consultation with Ford, Reliant were aware of the drawbacks of the engine as well as its advantages when they started to redesign the Scimitar chassis to take it. The main disadvantage is that it is heavy; the sheer problems of installation are not too bad, being confined usually to the exhaust system and sometimes the oil filter housing. The advantages are very obvious; reasonable power (although specific power at something under 50bhp per litre means that it is no ball of fire), lots and lots of torque and a nice compact shape.

The shape means that the engine can be mounted a long way back to overcome its heaviness—which is what Ford themselves did, for goodness' sake—maintaining a reasonable fore/aft balance and a low polar moment of inertia. And by leaving the engine dead standard you gain (you hope) reliability, plus the ability to get spare parts from any Ford dealer and even, with the right sort of negotiation, warranty cover from the moguls at Warley.

With Reliant showing the way it didn't take long for other special builders to think along the same lines. Next into the field were Gilbern with the Genie; last Earls Court Show saw the announcement of the Marcos 3-litre; and now we have TVR joining the throng.

The Gilbern is slightly different in concept from the other two, coming nearer perhaps to the Scimitar. It boasts four proper seats, even though with a big bloke driving it is reduced to a 3+1. It is easy to get into and out of, which is more than can be said for the Marcos or the TVR—especially the former.

From outside, all three cars reflect the much higher standard of finish which newcomers to the field must now measure up to. The TVR is perhaps marginally the best finished. But as a

shape the Marcos still puts the others in the shade, little spoiled by the bonnet bulge which fits over the V6 induction. The Gilbern reminds us from the side of a foreshortened Fiat 124 Coupé, especially in certain colours, an impression helped by the special cast-alloy wheels from Birmingham which look quite like the ones optionally fitted on the Turin car. The TVR looks like TVRs have always done; big-wheeled and squat, shortest of the cars by a long way, but fractionally wider even than the Marcos.

Inside and seated, it becomes obvious that all three firms have paid a good deal of attention to the driver's needs. The TVR falls squarely between the Marcos' near-reclining position and the Gilbern's near-normal one. All have seats with a good wrap-around effect and shoulder support, although the Marcos is clearly the best off. TVR and Marcos have both started paying attention to the American safety regulations and boast padded dashboards and safety-type switches; the Gilbern still disposes its dials and controls in a strip of polished wood. There is still a tendency in all these cars to push the minor instruments towards the middle of the dashboard where they can be obscured by the driver's left hand, and the Marcos especially has now come by a Jaguar-like row of identical and confusable switches in the centre of the dashboard.

Starting up lets you know straight away that even if these are standard Zodiac engines, enough has been done in the way of hacking the exhaust to make minor differences to the power output and a lot of difference to the noise. The Gilbern is certainly the most civilised; the TVR beats the Marcos by a short head in sports-car routiness, but can be driven quietly.

Manoeuvring is far from easy, even in the Gilbern, which at least has good all-round visibility and a shape which can be seen by the driver for accurate placing. Seeing from the Marcos is easier than you might think—there are no blind spots to speak of—but you are never very sure where the car begins and ends. And the TVR still has that over-the-shoulder blind spot which makes reversing a fairly tricky procedure at times. What really makes shunting tricky, however, is the heaviness of the steering (with the Gilbern the worst offender) and the difficulty of engaging reverse. Good

though it is in the Ford car, the Zodiac gearbox seems to lose something when stirred through a shorter lever in a different position relative to the driver. It's not just a matter of selecting reverse—which suffers from baulking—but also of difficult up-changes. In both the Gilbern and the Marcos we botched acceleration runs by missing the second/third change from time to time; driven gently, the difficulty is less obvious. Another thing which shows up to disadvantage in these cars is the low second gear with which the Zodiac gearbox is cursed. In the Marcos especially there was a tendency to ignore first entirely and drive it as though it had a three-speed box; that a car like this should not be able to pull 60mph without over-revving in second is not really good enough. It will be interesting to see whether Ford themselves come forth with a closer-ratio set when the Capri 3000 emerges later this year.

The real purpose behind these cars is to give motoring pleasure, and a good gearchange is one thing that contributes towards this. But handling is even more important, and here the Marcos is still almost in a class on its own. Staggering roadholding (on Avon radials) is complemented by near-neutral characteristics, edging towards understeer on high-speed bends and oversteer through low-speed corners. The steering is quite heavy but minimal movements are needed and there is plenty of feel fed back to the driver without too much kickback. What does upset the car a little is rough surfaces; stick two wheels into the gutter, for instance, to avoid a middle-of-the-roader coming the other way and you have to hang on tight to hold it on course. On smooth surfaces, it remains supreme.

The TVR runs it very close, though. Roadholding and cornering feel much the same although a conscious check will show that the speeds being achieved are slightly lower. There is less of a tendency for rough surfaces to upset the apperant and start the car jumping all over the road, and steering kickback is kept well under control. Even if the TVR won't quite keep up with the Marcos on a smooth road it will still out-corner most of the cars it will meet.

Unhappily, the Gilbern in its present form isn't in the same class. One would not expect it to be, quite, since it is bigger and its centre of gravity that much higher. ●

► **GILBERN** Considering how long they have been around, the little Welsh firm stay very close to their origins. In premises, that is; their cars have gone through a steady process of development which left them at the stage where they could feel confident about dropping the V6 into the existing MGB-engined GT. Chassis is still the tubular structure of yore, with the universally popular double wishbone/coil spring front suspension setup. Rear suspension owes more to original Gilbern thought, with a live axle located by twin Watt linkages, again using coil springs. As befits its two-plus-two status, the Genie is bigger than the other two cars, both in length and in height. It is also appreciably heavier, weighing something like three hundredweight more than the Marcos, for instance.

Gilbern are thus far the only people to have experimented with getting more power out of the V6, producing a PI version with

Tecalemit-Jackson fuel injection which pushes out a claimed 20bhp more than standard. Meanwhile with the normal engine one would expect the Genie to be slower than either the Marcos or the TVR, both because the extra weight must increase the rolling resistance and the extra frontal area the drag; and an aeronautical engineer would probably opine that it is down on drag coefficient as well. This is obviously reflected in fuel consumption, but is balanced by extra accommodation.

On the handling side, the rear suspension layout is singular enough to stop people from jumping to conclusions. The use of Watt linkages is something which requires a sterner use of basic theory of machines than some designers seem capable of; see our road test section to discover how the Genie fares. And remember that basic balance still plays a large part in determining handling characteristics, which is why the V6 installation is critical.

**MARCOS** Regular readers will have more than a passing familiarity with the smaller 1600, thanks to our Giant Test last November. The 3-Litre's advent answered some of the implied criticism therein, that the thing didn't go as fast as it looked, and a glance at our road test section and the accompanying figures shows that this is scarcely any longer a valid argument; there is no doubt that the Marcos puts its extra power to very good use indeed; this is the surest sign that it is a real thoroughbred in design.

Yet this was perhaps the one car of the three that one might have expected to get into real trouble with the extra power and weight. The 1600 Marcos relied for its superb handling more than a little on its very good balance. It was, and remains, the lightest car of the three, but the very large extra chunk of weight seems to have been absorbed without any bother, perhaps even with some beneficial



effects on the already low centre of gravity.

Marcos eschew the complex, and tie their live axle down with simple links in appropriate directions. Empirical, perhaps, but one can't deny that it works. So does their wooden monocoque build—at least we've never heard of the glue failing yet, even if the odd rattle bespeaks a slight easing of the relationship between the wood and the various metal components.

If logic suggests that the Gilbern should be the slowest of the three cars (if only because it is the most capacious), then the Marcos must be easily the fastest; there is no doubt about the aerodynamic efficiency of that sleek shape, nor yet the tiny frontal area.

Marcos don't seem to mind sacrificing ride to handling, yet such is the comfort of their seating that all but the most horrible graunchings go unnoticed. Noise, however, is something else again.

**TVR** One of our number, who used to build aeroplanes near Blackpool, remembers how even then the TVR company were very much local heroes. All the area bloods ran, or at least hankered after, the various versions then current—although there was a school of thought which favoured the Rochdale Olympic, now sadly defunct.

There was a tendency to overlook the occasional reports that money had run out or new interests moved in; a sort of faith that TVRs in some form or other would carry on being produced. And produced they were, in a variety of versions which have built up for the firm over the years a great backlog of development experience.

For instance, TVR have had enough to do with the installation of big American V8s in their miniscule tubular chassis to make the shoehorning of the relatively small V6 Ford look quite straightforward. Over the

**Study in frontal areas, with an interesting sidelight on aerodynamic lines. Note that the Gilbern (left) not only has more frontal area than the TVR or the Marcos, but that it is a lot more bluff-fronted into the bargain. Bulkier shape, however, bespeaks greater room within, and the deeper screen better visibility**

years they have also flirted with the idea of using new and more exotic bodywork, but the current production Vixen still owes much to the original stubby shape.

Another thing they believe in sticking to is their basic chassis setup. Of the three cars the TVR is the only one to use an independent rear end, with double wishbones and coils just like some very sophisticated racing and continental road machinery. This layout was chosen in the first place in the interests of handling, but led to one or two problems in the ride department. Ground clearance has also been a perennial problem.

Still, the progression to fairly cheap yet reliable V6 power should have left TVR with a compact car capable of leaving behind most of the opposition. On paper the Marcos should still out-accelerate the TVR by a fraction; read on into the road test section to see if it does!

continued on page 79 ▶



Photography: Charles Puckington



The car we drove was by no means short of roadholding as such, but was let down to quite an extent by its handling. The trouble took the form of a transition to oversteer at comparatively low cornering forces; it didn't seem possible to hold a stable oversteering condition, and any attempt to drive where the transition was taking place resulted in an untidy sawing away at the wheel in an attempt to keep the tail where it ought to be.

Compounding this problem was that of really bad kickback through the wheel, to the extent where real strength was needed to hold the car straight. Gilbern are aware of this problem, and are working on it hard; as a first step they may well replace the lever-type dampers at the front with telescopic ones. At the same time they might well try re-ambering the front suspension to increase the understeer and make the handling more consistent, even at the cost of making the car a bit heavier to steer. If they do this, the odd way in which the car feels 'locked-over' on really tight corners—rather in the manner of the Herald or Vitesse—may also be overcome.

Some experiments with the ratio of front to rear roll stiffness may also be in order, for the oversteer which occurs undoubtedly finds its origin in roll. If things could be softened up a little, it should help the ride as well. At the moment, this is not really up to the standard one might expect of a 2+2 GT car; because of its very nature, the Gilbern finds it difficult to get away with the sort of ride which people accept cheerfully in the TVR and the Marcos.

The Marcos especially has a diabolical ride, since its low-set design forces small suspension travel on the chassis engineer. That passengers do not complain bitterly about this is entirely due to the seats, which give such a marvellous semi-reclining position and support wherever it is needed.

Support is also a great feature of the TVR seats and indeed its cockpit in general. The ultra-high transmission tunnel is just right for the left elbow, for instance, and the knees find valuable extra support against tunnel and door when cornering hard, without coming into contact with anything uncomfortable. The ride is a fair bit better than that in the Marcos, and the ground clearance problem has definitely been solved: a trip over some of our favourite Lancashire switchback roads (which, with all due respects, are the last thing along which the Marcos likes being driven quickly) was accomplished at very high speeds with only one graunch from underneath—and that at a place where we have graunches things as prosaic as Minor 1000s before now!

Performance is a very vexed question indeed. Sums involving power, weight, frontal area and probably drag coefficient indicate that the Marcos should be a shade faster than the TVR which in turn should be comfortably faster than the Gilbern. But the overriding consideration is that of choice of gearing—something which also has a marked effect on top speed. In particular, times to a given speed mean relatively little because of the great hole between second and third in the

Zodiac box. If you can just scrape 60 in second, as the TVR can with its 3.31 final drive and 15in wheels, you are clearly going to be better off to that point than you are if you have to change up to third before you get there. In general these cars are very badly handicapped by the poor gear ratios—and so will the Capri 3000 be if Uncle Ford doesn't do something about it. Wait and see . . .

Psychologically, the Marcos feels the fastest, partly at least because it allows itself the unnecessary flattery of a very optimistic speedometer (maximum 134mph indicated equals 122mph true, for example). The TVR runs it close, however, and actually scrapes into the lead on top speed—perhaps indicative of the power soaked up by the Marcos' belt-driven fan at high speed compared with the TVR's electric one. The Gilbern still feels fast, to be sure, but not that fast—though it does believe in telling you near enough how fast you are really going.

So which of these cars do we plump for? The Gilbern gains a lot from its two extra places, which make it more or less unique in the market place until the advent of the Big Capri. What it still needs is a bit of development to sort out its remaining problems, but with only five cars a week going to keen kit-builders the urgency is not great; it will become more so when production doubles this year and complete cars start to emerge from Llantwit.

The Marcos remains, for us, one of the most glamorous cars in the world. We can vouch for the fact that the 3-litre attracted more attention than the Ferrari 365GTC we were driving a couple of weeks ago (story next month) and it probably represents one of the quickest ways at any price of getting from A to B along any route consisting of mainish roads with reasonable surfaces.

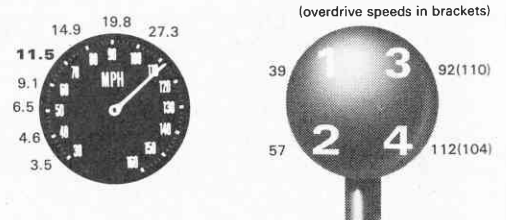
If you really want to take to the back lanes, the TVR immediately starts to gain points with its compactness, its better forward visibility, especially over humps and sometimes across bends which can be blind to the Marcos driver, and above all the way it takes to bad surfaces without its handling starting to go to pot. Thus one can take advantage of the way it can be braked hard into corners and then tweaked round, without having to worry about whether some imperfection of surface will try to fling the car off line.

As an all-round machine for our own personal driving, pleasure, in fact, we tend for this reason to go for the TVR by a short head, preferring it even to the Elan (which while more comfortable and better-handling—perhaps—on a smooth road also has its grounding problems in the rough and lacks the TVR's effortless urge). The only machine we can think of whose all-round performance impressed us as much was a very different animal: the BMW 2002. And to paraphrase the kit car enthusiasts without actually agreeing with them, who wants to buy a German tin box? Which is why there will always be a market for this sort of car. But make no mistake: the Gilbern shows promise, the Marcos is no less than you would expect the Marcos 3-litre to be, and TVR have made one heck of a good car out of the Tuscan.



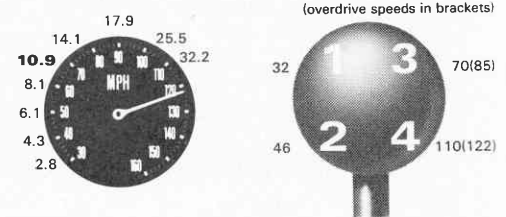
**What it's all about:** Ford's V6 is high and heavy, but also torquey, powerful, reliable, cheap and available: just right

**GILBERN V6**



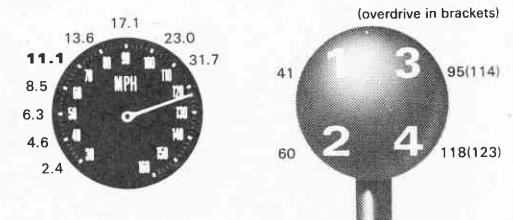
**21** mpg overall: ★★★★★: 27mpg driven carefully: 300-375miles range: 14 gallons capacity

**MARCOS V6**



**23** mpg overall: ★★★★★: 29mpg driven carefully: 250-300miles range: 10 gallons capacity

**TVR V6**



**23** mpg overall: ★★★★★: 29mpg driven carefully: 350-450miles range: 15 gallons capacity