TVR 2500M

Undeniably English, unquestionably quick

PHOTOS BY JOHN LAMM

NORMALLY IF WE were to call an automobile typically English, we're sure you'd expect that to be only the first in a long list of complaints. Yet the same system that has bogged down the English auto makers can produce a few gems—diamonds in the rough in some cases—that will easily start the blood of any true enthusiast circulating faster. Though the system has made it difficult for the small, specialist car builders to flourish, it hasn't killed them off, and while their numbers have been thinned, they still include TVR.

Now that may bring great cries of, "So what?" unless you know that TVR not only still brings cars into the U.S., but has for years. What of the wall of emissions and safety regulations you thought had stopped all such fun? TVR, in the person of their American distributor, Gerry Sagerman, has managed to live with such problems and conquer them. Makes you wonder about some of the importers who walked away from the U.S. market grumbling, doesn't it?

You'll find Doug Nye's short history of TVR, covering the Trevor Wilkinson days to the present Martin Lilley management, elsewhere in this issue. The marque's history on this side of the ocean is quite confusing, finding the TVR sold under such names as the Jomar and Griffith, but the important period is the last 10 years, which has been all Sagerman and quite stable. TVR Cars of America is presently in Huntington, New York and shows every sign of being there for quite some time.

The TVR in its present form is the 2500M, the 2500 to signify the capacity of the ex-TR6 engine they use, the M for Martin Lilley. The body style is quite similar to the Mk 1 first seen in 1958, though the shape was much rounder then. It's a very durable design and still looks presentable today. Finish of the body is of nice quality and everything seems to fit, close and seal properly. There is an odd gap between the side of the hood (one piece including the grille and fender tops) and the top of the body and we aren't too excited about the standard vinyl top, but everything seemed well secured.

Next step would be to give you a rundown on the interior of the TVR, which is no simple thing as one real problem with the car is trying to get into it. The door isn't all that small, but trying to get into the seat requires a movement that would outdo anything you might see in a discotheque. Once in and with the door closed, you are somewhat encapsuled in the driver's (or passenger's) seat, with the door on one side and an extremely tall center console on the other. That results from the center section of the car's hefty tube frame and leaves no question of the driver

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sliding out of his seat during hard cornering. Gauges are the requisite Smiths done in the British national typeface, speedometer and tach straight ahead and the fuel level, oil pressure, temperature and voltmeter off to the right and all set in a real wood dashboard. Only the turn signals and high beam/low beam switches are on stalks, all others are in a row of six traditional British rocker switches below the instruments and just ahead of the shift lever. You sit so low in the car and the shift lever is so high that your right arm is up almost at shoulder level, with a right angle at the elbow so you can get at the lever; it takes some getting used to.

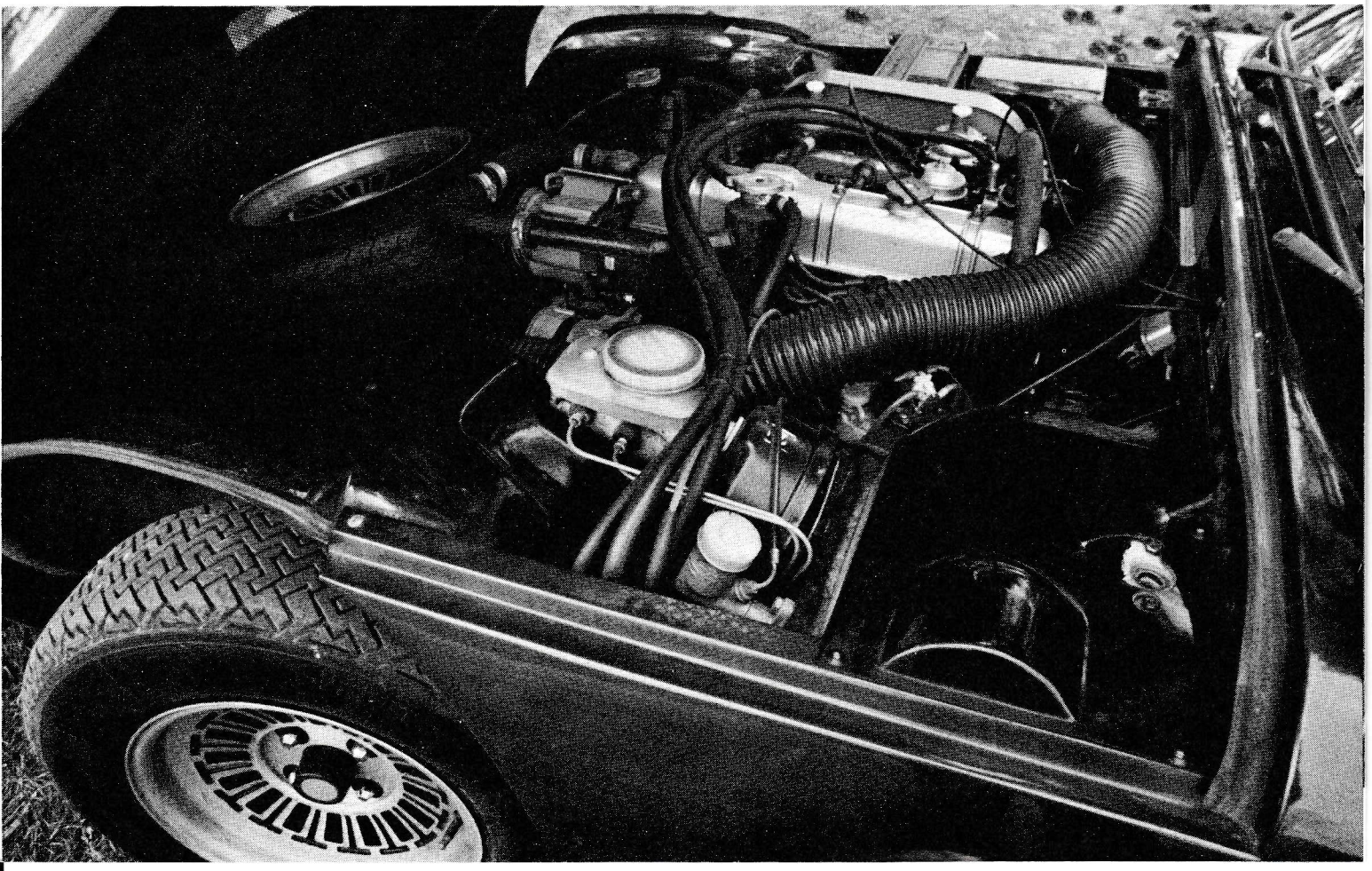
Seating drew mixed reviews. Some drivers found it a very relaxed position, and in combination with the close-coupled feeling of the cockpit and the nicely done Weathershields sunroof, made for a very enjoyable immediate environment in which to drive down the road. Others never could quite get comfortable, one feeling he was being forced to sit closer to the steering wheel and much lower than he cared to. One other problem was that while the ventilation system kicked out plenty of air, it was all warm!

Overall, the interior is British, the wood on the dash, the Smiths instruments, the hand-formed aluminum window frames and the general atmosphere all making it quite obvious. That's heartening, because the English, like the Italians, seem to surround themselves with warm, friendly things in their cars, so it is easy to feel at home immediately in such an interior; it's a "Would you care to stay for tea?" atmosphere. If there is anything to intrude on that image, it's the bay window masquerading as the backlite in the TVR, with so much glass you feel as though the driver behind you is actually in your back seat. Needless to say, rearward vision in the TVR can't be faulted.

When we tested a TVR 2500M in 1973, we were aghast to find only 3.1 cu ft of usable trunk space, owing to the spare tire being mounted behind the seats. Increasing the rear overhang 2.0 in., plus moving the tire to the front of the engine compartment where it provides additional crash worthiness, leaves a very generous 10.2 cu ft for luggage back there, with a potential 19 cu ft if you don't mind obstructing your rearward vision. Now your only problem is wrestling whatever you want to carry through those tiny doors. Hopefully, the 1978 TVR will use the Taimar body shell with the hatchback. It needs it.

While the basic shape has been with us for some time, the TVR's space frame is relatively new, having been introduced in 1972. It's a classic of its type, all neatly arranged square and round tubes hand-welded at all their proper meeting places. The insides of the tubes are sprayed with oil, the outside with undercoating, providing enough protection that in England the frames are guaranteed against corrosion for five years.

Mounted at each end of the frame is a twin A-arm independent suspension, and set well back in the chassis is the "front mid-engine," which are the keys to the TVR's near even weight distribution, low polar moment of inertia and exceptional handling. The ride is also quite good for a car with a wheelbase this short, TVR taking advantage of fairly generous wheel travel, but



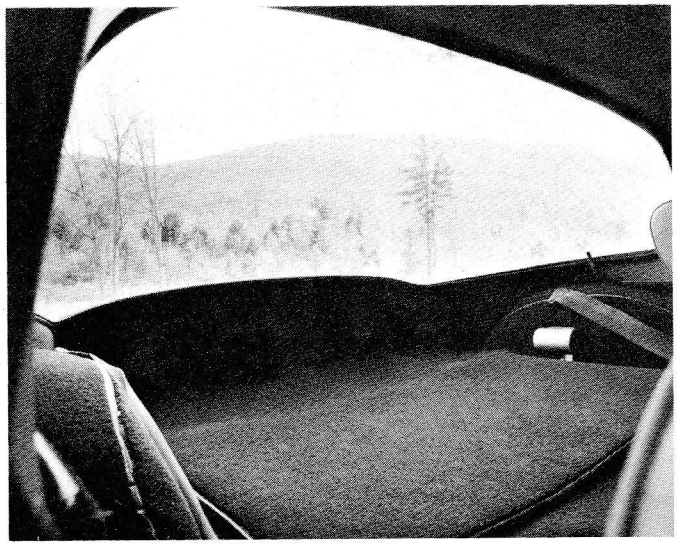
retaining just enough of the jounciness to help you remember the car is still British. In fact, it bears just enough resemblance to the MGB ride that as you enter a rippled pavement corner you just wait for the rear end to bounce and kick—but it doesn't. It just sticks. Last time around with the TVR we recorded a skid pad figure of 0.783g and so little has changed that we suspect the figure would be about the same today. Unfortunately we weren't able to do a skid pad test, as the latest TVR was tested at Lime Rock Park, Connecticut. At 61.2 mph through the slalom course, the TVR was only 0.7 mph slower than the Ferrari 308 GTB we tested in our February issue.

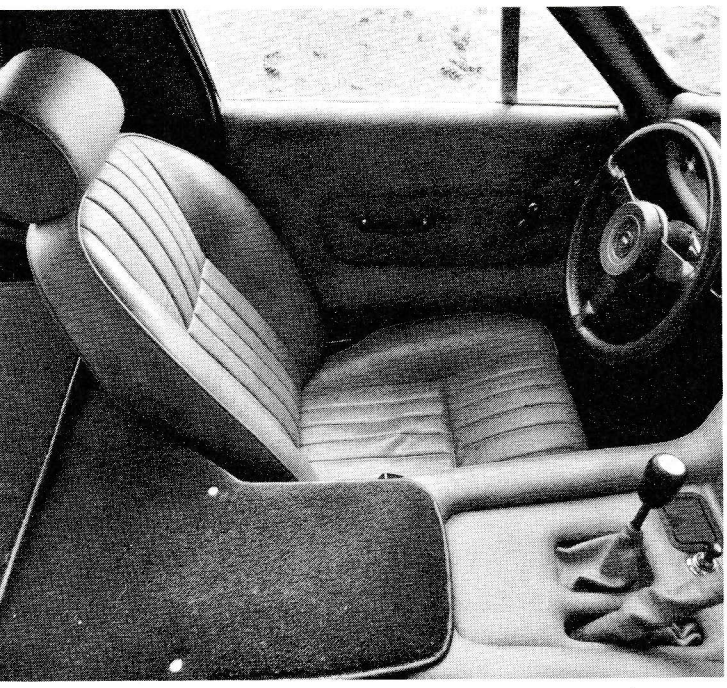
In fact, much of what we said about the TVR in 1973 is still applicable, as the car seems stuck in time. Acceleration times through the quarter-mile then and now are close enough that when you allow for our new testing procedures, they are almost identical (the 1977 did 17.3 sec). TVR still has an exemption on bumpers (one of only two in effect; Lamborghini has the other for the Urraco) so the TVRs are visually similar. The same Triumph 2.5-liter engine is used, despite the demise of its main outlet in the U.S., the TR6. Luckily, TVR works with an Environmental Protection Agency (EPA) Assigned Deterioration Factor, meaning they can avoid running the 50,000-mile certification test to determine emissions deterioration and only have to run 4000 miles. (Maserati is another example of a car using such a factor.) While we said the 1973 TVR was an interesting car in a market segment with several alternatives, we can now say it is the same interesting car in a segment with few alternatives except, perhaps, the 280Z, which we doubt appeals to the same buyer as the TVR.

One thing that is different in the 1977 TVR are the brakes, thank goodness. The earlier TVR rated only a fair in overall braking performance, while the present model achieves a very good. Fade was nil and even on Lime Rock's bumpy straight stopping distances were short. There were no control problems in a panic halt.

Just as with the Lotus Esprit last month, we reach the summation portion of the road test ready to view a test car through the enthusiast's filter. Certainly the TVR's ergonomics aren't quite right, the styling is a bit odd from some views and it is a car that you have to adapt yourself to rather than expecting it to live with your traits. Yet, it is great fun, a car that doesn't give in to you, but is willing to work with you on that favorite back road you enjoy so much. It hasn't the hair-shirt nature of a Morgan so you needn't suffer needlessly—and if you're looking for a different car, the TVR certainly is unique.

Most likely that's because Gerry Sagerman is unique. He claims no aspirations to be a millionaire, but just to enjoy himself and to him that means selling TVRs. He and his faithful TVR Cars of America staff of three (including his wife) have been through a lot—the EPA, the Department of Transportation, the factory fire—and it seems to have steeled their determination to keep TVR in America. Hopefully next year will not only bring the hatchback, but a 3.0-liter Ford V-6 engine and another 300 cars to sell. And that leads to the kicker for you west coast fans, because not only isn't there a California version, there isn't a dealer west of Wichita, Kansas. Sorry.

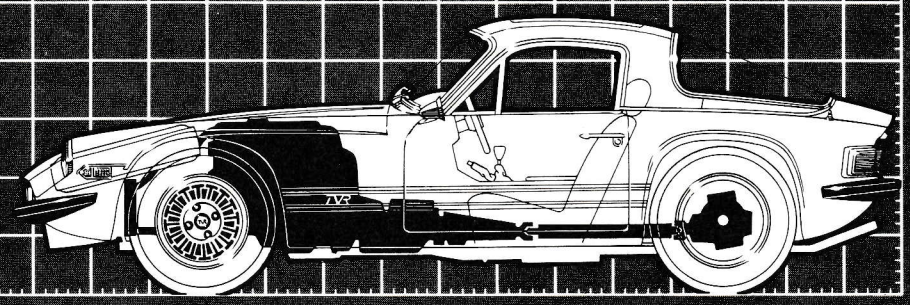




R&T

ROAD TEST

TVR 2500M



SCALE: 10" DIVISIONS

PRICE

List price, all POE $8888
Price as tested $9303
Price as tested includes standard equipment (sunroof), AM/FM/tape ($250), side stripes ($15), dealer prep ($150)

IMPORTER

TVR Cars of America, Ltd
29 New York Ave
Huntington, N.Y. 11743

GENERAL

Curb weight, lb 2275
Test weight 2370
Weight distribution (with driver), front/rear, % 53/47
Wheelbase, in. 90.0
Track, front/rear 53.8/53.8
Length 154.0
Width 64.0
Height 47.0
Ground clearance 5.0
Overhang, front/rear 33.0/31.0
Usable trunk space, cu ft 10.2
Fuel capacity, U.S. gal. 12.0

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 ..... 106 @ 4900
Equivalent mph 105
Torque @ rpm, lb-ft ..... 117 @ 3000
Equivalent mph 65
Carburetion ..... two Zenith-Stromberg (1V)
Fuel requirement ..... regular, 91-oct
Exhaust-emission control equipment: air injection, exhaust-gas recirculation

DRIVETRAIN

Transmission ..... 4-sp manual
Gear ratios: 4th (1.00) 3.45:1
3rd (1.39) 4.80:1
2nd (2.10) 7.25:1
1st (2.99) 10.32:1
Final drive ratio 3.45:1

CHASSIS & BODY

Layout ..... front engine/rear drive
Body frame ..... separate fiberglass body with multi-tubular steel frame
Brake system ..... 10.9-in. discs front, 9.0 x 1.75-in. drums rear; vacuum assisted
Swept area, sq in. 431
Wheels ..... cast alloy, 14 x 6
Tires ..... Pirelli CN36, 185HR-14
Steering type ..... rack & pinion
Overall ratio ..... na
Turns, lock-to-lock 3.9
Turning circle, ft 35.8
Front suspension: unequal-length A-arms, coil springs, tube shocks, anti-roll bar
Rear suspension: unequal-length A-arms, coil springs, tube shocks

INSTRUMENTATION

Instruments: 140-mph speedo, 8000-rpm tach, 99,999 odo, 999.9 trip odo, oil press., coolant temp, voltmeter, fuel level
Warning lights: brake system, ignition, rear-window heat, exhaust-gas recirc, seatbelts, hazard, high beam, directionals

ACCOMMODATION

Seating capacity, persons 2
Seat width ..... 2 x 19.5
Head room 37.0
Seat back adjustment, deg 45

MAINTENANCE

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

CALCULATED DATA

Lb/bhp (test weight) 22.4
Mph/1000 rpm (4th gear) 21.8
Engine revs/mi (60 mph) 2750
Piston travel, ft/mi 1715
R&T steering index 1.40
Brake swept area, sq in./ton 364

ROAD TEST RESULTS

ACCELERATION

Time to distance, sec:
0-100 ft 3.4
0-500 ft 9.2
0-1320 ft (¼ mi) 17.3
Speed at end of ¼ mi, mph 79.0
Time to speed, sec:
0-30 mph 3.0
0-40 mph 4.5
0-50 mph 6.6
0-60 mph 9.3
0-70 mph 12.8
0-80 mph 17.8
0-90 mph 25.3

SPEEDS IN GEARS

4th gear (5100 rpm) 109
3rd (6000) 96
2nd (6000) 62
1st (6000) 45

FUEL ECONOMY

Normal driving, mpg 23.0
Cruising range, mi (1-gal. res) 253

HANDLING

Speed on 100-ft radius, mph ..... est 34.1
Lateral acceleration, g ..... est 0.780
Speed thru 700-ft slalom, mph 61.2

BRAKES

Minimum stopping distances, ft:
From 60 mph 155
From 80 mph 265
Control in panic stop ..... very good
Pedal effort for 0.5g stop, lb 30
Fade: percent increase in pedal effort to maintain 0.5g deceleration in 6 stops from 60 mph ..... nil
Parking: hold 30% grade? ..... na
Overall brake rating ..... very good

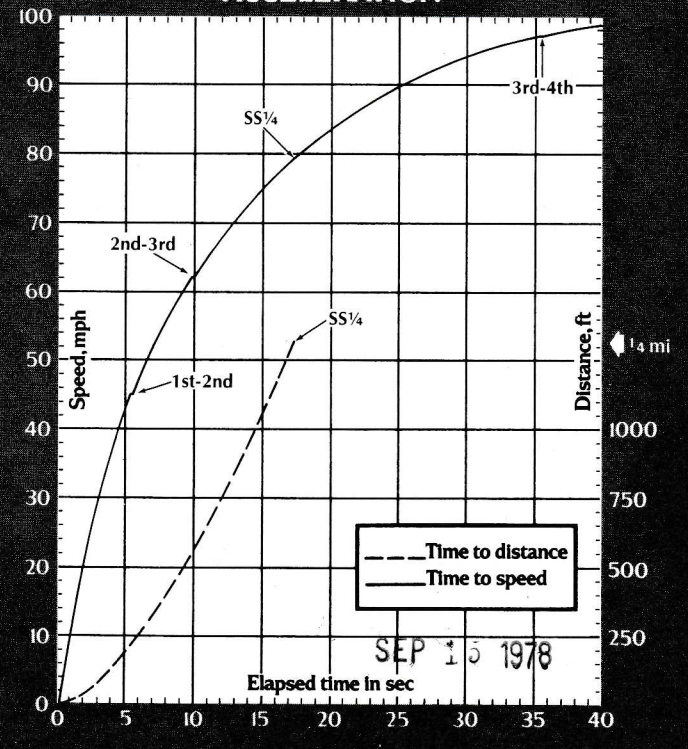
INTERIOR NOISE

All noise readings in dBA:
Idle in neutral 61
Maximum, 1st gear 90
Constant 30 mph 72
50 mph 74
70 mph 77

SPEEDOMETER ERROR

30 mph indicated is actually 31.5
50 mph 54.5
60 mph 65.0
70 mph 75.5
80 mph 86.0
Odometer, 10.0 mi 9.8

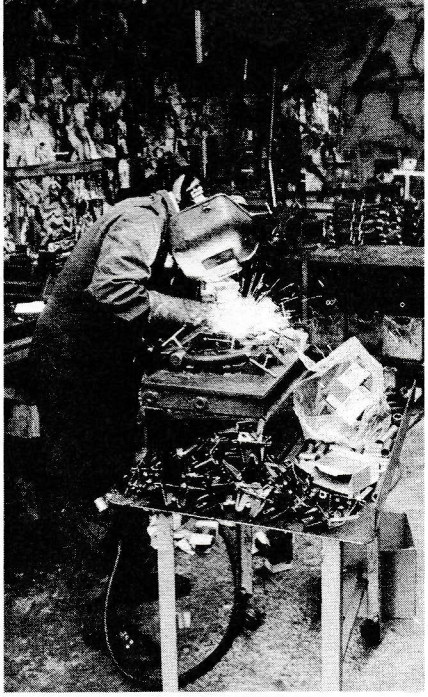
ACCELERATION



TVR: Blackpool's Beauty

Individual cars for individual owners

BY DOUG NYE



PHOTOS BY GEOFFREY GODDARD

NEARLY EVERYBODY ASKS the same question: What does TVR stand for? No, it was never a company repairing tractor vehicles nor anything so simple. The initials TVR were derived from the name of TreVoR Wilkinson who designed the original Mark I coupe and produced it as a kit in 1957.

Ever since, TVR has had a checkered career, even by British specialist sports car standards. A company named Layton Sports Cars Ltd was formed in the Blackpool suburb of that name in 1959 to produce Wilkinson's cars, but by 1961 two new concerns—TVR Cars Ltd and Grantura Engineering—were set up to handle marketing and production. In 1962 the outfit came under the control of Chester car dealers Keith Aitcheson and Bryan Hopton, but in 1965 TVR went into liquidation. An attempt to enter the luxury high-performance market with the Fiore-designed, Fissore-bodied Trident V-8 had overstretched resources. The company's assets were acquired by another motor trader, Arthur Lilley, and his son Martin, who became Managing Director of the new TVR concern.

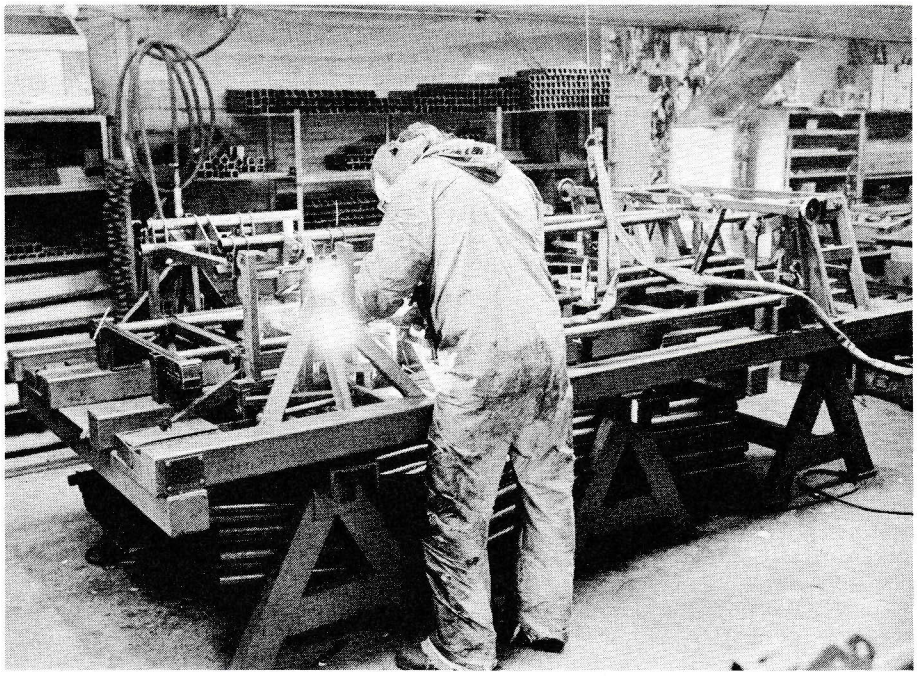
Apart from an attempt to build the pretty little Fiore/Fissore TVR Tina on Sunbeam Imp components in 1966 and the more recent Zante styling exercise, TVR has concentrated on Trevor Wilkinson's basic 1957 body shape ever since the Lilleys gained control. The Ford V-8 version, originally put together by Jack Griffith in the U.S., continued as the hairy-chested Tuscan until 1969, while MGB and 1600 Ford engines powered the similar-bodied Vixens. Eventually the 3-liter Ford V-6 was adopted, developing the TVR Turbo flagship model offshoot, while Triumph's inline 6-cylinder appeared in the 2500Ms. A new M-type tubular backbone chassis was introduced in 1972, designed by consulting engineer Mike Bigland and Martin Lilley to provide a lighter, simpler and stronger replacement to the crude tube original.

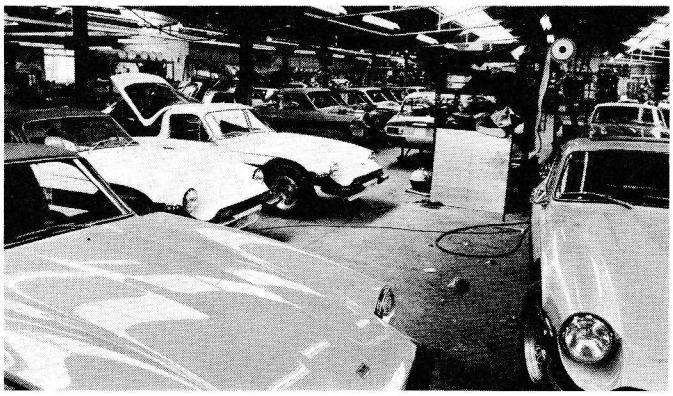
Then in January 1975 disaster struck as TVR's new assembly shop in Bristol Avenue was totally gutted by fire. Lilley and his men worked desperately to save the company and painfully restarted production which has built slowly to the current level of about eight cars a week.

Blackpool, at the tip of the flat Fylde Peninsula, is the clean, crisp center of Lancastrian holiday dreams. Flat beaches shelving into the Irish Sea, bingo halls, fun fairs, the Tower Ballroom with its famous imitation Eiffel Tower soaring into the sky, yards of rock candy, rolled-up trouser legs, knotted handkerchiefs on sweating heads and fat paddling matron's skirts tucked up into voluminous knickers; that's the stereotype Blackpool image.

Out in the neat suburbs, opposite an imposingly Victorian civic destructor works, we find TVR Sports Cars where a staff of 83 work in premises little larger than a good-size distributorship.

Their cars are built as individuals, by individuals. Here there is no question of a faceless number bodging together an anonymous motor car. Each production step is taken by specific members of the TVR team and a problem discovered on delivery "is traceable." The result is an on-their-toes atmosphere found only in these specialized concerns. Although TVRs can and do fall heir to the problems of small-quantity production, one gets an abiding impression of bluff and confident north country efficiency in the way they are built.





TVR welder fabricates a wishbone (top) under the watchful eyes of a pin-up collection. A frame goes together on the chassis jig (above). The inside of the tubes that make up the 4-tube backbone frame are sprayed with oil to inhibit corrosion. Business for TVR must be quite good, as can be seen by the very crowded final assembly shop (right).

There are two main works buildings, the front office-cum-assembly block and a separate body plant out back. Bodies are molded fiberglass, laid-up by hand and individuality begins right here with

shells built to individual order spec. There are two basic body molds, one for the well established fixed-back and the other for the liftback Taimar model introduced at last year's London Show. Production is split equally between the two styles and the liftback incorporates several improvements such as flow-

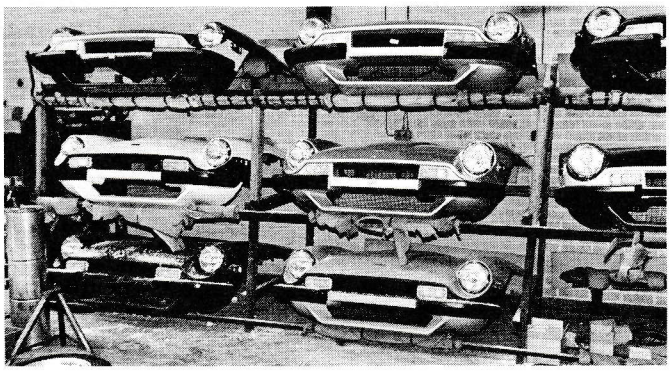
through heating and ventilation and a bonded-in bulkhead which should be incorporated on the fixed-backs soon. The Taimar's lifting door is contracted out to another supplier, but TVR's body shop makes the side doors, hood (which forms the whole front-end of the shell), bulkhead, floorpan, wheel arches, heater box and so on.

The basic shells are formed in two halves, upper and lower, emerging from the molds as a unit. They are dropped onto chassis bogies to be moved around, molding flash is sanded off and various holes such as sunroof apertures, are cut to order.

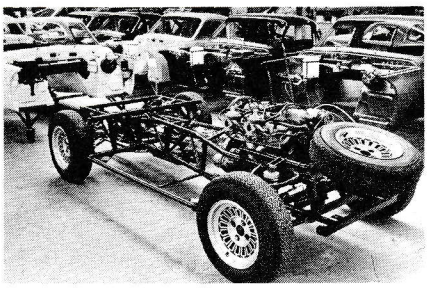
Footwell boxes are bolted into place—the overdrive model with its hydraulic clutch demanding a different one—and tank straps are bonded into the tail compartment. Federal intrusion barriers are fitted into the doors, acting through bolted-on hinge plates into a square-tube beam fitted across the front bulkhead. Hood strikers are bolted on and then the shells are wheeled into the paint shop for six coats of primer and at least three coats of acrylic synthetic top color. The shells are masked during this process for the necessary sign writing and coachlines. If a vinyl roof appears on the spec sheet the shell's roof is left unsprayed.

Painted shells are wheeled from Graham's paint shop into the assembly block where Bert fits the rear light systems and the brake booster and heater box are mounted on the bulkhead.

Meanwhile, on the other side of this building, Tommy welds frames on the chassis jig and Tony adds the brackets, made in Terry Lendrim's machine shop. The basically 4-tube backbone frames with their body outriggers are sent out for stove-enameling and are returned to two Micks and a Brian who assemble them into complete powered rolling units



TVR molds the fiberglass bodies in their own shop. The car's "nose bonnets" are painted and fitted with all lights and trim, then put on the shelf (left) to wait while the rest of the car is finished. With the drivetrain and suspension in place, the chassis (bottom) awaits the fiberglass body.



working from a box of bits.

Brothers Roy and Paul work furiously with scalpels and two modest sewing machines to make TVR's trim and they fit sound insulation, headlining and, if necessary, the vinyl roof covering, before four men lift shell onto chassis. It sits on eight rubber pads within the wheelbase and two behind the back axle. Ronnie bolts them together and fits fuel tank and rear screen, while George has been building up hood assemblies and side windows. The wiring loom, also made up on-site, is fitted and then Paul fits the carpets. Dashboards and instruments go in—the cut and shaped wooden panels being purchased from outside—and then the radiator, wheel arches and screen are fitted and the hood, complete with lights and fittings, is offered up and set.

Russell and Bob having completed this final assembly, the new TVR goes on a ramp where Andy adds all fluids and checks out suspension geometries, etc. Mike Penny, Production Manager, has been responsible for inspection between stages and now every car is started and given a brief road test. If acceptable, the car is then given a final clean and polish and the necessary labels are affixed.

Stock controller Eddie Hall showed us around, describing how Ford provides the V-6 engines and gearboxes, Triumph the 2500s, Laycock overdrives for the Ford unit, Salisbury diffs, Lucas electrics, Telcast TVR's attractive wheels, Triplex glass, Girling brakes, BRD prop-shafts and Armstrong dampers (or Spax if adjustables are specified). Alford & Alder steering and front uprights are used, carried on wishbones welded in the shop. Special rear uprights to TVR design are cast and machined by two separate subcontractors.

Out in the office Sales Director Stewart Halstead—who races a ProdSports 3000M on weekends as the works entry—explained how Martin Lilley was largely responsible for the attractive Taimar liftback styling, and how Ford V-6 engines for the 50 Turbos built a year are modified and assembled by Broadspeed in the Midlands. They spend 120 hours per engine, stripping, balancing and blueprinting the basic unit, machining the heads, adding an improved oil pump and finally fitting the Holset turbocharger.

TVR's markets are in Europe, the UK and U.S., and Halstead firmly intends not to become too dependent on any one of them. Like all small car manufacturers, the advent of international automotive legislation is the bain of TVR's life. To homologate a model for the future year's production, tiny TVR has to spend as much time and money achieving test results as does Ford or British Leyland. In fact, they have a separate unit based in Shropshire doing nothing else except develop and prepare prototype cars for regulation tests to meet the various European, UK and U.S. standards.

Production Engineer John Southall acts as a go-between, putting Mike Bigland's Shropshire developments into the factory at Blackpool, but currently they have one major hurdle to clear. From October this year (to become effective as of April 1978) British manufacturers will have to convince her majesty's government of their ability to type approve not only their cars but also their methods of manufacture. Fortunately TVR has grown up with this kind of bureaucracy since the first U.S. regulations of 1967 and Halstead is confident of the company's ability to meet the law when it becomes effective next year.

In many ways the Blackpool-built cars are becoming outdated, but for such a small concern a major model change could be prohibitively expensive. What they do make they make well and the individual touch was typified by the young American who appeared in the Bristol Avenue office when we were there. "Hi," he said. "Could somebody look at my Tuscan? I've just taken it up to Norway, then down to Morocco and back. It's suffered a little."

"Oh, yes," said TVR's receptionist, "that's the blue one isn't it?" The individual touch, you see, is something the big battalions cannot match.