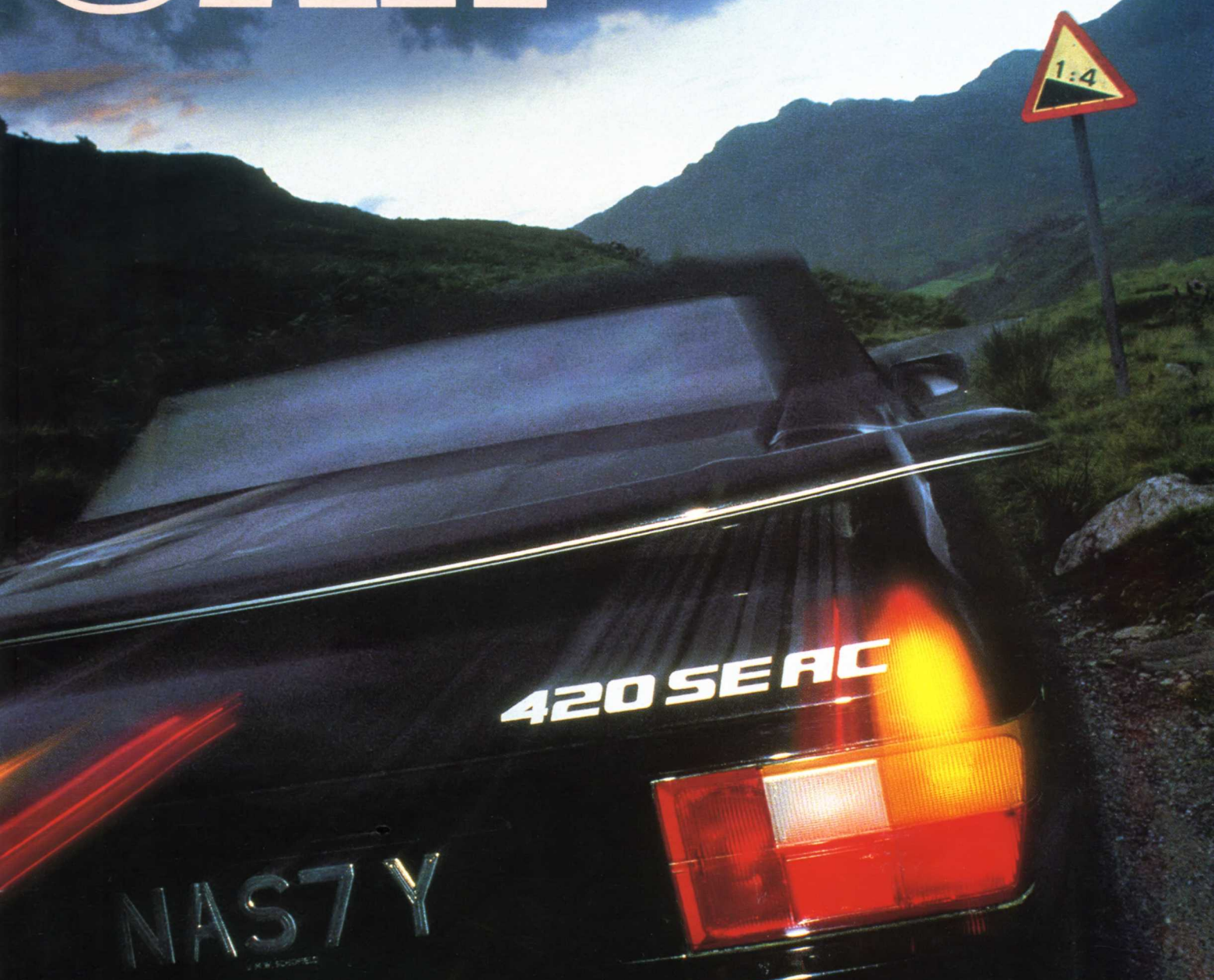


PERFORMANCE CAR

October 1987 £1.60 US \$4.00



TVR's BIGGEST GUN

WORLDBEATING PERFORMANCE FOR THE VERY FEW

DARK STAR



The TVR 420SEAC is the most powerful road car the Blackpool sportscar specialists have ever built. With a gloriously responsive 300bhp from its all-alloy Rover-derived V8, plus a lightweight composite body, it has a power to weight ratio to beat those of a Ferrari Testarossa, a Porsche 911 Turbo or even an Aston Vantage Zagato. And it is a real sportscar with the topless option. **Brian Laban** been driving this race-bred, all-British, soft-topped supercar . . .

The video film which TVR's UK sales manager Brian Horner had just made from the passenger seat of the Nero Black Metallic 420SEAC was amusing and informative. It started like a travelogue, the car bounding gently along the leafy lanes of the Lake District, the camera panning occasionally over the stubby bonnet to the pretty fields and hedgerows skirting the smooth, narrowish road. Sometimes the camera looked across to the driver, taking it all very easily under the dappled sunlight from the arching trees, just burbling harmlessly along for the ride.

Once or twice, Windermere flashed silvery into the background and the camera zoomed tighter onto a cluster of small boats in the middle distance. Once there were even some cows.

It was while the camera was dwelling briefly on one of these transitory idylls that it missed the transformation. It didn't see it and I don't remember it – not going mild-mannered into a telephone box, or drinking from a bubbling beaker or growing hairs on hands and face and fangs in the mouth. But it happened alright. There was no mistaking it.

The sound was the first clue. From below the loafing V8 burble came two short, sharp shocks of noise – rrrap, pow. . . rrap, pow: fifth to fourth, fourth to third. The camera goes back to the view ahead, but it has changed.

The road is a little bit wider – not much but just enough; it is empty ahead and it has started to do something very strange. It has started to look like an amusement machine gone completely crazy.

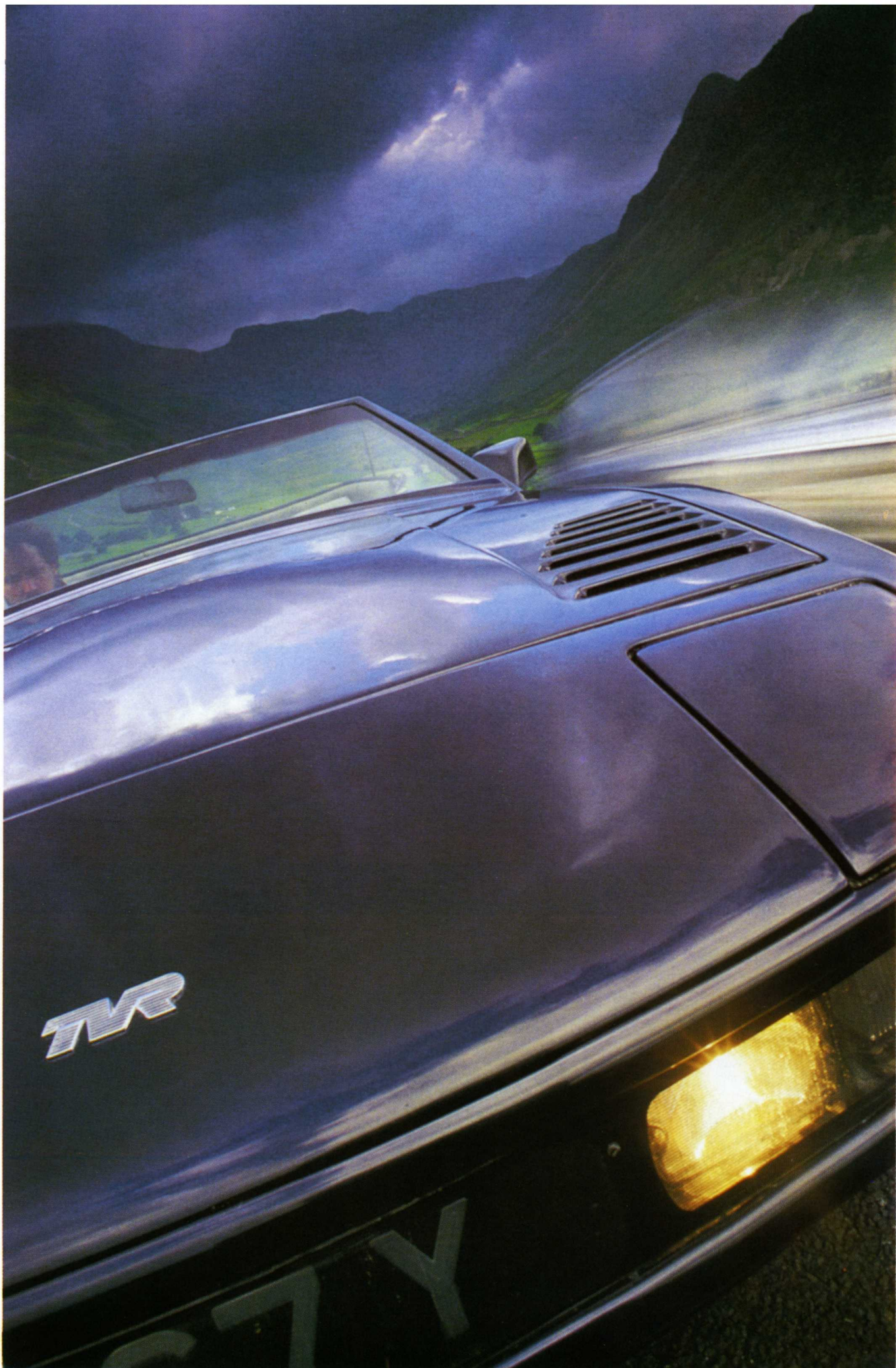
The short straight is getting shorter; pow, back to fourth and the nose rises slightly under the huge, unrelenting blast of power. As the camera comes past the dash, the white needle on the VDO speedometer has leapt from 40mph to nudging 90. The noise changes again, the nose comes down a little under the powerful influence of disc brakes with four-pot callipers all-round. Rrrrap-pow; back into third with heel and toe and twitch the wheel left into the tightening little corkscrew of a bend at maybe 70mph, power hard on again even before the apex, easing lock off as the front bites hard and the tail gently kicks.

Flick right, flick left again, noise turning on and off with the throttle, big Bridgestone RE71 tyres chirping and chattering even over all that, just on the edge of how quick they want to go.

And just on the edge of how quick I want to go. . .

Powww, back to fourth for maybe two seconds-worth of staggering blast between the tight sequence of corners. The white needle, both white needles, flash round the dials like almost no car I have ever seen. The high hedges and the canopy of trees have turned into a thundering green tunnel, the camera has forgotten all about the cows.

The little sequence goes on for maybe four or five minutes, every corner a gem, every gearchange with that crisp, sharp bark, occasionally the rich mixture stutter on the overrun; every second is very close to the car's limit, and just once almost beyond it as the rear snaps rather further



Photography: Tim Andrew

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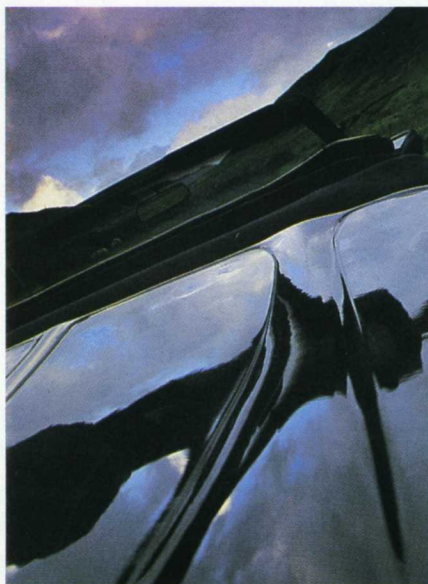
out of line and there for a fleeting moment is Windermere again.

And then a thundering rush up to what looks a smallish brow with a clear view beyond, but with hindsight just a tad too fast, as the camera sees first the sky, for a long, embarrassing moment, then the road and then feet in a footwell. Time to back off for a while. . .

It might not be exactly how some of the Lake District's more celebrated writers would have committed it to words, but that's how the 420SEAC felt to me, and in two days of driving the car the transformation seemed to sneak up about once an hour on average.

I like fast cars, especially fast cars with lots and lots of power, but sometimes they can be very intimidating. This TVR is surely among the quickest of all of them, but it doesn't intimidate.

Whatever else the 420SEAC is, it's a lot



more than just a big-engined 390, and not just in the way it looks. The body is about six inches shorter and much of the angular awkwardness of the long-running design has been gently rounded out – especially around the nose, where the old 'droop-snoot' look with its unattractive kink above the front wheelarch has all but gone. The wheelarches are wider and there are extended sills in between, and the rounder tail is topped by a huge, curved, tea-tray spoiler – 'quilted' underneath should you want to look.

Aesthetically, I reckon the car could live without the big wing and be more understated, but I'm told it does help high-speed stability, so I suppose we just have to live with being pointed at.

And people do point. In Morecambe, it was a toss-up which they pointed at most, the *EastEnders* who came to switch on the illuminations, or the mean black 420, which looked and sounded like all the fairground rides rolled into one.

Probably 'Angie' had the edge, but only because the town had given her an open-topped bus. . .

Yet for all its exotic materials and outrageous numbers, the 420 is still very much a traditional TVR: a real sports car, basically conventional in layout, slightly eccentric in looks, unmistakably the product of a small, specialist builder. That inevitably implies both strengths and weaknesses, but in the 420 the strengths win hands down – and the main ones are that real, soft-top, sportscar feel, obviously race-bred handling, and quite amazing performance.

TVR first started using the all-alloy Rover V8 engine and its five-speed gearbox in March 1983, with the 350i convertible. The 350i used the injected Vitesse unit in standard 190bhp form, to give a top-of-the-range model which was respectably quicker than the existing 2.8-litre Ford V6-engined 280i, and was also acceptable in the important Middle East market, where Ford was a dirty word.

Power went up by 7bhp in September 1984, with tubular exhaust manifolds in place of the cast iron Rover parts, but there was much more to come, starting in the same month, with the 390SE.

For the 390 engine, TVR went to Andy Rouse, who had just won the British Saloon Car Championship (for the third time) with a Rover Vitesse which his own tuning company had prepared. For TVR, Rouse increased the V8's capacity to 3905cc, by increasing the bore from 88.9 to 93.5mm, the stroke staying at the standard 71.1mm. He also fitted Cosworth pistons and gasflowed heads, which put





More rounded lines and shorter nose of the 420SEAC are attractive and functional. On the road, big wing adds to straightline stability, compact size makes car eminently usable

compression up from 9.8 to 10.5:1. With high-lift cams, stronger valve springs, blueprinting and balancing, power took a hefty leap, to 275bhp at 5500rpm and 270lb ft of torque at just 3500rpm.

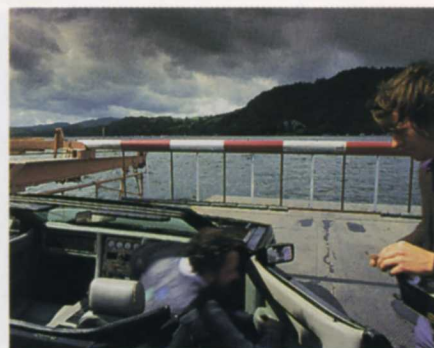
One natural outlet for this engine was racing, and TVR sponsored two 390SEs in Production Sportscar racing during 1985. That very quickly demonstrated that the original, fabricated, semi-trailing arm rear suspension gave inadequate wheel control with this sort of power and by October a much improved system had been devised – which went straight onto the road cars. All production TVRs except the entry-level S now boast wide based, four-point mounting lower wishbones at the back, acting on inclined coil spring/damper units, with trailing torque control arms and the uprated, fixed length driveshafts as upper links.

Next step, once the chassis could handle it, was yet another increase in power, and that appeared on one of the 390 racers early in 1986; it was the first 420 engine and it helped driver Steve Cole to a comfortable class win in the BARC Sports Saloon Challenge, in spite of arriving halfway through the season having been deemed not quite 'production' enough yet for Prodsports.

The step between the 390 engine and the 420 isn't nearly so extreme as between the 350 and the 390, but it does give another significant power boost, to a full 300bhp. TVR apparently believe in movie mogul Louis B. Meyer's philosophy: 'do it right and do it big. . .'

TVR hand build and dyno test the 420

engine themselves. The capacity increase, to 4228cc (still comfortably inside the engine's ultimate possibilities), comes from a new steel crank which takes the stroke to 77.0mm. Like the 390, the new engine uses Cosworth pistons and it has had further work on the cylinder heads, camshaft and valve gear – which uses solid tappets where earlier cars had hydraulics. The fuel system was uprated for the bigger engine, with a larger capacity airflow meter, large injectors and a bigger plenum chamber, and the lubrication system



**DARK
STAR**

420SEAC's interior is far from spartan, with additional space from new, low-profile centre section and new door recesses. Trim quality is excellent, hood is one of the best

gained a bigger sump, an oil cooler and a high capacity pump. Dry sumping is available to order, mainly as a racing option, and the full-house race engine gives somewhere near 365bhp.

Even for the road, all this has taken the compact all-alloy V8's power to 300bhp at the same 5500rpm as the 390's 275, and peak torque up to 290lb ft, a shade higher than before, at 4500rpm, but with little apparent tail off for a long way either side of that. It is a superb engine, not just for its massive spread of torque and power and its instant, thundering throttle response, but for its sheer character. Yet it is docile when needed and totally untemperamental – it never fluffed on us once, through photography, traffic or hard trying.

As well as gaining the extra power, the TVR has lost weight, which is where the AC designation comes in and the power to weight ratio stretches out – to a hugely impressive 291bhp per ton. The Aston Zagato has 266, the Porsche 911 Turbo Sport has 246 (exactly the same as the 390SE) and a Ferrari Testarossa has 240. Of production cars, only the Countach S *quattrovalvole* has more, at 312bhp per ton. The Countach costs £82,277, the 420SEAC costs £29,500. The TVR doesn't have the Lamborghini's pedigree or its downright class, but in many real-road situations it would give it a hell of a run for its money. . .

It is reasonable to assume that this is a sub-5-second car to 60mph, say 11 seconds to 100 (traction is outstanding and the power is well up to those sort of numbers)



DARK STAR

and TVR claim a top speed of around 165mph, which may be a little wide of the mark but could make this the fastest of all soft-tops. Give or take a few tenths and this is still world-class performance and in a package so compact and taut as to make it really usable.

The roadgoing 420SEAC also has brakes to virtually full-race specification, with discs all round, ventilated at the front, and AP four-pot callipers. In a car weighing just 2300lb they are exceptional, with a strong, solid pedal and subtle feel, while the big tyre footprints translate their power firmly onto the road. Just as much as the power, they make the 420 a very fast car indeed on ordinary roads.

Strictly speaking, the car is a 420SE (for Special Equipment) AC (for Aramid Composite) and on the badges there is that slight gap between the letters. The restyled 420 shell is laid up not in the usual glassfibre reinforced polyester but in larger sheets of 'Aramid Compound' – better known as Kevlar. This is a much stronger material for far less weight but it is also maybe four times the price and it doesn't like being used on large flat areas, which need extra reinforcement.

On the 420, this includes plastic honeycomb sections in the nose, the bootlid and the transverse bulkheads. TVR have managed to refine the process to some extent by using fewer mouldings in the 420 shell but as with the lesser cars, the time spent on each shell stretches into hundreds of hours.

The finish isn't quite as good as on, say, a 390, and it is obvious that the material is thinner, but the quality is perfectly acceptable even under the totally unforgiving metallic black of our car, and the fit lines are all snug.

The 420SEAC is subtly but effectively different too under the skin. It has the traditional TVR multitubular steel backbone chassis with outrigger extensions but since the 420 appeared as a production car, at the 1985 Birmingham Motor Show, that has changed somewhat. The backbone is now narrower and shallower, which allows a more compact centre tunnel and slightly more elbow room than on other TVRs. The doors have been recessed for the same feeling of space – but it is still

unmistakably from TVR.

It certainly isn't a stripped out racer inside; our example was impressively finished with pale grey leather seats and trim, walnut cappings on dash and glovebox and darker grey carpets. The switches and minor controls are inevitably 'bitza' but the instrument layout (new since the car was first seen) is neat and comprehensive. Smallish, white on black VDO speedo and tach, plus the usual warning lights, are dead ahead behind the height adjustable Momo wheel; oil pressure, water temperature, fuel and battery charge are covered in the centre.

The one that gave cause for concern was the fuel gauge, which moves fairly swiftly anyway but for a while was practising free-fall, which turned out to be because a rear tyre had chafed through an unsecured petrol pipe. It was easily repaired and rerouted, but it could have been very nasty had fuel found its way onto either rear tyres or hot exhaust.

Our only other glitch was an out-of-adjustment handbrake (umbrella type, under the dash) which was all but useless, but the car is so docile, the pedals so perfectly set and the clutch so smooth that this was never a real problem.

Generally, TVR's build quality is obviously much improved, and the basic layout has always been sound. The backbone is stiff and for the 420 the spring rates and dampers are uprated and most of the rubber bushes have given way to Rose joints, which tightens up the feel of the car very markedly.

It is typically TVR in its lively steering feedback on poor surfaces and the lightweight body does shudder and

shimmy in unison, but it never rattles and the chassis itself always feels impeccable. It is stable in a straight line at high speeds, and the handling feel is precise. It turns in positively with almost no front-end roll, though it does ask for quite a lot of steering effort on slower corners.

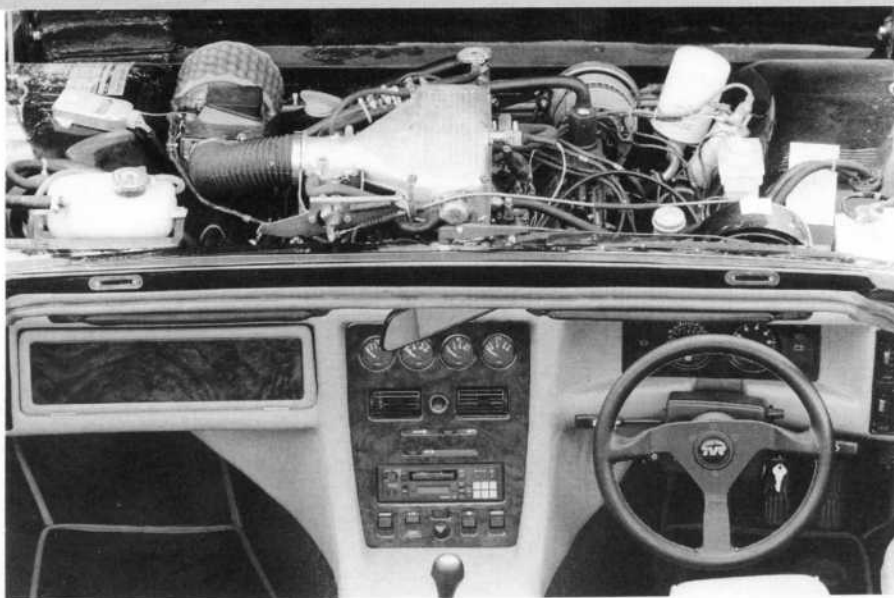
Mainly, it has a tremendous amount of both grip and feel through the Goodrich RE71 225/50VR15 footwear, which are also better than most large tyres at shrugging off road markings and bad surfaces. There is just a trace of understeer now (the new suspension was deliberately set up to ease the more usual TVR oversteering traits) but it is better to think of the car as virtually neutral. On damp or muddy patches the tail tends to step sideways quite easily under power but because you're so close to the rear axle line you correct without thinking, and the steering is sharp enough to do that.

In fact it is quite natural to drive the 420 on a mix of throttle and steering – just as you would expect in a car with this combination of short wheelbase, wide track and a lot of controllable power. That's why it's so much fun.

The ride remains acceptable too; it is very firm, naturally, but rarely harsh.

The main thing it lacks is travel and the one thing that will catch the car badly is fast bumpy corners, where the tail tends to hop and the low rear silencer box can bottom noisily. Then the ride is really jarring and you have no option but to back off, just like the movie. . .

One thing the 420SEAC does share with other TVRs is the superbly simple hood arrangement, with a rigid roof panel and easy to fold soft rear section – surely one of



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**DARK
STAR**



the best soft top arrangements offered anywhere. With the top on, the car is watertight, airy and quiet; with it off the steeply raked windscreen and deep sides keep the cockpit virtually free from buffeting right up to very high speeds. Almost throughout our time with the car, the top stayed in its space in the boot, along with the spacesaver spare wheel. That doesn't leave much luggage space in the boot itself but there is ample room for soft cases for two behind the seats and the 420 is a perfectly practical car for modest touring.

But that, as you may gather, is not what it is designed for. What it is designed for is that occasional transformation when the road opens out ahead. Here, for less than £30,000 is a car with true supercar performance, race-bred roadholding and handling, immense character, reasonable practicality and the one extra that makes it a real sports car as well as a real supercar – the soft top. It is a gem.



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