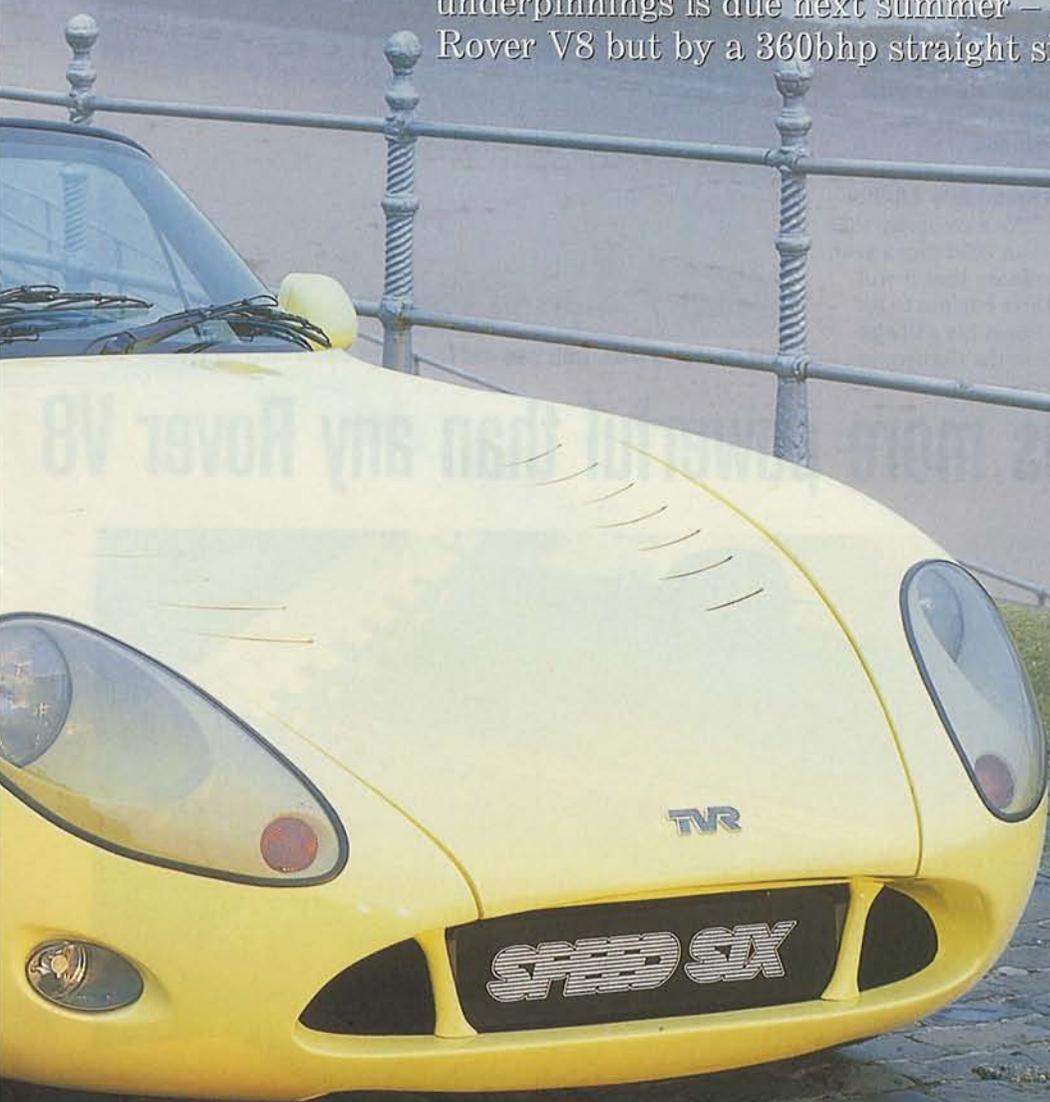




SIX FIX

FIRST LOOK TVR TUSCAN An all-new TVR roadster with Cerbera underpinnings is due next summer – and it's powered not by a Rover V8 but by a 360bhp straight six. Andrew Golby reports



Nothing stays the same for very long at TVR. Last year we were looking forward to a brand new straight six engine in a facelifted Griffith. This year the new engine has become a reality, but rather than going into a modified Griffith, the Speed Six will power an all-new roadster called the Tuscan.

Building a successor to the Griffith is no easy task; after all, it's the car that really began the incredible rise of TVR to date. Simple, aggressive looks and a thunderous Rover V8 were – and still are – an appealing combination. So far nearly 2000 have been built, and they have sold like hotcakes. The Tuscan sticks closely to its predecessor's philosophy, even though they share nothing except the hand brake cable and fuel tank.



Big cover encloses light, indicator

The new roadster is based on a shortened Cerbera chassis and shares much of the coupe's running gear. At £38,000, it will cost £3500 more than the Griffith 500, which will stay in production as long as there is demand. Incredibly, 250 TVR fanatics have already put down £1000 deposits for a Tuscan, with deliveries starting next summer.

Buyers won't be purchasing the first ever Tuscan; this is the third in TVR's history. The first was a coupe, sold between 1967 and 1971 and powered by either a V6 or V8. The other Tuscan is a racing car, still going strong in a massively popular one-make series. Spectators have been thrilled by the hairy sports cars since 1989, and now that they're powered by TVR's AJP V8 they're faster than ever.

People have wanted a road-going Tuscan almost since the series began, and now their wish has come true. There was never any question of the race car being converted for road use, but this car is very much in the spirit of the racer. The existing Tuscan will continue as before, but the new car might race abroad.

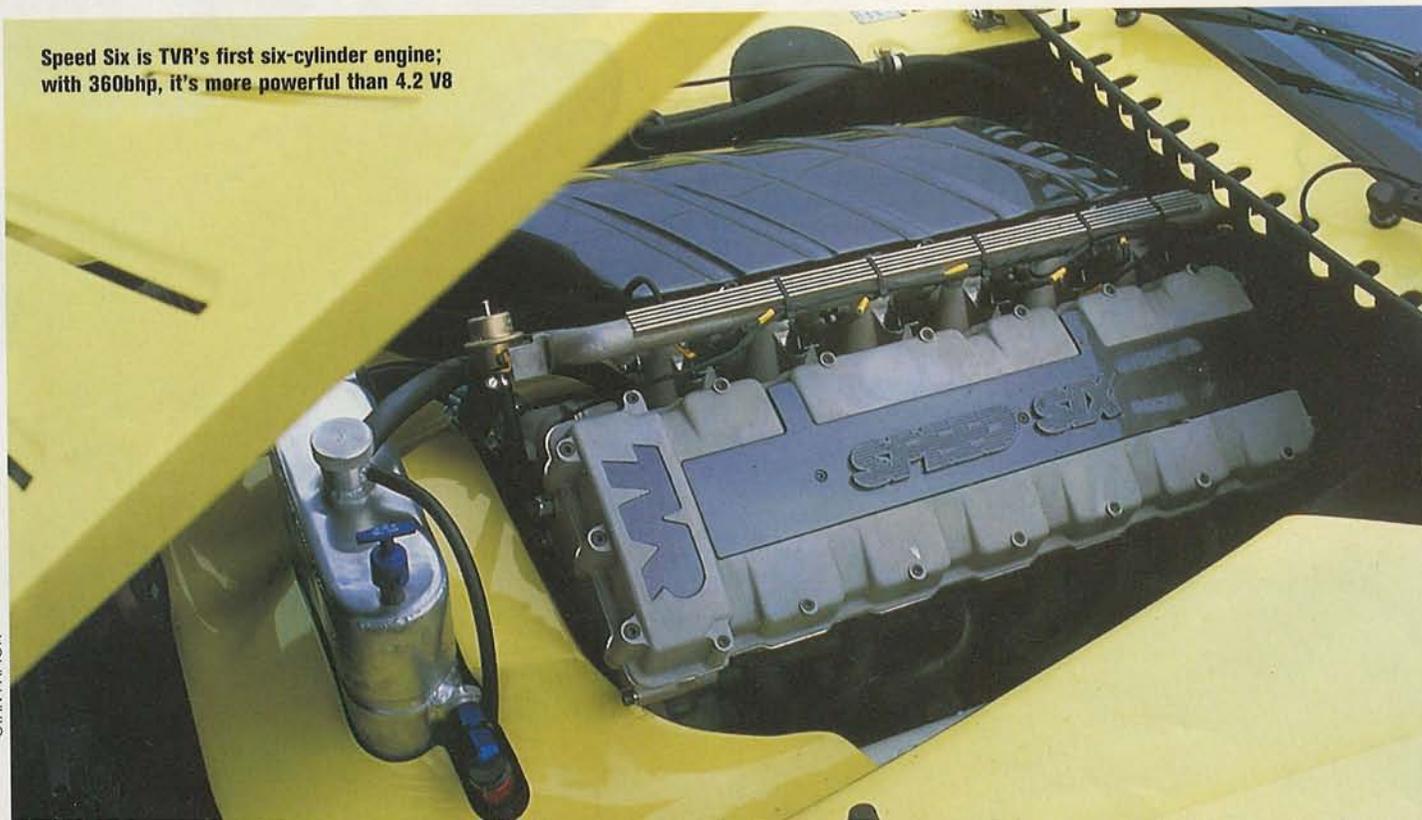
At the heart of this car is TVR's own brand new 4.0-litre straight six. For a company that builds less than 2000 cars a year, it is extraordinary that it will soon have three engines to its name. The Speed Six will also be available in the Cerbera at



Tight cluster of dials, with vent and fuel gauge below steering column

"The Speed Six is more powerful than any Rover V8

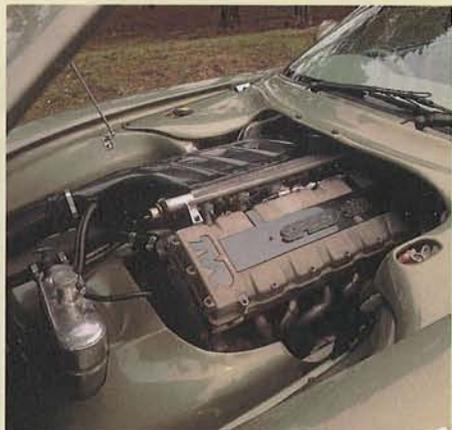
Speed Six is TVR's first six-cylinder engine; with 360bhp, it's more powerful than 4.2 V8



Absolutely typical. Just as I get within a few feet of TVR's only road-going Speed Six, Goodwin and Sutcliffe jump the queue and clear off in it.

When I catch up with the Cerbera prototype, they seem gobsmacked. And that doesn't happen very often. Having had a go myself (eventually), it's not difficult to see why. In short, TVR's first six-cylinder engine is magnificent. Peter Wheeler's love of old Healeys and Aston Martins is one of the reasons why a straight six is in a TVR today. In deference to this, TVR has painted this car in California Sage, a classic-looking Aston Martin colour.

What strikes you first about this engine is



Speed Six: nothing else quite like it on the road

the noise. There's nothing else like it on the road. As Sutcliffe points out, the Speed Six could be a blood brother of Porsche's 956 engine, as used by Derek Bell et al at Le Mans in the '80s. This particular car is probably a bit noisier than production



Slotted into a Cerbera, the Speed Six is smooth, progressive in power delivery and sounds amazing

versions. Apparently most TVR buyers fit sports exhausts, though, so the difference will be minimal. Even at tickover it sounds amazing and as the revs are wound up, the noise just gets better.

There's still some mapping work to be done and TVR says it will smooth out the occasional rattle that's noticeable in this engine. That said, it's a pretty smooth performer and the power delivery is nearly spot on already. Unlike the 350bhp AJP V8, there's no great big kick as the torque comes in; it's gradual and very useable. From 1500rpm it runs clean and the power is good all the way to the 6900rpm limit we're using today. Eventually, the full 7500rpm will be available. It feels a little slower than a V8 Cerbera, but this is probably an illusion, as an occasional glance at the speedometer confirms.

For those who like fast cars, but don't necessarily exploit them to the full, this car will really fit the bill. Apart from a poorly sprung throttle action (which will be

changed), it is a very easy car to drive around town. Because the engine is so tractable, there is none of the usual jerkiness present in some sports cars. A light, progressive clutch and an accurate, if slightly notchy, gearchange are easy to use as well.

Don't think for a minute that this is a tamer machine than previous TVRs; it's just easier to use and seriously easy on the ears. But what's TVR going to do with the V8 now?



Six-cylinder Cerbera easier to drive than V8s

TVR has tuned, generating an incredible 360bhp"

the same price as the 4.2-litre V8 (£41,100).

The six-cylinder engine was an original design by freelance engine designer Al Melling, but since then TVR's own John Ravenscroft has taken over the project. Work began in 1995 and Ravenscroft has worked flat out to produce the prototype engine we've driven in a Cerbera (see above). It was born out of the need to replace Rover's V8, an engine that has powered TVRs since 1984. The AJP V8 is too expensive to be considered a direct substitute. TVR says building its own six-cylinder engines will eventually be cheaper than buying in Rover power; the company has plans to build a "budget" version of the six, for when the supply of Rover engines finally dries up.

The Speed Six is more powerful than any Rover engine TVR has tuned, generating

360bhp at 7000rpm. With 320lb ft of torque at 4500rpm, the engine is impressive even before you fire it up. Rather than producing a flat torque curve, as many tuning gurus would aim for, TVR has designed the six to feature a

rising torque graph. So as you accelerate through each gear, momentum builds faster all the time. The idea is not to have a great big surge at any particular engine speed, but for the power to build progressively across a wide band.



All-aluminium straight six has four valves per cylinder and is dry sumped

Weighing 145kg, it is slightly lighter than a Rover V8, but some 20kg heavier than the AJP V8. However, the Speed Six has four valves per cylinder, whereas the V8 has two. The camshafts open the valves indirectly via finger followers, rather than directly via hydraulic tappets. Not only do they save weight, but they also have less inertia and are better suited to high-performance engines. Frictional forces are also reduced, which improves fuel economy a little.

Both head and block are made of alloy, and instead of using belts or gears (like the V8), the camshafts are chain driven. Chains are not only quieter but are less prone to going wrong. To further improve reliability and performance, a dry sump has also been specified.

TVR is not yet making any claims about the Tuscan's

◆ performance, but it would be a surprise if it were any slower than the Griffith 500 (0-60mph in 4.2sec, 161mph top speed).

The Speed Six is 100mm longer than the AJP V8, due to its in-line arrangement. The engine bay is nearly 80mm longer than the Cerbera's to accommodate the new powerplant, although the Tuscan is 200mm shorter overall because a chunk has been taken out of the wheelbase.

TVR expects the Tuscan chassis to be stiffer than a Cerbera, which suggests grip ought to be quite superb. The

MEET TVR'S ENGINE DESIGNER



Ravenscroft: burning midnight oil

If you live in Blackpool and are woken by a high-revving engine in the middle of the night, blame John Ravenscroft. It's probably him testing something on the dyno. TVR's engine designer is well known for his long hours and could be the hardest worker in the whole of Blackpool.

Having met TVR boss Peter Wheeler's criteria for employment, he joined the company straight from Loughborough University in 1984. All TVR engineers must

have a degree in mechanical engineering *and* be able to weld. His first big task was to style the Griffith and assist in some chassis work on the car as well.

Since then he's concentrated on engine work and is responsible for TVR's non-stop development of the Rover V8. He also worked on the Al Melling-designed AJP V8 and can take much responsibility for the new straight six. The final feather on his bow is the V12, which is entirely his own design.

“TVR has fashioned its most adventurous cabin yet

Tuscan will cost about £3500 more than Griffith 500 - £38,000. Deliveries will start next summer





Swoopiness taken to new heights in Tuscan cabin; narrower transmission tunnel improves space for driver's feet

for the Tuscan, and it looks fabulous"



steering, brakes (still with no anti-lock system) and suspension come directly from the Cerbera 4.2. Small changes have been made to the rear brakes and anti-roll bar, to take into account the fact the Tuscan weighs only 1080kg. That's 97kg lighter than a Cerbera, but 5kg heavier than the Griffith 500. To put that into perspective, a BMW M Roadster weighs 1402kg.

The spaceframe chassis is slightly asymmetric, to allow the exhausts to run down one side, and the driver's footwell is much bigger to answer a criticism of the Griffith. The extra space has been liberated by reducing the width of the transmission tunnel, offering a wider and longer space for big-footed drivers. There is also a huge boot and extra storage space behind the front seats.

The design of the soft top is essentially the same as that of the Griffith, but it's easier to use, because there's more space for the hood to manoeuvre in.

For the Tuscan, TVR has fashioned its most adventurous cabin yet, and it looks fabulous. At first glance the radical curves



Seven-spoke 16in alloys standard

look slightly ridiculous, but in fact the interior has a very simple design. It follows the TVR rulebook in that the switchgear is all bespoke. The instrument cluster is quite minimalist and the dials are packed in tight behind the steering wheel. In line with current models, no airbag is available on the Tuscan. Like the Cerbera, a heater vent is positioned between the spokes, as is the fuel gauge. It doesn't, however, feature steering wheel-mounted controls.

Dominating the dash more than anything is a swoopy pillar, continuing a curve which begins around the top of the instrument binnacle. It not only looks good but also houses two vents and some of the heating controls.

The Tuscan is absolutely faithful to the Griffith concept: light, powerful, clean looking and cheaper than the competition. Reliability will be important, because early Cerbera buyers suffered at the hands of incomplete development. But if TVR gets that area right, there'll be no stopping the Tuscan. ©



New tail lights don't look borrowed

FACTFILE



TVR TUSCAN

HOW MUCH?

Price	£38,000
On sale in UK	Summer '98

HOW FAST?

0-60mph	n/a
Top speed	n/a

HOW THIRSTY?

Urban	n/a
Extra urban	n/a
Combined	n/a

HOW BIG?

Length	4160mm
Width	1910mm
Height	1180mm
Wheelbase	2362mm
Weight	1080kg
Fuel tank	65 litres

ENGINE

Layout	6 cyls in line, 3996cc
Max power	360bhp at 7000rpm
Max torque	320lb ft at 4500rpm
Specific output	90bhp/litre
Power to weight	333bhp/tonne
Installation	Front, longitudinal, rear-wheel drive

Made of Aluminium alloy head and block

Bore/stroke	96/92mm
Compression ratio	10.5:1
Valve gear	4 per cyl, dohc

Ignition and fuel MBE ignition, Lucas/Sagem electronic fuel injection

GEARBOX

Type	5-speed manual
Ratios/mph per 1000rpm	
1st	2.95/7.2
2nd	1.95/10.9
3rd	1.34/15.9
4th	1.00/21.3
5th	0.80/26.6
Final drive	3.45:1

SUSPENSION

Front	Wishbones, dampers, anti-roll bar
Rear	Wishbones, dampers, anti-roll bar

STEERING

Type	Rack and pinion, power assisted
Lock to lock	2.0 turns

BRAKES

Front	292mm ventilated discs
Rear	306mm ventilated discs
Anti-lock	Not available

WHEELS AND TYRES

Size	7.5Jx16in
Made of	Alloy
Tyres	225/45 ZR16 (f), 225/50 ZR16 (r) Bridgestone S02

All manufacturer's figures

VERDICT

Promises to be an absolute cracker. Griffith owners will love the noise and performance. Newcomers to TVR won't believe what's hit them.