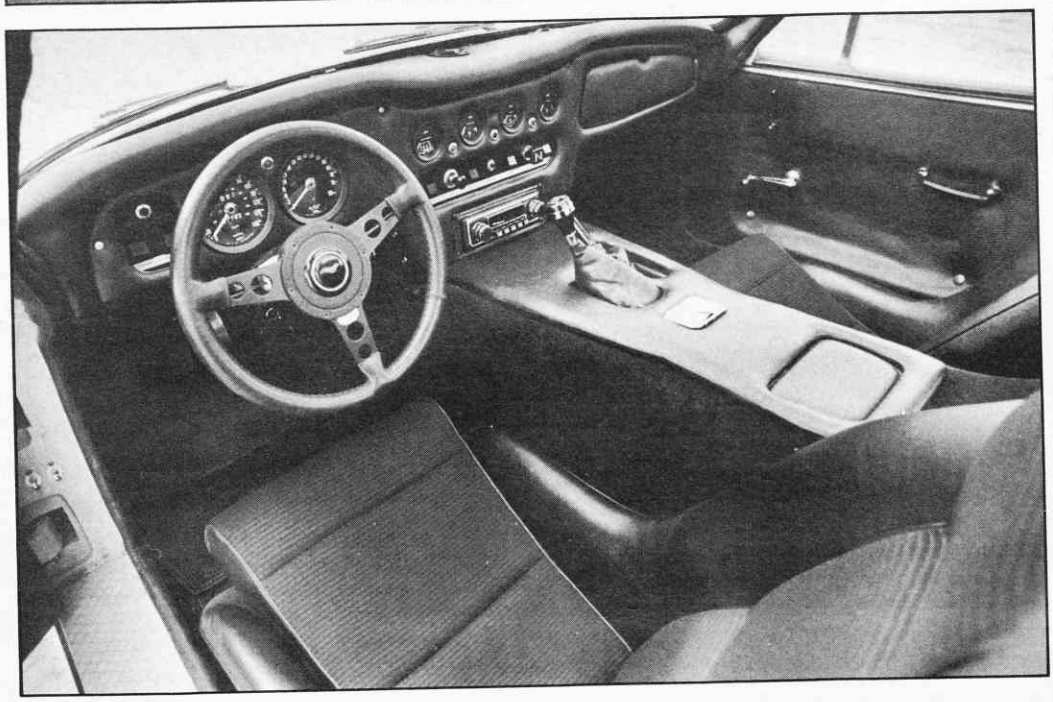
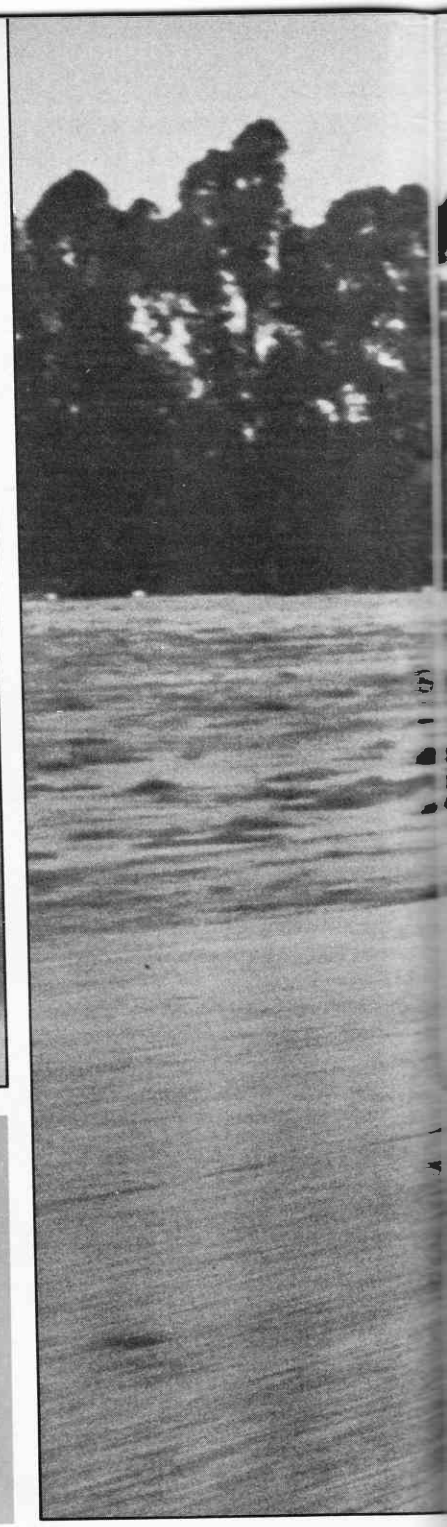




TVR VIXEN 2500 M

An incredibly good chassis disguised so as to appeal only to the dedicated few

NURTURING ECCENTRICITY is an admirable trait, one at which the English have always excelled and one to which the English adhere while all about them car makers surrender to the forces of blandness and build larger numbers of fewer models. There is still a place in England for small firms building unusual cars and there is still in the English the determination to meet whatever governmental requirements are imposed on the builders of unusual cars, however ill-equipped they are for doing so.

Thank goodness. As witness to that determination we have here the TVR Vixen 2500 in its latest "M" form. It is not precisely a new car, being rather a modification of previous TVRs, but the modifications are extensive. The tubular chassis structure has been redesigned completely, even though the body surrounding it is much the same as before.

But first, what is it? When last we tested the TVR line there were two models, similar in that both were TVR's own semi-space frames and fiberglass bodies fitted with bought-out engines and drivetrain components. The Vixen used a short-wheelbase, extremely truncated body and the 1599-cc English Ford engine; the Tuscan had a longer chassis, much smoother body lines and an American Ford V-8.

Now there is one model, in many ways an average of the previous two. TVR has replaced the small four and the big V-8 with Triumph's 2.5-liter six. To accommodate an engine larger and longer than the Cortina four there's a new, stronger frame to go with the short wheelbase and distinctly odd body of the previous smaller model. The result can best be described as 4.1 quarts of machinery within (almost) a one-gallon container.

On the outside, the front of the chassis isn't quite covered

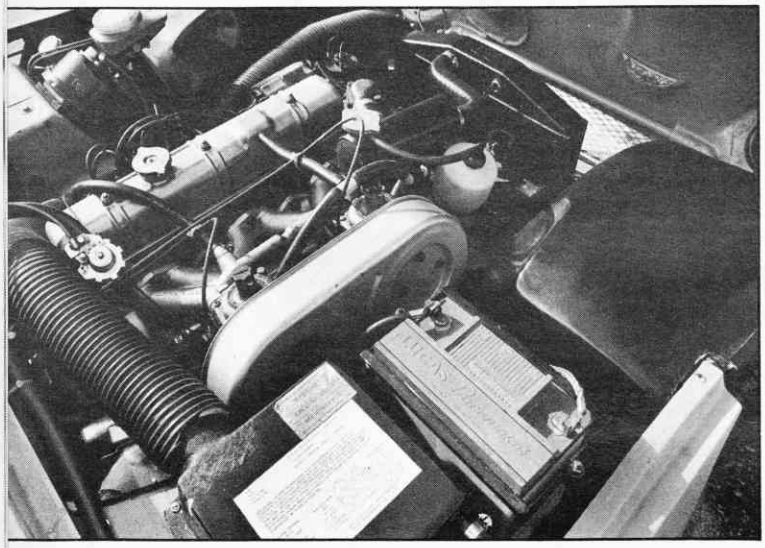
PHOTOS BY JOE RUSZ

by the body, a trifling flaw as the car tested was a 1972 model and lacked the larger bumpers scheduled for the 1973 TVR. Those bumpers will add approximately 6 in. to the length of the car, which might explain TVR's use of the shorter body rather than the more graceful Tuscan shape.

Inside . . . ready for the bad news? Adding people to the engine and frame to be jammed inside the body gives 4.5 quarts for the gallon container and that causes some packaging difficulties. The inner frame tubes form a tunnel around the transmission and said tunnel is very large, in turn creating narrow slots for driver and passenger between the tunnel sides and the doors. The pedals are severely offset, with both clutch and brake to the left of the steering column and the accelerator directly beneath it. The Triumph gearshift was designed for a higher car and in the TVR it emerges at shoulder level. The engine was placed far back in the TVR and that puts the lever nearly next to the driver. Compounding all this, the footwell is not high enough for even a size nine shoe and the accelerator's action is very stiff.

Virtually the only pluses in this are that the bucket seats are true buckets, with high sides, and the steering wheel is small, leather-rimmed and set at the proper distance. Even so, there the poor sporting driver is, legs skewed to the left, feet spraddled on the pedals, right hand drawn back and up to grasp the shift knob. Never has the phrase "the controls fall readily to hand" been less appropriate. Almost every motion on the controls is foreign to normal practice.

There's more in the secondary control area. The handbrake interferes with the radio tuning knob. The side controls are so far back and the cockpit so narrow that everything must be done with a crossdraw technique, that is, one cranks the left window and opens the left door with the right hand, works ⟶



TVR VIXEN 2500M

the righthand seatbelt snap with the left hand, etc. The lap and shoulder belts are mounted and fasten too high on the seat, so they cross the occupant in the region of one's vulnerable abdomen, not the sturdy hip bones which nature and the DOT intend to take the loadings of a crash.

More still. The interior mirror has a mounting so flexible that more time is spent adjusting it than looking through it. Not that one could see much if it were adjusted properly; it vibrates a lot. There's no trunk and the rear window is permanently closed. The seatbacks are fixed and the spare tire lives on the floor of what is either the world's smallest trunk or largest parcel shelf. Whichever, the space for luggage or groceries or things is quite limited and the access more limited than that. And with the high seat sides, narrow footwells and small doors, simply getting people into the car is a production.

Still more. The otherwise adequate gauges are rendered less so by glare, the rocker switches are obscured and obscure, the ignition switch and heater control are secreted beneath the dashboard, and the seats are so low that a man of median height slouched comfortably behind the wheel may not be able to see any part of the hood or fenders. The controls and cockpit of the TVR 2500 are designed with such disregard for the human body—such, well, amateur enthusiasm and lack of skill—that one cannot say there are any ergonomics involved at all.

Now we move into the area of the acceptable. The Triumph engine is a nice, big, well-proven six. It is being tuned down to meet the emissions laws, and the TVR isn't as light as its size would lead you to expect. But the performance is good enough; it will keep pace with other sports cars in the price range, although many of them have smaller engines and the higher-priced cars with equal displacement will cover the TVR with rubber dust. The power peak is given as 4500 rpm and we used 5000 for our acceleration runs. With that limit in normal use the engine is happy. It warms up quickly and runs smoothly when warm, more so than several engines with more elaborate induction equipment. The gearing is well matched to the engine's characteristics, and though the car does not leap forward in the higher gears it can be launched briskly and there is an entertaining swoop forward in the lower gears. The good weight distribution and independent rear suspension keep wheelspin minimal on a pop-the-clutch start.

The brake specifications are good on paper: big discs in front and drums at the rear, vacuum assisted; but they cannot be rated better than acceptable as on the test car they squeaked loudly under light application and the front discs tended to lock when used hard. The latter flaw meant that full braking power could not be applied for the test and that the stopping distances were far greater than they should have been for a car of this weight, tire size and braking system.

But now, the good part. To do the TVR justice we might coin a term and say that the TVR 2500 is a front-mid-engine car, in the way the Dino 246 and the Pantera are rear-mid-engine cars. In these cases the "mid" means that the engine is within the wheelbase and front or rear locates the engine in relation to the driver. This is not just semantics; neatly tucking the machinery within the wheelbase gains for the TVR a low polar moment of inertia, just as in racing cars and GT cars in the Dino and Pantera class. And just like them, the TVR goes around corners very well.

Elsewhere in this issue there is a new feature, a summary of our test results on various cars. The TVR's cornering power of 0.783g sounds mighty good by itself, but to appreciate it fully one must look at the test summary and realize that of the road cars we've tested lately only the Dino and the Lamborghini Jarama will whip around the skidpad faster than the TVR.

This is what the TVR is all about. This is its reason for being and the excuse for all its shortcomings. A small company with a small and well-defined market set out to build a sports car from bought-out pieces. They laid out a nice chassis and placed the engine and transmission just where they should be to achieve the low polar moment and precise balance they needed. That was the primary goal. The others, creature comfort and aesthetic appeal, say, were secondary.

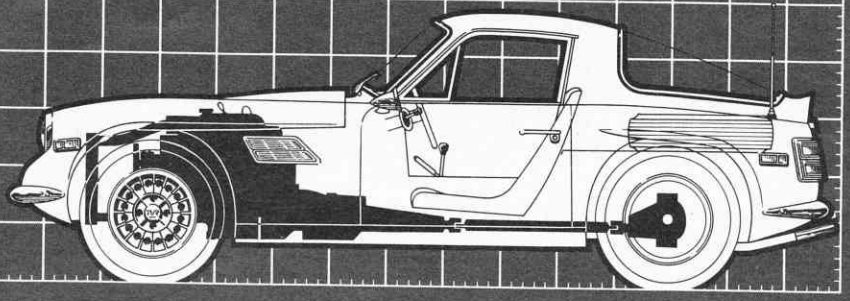
So we have a car that sticks to the road, is properly balanced, has independent suspension and quick and accurate steering. There is plenty of suspension travel, so the TVR can go over rough pavement nearly as fast as over smooth, and that's very fast indeed. The short wheelbase, low build, good geometry and low inertia allow the driver to hurl the car this way and that, to provoke either under- or oversteer at will. The car is stable at high speed, maneuverable at low speed. There is some pitch over bumps, but there are several economy sedans that are worse. The ride is firm, but while the TVR is no BMW, neither is it a Morgan. It would be a competitive slalom car as delivered and a competitive production-class racing car with development. (The Sports Car Club of America hasn't accepted the TVR 2500 for competition yet, which the TVR people attribute to politics.)

On a winding road, the TVR is hard to beat. Never mind just playing boy racer: as a hidden benefit, the sight of what looks like a truculent Troll, a ferret with an oversupply of Y chromosomes, is enough to send the average driver scurrying toward the nearest turn-out.

What fun. Few people will buy the TVR 2500; fewer still will buy it and be disappointed, because those who do are sure to accept its eccentricities. If being the product of a small and specialized firm is an excuse for the shortcomings of the TVR, then its virtues are justification for the existence of specialist —even eccentric—car builders.

ROAD TEST

TVR VIXEN 2500 M



SCALE: 10" DIVISIONS

PRICE

List price, east coast $4850
List price, west coast $5050
Price as tested, west coast $5245
Price as tested includes AM-FM radio ($120), dealer prep ($75)

IMPORTER

TVR Cars of America
572 Merrick Rd.
Lynbrook, N.Y. 11563
TVR West
P.O. Box 3255
Santa Monica, Calif. 90403

ENGINE

Type ..... ohv inline 6
Bore x stroke, mm ..... 74.7 x 95.0
Equivalent in ..... 2.94 x 3.74
Displacement, cc/cu in.. 2498/152
Compression ratio 8.5:1
Bhp @ rpm, net ..... 104 @ 5000
Equivalent mph 106
Torque @ rpm, lb-ft .. 142 @ 3000
Equivalent mph 63
Carburetion ..... 2 Stromberg 175 CDSE
Fuel requirement ..... regular
Emissions, gram/mile:
Hydrocarbons 2.16
Carbon monoxide 13.5

CHASSIS & BODY

Layout ..... front engine/rear drive
Body/frame .... tubular steel frame, fiberglass body
Brake system .... 10.0-in. disc front, 9.0 x 1.75-in. drum rear; vacuum assisted
Swept area, sq in 302
Wheels ..... cast alloy, 15 x 5½
Tires ..... Pirelli Cinturato 165-15
Steering type ..... rack & pinion
Turns, lock-to-lock 2.5
Turning circle, ft 32.0
Front suspension: unequal-length A-arms, coil springs, tube shocks, anti-roll bar
Rear suspension: unequal-length A-arms, coil springs, twin tube shocks

DRIVE TRAIN

Transmission ..... 4-sp manual
Gear ratios: 4th (1.00) 3.45:1
3rd (1.33) 4.59:1
2nd (2.01) 6.94:1
1st (3.14) 10.83:1
Final drive ratio 3.45:1

INSTRUMENTATION

Instruments: 140-mph speedo, 8000-rpm tach, 99,999 odo, 999.9 trip odo, oil pressure, coolant temp, fuel level, voltmeter
Warning lights: brake system, backup light, high beam, directionals, seatbelt

CALCULATED DATA

Lb/bhp (test weight) 23.1
Mph/1000 rpm (4th gear) 20.8
Engine revs/mi (60 mph) 2880
Piston travel, ft/mi 2270
R&T steering index 0.80
Brake swept area, sq in/ton .. 252

GENERAL

Curb weight, lb 2150
Test weight 2400
Weight distribution (with driver), front/rear, % 50/50
Wheelbase, in 90.0
Track, front/rear 53.0/54.0
Length 144.0
Width 64.0
Height 48.0
Ground clearance 5.0
Overhang, front/rear 25.0/29.0
Usable trunk space, cu ft 3.1
Fuel capacity, U.S. gal 13.5

ACCOMMODATION

Seating capacity, persons 2
Seat width ..... 2 x 15.0
Head room 37.5
Seat back adjustment, degrees .. 0

MAINTENANCE

Service intervals, mi:
Oil change 6000
Filter change 6000
Chassis lube 2000
Minor tuneup 6000
Major tuneup 12,000
Warranty, mo/mi 6/6000

ROAD TEST RESULTS

ACCELERATION

Time to distance, sec:
0-100 ft 3.7
0-500 ft 10.0
0-1320 ft (¼ mi) 17.7
Speed at end of ¼-mi, mph 78
Time to speed, sec:
0-30 mph 3.4
0-40 mph 5.1
0-50 mph 7.5
0-60 mph 10.6
0-70 mph 14.2
0-80 mph 18.5
0-100 mph 31.0

FUEL ECONOMY

Normal driving, mpg 26.0
Cruising range, mi (1-gal res.) 325

SPEEDS IN GEARS

5200 gear (5200 rpm) 111
3rd (5200) 83
2nd (5200) 55
1st (5200) 36

HANDLING

Speed on 100-ft radius, mph .. 34.2
Lateral acceleration, g 0.783

BRAKES

Minimum stopping distances, ft:
From 60 mph 186
From 80 mph 343
Control in panic stop ..... fair
Pedal effort for 0.5g stop, lb 35
Fade: percent increase in pedal effort to maintain 0.5g deceleration in 6 stops from 60 mph 34
Parking: hold 30% grade? ..... no
Overall brake rating ..... fair

INTERIOR NOISE

All noise readings in dBA:
Idle in neutral 59
Maximum, 1st gear 84
Constant 30 mph 67
50 mph 74
70 mph 82
90 mph 88

SPEEDOMETER ERROR

30 mph indicated is actually .. 31.5
50 mph 50.0
60 mph 59.0
70 mph 68.5
80 mph 78.0
Odometer, 10.0 mi 9.8

ACCELERATION