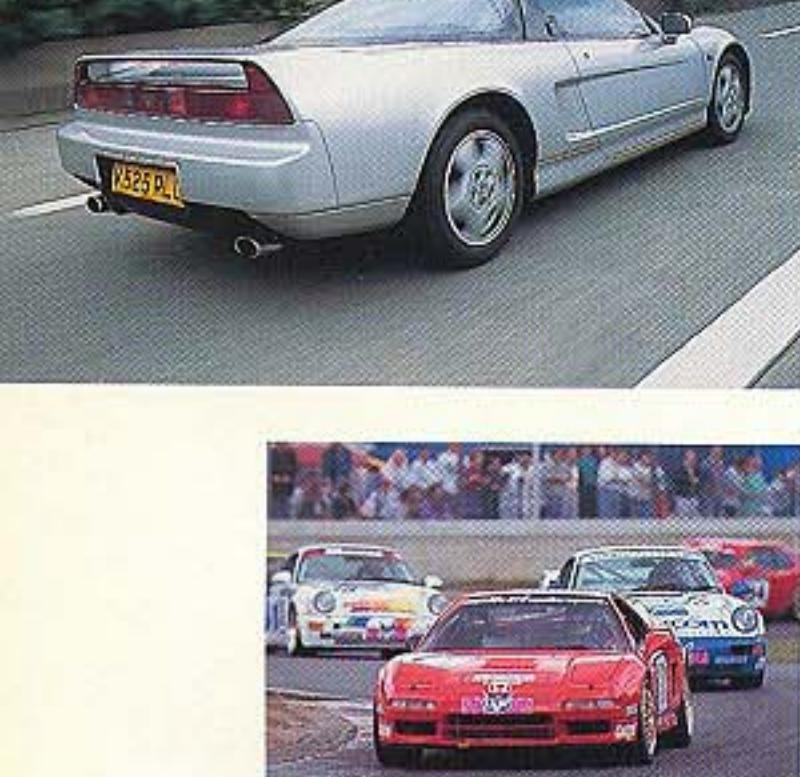
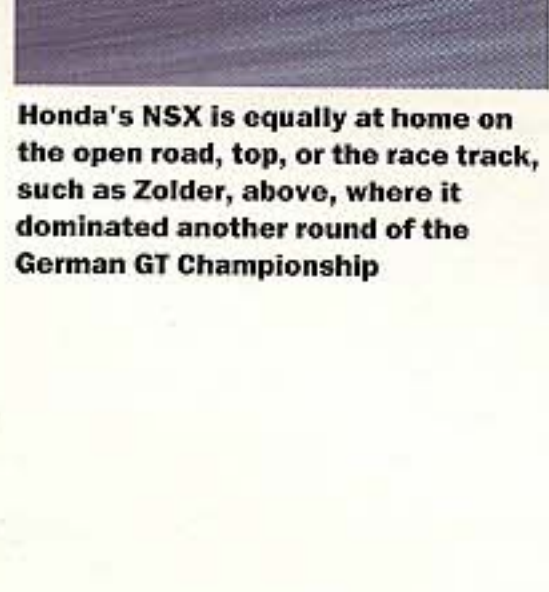


An Unknown Quality



Road and racing versions of Honda's supercar contender come under scrutiny. **Kevin Brazendale reports**



Honda's NSX is equally at home on the open road, top, or the race track, such as Zolder, above, where it dominated another round of the German GT Championship

Build a better mousetrap and the world will beat a path to your door. But no one cares who makes a mousetrap; it doesn't need a badge to sell it. Unfortunately some cars do, certainly those cars selling for over £50,000. The Honda NSX falls into both categories and seems doubly damned.

Since its introduction in the UK in 1990 it has not been an enormous seller – in 1993 just 20 had been sold by the end of May – but as the whole time it's been on sale has coincided with Britain's deepest recession since the 1930s that is not too surprising. Supercars are unashamedly luxury items and with hard times it's more difficult to justify buying one. Sales of Porsches have plummeted in the 1990s, from a total of 2,801 in 1990 to 945 in 1992. The decline is even more marked with the 911, down from 1,584 to 332.

Even Ferrari has not been immune from hard times. Traditionally Britain takes about 10 percent of the factory's annual production of around 4,000 but last year saw fewer than 250 Ferraris bought. That's still more impressive than NSX sales but then the NSX is a Honda and any Ferrari is, well a Ferrari. Does that make the Honda inferior? Anything but and that's the sad part of the story. The car's abilities are immense, but too little known and appreciated. Recently Honda decided on a two-pronged attack to rectify that.

The pair of NSXs run by Team Seikel Motorsport is currently dominating the German GT Cup with Armin Hahne and John Nielsen. In June they ran at Zolder. Driving a

road car across the 180 or so miles from Calais to the Belgian track would give ample opportunity to refresh the memory and prove the car's capabilities.

By the time the NSXs reached Zolder the question was whether the racing car could possibly be as impressive on the track as the standard car on the dreadful Belgian roads. Practice saw Armin Hahne's car the third fastest, less than half a second behind a brace of BMW M3s, with a fastest lap speed of 87.3mph. The Seikel outfit was unperturbed and it was soon easy to see why. The BMWs started well, too well in the case of Johnny Cecotto who earned himself a 20-second penalty for jumping the light. Harald Grohs' Porsche RSR led the first lap but by lap three Hahne's NSX was through into the lead, squeezing past Kris Nissen's BMW M3 so tightly that part of the left front indicator was left hanging in the breeze. Hahne stayed in front, although never by more than a matter of yards, for the rest of the 23-lap race and there was nothing that either Nissen or Cecotto could do about it. Twenty three laps around Zolder doesn't constitute a long race but it saw eight cars (a quartet of Ferraris, a 968, a Corvette and a couple of Escort Cosworths) drop out, all through running out of fuel. That's the key to this championship; this was the first race run over the full distance and clearly some teams had made the wrong calculations. Not so Honda who worked it out to perfection. Hahne had enough fuel to win and no more and team-



John Overton

HONDA NSX

mate Nielsen, running on a lower rev limit to conserve his fuel, stopped some 200 yards past Hahne to finish fifth.

You can regard running to a fuel consumption formula in two ways, as an absurd restriction on a racing car or as a way of making engineers concentrate on maximising efficiency. The rules for the championship itself are complicated – stretching to more than 20 pages – and once you delve into them it's clear that a considerable amount can be done to the cars to improve performance, but of course with the fuel consumption limit few teams even scratch the surface of what's allowed. There's another complication to bear in mind, the cars have to conform to a certain power to weight ratio, in this case of 8.9lb bhp. So as the NSX has a race weight of 2,866lb it's allowed 320bhp; the heavier (and clearly thirstier) Corvette was allowed 370bhp.

The rules allow Honda and Seikel many avenues to this extra power. The engine could be bored out by 0.6mm, the head could be milled to increase the compression ratio, there's free rein on pistons, rings and bearings, and the flywheel can be lightened. Valve timing and cam profiles are exempt from the regulations, as is the size and lift of the valves. If you stay with the standard manifolds the rest of the exhaust system is exempt and the ignition timing can be altered at will. With scope like that any engine builder worth his salt should be able to increase power considerably. In fact with the standard NSX producing 270bhp it didn't require much to find the extra 50bhp. The cam profile was changed, stronger valve springs were fitted and the engine management system reprogrammed. A thinner head gasket was used, to increase the compression ratio and the whole bottom end of the engine, including the pistons was left as standard. According to Seikel Motorsport it would take very little more to get 350bhp from the VTEC V6, but the twin restraints of fuel economy and power-to-weight ratio make that an academic point.

The rest of the car can be changed too, within limits. The suspension has to be the same system, as do the brakes, but within the same configuration real improvements can be made. The racing NSX gets stiffer springs and dampers and the diameters of anti-roll bars front and rear have been increased. Larger Brembo ventilated discs (13.1in diameter front, 12.3in diameter rear) are fitted but the most significant suspension improvement came with a simple bolt-on change, the switch to larger, 18in diameter, aluminium-alloy wheels, the fronts 9.5in wide and the rears 10.5in, shod with Yokohamas.

The package clearly works as so far the NSX is unbeaten and it's got the outright speed and the handling that suggests. It swept through Zolder's chicanes completely untraced, taking a neat tidy line without a flutter of roll. A

good number of NSX owners were on hand to witness the performance and would have been overjoyed to see how little is needed to turn a junior road supercar into an effective winning racer. And that's one of the main strengths of the NSX, everything is just right on the car, from its sculpted alloy wishbones to one of the finest engines in production.

If the engine was the Honda's only strong point it would still make the NSX a formidable performer. The short-stroke 3-litre V6 is all aluminium-alloy, and has the expected four overhead camshafts and four valves per cylinder. It's not alone in that of course but there's far more to this engine, from its titanium con rods which help permit it to rev safely to 8,000rpm to the individual coil per cylinder ignition and the VTEC (Variable Valve Timing and Lift Electronic Control) system that changes cam timing past 5,800rpm, giving greater valve lift, more overlap and longer duration. That has been well enough documented already, as has the VVIS (Variable Valve Induction System) which allows the

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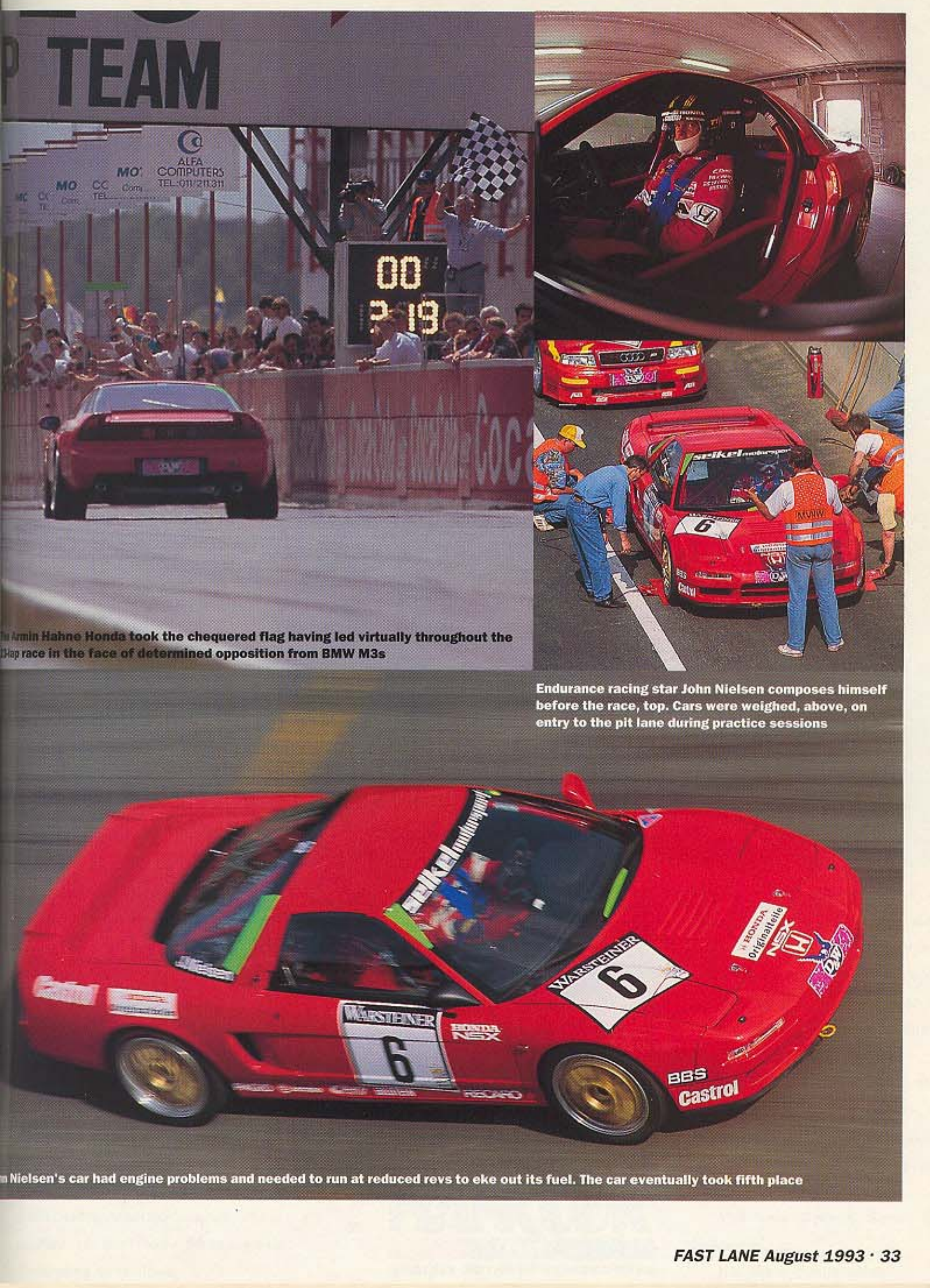
engine to breathe better beyond 4,800rpm but knowing that such devices are there doesn't prepare you for how well this engine works.

Stuck in traffic the V6 is docility personified, it idles smoothly with no temperament whatsoever and yet it answers instantaneously to the throttle's call. From an engine note at home in a Civic it rises in pitch as the needle climbs, once over 4,500rpm it starts to tell you that it's a racing engine at heart and if you go beyond 7,000rpm you and the surrounding traffic (if there's any left near you) are in no doubt whatsoever. It is a stunning performer; it gives you instant generous power but it and the car makes you crave for more. You become so conditioned by the easy access of so much power that you notice the V6's only weak point, a lack of torque that shows itself in fourth and fifth gear at the sort of speeds where you would expect good high-gear acceleration. Maximum torque is 'only' 210lb ft at 5,300rpm, so if you are travelling at 80mph in fourth gear the engine is some 1,300rpm below its maximum torque rpm and it shows. But we can allow the NSX one flaw and that is pretty well the only one.

Question any other aspect and the NSX



NSX design loses nothing in comparison to the best architecture in Brussels, top. Parked at Zolder, above, the NSX drivers showed owners' club tendencies in congregating amongst themselves



Armin Hahne Honda took the chequered flag having led virtually throughout the 23-lap race in the face of determined opposition from BMW M3s

Endurance racing star John Nielsen composes himself before the race, top. Cars were weighed, above, on entry to the pit lane during practice sessions

Nielsen's car had engine problems and needed to run at reduced revs to eke out its fuel. The car eventually took fifth place

HONDA NSX

won't be found wanting. Handling? It's little short of perfection. Is there some doubt then? Possibly, but only beyond the speeds we explored and in the region where few but race drivers venture. They might find fault – I couldn't. It rides flat through the corners and just won't be deflected from its line. The springing is stiff. Try leaning on the rear wing and you'll think the car has one of the racing team's onboard jacks in place; there's just no deflection. Such stiff springing usually extracts a high price, making a car skitter and hop on poor surfaces. Many roads in Belgium are diabolical but even the worst made no difference to the Honda apart from generating unparalleled road noise. It always tracked straight and true, didn't even know the meaning of bump steer and possessed unassisted

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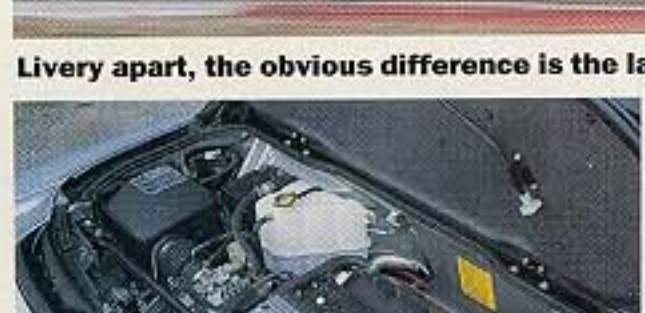
steering that gave perfect feel and control with none of the thinking effects that some people seem to write as hand-in-hand with communicative steering.

Mid-engine cars used to have poor gearchanges – some still do – but the Honda's is precise, not truly light in Japanese shopping car vein but no effort to move in a well-defined gate and there's never any baulking going into gear. A power output of 270bhp used to be enough for some engineers to give the car a dispiritingly heavy clunk, more often than not operating at an awkward angle to compound the effort. The NSX's is as light as the gearchange. The Honda is no light-weight though; step out of it straight into a first-generation Toyota MR2 as I did and you realise there's a weighting to all the controls but it's because they are all so perfectly matched that there seems to be no effort involved. Some misguided souls have suggested that power steering would be useful – they should drive the automatic version which does have power assistance to see that the NSX really is better off without it.

So for an asking price of £56,950 you get real performance (a top speed just on the 160mph mark, a 0-60mph time under 6sec, and a standing quarter in the 14sec region). You get handling, with little compromise in ride comfort, looks which still make people stop and stare, and superb build quality. What you don't get is a Prancing Horse adorning the bonnet. But who needs it?



Livery apart, the obvious difference is the larger alloy wheels fitted to the race car



Superb V6 has 274bhp, revs to 8,000rpm



Race car interior is only partly stripped



Regulations allow a maximum of 320bhp



NSX is the easiest of all supercars to drive



NSX is a comfortable and competent motorway cruiser