16 PAGE GUIDE TO TRACK DRIVING – FROM BEGINNER TO EXPERT







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Ed Speak





WE MAKE NO EXCUSES for our love of trackdays. The best days I've had in this job have not been wringing out a Veyron on an oval, or being a spoiled VIP at

a Grand Prix, but hanging out in a chilly paddock at Bedford Autodrome on an evo track evening, chatting to readers, poring over some great cars, and taking to the track to burn away some stresses.

The thrill of driving has never been about speed, and we'll never condone speeding on the road. But likewise we'll never condone poor driving. I thought about this deeply the other day, having witnessed a biker come within a micron of being pink mush as a car pulled out of a junction directly in front of him. The situation was scarily similar to one that put me in intensive care, and at risk of losing my left arm, nine years ago.

Speed was not a factor in either of these incidents, but poor decision making and inattentiveness undoubtedly was. These are serious issues - as serious as speeding - and if you put the three together your car, the car you love, becomes a horribly destructive weapon.

Very human responses, that we are all vulnerable to. can result in poor driving. Adrenalin, stress, frustration and pride (and a dozen other 'reasons') may tempt you to push a little harder on the road, but eventually it'll only end one way.

NICK TROTT @evoNickTrott

And if you don't give a damn about yourself, imagine hurting someone else - and I mean seriously hurting someone. I ran someone over once - it wasn't my fault - but I thought I'd killed them and the seconds that followed were seconds of such excruciating mental pain that I don't believe I'd have coped if he had died.

So the thrill of driving is not about speed, but if it plays a significant part in what constitutes your thrill of driving then please take advantage of the numerous trackdays that take place all over the world. I absolutely guarantee that no matter how stressed, or competitive, or pumped with adrenalin you are, your drive home from the track will be calm, composed and stress free. Track driving is a release in an increasingly manic world, and, well, a plain good laugh too.

Enjoy our 'Get On Track' guide starting on p115, and be safe out there.

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Connectivity

REALITY

AUGMENTED

by STUART GALLAGHER

Bugatti Chiron

Meet the Veyron's 1479bhp, 261mph, £1.9m successor

8

ZADAR



The KING IS DEAD. LONG live the king. As the Bugatti Veyron passes into the history books as the original hypercar, its successor drives headlong into the most exclusive of motoring groups with more of everything: more power, more performance, more extraordinary numbers to try to comprehend. The Chiron, on paper at least, wants for nothing.

It took McLaren 15 years to replace the F1 with the P1; the first deliveries of the Chiron will be with customers within 15 months of the last Veyron being delivered. But this is not the work of a moment, a quick nip and tuck, with the boost wound up and some LED lights fitted. Bugatti started work on the Chiron before the Veyron started its long goodbye through an endless stream of final editions.

How, then, do you replace a car like the Veyron? It set records, it stunned the motoring public and it became a poster car of a generation of impressionable petrolheads. Its performance may have dominated proceedings at the cost of dynamic involvement, but you'd be hard pressed to find anyone who stepped out of a Veyron and wasn't bursting with superlatives to explain what they had just experienced. Even seasoned hacks could be impressed by the super Bug's performance, no matter what else they had experienced.

The Chiron is, says Bugatti, a completely new development. Its monocoque carbon chassis is more aligned with Porsche and Audi's LMP1 tubs than anything that has come from Molsheim in the past. The rear structure is, for the first time, also manufactured from carbon and as a result is 8kg lighter than the Veyron's. The same weight saving has been achieved by using a sandwich construction for the carbonfibre underbody, too. Bugatti claims the tub is on a par with an LMP1 car's when it comes to stiffness.

As with the tub, the Chiron's body is also manufactured entirely from carbonfibre. The Veyron's body was designed primarily to optimise aerodynamics, engine air supply and cooling, hence its function-overform design. With the Chiron, the designers have managed to inject a small flick of flair too. As a result the general consensus is that the Chiron has a far greater sense of character than the rather blob-like Veyron. The open rear of the new car is far more aggressive than its predecessor's plump behind, for example. There is also room for some nostalgic design flair, namely the arc that runs from the base of the A-pillar over the door and beyond the B-pillar before returning and running the length of the sill to There
 isn't a
 component
 of the W16
 quad-turbo
 engine that
 hasn't been
 improved
 upon **9**

FIRST LOOK

by STUART GALLAGHER







The Chiron's 0-124mph time – the same time it takes a Focus ST to reach 60mph



Top speed – but only for six seconds, to prevent tyre failure

Engine Power Torque 0-62mph Top speed Weight Power-to-weight Basic price

SPECIFICATION



sets of tyres used during the Chiron's development

W16, 7993cc, quad-turbo 1479bhp @ 6700rpm 1180lb ft @ 2000-6000rpm <2.5sec (claimed) 261mph (limited) 1995kg 753bhp/ton £1.9million



of coolant pumped through the system every 3 seconds

Peak power.

479bhp more than

the Veyron 16.4

join the base of the front wheelarch. It's a classic Bugatti design detail that

responses, agility and steering

lacking in the Veyron. It is, claims

predecessor, one that is about more

The Chiron still does the numbers,

of course. Its W16 quad-turbo engine

is carried over from the Veyron but there isn't a component that hasn't

been improved upon. Weight has

the four turbochargers now feature

spooling up at low speed and the

1 ENGINE

Eight litres, sixteen cylinders, 32 injectors, four turbos – the Chiron's W16 engine is a colossus. The titanium exhaust has four pre-converters and two main catalytic converters, which are six times the sizes of the units fitted to an Audi A4. Four of the six exhaust exits are positioned to point directly out of the back of the car and two point downwards.

2 AERO

The Chiron has to be as aerodynamically efficient as possible while maximising airflow for cooling. There are new intakes for brake, water, air conditioning and oil cooling, plus new engine air inlets ahead of the rear wheels. Both the front splitter and rear spoiler are adaptive, the latter in four positions depending on the driving mode selected.



3 TYRES

The Michelin Pilot Sport Cup 2s have been tested on aerospace industry rigs – understandable when you consider that at 249mph each gram of rubber weighs 3.8kg due to the centrifugal force. Calculations showed the tyres can only sustain around six seconds of maximum-speed running before the pressures increase to a level that risks tyre failure



🙆 CHASSIS

The new adaptive chassis has five modes. 'Lift' is self explanatory. 'EB Auto' is the default mode and adapts to the driving conditions. 'Autobahn' sets the dampers for high-speed cruising. 'Handling' is for circuit work. 'Top Speed' lifts the speed limiter from 236mph to 261mph – but as with the Veyron, you'll also need to insert the special 'Speed' key first.

FIRST LOOK

by STUART GALLAGHER

RADAR

other two coming in from 3200rpm. The result is a claimed total lack of turbo lag. Other improvements include the charge air cooling system, the fitment of a titanium exhaust and carbonfibre air intakes.

Harnessing the Chiron's fourfigure power output is a sevenspeed DSG gearbox with the largest high-performance clutch ever fitted to a passenger car, plus locking differentials front and rear.

The brakes use carbon silicon carbide ceramic discs, with milled aluminium calipers that follow bionic principles (i.e. their design is based on structures found in nature). The bespoke Michelin tyres have been developed in conjunction with the aerospace industry.

Where the Chiron looks set to improve over its predecessor is in translating the phenomenal numbers into a more interactive and engaging driving experience. We're not expecting 911 R levels of feedback, Elise delicacy or 675LT accessibility, but the Chiron promises to be more than just a numbers machine. There are suggestions of a personality behind its more toned and athletic body, of a chassis that wants to indulge you, and of an engine that will leave you more impressed with how it performs than what it does.

There will be those who will argue that the Chiron is a car from a time the industry is quickly leaving, and that a hybrid or fully electric powertrain would have been a stronger statement of intent. But as CEO Wolfgang Dürheimer said, a hybrid powertrain wouldn't have delivered the performance gains over a Veyron, and when you consider that the Chiron has to pass the exact same quality control tests as every product in the Volkswagen Group, you can't not be impressed by what has been created in Molsheim.



INTERIOR



Very few will find themselves inside the cockpit of a Chiron, but those who do will be presented with a more exquisite and unique cabin than that of the Veyron. Not only is the fit and finish to a whole new level – even the Audi-sourced steering wheel feels of a significantly higher quality – but the attention to detail rivals the car's performance for wow factor. Take the C-bar that arcs from the top-centre of the windscreen and along the roofline before returning between the passengers' shoulders and along the transmission tunnel – it's the longest light conductor in automotive history.



The total active surface area of the six catalytic converters

RIVAL Koenigsegg One:1



Hypercars with four-figure power outputs that don't rely on hybrid power are few and far between, but thankfully Koenigsegg is on hand to oblige with its One:1. All 1341bhp of it. It offers a feeling of connection and involvement that the Veyron never could, and despite its monumental power output and 273mph top speed claim (12mph up on the Chiron's), it isn't all about brute force - it is agile, intense, devastatingly fast, heartstoppingly exciting and a bona fide megacar. The Chiron won't have it all its own way.

Engine Power Torque 0-62mph Top speed Weight Power-to-weight Basic price V8, 5065cc, twin-turbo 1341bhp @ 7500rpm 10111b ft @ 6000rpm <2.9sec (claimed) 273mph (claimed) 1360kg 1002bhp/ton c£2million



PXI4 HHY

AVAION

Precision Performance

SPORT

AZIONE

DB BC

S FALVER

60

TACHYANE

65

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Aston Martin DB11

The long-awaited new chapter in Aston's future starts here with the turbocharged DB11 The DB11, SAYS ASTON Martin, is the most significant new car since the introduction of the DB9 in 2003. With the current model-line creaking at the edges, Aston's range, from Vantage to Rapide and everything in between, has been living on borrowed time for too long, surviving on unwavering support from the Aston faithful and the marketing power of the Civil Service's most famous employee.

The cars are charming and the company's naturally aspirated V12 powertrain is dangerously addictive. However, they are beginning to feel behind the curve in terms of performance, dynamics and technology. The current Vanquish is a lovely thing, and just over 12 months ago was an eCoty contender, but even in the short time since then it has been usurped by sports cars such as the Mercedes-AMG GT.

In design terms the DB11 evolves the philosophy penned by Henrik

Fisker back in the early 2000s. This new car, designed by Marek Reichman and his team, may be a direct replacement for the DB9 but there's more than a hint of the Vanquish's muscular haunches.

There are also key design elements that set the tone for future Astons: the clamshell bonnet, the uninterrupted flow from A-pillar to C-pillar, and other areas such as the traditional Aston grille and contemporary LED lights. Reichman has integrated modern design approaches without erasing Aston's design history.

The aesthetics may link the past with the future, but the DB11's engine has little in common with the DB9's bar cylinder count. Contrary to the rumours, it is not a Mercedes engine (the German giant bought a five per cent stake in the British company as a technology partner in 2014). Rather it's a new 5.2-litre twin-turbo V12 that makes the DB11 the most powerful production DB model and the first turbocharged DB in the company's history. It's mated to an eight-speed ZF automatic gearbox.

Beneath the new body is a heavily revised platform. The settings for the chassis, suspension, steering and electronics have all been redesigned and future-proofed for forthcoming technology that may come Aston's way via its Stuttgart-based partner.

A decade ago Aston was on the verge of serious growth, with a new product line well underway and a new factory in Gaydon with Ferraririvalling capacity. Then the 2008 downturn took the wind out of Aston's sales and as the cashflow dried up, so did the product development.

Time will tell if its new turbocharged future can get it firing on all cylinders, but the question is how much time does an independent Aston Martin have, and will the DB11 set the pace or will it be left to the forthcoming DBX SUV to lead the way to secure the firm's future?



FIRST LOOK

by STUART GALLAGHER

IN DEPTH

I ENGINE

Designed in-house, the motor is an all-alloy, quad-cam 48-valve V12 with charge-coolers and dual variable camshaft timing. The pair of turbos feature infinitely variable electronic wastegate control, the combustion chambers are CNC machined and there's cylinder deactivation, too. Each engine is still handassembled in England.

2 TRANSMISSION

The DB11 gets the ZF eight-speed automatic gearbox first introduced on the Vanquish in 2014, which will bring a sigh of relief to those who have ever tried to shift smoothly with the DB9's six-speeder. There's an alloy torque tube and carbon propshaft, while a limited-slip diff is standard and active torque-vectoring features for the first time.

DIMENSIONS (mm)

Width	2060
Length	4739
Height	1279
Wheelbase	2805

3 CHASSIS

With its longer wheelbase, the DB11's V12 sits further back in the chassis compared to the DB9. Overhangs have shrunk, too, but both the tracks and the car's overall width have increased. There are three selectable driving modes – GT, Sport and Sport Plus – which all adjust the adaptive damping, throttle response and electric power-steering.

4 AERODYNAMICS

SPECIFICATION

Engine Power

Torque 0-62mph

Top speed Weight

Basic price

Power-to-weight

Aston's time-honoured side strake in the front wing forms part of a 'Curlicue' vent that ejects high-pressure air from the front wheelarch. At the rear is an 'AeroBlade' – an intake at the base of the C-pillar that channels air through ducts within the body before exit slots in the rear deck create a jet of air that reduces rear lift (so no spoiler).

V12. 5204cc. twin-turbo

600bhp @ 6500rpm 516lb ft @ 1500-5000rpm

3.9 sec (claimed) 200mph (claimed)

344bhp/ton (dry)

1770kg (dry)

£154,900

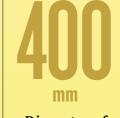


INTERIOR

Aston says the DB11 retains key design elements of the brand, only re-imagined for the 21st century. The cockpit is all-new and features a TFT instrument display. There's also a new centreconsole, which has an eight-inch LCD screen positioned at the top. Very Mercedes-esque... Crucially, the increased wheelbase means the 2+2 cabin offers more interior space than the DB9's.



Power of the new twin-turbo V12 – 60bhp more than the DB9 GT



Diameter of the front castiron brakes, with sixpiston calipers



Engine

Power

Torque

0-62mph

Weight

Top speed

Basic price

Power-to-weight

65

The length the DB11's wheelbase has been extended over a DB9's



RIVAL Bentley Continental GT Speed

Big, British and powered by a gargantuan turbocharged 12-cylinder engine, the latest Continental GT Speed will be waiting for the DB11. The Bentley is heavier and will likely struggle to match the DB11's Matt Beckertuned chassis, but its allwheel-drive chassis generates huge levels of grip to match its imperious performance.



4.05ec (claimed) 206mph (claimed) 206mph (claimed) 2245kg 283bhp/ton £168,300



ZADAR

GENEVA MOTOR SHOW

Two new Bentley coupes on their way

One's an SUV, the other is a sports car. But which comes first?

by STUART GALLAGHER

B ENTLEY WANTS TO ADD two further new models to its existing line-up. They will join the Continental GT, Mulsanne and Bentayga models.

The two options on the table are a coupe-like SUV based on the new Bentayga and a new sports coupe first mooted with the EXP 10 Speed 6 concept (pictured) shown at Geneva in 2015. However, either would require the Bentayga to hit its production targets in order to pay for development and the required expansion at Crewe.

Speaking at the Geneva motor show, CEO Dr Wolfgang Dürheimer confirmed that he wants to decide which new model will be built first by the end of the year. The likelihood is

A plug-in hybrid petrol V6 is a possible route

that the coupe-SUV will get the nod as it will utilise the Bentayga's platform and further maximise cash flow to fund the all-new sports coupe.

'When we showed the EXP 10 Speed 6, everyone said we had to build it,' said Dürheimer. 'But we don't have a honeyand-milk pipe from VW Group and we have to pay for our new models and make a business plan for them.' Part of the EXP 10's development could be shared with Porsche, which, despite the Mission E concept having been retired from the show circuit, is working on an electric sports car that at the end of 2015 was given the go-ahead for production.

Bentley is also looking at a hybrid powertrain. A full EV, however, has been ruled out. 'Too much weight, not enough performance for a Bentley,' said Dürheimer. 'I think the industry is going down the wrong path with EVs. They sound positive about it but I think it's the wrong direction.' A petrol V6 with plugin hybrid technology is a possible route. 'With this combination we can deliver the expected power output of a Bentley. Reducing the number of cylinders on the engine reduces a small amount of weight to compensate for the electric motors and battery pack. Within VW Group we have access to some very clever technology.

'Our customers are early adopters of technology, but only when it works and offers them a clear benefit. When we introduce a hybrid, it will be at a point when the customer is demanding it and we are able to deliver what they expect.'

The rear view is my favourite – it has something provocative about it, like the car is saying 'follow me – if you can' ??

Daisuke Tsutamori, Honda Civic hatchback prototype designer



35,000

Planned sales for the Maserati Levante in 2018 – doubling Maserati's 2015 volume

LAMBORGHINI CENTENARIO LP770-4

To mark 100 years since the birth of founder Ferruccio Lamborghini, the company has unveiled this, the Centenario.

A 759bhp naturally aspirated V12 gives the car a 217mph top speed and a 2.8sec 0-62mph sprint time. It revs to a heady 8600rpm. Both body and chassis are carbonfibre, but dry weight is a middling 1520kg.

Far from middling is the styling: front and rear fight over how many aerodynamic elements can be squeezed into a finite space, and an active rear wing enhances downforce. The cost? €1.75million plus taxes.





RADAR ROUND-UP

by ANTONY INGRAM

evo's Geneva hits and misses



NICK TROTT Editor

Best: First time I've seen the Mazda RX-Vision concept (picture no. 1); it's the most beautiful car I've seen for a long time and the star of the show for me. **Worst:** The Volkswagen T-Cross Breeze was the worst – a Chinese Evoque Cabrio knock-off, but much worse.



HENRY CATCHPOLE FEATURES EDITOR

Best: Apart from the 911 R it was the AC Schnitzer ACL2 (pic 2). Brilliantly bonkers. **Worst:** The very purple and very ugly Techart GrandGT (based on a Panamera).



DAN PROSSER ROAD TEST EDITOR

Best: The Koenigsegg Regera (pic 3), which transformed as the doors and panels opened automatically. Worst: I've been trying to think of a specific Mansory offering, but the whole stand was pretty offensive...

HUNTER SKIPWORTH WEBSITE EDITOR

Best: The new Ford GT (pic 4) in white. It's just such a beautiful car. I'm so excited for it now. Worst: The weird Mercedes Sprinter on the Brabus stand. The interior was a hipster's nightmare.



ANTONY INGRAM STAFF WRITER

Best: Opel's GT concept (top right) is a recipe I wish was more common. Small, light, simple, rear-drive, neat styling. Worst: I can't help feeling apathetic about the Aston DB11 – the styling is overwrought after the DB9.



WILL BEAUMONT STAFF WRITER

Best: Ruf SCR 4.2 (picture no. 5). Looks like a humble 964 but has a spec that outshines the new, 493bhp 911 R. Worst: Maserati Levante. Looks like a Chinese imitation of a Maserati SUV and only available in the UK with a diesel – the essence of disappointing.

STUART GALLAGHER MANAGING EDITOR

Best: The RUF SCR 4.2. Any Ruf is special and this one has 518bhp and weighs less than 1200kg. What's not to like? Worst: Seeing the Fiat 124 Spider in the metal. Only because it cast a shadow over the lovely 124 Abarth (pic 6) next to it.















The Opel GT
 is not retro – we
 wanted to bring
 the spirit of the
 1960s GT into 2016
 in a progressive,
 modern way

Mark Adams, Opel GT designer



Top speed of the Mercedes-AMG C63-based Brabus 650

EXIGE SPORT 350 ROADSTER

One of Lotus's best drivers' cars is now available without a roof. The Sport 350 Roadster is now the lightest Exige that Lotus builds. At a waif-like 1085kg, it weighs 40kg less than the coupe (see page 38). Losing the roof helps, of course, as does making the tailgate, side air intakes and seats from carbonfibre. The price is identical to the coupe's, at £55,000.



ZADAR

GENEVA MOTOR SHOW



BATTLE OF GENEVA'S HYPERCARS

	Bugatti Chiron	Koenigsegg Regera	Rimac Concept_S	
Power	1479bhp @ 6700rpm	1479bhp @ 4500rpm (approx)		
Torque	1180lb ft @ 2000-6000rpm	1475lb ft @ 7000rpm (approx)	1327lb ft	
0-62mph	<2.5sec	2.8sec	2.5sec	
0-124mph	<6.5sec	6.6sec	5.6sec	
0-186mph	<13.6sec	10.9sec	13.1sec	
Top speed	261mph	249mph	227mph	
Price	€2.4million	€2.1million (est)	\$1million+ (est)	

An **evo** reader's view of Geneva

Hot, busy and stressful – the Geneva show is all these things for journalists, but it's doubly so for regular punters. Here's Marc Levy's summary of the show from the other side of the fence:

- Everyone there has a passion for cars and everyone is very respectful.
- Unless you have a 'VIP invitation', forget getting onto the Ferrari or Lambo stands...
- ...unless you want to spend a fortune in their boutiques.
- McLaren had the friendliest stand I chatted for half an hour with their Swiss head of sales.
- The carbonfibre details on the McLaren 675LT Spider [above left] were incredible.
- Most overrated car? The DB11 the shape was dull and the interior was already falling apart.
- Ruf's stand was brilliant, but a real 'if you don't know it's there you'll miss it' affair.
- Best car for a cross-continent trip? The Rolls-Royce Wraith – but it could have been the Ferrari GTC4Lusso, had they allowed me onto their stand...
- Most expensive merchandise: the 35,000 CHF Bugatti crocodile-leather briefcase.
- My car of the show? The Porsche 911 R. It was great to sit inside and experience the tight gearshift quality.

Mini and evo join forces

evo road testers to help develop new track-focused model

INI HAS CONFIRMED it will build a trackfocused version of its John Cooper Works hot hatch later this year – and **evo** will be involved in its development. The UK-only model, which will be built in very low numbers, will be badged Mini John Cooper Works Challenge and is set to hit showrooms in June.

The model will benefit from adjustable suspension, uprated brakes and tyres, and styling tweaks. This project was formed by a small group of enthusiasts at Mini Plant Oxford and Mini UK wanting to bring some of the experience from the Mini Challenge to our production John Cooper Works model,' said Nicolas Griebner, head of Product for Mini UK. 'This new car will cater to the growing number of customers looking for an even more focused John Cooper Works model without losing any of the practicality of a vehicle they can use on the road every day.'

evo's road testers will team up with Mini's engineers during the development of the Challenge. We'll document the car's progress over the coming months.







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Andy Palmer

Aston Martin's CEO unveiled the new DB11 at the Geneva motor show. Here he tells evo why his multi-model plan will herald a bright future for the British marque

PALMER'S AMBITIONS



Sustainability, in that we are self-funding with good market capitalisation



In the same vein, to be able to fund our future and be self-reliant



To build cars that take us back to being that drooling eight-year-old



To be seen as world-class in terms of quality and processes



We already have it in some respects, but to be iconic. Of course, the Bond connection helps... **S** O WHAT'S CHANGED? We have a plan that is for more than one car, and we have funding for more than one car. I think historically what's happened in the company is that it's come to a moment in time where someone in the company has gone, "We need a new car." Then there's been a race around for cash and maybe that's resulted in new ownership, maybe it's resulted in bankruptcy, that's the history. We've never been able to put in place a plan beyond the next car.

'What we have now is a plan that is actually for seven cars, four of which are funded already. The money is in our bank, ring-fenced for product development. That gives you DB11, it gives you nextgeneration Vantage, it gives you nextgeneration Vanquish and it gives you DBX. Beyond that, the assumption is that we're self-sustaining, funding all of our models from working capital so we don't need to go out for any more money.

'Once you've got that longevity, you can start thinking about things that you *should* do, not *need* to do. That's why we can start to think about things like what does our electric strategy look like, what does that retail strategy look like? But raising capital is not easy. We're quite highly geared, we've got quite a lot of debt on us at the moment but, on the other hand, people don't lend you money unless you've got a very credible business plan.

'That credibility comes in, I would say, in the thoroughness in which you can demonstrate the plan – and, frankly, it's all about the numbers. There are people in the room that like cars but ultimately their brain overrules their heart. That's the first instance. The second instance is about delivery. For the last 13 months now, every single month we've hit the budget that we committed to the investors.

'That does an awful lot of things. If you make a promise and you miss it and you make another promise and you miss it, eventually everybody goes, "Well these guys are basket cases." It was a small revolution, the first quarter, where we set a quarterly budget and we went to the shareholders and said, "We've not only hit the budget, we've exceeded the budget." That injects confidence.

'We occupy a unique space in so far as we're not Ferrari, we're not McLaren or Lamborghini, which is, if you will,

We occupy a unique place. We're not Ferrari or McLaren. We're not Rolls-Royce

the edgy sports cars. We're not Rolls-Royce and Bentley in so far as we're not the ultimate in upholstery. We lie in the ground in between, which is a combination of superb performance but not necessarily point one quicker than the fastest, and maybe not always the ultimate in luxury and comfort.

'But will we stretch? Yes, we will. I mean, you know the ambitions we have with Lagonda, which obviously pushes us in that Rolls-Royce direction, and the DBX pushes us into a Bentayga. It doesn't look anything like a Bentayga – but it's in that territory. Obviously, vehicles like DBX are aiming at a cultural diversity, and the US and China, but, even though it's an SUV at the end of the day, it's still aiming to have style, panache and beauty. It's still for the connoisseur of the car and connoisseur of craftsmanship.

'Yes we probably could have sourced a platform from somebody, or we could have made a platform in another plant. We've gone in opposite directions in so far as we're making it in our own factory in Wales. We decided to stay true to the bonded aluminium process so we make our own vehicles. It will be completely crafted in-house. It's a DB11 but in the SUV set of clothes.

'Would the market be ready for DBX if it launched today? We are in the education process for the market. The SUV space exists in every segment of the market bar luxury. Bentley is making the market and, I guess to some extent, the Maserati Levante will help, but that's one of the reasons why we'll struggle to tell you how many Bentaygas will sell, or how many DBXs, as no one knows. The market doesn't exist.

'You can find the latent need for it and, when you talk to the customers, there's clearly a desire for that kind of car, particularly in China. Ultimately, who knows whether it's 5000 units or 10,000. What I will say is that if it's more than 10,000 units, we won't supply. We always will keep the exclusivity of the brand. 'What can I say to **evo** readers about how the next generation of Aston Martins will drive? Well, we've talked about the future line-up of vehicles having a family resemblance but looking different from each other. For the driving enthusiast they will all have to drive like an Aston but they all have to have personality in that driving which is different.

'ADB11 is a GT, so you'd expect to be able to drive it to the South of France. It doesn't need to rattle your fillings, it needs to be a pleasure to drive but it needs to be able to drive for a long time and not tire you. On the other hand, the Vantage, when it comes, just needs to be bloody quick and engaging. Our engineers' job is to create a driving personality that suits the design personality. That's what makes it interesting. It's why you might want to have two or three Astons in your garage because it depends on your mood and what you're working. You could easily imagine having a DB11 for those long weekends, a Vantage for the track and a DBX for the family.'

TAKING ON THE BIG BOYS

The key phrase that jumps out of Palmer's interview with **evo** is 'the money is in our bank', which acknowledges the work the British CEO has carried out behind the scenes to raise the capital necessary to develop, at the very least, the next four Aston Martins. The significance of this, plus the news that the company has hit the budget targets committed to the investors, cannot be underestimated.

Palmer's plan to ensure each new Aston has a different 'driving personality' is also key to eradicating the 'Russian doll' image of the brand. It won't be easy when you consider the inevitable mechanical similarities, but it will be intriguing to watch it unfold. *Nick Trott*

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ASK GOODWIN

Have you driven the new Focus RS and is it the best hot hatch ever? Gareth Stevenson, Swindon

Yes I have driven it, and no it isn't the best hot hatch ever. At least not in my opinion. It's probably one of the best high-performance fourwheel-drive cars ever made, that's for sure 1 drove the Focus in Spain at the launch, on the road and on track at the Ricardo Tormo circuit at Valencia. Ford had also set-up a circle of cones that were used to demonstrate the Drift mode - bit of a gimmick but it does work. You have to unsettle the car by using weight transfer or else you just wear the front tyres out. Once into a skid, though, it's easy to hold.

Ford didn't let us do complete laps of Valencia and instead pulled us into the pits, slowed us down to the speed limit and then let us out again. The reason for this became clear when I saw smoke billowing out of a car's front arches. Even without driving Valencia's long start/finish straight and the tight left at the end of it, the Focus's 1524kg was too much for the mighty Brembo brakes. I reckon that a trackday in a Focus RS will cost you at least a set of front tyres and probably a set of pads. Possibly worse.

The Focus was predictably fast on the road. As quick A to B as anything. Great in Spain where you'll probably come back to Heathrow with your driving licence intact, but performance that will be difficult to exploit back home.

But to go back to your question; best hot hatch ever? For me it's the 2005 Clio Trophy. We had one on eCoty that year and I remember chasing motoring editor John Barker, who was in a Gallardo. I was almost able to keep up and it was one of the best ten minutes that I've ever had in a car. Harry Metcalfe bought one when he got home and still has it. One-hundredand-eighty-two horsepower. Just over half the power of the Focus RS and probably 25 per cent more fun.



Oldtimer Grand Prix

Another month, another excuse for a Nürburgring-bound excursion

E'RE SENDING YOU back to the Nürburgring. I know you've just been there for a historic rally festival (last month's issue), but there's another event that is well worth a visit. It's the Oldtimer Grand Prix, held this year over the weekend of August 12-14.

I've been many times to the Oldtimer, going back to the early 1990s. Actually, the first time I ever drove around the old circuit was at this event, in the days when you started in the old pits and it was a lot simpler and cheaper. An old boy with a bus conductor's satchel would sell you laps and off you went. In my case in a Fiat Punto. Back then there were fewer historic racing events. The UK's premier meeting was the Coys Festival, the forerunner of today's Silverstone Classic.

I probably don't need to give you directions to the Nürburgring. From London you'll need to leave a day for the journey. That'll give you time for stopping off for a leisurely lunch, perhaps in Spa if you haven't been there before. The only snag with leaving in the afternoon is that you'll arrive at the Ring in the dark. And unless you loathe life under canvass, I'd recommend taking a tent with you. That's how I've done it, which is why arriving in daylight is a good idea. One year we got there in the dark and I managed to use a metal post as a can-opener and tore open the flank of a Jeep Cherokee.

Practice is on the Friday, so if you want to make a full weekend of it, leave on Thursday. The full weekend ticket costs 46.40 euros (about £36 at the current rate) if you buy your tickets before the end of June; kids under 17 go free. That's pretty reasonable as the ticket will get you into all the grandstands around the circuit and into the paddock as well.

So if we have Goodwood, the Donington Historic Festival and the Silverstone Classic, do we need to have another one? For starters, there is no date clash and the German event will be a good warm-up before the Goodwood

Revival, but more importantly the atmosphere at continental events is quite different and so is the variety of machinery. Not quite so much with the circuit racing, but most certainly it is in the car parks and on display in the middle of the modern Grand Prix circuit that's used for the historic races. You'll spot stuff like NSU TTs and hottedup Opels that are unfamiliar to British eyes. I've still not forgotten seeing a '70s CSL fitted with an M635 CSi engine about 25 years ago. I suspect that the original donkey has now been put back in that car. That's if the owner didn't throw the notoriously tricky CS into a field with the extra power.

You'll be watching a huge variety of machinery out on the track, from screaming Formula Juniors up to Group 6 and CanAm cars to DFV-era Formula 1 cars. Some of the more interesting exhibits rock up in the saloon car races where, like in the car parks and in the car-club stands, you see makes and models that aren't so familiar to us Brits.

DFF THE BEATEN TRACK

by COLIN GOODWIN pho

Most of the races are run on the GP circuit, but there is an endurance race on the Nordschleife on Friday evening (the Nordschleife is open to the public as normal on Saturday and Sunday). There are plenty of places to watch the endurance race from, but Brünnchen is easy to get to. Taking a picnic up to Adenau Bridge and sitting in the field that overlooks the run down into the bridge is pretty good, and you've only got a few minutes' walk into the town to get more beer.

only got a rew minutes walk into the town to get more beer. The atmosphere in Adenau in the evening is excellent and you'll see lots of amazing classics smoking around. You'll need to book a table if you want to eat at one of the favourite restaurants - the Wildes Schwein is one of my favourites and if you eat there you'll probably see a few recognisable faces. I've seen Derek Bell in there, and Hans Stuck.

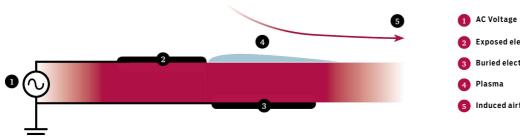
One event I've never been to that is worth a mention is the Historic Trophy, held on the Nordschleife on June 17-19 this year. Again there's a wide variety of machinery taking part, right up to early-'90s M3s, Cosworth 190Es and 911s, as well as vintage singleseaters. Pity it clashes with the Le Mans 24 Hours. And with F1 as dull as is possible, Le Mans is going to be an even more important fix for motorsport fans.

GERMANY

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TECHNICALLY SPEAKING

by DR MICHAEL WHITELEY



FOCUS **PLASMA ACTUATORS**

RODUCTION CAR aerodynamics have come a long way in recent years. You can now buy cars that have moveable control surfaces to change the attitude of a car - think of the active rear wings on the likes of the McLaren P1 and LaFerrari, for example. So what does the future hold for aerodynamics? The answer is plasma actuators.

Currently in a research and development stage. plasma actuators can alter the aerodynamic behaviour of a control surface - such as a wing - without the need for moving parts. The basic operation of these actuators requires the application of high voltage alternating current through a pair of electrodes. This results in a plasma forming and leads to the ionisation of the surrounding air, which accelerates the air through the electric field. The electrodes can be inserted into the bodywork and sit flush to it so they do not change the shape of the car.

Where this technology could be useful to automobiles is for flow separation. Remember those Sonic the Hedgehog inspired spikes that ran across the trailing edge of the Mitsubishi Evo VIII MR GSR's roof? They were vortex generators and helped the flow of air going over the car stick to the rear window and pass under the rear wing, reducing lift.

The problem with such spikes is that they are passive and are always acting on the surface, even when you don't want the additional downforce, such as on the straights. By contrast, plasma actuators can either provide vortices or not depending on whether or not they are being supplied with power.

Plasma actuators induce vortices through a process called thrust vectoring. When a row of actuators are placed flush and in line with the flow of air, they can be pulsed to create a vortex airflow after the actuators. By changing the pulsing frequency, engineers can finely tune the vortex attributes.

In addition to being able to choose between aerodynamic characteristics without moving parts, plasma actuators can also be used at low speeds. Whereas



66 They can alter the aerodynamic behaviour of a surface – without moving parts **99**

passive aerodvnamic control surfaces need lots of airflow which is directly linked to the vehicle's speed - plasma actuators can accelerate airflow at low speeds. This means that cars could have increased downforce in lowspeed corners, potentially making them higher speed corners.

Not only can this technology be used for flow control, but engineers have even manipulated sound energy with them. By influencing the characteristics of the plasma, sound waves can be damped, effectively cancelling out the sound. This type of system could be installed in luxury cars to reduce road and engine noise.

With the growing popularity of hybridisation of cars, there is an increasing amount of electrical energy to play with - exactly what plasma actuators need to help make it to production.



ASK MIKE Your tech questions answered

> What technology do you most want to see on future cars? – Kang Seui-gi

Hybridisation has developed from being synonymous with boring eco cars to powering some of the fastest hypercars on the planet. But this technology is still in its infancy. Batteries are limited by discharge rates and charge times, but researchers are looking at new materials for electrodes and electrolytes to increase performance. So I want to see what will come in terms of electrifying supercars. With the developments in batteries and hydrogen fuel cells, we can be certain that performance figures are going to get more and more mind-blowing.

Send your question to experts@evo.co.uk



TECH GAME-CHANGERS

HEAD-UP DISPLAYS First production application: Oldsmobile Cutlass When: 1988



The first head-up displays (HUDs) were. of course. military. They were developed in the 1940s to help pilots read vital information in a timely fashion by reducing the need for them

to look down at their aircraft's instruments. However, the first HUD in a production car didn't arrive until the late '80s. The technology works by projecting an image onto the windscreen

from within the vehicle. This image is then reflected back towards the driver's eves.

If you try this with your smartphone, you will immediately notice two things. Firstly, the image is reversed. This

is because you are reflecting the image off the windscreen. Secondly, there are two images that are slightly offset from each other. This is because car windscreens are laminated and therefore the

projected image is reflected off two surfaces at different distances away. Manufacturers get around this by using a special film that smoothes out the image into one, crisp picture.



SIMPLY BEAUTIFUL

Each detail of the all-new XC90 is designed around the people using it, to make driving easier and more njoyable. It's this purpose which gives the car such natural confidence

THE ALL-NEW **VOLVO XC90** MADE BY SWEDEN

Official fuel consumption for the all-new Volvo XC90 in MPG (I/100km) ranges from: Urban 28.8 (9.8) – 45.6 (6.2), Extra Urban 40.4 (7.9) – 52.3 (5.4), Combined 35.3 (8.0) – 134.5 (2.1). CO₂ Emissions range from 186 – 49g/km. MPG figures are obtained from laboratory testing intended for comparisons between vehicles and may not reflect real driving results.

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NEWS

E.U. LAWS REDUCE TRACKDAY TYRE CHOICE

RACKDAY WARRIORS WHO drive their cars to venues will have noticed their choice of tyres has shrunk over the past few months. Where once there was a ready supply of track-biased rubber, now many options, particularly in the smaller sizes, are no longer available or are designated for track use only.

The reason is European tyre labelling. Introduced in November 2012, the system ranks tyres for fuel economy, wet grip and pass-by noise. Primarily driven by environmental concerns – wet grip was only added when tyre makers pointed out you could have a very fuel efficient design that was hopeless in the rain – it was always planned that standards would be raised over time. The first improvement came in November 2014, when the lowest band for fuel economy, G, was removed.

Not a big concern for everyday road tyres, but the soft, sticky compounds used for track-biased tyres take some pushing along and the resulting high rolling resistance means many popular patterns could no longer meet the demands of the tighter label requirements. Such tyres could no longer be sold for road use, but they didn't disappear from tyre dealer racks overnight as the new requirements only applied to tyres made after November 2014, plus manufacturers had 30 months to sell existing stock. But those stocks have dwindled...

While drivers now face a difficult



Many track-biased tyres can no longer meet the tighter label requirements

GMO3 FDD

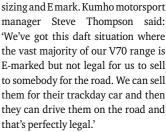
choice, so did the tyre makers. The premium producers, such as Dunlop, Michelin and Pirelli, concentrate on bigger rim sizes – 17-inches and up – and as their tyres are often seen as original equipment on highperformance cars, they made any changes needed to ensure their tyres remained road-legal. However, the smaller tyre makers looking after the Caterham/Ariel/Mazda MX-5 end of the market faced a dilemma with their ranges – stop making the tyres, tweak them to conform to the labels, or sell them for track use only.

Toyo bit the bullet and produced a new tyre in 2015 – the Proxes R888R, with a 32-strong range spanning 13 to 20-inch rims and, more importantly, E and F rolling resistance ratings. The newcomer sits alongside its existing R888, which has a mix of ratings making only certain sizes legal to be sold for road use.

Yokohama took another approach and made tyres like the A048R and A021R for competition use only, stripping the sidewalls of markings and giving them motorsport sizes. Nothing else changed, but they are no longer able to be used on the road. Just a few sizes, like the ten-inch tyre for the original Mini, remain legal. A new track-focused tyre conforming to the labelling demands is planned for later this year.

A new tyre – the V720 – has also been launched by Kumho, which saw most of its popular V70A range hit by the labelling change. Its approach with the V70 has been less drastic than Yokohama's, selling the range with a label declaring them for racing purposes. They retain their original





He added the solution is not simply a matter of changing the compound to meet the rolling resistance requirements as there is a direct trade-off with dry grip. If this is reduced then the trackday customers who do not drive their cars to the venue will be adversely affected.

It's a dilemma that Avon also faces. It is a supplier to Caterham, whose models like the R400 or 620R need all the grip they can get, so Avon doesn't want to compromise its tyres for fuel economy. Yet carrying an extra set of tyres to swap to at the circuit is not an option with a Seven.

Avon has taken yet another approach with some of its ranges. These are designed to be fitted to cars first registered before October 1, 1990 and, as a result, are exempt from the labelling requirements. This does not mean the design has to be pre-1990 but just designed for vehicles made before then.

As more than one person we spoke to said, the changes have created a mess for all concerned – tyre makers and trackday drivers. While labelling works well in allowing motorists to make an informed choice, it is much less successful at dealing with designs that bridge road and track.

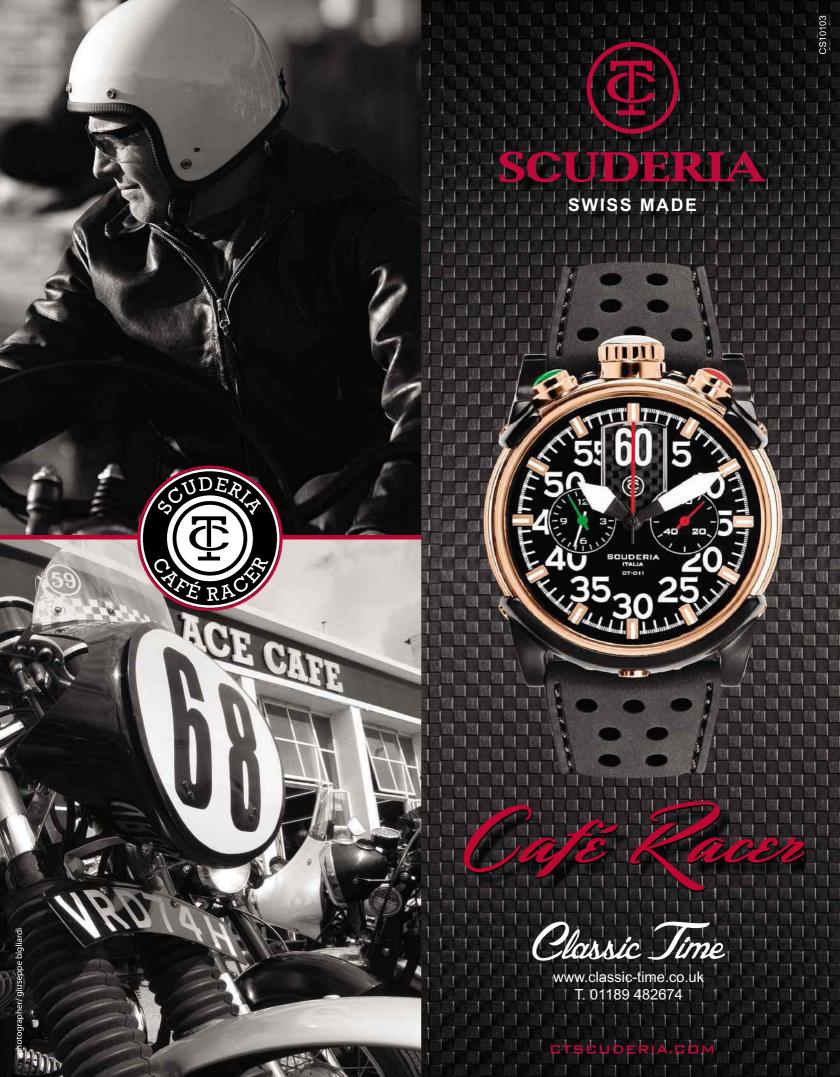




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ZADAR

ESSENTIALS

edited by ANTONY INGRAM

HEAD UNITS

Need to upgrade your in-car entertainment? Here are five options to shortlist





KENWOOD DPX-7000DAB £199.95

If you aren't convinced by the touchscreens that pervade the double-DIN choices, this unit may be ideal. With DAB, Bluetooth, CD and iPhone and Android compatibility (via either USB or near-field communications) it has all the features you need, plus satisfyingly large, clear buttons. You can change the illumination colour to match your cabin, too.

kenwood.eu/car

PIONEER SPH-DA120 £329

In Connectivity in **evo** 216, we looked at the pros and cons of factory-fit and aftermarket infotainment. Pioneer's offering is a good argument for the latter: it has a clear, 6.2-inch capacitive touchscreen with Apple CarPlay, letting you use your phone's maps, music and messaging functions. It's Android-compatible too and lets you hook up a rear-view camera.

pioneer-car.eu



JVC KD-DB97BT £149.95

Don't let the simple look deceive you – this JVC unit packs not only CD and DAB capabilities, but easy compatibility with Android and iPhones (with a wired mic for Siri functions) and Bluetooth connection. Don't like the blue graphics? You can also change the background illumination colour.

jvc.co.uk



AUTOSOUND RADIO CD WITH BLUETOOTH £99.95

An affordable alternative to the likes of Becker's Europa and ideally suited to classic vehicles. With CD, Bluetooth and a USB input, you've got several options for listening to music, though unlike others here there's no DAB. Those put off by tiny switches will appreciate the large knobs and substantial preset buttons.

classiccarstereo.co.uk

KENWOOD KDC-BT700DAB £129.95

This is about as slick and unobtrusive as you can get in the single-DIN headunit world these days: a classy black finish and white illumination. It has the obligatory DAB receiver and will hook up easily to iPhones with USB. With Kenwood's Music Control Android app you can even control the unit's functions from your phone.

kenwood.eu/car



edited by ANTONY INGRAM

Augmented reality windscreens

Windscreens could be used for projecting everything from mph to cornering lines



NLESS YOU'RE A HARDCORE racing gamer, the first few laps on any new racing sim are likely to feature a twisting, dashed line, snaking its way around the circuit in front of you. Once you're up to pace, you'll probably turn it offbut, while you're learning, its braking points and acceleration zones help you master even the toughest of circuits.

Could similar technology be used in cars to improve our driving skills both on the road and on track? The concept of augmented reality windscreens has been explored since 2011 by automotive glass repair and replacement firm Autoglass. '2020 Vision' proposed a windscreen that displayed both essential vehicle data and augmented navigation features such as directions and information on nearby shops and restaurants.

The company's work is more theoretical than practical – development is left up to the major manufacturers – as it tries to keep abreast of developments and predict changes in the market to ensure it's ready for the latest technology when it arrives.

Dr Chris Davies, head of technical research and development

Track driving
 really could become
 like a video game,
 with racing lines
 mapped out

at Autoglass, told **evo** that augmented reality windscreens would require a 'bold step' from manufacturers, but production systems could easily be on road vehicles before 2020. Dr Davies expects that, as with many automotive technologies, it will filter down from high-end vehicles, but there are already cost-effective ways of implementing the technology.

Some form of dashboard-based projector is most likely, he said, while an organic light-emitting diode (OLED) film within the glass itself would be another option. The third he describes as a 'visor' worn by the driver themselves – a little like Google Glass. Whichever route the manufacturers take, some form of eye-tracking technology would be employed to ensure that what the user sees lines up squarely with the view through the windscreen. But what about distraction? Thats a risk, says Davies: manufacturers need to find a balance between displaying useful information such as navigation aids and speed data, and filling the screen to such a degree that drivers feel they're in an actual videogame – something he describes as a 'virtual cocoon'.

For driver training, though – both on the road and the racetrack – Davies describes augmented reality as a 'really exciting opportunity'.

Dr Wolfgang Epple, director of research and technology at Jaguar Land Rover, agrees. The firm showed off its own take on augmented reality screens in 2014, projecting driving lines and 'ghost vehicles', as well as speed and engine data, onto the windscreen of a Jaguar F-type.

'Showing virtual images that allow the driver to accurately judge speed and distance will enable better decision-making and offer real benefits for every-day driving on the road, or the track,' says Dr Epple.

With technology connected to the car's central computer, track driving really could become like a videogame, with braking points, gearchange points and racing lines all mapped out with perfect accuracy.

NOW & THEN Voice recognition



ALL MONITORED FUNCTIONS ARE working correctly. We're not sure whether any Austin Maestro owner ever heard such a sentence – because, well, they owned a Maestro – but the phrase was among several clearly enunciated by actress Nicolette MacKenzie for the car's unusually high-tech talking dashboard.

Such technology caused quite a stir in the mid-80s, if you could ignore the dreary BL surroundings, though Chrysler and Renault also offered similar systems.

Today's equivalent is arguably automatic speech recognition, though in fact it has been around in non-automotive applications since 1952. Those early systems recognised only single digits – you could spell a word, but not speak it.

Implementing such technology in cars is difficult, thanks to the potentially complex commands required to change navigation settings or phone a colleague hands-free, and also interfering background noise from wind, tyres and engines.

In 2003, Honda turned to IBM – an early pioneer of the tech – to develop a satisfactory system for Acura and Honda models in the US, one of the first useable, complex applications. The tech has certainly advanced – Ford Sync recognises 10,000 commands and 17 languages.



Heated steering wheel

On, says lan Grushka via Facebook. 'I'm not a big fan of in-car tech, but I'll make an exception for heated wheels – mine has made such a difference on the recent cold mornings.'



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WATCHES

by SIMON DE BURTON

WATCH TECH

Mondaine PayChip

The growth in electronic 'wearables' has led to several conventional watch brands introducing new ways to make their timepieces appear cutting-edge, and one area that appears to have potential lies in creating watches that double as contactless payment devices.

The Apple Watch can be equipped with a payment app, so to rival this, Swatch has launched its 'Bellamy' watch in China, with a global roll-out planned, and now Mondaine – best known for its wrist-sized versions of Swiss railwaystation clocks – has introduced its PayChip.

The PayChip is the size of a mobilephone SIM card and can be concealed inside a specially designed strap or in a universal strap loop. The device uses Near Field Communication technology to enable low-value payments to be made with no more than 'a flick of the wrist'.

The idea could catch on, not least because housing the device in the strap makes it adaptable to traditional watches - and also eliminates the battery-life issues associated with true 'smart' models.



THIS MONTH

TAG Heuer Carrera Heuer-02T

Price: c£14,000

From: tagheuer.com

TAG Heuer caused a stir at last year's Baselworld watch show by introducing a variant of its celebrated Carrera drivers' chronograph with an accuracyimproving tourbillon mechanism and a price tag of around £10,000 – making it the most affordable Swiss watch of its type on the market. This new '02T' version (dubbed 'the Black Phantom') gets a blackened titanium case and a titanium and carbon tourbillon. Just 250 pieces are available worldwide.

MHD SQ1

Price: £250

From: matthewhumphriesdesign.com

Former Morgan designer Matthew Humphries began customising classic Seikos a couple of years ago and selling them under the MHD label. He has now created his own car-themed watch in the form of the SQ1, which takes the inspiration for its dial from the VDO rev counters of classic Porsche 911s. The cushion-shaped steel case is reminiscent of an old Omega and is mounted on a perforated leather strap. Just 300 examples will be made.

REC P-51

Price: c£1000 From: recwatches.com

REC is a new Danish brand selling watches that incorporate bits of old cars. This P-51 model (named in memory of Ford Mustang prototype co-stylist John Najjar, who was a fan of the WWII fighter plane) has a dial made from a piece of 1966 Mustang and displays based on its instruments. It uses a Japanese Miyota automatic movement, and each watch comes with a scannable 'storycard' linking to a video of the car it was created from.



BREMONT ALT IZ

As worn by Charley Boorman, motorcycle adventurer

'I have always been keen on watches, but I got my first proper watch when I was about 14. It was a classic-looking Casio dive watch and I wore it in the bath to prove it was the real thing! 'My first really serious watch was a Rolex

watch was a Rolex Submariner, which I bought myself for about £1500 when I was 21. I couldn't afford it, but once I'd tried it on I couldn't get it out of my head – and although there were occasions when I thought about selling it to make ends meet, I never did.

'Since 2007, I have mainly worn Bremont watches. The brand was just launching then and the founders, Nick and Giles English, asked me and Ewan [McGregor] if we would take a couple of prototypes on the Long Way Down ride.

Bremont has gone on to be really successful. I'm proud to have become an ambassador for the brand, and the ALT 1Z chronograph I wore for Long Way Down is still going strong.'

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est location: Balocco Prov ng Ground, Italy GPS: -45.4538<u>3, 8.28166</u>

Maserati Levante

With its first SUV, Maserati is looking to achieve the same success Porsche enjoyed with the Cayenne. Is the Levante up to the task?

THE LEVANTE HONOURS Maserati's tradition of naming its cars after

exotic winds, but little else about the all-new SUV sits quite so comfortably with the Trident's rich and noble heritage. Or with our enthusiast sensibilities, truth be told. Yet here it is: Maserati's first SUV and, in all likelihood, the most important model in its 102-year history. So what do we make of it?

Forget 2011's Kubang concept and its proposed platform-share with Jeep. The Levante is pure Maserati, designed, engineered and built in Italy. Two engines are offered, providing three power options: a 345bhp or 424bhp 3-litre V6 petrol and 271bhp 3-litre V6 diesel. We only get the diesel in the UK, which instinctively feels like a shame, but with the overwhelming majority of SUV sales being diesel, such pragmatism is understandable, for now at least. Perhaps when Maserati's foot is in the door and it fancies a pop at the big guns, a V8 petrol might be forthcoming.

Looks-wise the Levante is a curious and appealing machine. At 5 metres long and just over 2.1 wide it's a hefty car, but there's elegance to its curves and a welcome lack of the thuggish aggression that characterises the breed. Familiar Maserati styling cues sit surprisingly well and it looks good amongst

The team

NICK TROTT

With the Levante this month's lead Driven, we asked our road-testers to name their favourite Maserati they've driven...



Editor 'I've never driven a Maserati road car that's blown my socks off, and I'm not sure I ever will



STUART GALLAGHER Managing editor 'Harry Metcalfe's Ghibli Cup. It's the only one I've driven and it was rather charming



Features editor 'GranTurismo Sport, Great shape, wonderful engine and a GT you could enjoy every day



Road test editor 'Mine isn't a long list, but the GranTurismo MC Stradale was genuinely good fun'

other traffic. The interior is equally impressive with its tailored design and quality feel. Worthy of special mention is the optional Luxury Pack, which features a bold combination of leather and silk by Zegna and gives the Levante an indulgent and original ambience. These looks and luxury, combined with the allure of the Maserati badge, make the diesel Levante's predicted list price of £53,000-55,000 feel very keen.

With big claims made for a classleading blend of ride and handling, the Levante has much to live up to. Initial impressions are really encouraging, with a palpable sense of structural rigidity and a smooth, well-judged steering response (from a hydraulic power-assisted rack) that's quick-witted without feeling overly sharp. The damping also connects you to the road but isolates you from the bumps. Above all it hides its size and weight (2205kg for the diesel) admirably.

A generous 442lb ft of torque helps the Levante off the mark, but its performance is brisk rather than genuinely rapid, as a 0-62mph time of 6.9sec confirms. This compares with 5.2sec for the most powerful petrol version. Out on the autostrada the diesel lopes along nicely, and the eight-speed torque converter shuffles the ratios nicely when you want to kick down. It's a refined and adept mile-eater, no question. Wind



'GranTurismo MC Stradale. So evocative, fantastic noise and looks as cool as ice'









'4200 GT Gransport. So much frustrates, but you can forgive a lot for that noise'









DAN PROSSER





noise is subdued despite frameless windows (Maserati has worked hard on this) and the general ambience is that of an elevated GT.

After two hours of lumpen backroads and rapid autostrada, we arrive at the Balocco Proving Ground, where we can explore the opposite ends of the Levante's capabilities on the high-speed handing circuit and a technical off-road course. I'm not sure what feels more incongruous: pointing the bluff nose of a two-ton SUV out onto one of the world's more challenging manufacturer test tracks, or slamming it through



rocky ruts, wading through mud and nudging over the edge of a precipitous 70 per cent slope and falling into the invisible catch-net of the hill-decent electronics.

While it's impressively capable off-road, the biggest surprise comes on the high-speed handling course. Too often these big beasts contain their mass with huge tyres, musclebound damping and resolutely rigid anti-roll bars, but the Levante feels fluid from the off. There's plenty of poise and pliancy, and the handling balance really does reflect the 50:50 weight distribution. A mechanical LSD and torque vectoring helps, as does an active torque split that prefers 100 per cent to the rear but can send up to 50 per cent to the front. It has a natural athleticism where other SUVs feel like they have had it thrust upon them.

When grip fades, it yields from the front first, but this is gradual and easily contained with a gentle lift off the throttle. You can feel the ESP at work in Normal mode, but switch to Sport and the thresholds are upped to minimise the intrusion. Disable ESP completely and you access the final ten per cent of the Levante's abilities, though in deference to the increased centre of gravity, the ESP reawakens if you're a hooligan.

Tantalisingly, we also get the chance to try the top-spec petrol Levante. What are we missing? In terms of looks, luxury and chassis dynamics, very little, because all models share the same transmission and air-suspension damping, albeit with subtle differences between the diesel and 424bhp petrol model.

As you'd expect, the petrol V6 has greater urgency and a pleasing

'It has natural athleticism where others have it thrust upon them' appetite for revs. It has a nice gruff note; in fact it's really rather vocal on full throttle. It sounds like a Maserati, in other words. The uprated brakes have a slightly firmer pedal and more insistent stopping power when used hard, but they retain the diesel's smooth, progressive feel at low speeds. There's more outright grip, and because the rear tyres are wider. the balance remains more neutral. vet it still has poise where its rivals can feel numb and flat-footed. Of course, this petrol Levante is quicker and more exciting than the diesel, but far from overshadowing the diesel, the powerful petrol version merely underlines the inherent rightness found in both models.

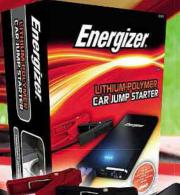
However much you might dislike the notion of this blue-blooded marque embracing the SUV, you can't ignore the business case. One million cars are sold annually in the premium luxury segment, with half of those being SUVs, so you don't need to be a genius to grasp the fact that if Maserati is to achieve its aspiration of building 75,000 cars a year, it needs a slice of that action.

On the evidence of this first drive, the Levante looks set to do just that. Deservedly so, for it's an accomplished and appealing machine with a breadth of capabilities and an identity that sets it apart from its rivals. The Levante is a breath of fresh air in the segment and a wind of change at Maserati. **Richard Meaden** (@DickieMeaden)



Specification 🗄 Distinctive styling, impressive blend of ride and handling, good value 📮 Diesel performance is mild for a Maserati				evo rating	★★★★☆		
Engine	CO2	Power	Torque	0-62mph	Top speed	Weight	Basic price
V6, 2897cc, turbodiesel	189g/km	271bhp @ 4000rpm	442lb ft @ 2000-2600rpm	6.9sec (claimed)	143mph (claimed)	2205kg (125bhp/ton)	£53,000 (est)

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Volvo's Polestar branding grows with the launch of its answer to BMW's M Sport models

Volvo V40 T5 with Polestar Package

Test location: Vallelunga Circuit, Italy GPS: 42.15400, 12.36933

Below: retuned auto gearbox still lacks the precision and speed of a dual-clutch unit. Bottom: handling is usefully improved







YOU'LL BE HEARING quite a lot more about Polestar from now on. Volvo has wholly owned

this road-car offshoot of the racing team since last summer, which means there'll be more 'Engineered by' cars such as the likeable V60 Polestar launched in 2014 (see Driven, **evo** 197), a greater range of official Polestar remap software, and now also what we're discussing here: a full range of official 'Polestar Performance Parts'.

These items are nothing like as bespoke, or expensive, as, say, the Öhlins dampers that feature on the full-fat Polestar models, but they still aim to sharpen the dynamics and performance of every car in Volvo's range. They're available in 'Complete Performance Packages' or as individual items.

Some of the models available for us to test at the Performance Parts launch event in Italy don't apply to the UK, including the painfully shy but surprisingly effective S60 T6 AWD, with its supercharged and turbocharged 302bhp 2-litre petrol four. So amongst tweaked D4- and D5-engined V40s and XC60s, for now our attention most naturally falls to this V40 T5 hatch, fitted with the complete package of Polestar modifications.

Funny car, the V40 T5. On paper you might think it an underpowered VW Golf R rival, particularly given its price and the way it's all precision panel-radii and crisp shut lines, and the fact that it has a heavily boosted four-cylinder lump. Examine the proposition in detail, though, and



it's obvious this isn't the case. The V40 is front-wheel drive, not four, has only 242bhp and comes with an eight-speed torque converter 'box. It's a hot hatch in the mould of the old Golf VR6: for longer journeys and a more mature owner, but without that car's expensive soundtrack, the 'T5' badge no longer denoting a braying five-cylinder in Volvo-speak but a 2-litre four-cylinder unit.

With the benefit of the Polestar remap, plus the contribution of a 2.5-



'The exhaust note of this V40 is a useful metaphor for Polestar's work'

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Specification	Himproved bo	ody control, strong mid-range per	rformance 😑 Still no hot hatc	n, disappointing steering, ex	pensive evo rating Weight	*****
Engine In-line 4-cyl, 1969cc, twin-turbo	- <u>CO2</u> <u>Power</u> 137g/km 250bhp		le 0-62mp ft @ 2000-3500rpm 6.2sec (cl			£4725 (Polestar kit)

inch stainless steel exhaust system and a 'performance' air intake, the T5 engine here produces an additional 8bhp, taking the total to 250bhp. Perhaps aware this looks at best stingy, Polestar is quick to point out that at 3500rpm the power curve is up by 25bhp. There are no such caveats required with the torque figure, which promises an additional 37lb ft to realise a solid 295lb ft between 2000 and 3500rpm.

New springs and dampers lower the V40 by 10mm and are predictably stiffer compared with Volvo's regular sports chassis option. Lighter, 19-inch Polestar wheels are combined with a set of 235/35 Pirelli P Zero tyres. Other new visual elements include a small kick to the rear spoiler (which is said to increase stability), a rear diffuser and a Polestar gearknob and sill-plates.

The exhaust note of this V40 is a useful metaphor for Polestar's work. You actually have to lower a window to hear the difference, but at idle it has an unusual, attractive tone. At speed, at least from inside the car, it is drowned out by the whistling cry from the induction, which is more of an acquired taste. So, the additional performance is relatively discreet and not overdone, and neither is the rest of the car.

It's fast though, exhibiting an emphasis on mid-range surge that the figures suggest. However, drive it in the manner expected of a 250bhp hot hatch and the standard brakes soon show the strain, the pedal losing its bite and wisps of acrid smoke appearing once the car has come to a halt. Nevertheless, on a road that suits it, this V40 shows flashes of promise. The changes to the suspension mean it has much more poise than the standard T5, without ruining the ride. The 235-section contact patches, meagre in profile, do transmit a poor road surface into the cabin at low speeds, though, and they can be noisy at times, too. However, the ride improves with speed, and in general body control is very good, enabling the car to cover ground quickly.

The steering is disappointing, and does the most to shatter the hot-hatch illusion. It's light but has an artificial and one-dimensional weight as soon as you're away from the straight-ahead. It's almost impossible to know what's happening at the front wheels, save for when you get a dollop of torque-steer when pulling hard in the lower gears.

The gearbox can be frustrating, too, especially so here at this launch where the cars are inexplicably *not* fitted with Volvo's steering-wheel shift buttons, leaving us with just the gearlever to contend with. And despite a more sporting-minded algorithm from Polestar, this torque converter has nowhere near the crispness and dependability of a good twin-clutch setup.

So, Polestar's kit makes for a mildly more potent version of a niche car and adds £4725 to a list price that starts at more that £30,000. This ensures it'll be a rare sight. As an example of Polestar's competencies, however, this V40 is more useful.



SEAT Leon Cupra 290

Cupra gets even more power and a trick exhaust system for its 20th birthday

Test location: Sant Pere de Ribes, Spain GPS: 41.26609, 1.77441



THIS IS THE VERY MILDEST of facelifts. There are

no styling revisions, no meaningful chassis tweaks and there's no new dashboard layout. To understand why SEAT has gone to the effort of launching an updated Leon Cupra, it's worth knowing that the Cupra name was first used in 1996. So with a standard-fit sports exhaust and an extra 10bhp, the Cupra 280 becomes Cupra 290.

The power increase is certainly a marginal one (in fact one wonders if 10bhp would have been within tolerance anyway), but the Cupra 290 does officially become the quickest and most powerful SEAT road car ever. That seems like a pretty good way to mark a 20th anniversary. The model is still available in a choice of body styles – three-door hatchback (Leon SC), five-door hatchback (Leon) and fivedoor estate (Leon ST).

The Cupra 280 spawned the fastest front-wheel-drive car we have ever timed around a track, and in Cupra 290 guise those highperformance models live on. The Sub8 Performance Pack adds lighter



19-inch wheels and uprated Brembo brakes for £2050, with sticky Michelin Pilot Sport Cup 2 tyres a further £460. The Sub8 Ultimate Pack, meanwhile, includes all of the above but junks the air con and some of the speakers to save weight. It costs £4250. Bucket seats are a £1250 option and are well advised given that all Sub8 derivatives offer enormous cornering ability.

The uprated engine delivers its peak power output of 286bhp from 5900 to 6400rpm, while the torque figure of 258lb ft is unchanged but available over a slightly wider range. The sports exhaust saves 5.8kg, reduces back pressure and, we're told, produces a more stirring soundtrack. Buyers can still choose between a six-speed manual and a six-speed twin-clutch DSG, the latter carrying a £1355 premium and trimming acceleration times slightly. The quickest 290 is the DSGequipped three-door, which reaches 62mph in a launch-control-assisted 5.6sec – a tenth quicker than the 280. The manual estate, the slowest of the lot, takes a still respectable 6.0sec (also a tenth quicker).

SEAT now offers its Full Link mobile connectivity system as standard, but otherwise the cabin is unchanged. There is a general feeling of solidity, but the design is functional and the overall impression of quality falls short of a Golf GTI's.

You'd need a stopwatch to notice the extra power once on the move, particularly since this is an engine that's best driven on its tabletop torque curve. As in the Audi S3 and VW Golf R, its effective, responsive and full of urgency, but it's nothing close to evocative. Rather like the hike in power, you'd have to be very familiar with the 280 to notice the livelier soundtrack here, although we do manage to tease one or two pops and crackles from the exhaust.

The helm feels slightly loose regardless of the drive mode, more

so than in any current quick Golf. Similarly, the body control is ever so slightly remote, where other cars on this platform feel better keyed into the surface. These are observations rather than fundamental criticisms, because they aren't impediments to pace or enjoyment.

Remarkably, SEAT has managed to negotiate with the Spanish authorities to close a mountain road and suspend the speed limits during the launch, which gives us ample opportunity to drive the 290 to its full potential in its natural environment. Exactly like the 280, the revised model is terrifically quick along a road, even more so on the optional Cup 2 tyres than the standard Continentals. The Haldex-type LSD does a good job of deploying that torgue between the front wheels, but it is still possible to overwhelm the inside tyre.

The Leon Cupra 290 is a very good hot hatch, but it's surrounded by a handful of utterly spectacular ones – Golf R and Ford Focus RS among them – without offering any meaningful saving. ■

Dan Prosser (@TheDanProsser)

Specification	6	Huge performance and strong	dynamic ability 🧧 Uncomfor	tably close in price to th	ne Golf R and Focus RS	evo rating	*****
Engine	CO2	Power	Torque	0-62mph	Top speed	Weight	Basic price
In-line 4-cyl, 1984cc, turbo	154g/km	286bhp @ 5900-6400rpm	258lb ft @ 1700-5800rpm	5.8sec (claimed)	155mph (limited)	1300kg (224bhp/ton)	£30,030



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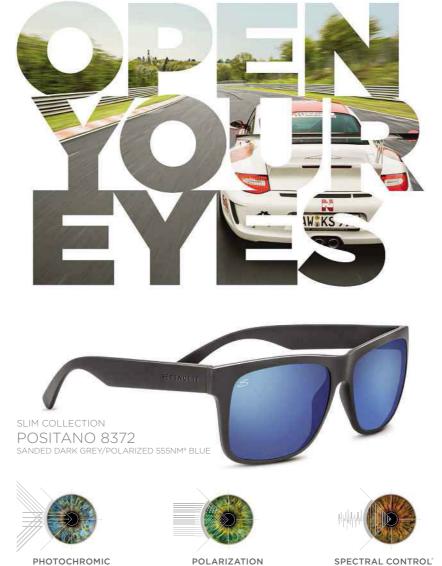
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Test location: Genoa, Italy GPS: 44.45142, 9.08723 Photography: Aston Parrott

Ferrari **California** T Handling Speciale

Too little, too late for a Ferrari that never properly appealed to purists in the first place?





THIS SHORT PIECE IS intended to answer a very simple question. If you're buying a Ferrari California T, should you specify the new Handling Speciale package? It costs £5568 on top of the £155,230 list price and consists of new spring rates, revised magnetic dampers, a new, louder exhaust system with a sharper tone, quicker shifts for the gearbox, new logic for the traction control systems and a few very subtle

styling tweaks. The answer, then, is pretty simple. Of course you should. But should you buy a California T at all? That's not quite so straightforward...

We'll get onto the pros and cons of the Cali T in a second, but first the specifics of the Handling Speciale package and its intended role in the Ferrari range. Those spring rates are increased by 16 per cent at the front and 19 per cent at the rear. and Ferrari says that the balance has been shifted to make the car more neutral - they love to chase



Similarly, the drivetrain has been sharpened up. The 3.9-litre twin-turbo V8 is unchanged, with 552bhp at 7500rpm and 557lb ft at 4750rpm. Like the standard T, the HS features a specific torque map for each gear, only allowing the full 557lb ft in seventh. However, the 'box is much faster thanks to lessons learnt from the 488 GTB. Upshifts are 30 per cent quicker and downshifts a remarkable 40 per cent quicker.

The HS is distinguished by nothing more than a 'Grigio Ferro' matt grille and rear diffuser and black exhausts, plus some interior badges.

On some fabulous roads near Genoa. the HS is a vast improvement. It sounds boomier

at low speeds and the bassy noise won't be to everyone's taste, but as with the 488. this turbo V8 has quite stunning throttle response. You notice it immediately and the instantaneous character of the drivetrain continues to astound up in the hills. In fact, save for the whistle that occasionally cuts through the V8 bark, you'd struggle to tell the engine is turbocharged at all until you really chased the red line. Ask it for everything and the gorgeous rush to the limiter of a normally aspirated Ferrari isn't there. That said, performance is superb and the new 'box is noticeably faster.

The chassis is altogether more enjoyable, with less roll (there's still plenty, though), much more consistent body control and a better relationship between the superalert steering and the chassis. In standard trim the car often feels like the front and rear are out of phase with each other, but the HS is more predictable, more locked-down and hence much easier to exploit. There

is a tiny bit of understeer - more than you'd find in a 488 or F12, of course – but for the most part it turns in with real bite and offers excellent traction. too.

To my mind there's no question that the HS pack creates a much better Cali T and a better Ferrari. However, the harder you push, the less comfortable the car is and that strange sensation of the body movements running out of sync with your steering inputs remains. It still feels a little loose. Of course, this is a Ferrari for people who want the badge but not necessarily everything that comes with it, but there's always the feeling with the Cali that it's not as good as it could be simply to protect the 488/F12 model lines.

Just as importantly, the T is starting to feel long in the tooth generally. If you stepped out of an AMG GT, R8 or Turbo S and into this, you'd be disappointed by the styling, technology and the quality. Jethro Bovingdon (@JethroBovingdon)

Specification		C	Noticeably tighter than befor	e 🧧 Still not a patch o	n other Ferrari models	evo rating	★★★★☆
Engine	CO2	Power	Torque	0-62mph	Top speed	Weight	Basic price
V8, 3855cc, twin-turbo	250g/km	552bhp @ 7500rpm	557lb ft @ 4750rpm	3.6sec (claimed)	196mph (claimed)	1729kg (324bhp/ton)	£160,798





Test location: Balls Cross, West Sussex GPS: 51.027459, -0.592510 Photography: Aston Parrott

Lexus GS F

Lexus's supersaloon offers a compelling blend of oldschool brawn and new tech



WE'VE ALREADY TRIED the Lexus GS F briefly,

on sun-baked roads near Madrid, but it's well worth revisiting here in the UK and for an extended period. Mostly because it swims against the tide of vast power and forced induction to create a unique take on the modern supersaloon. And although it's easy to get blinded by the sheer performance of a new M5 or E63 AMG, the GS F's 5-litre V8 isn't exactly weedy. It produces 471bhp at 7100rpm and 391lb ft from 4800 to 5600rpm and this 1790kg saloon car gets from 0 to 62mph in 4.6sec and is limited to 168mph.

Anyway, never mind the numbers, just feel the quality... That V8 is actually central to the GS F driving experience and it's really rather wonderful. It's a big, brawny engine with an old-school feel in some respects, but it uses plenty of tech, including direct injection, forged connecting rods and titanium inlet and exhaust valves. Its variable valve timing system also allows it to adopt the more efficient Atkinson cycle in gentle use but still howl around to its 7300rpm limiter when you ask.





You'll find yourself doing just that with surprising frequency, because the GS F offers a highly addictive dynamic experience. Best of all, and despite the many different driving modes and settings for the torque-vectoring differential and traction control, the GS F feels just right. It might take a while to work out exactly how to tune your own perfect set-up, but there's an intuitive, timeless feel to the whole experience that seems instantly familiar and yet exciting.

Those modes? Well, you can choose from Eco, Normal, Sport S and Sport S+, which act on the throttle mapping, steering weight, stability control intervention and, rather controversially, the Active Sound Control, which cancels unwanted noise and enhances all that creamy V8ness through the speaker system. However, you can just turn it off and we'd suggest doing just that. You can also choose between Standard, Slalom and Track modes for the TVD (Torque Vectoring Differential) and in Sport S+ mode you can select 'Expert' mode for the VDIM stability control. Do so and the electronics should only step in to prevent a spin.

Like I said, it sounds complicated but, so long as you're in Sport S or Sport S+ mode, the GS F will feel very good indeed. On the road, the various settings for the diff make only a very subtle difference, with Slalom mode slightly speeding up steering response and Track mode reducing oversteer but retaining a really lovely ability to steer the car on the throttle. The dampers are fixed-rate and offer an excellent compromise, allowing enough roll and pitch to get a really good feel for the car's balance but offering enough support to keep the weight well under control. Without a great shock of torgue to contend with, the chassis is fluid, easy to read and very progressive. There's a bit of

understeer if you push too hard but, with accurate control of the engine's delivery, it's easy to drive through that phase and balance the car on the point of oversteer.

Of course it's not perfect. The eight-speed gearbox is massively outclassed by the best dual-clutch systems. Sometimes it's superb, delivering clean upshifts and rapid response to a downshift request. Then, inexplicably, it'll refuse to change up when you ask, or throw in a late, fluffy downshift. It's most odd. The electric steering isn't particularly feelsome, but it's quick and fluid so it's not a great hindrance to enjoying the car and does impart a sense of real agility. The brakes are superb, oversensitive at first but better with experience, and they cope very well during hard road driving.

The GS F is somehow more than the sum of its parts and much more appealing than the RC F with which it shares much. At £70k it's not going to be a common sight, but you can bet when you see one the driver will be wearing a broad grin. Jethro Bovingdon (@JethroBovingdon)

Specification	[Superb engine, exploitable ch	assis, quality 🧧 Gearbox off t	the pace, structure less	rigid than some rivals'	evo rating	★★★★☆
Engine	CO2	Power	Torque	0-62mph	Top speed	Weight	Basic price
V8, 4969cc	260g/km	471bhp @ 7100rpm	391lb ft @ 4800-5600rpm	4.6sec (claimed)	168mph (limited)	1790kg	£69,995



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Test location: A3400, Banbury, UK GPS: 51.98445, -1.32316 Photography: Aston Parrott

BBR Mazda MX-5 2.0 Super 190

More power and the taut chassis we wanted from the start transform the MX-5



IT'S FAIR TO SAY THE Mk4 MX-5 was one of our disappointments of 2015.

That's not because it was a bad car, far from it, but simply because compared with what the fanatical weight-loss regime and back-tobasics mindset promised, the final execution didn't quite live up to our expectations.

Enter familiar MX-5 exponents BBR, who have made the little roadster – in all its generations – their speciality over recent years. BBR are quick to market with this 'Super 190' conversion, which isn't surprising as the firm started development work on the new Skyactiv engine in advance by acquiring a 2-litre Mazda 3.

At present there are two levels of modification. The first consists of a remap under the familiar StarChip brand and liberates an additional 20bhp from the feisty little 1.5-litre engine and 17bhp on the 2-litre model. These remaps are called 'Super 160' and 'Super 175+' respectively, and cost £594, including a rolling-road session. Then there is the more brawny 2-litre-



based Super 190, sampled here.

The Super 190 naturally includes the StarChip remap, but also seeks to improve the breathing of the Skyactiv motor. Although BBR has no criticism of the standard airbox, their testing suggests the feed to it suffers from pronounced heatsoak – thereby raising the air inlet temperature - and have designed a new pipe that repositions the feed point. To exhale the gases more efficiently, there's a new 2.5in manifold, a stainless steel centresection with a sports catalyst and a new rear silencer-box with a 2.75in exit. Curiously, BBR discovered that changing the exhaust on the 1.5-litre car made little or no difference, but that there were very worthwhile gains to be had on the bigger engine. Exactly how worthwhile, I'm

about to discover. In my head are the numbers, naturally: an extra 30bhp, developed at 6700rpm (up from 6000rpm), takes the total to 188bhp, and there's 171lb ft of torque (up from 147lb ft) at a tractable-sounding 3550rpm. Realising, perhaps, that such power gains on a naturally aspirated motor are often at the expense of driveability, BBR are quick to point out that the new torque peak is 1050rpm lower than before.

In essence, the Super 190 is everything you'd hope for from regular 2.0i Sport. Where the standard engine has an inoffensive but workmanlike tone, the 190 is so much sweeter and rasping without being domineering. It pulls harder through the mid-range, which makes the car feel much more potent, but the biggest difference is the way it revs so much more freely, which in turn encourages enthusiastic use of every last engine revolution.

What, then, of the Mk4's bizarre body roll? Like us, BBR are not fans of the excessively soft springing, and have combined the Sport's Bilstein dampers with new progressive-rate springs that also lower the car by 30mm. This car also has lightweight OZ wheels with a wider offset, and a 215-section tyre (up from 205) combined with BBR's fast-road geometry setup.

The car is transformed, able now to scribe a laser-like trajectory through corners without the histrionics of before. It's a car that relishes being driven hard but that's not compromised for everyday use (even if, occasionally, over really poor it does feel a tad unyielding).

The steering is an improvement, too, with a more positive sense that the tyres are biting into the roadsurface, but this is still a car that you feel moving around through your backside, not your hands. That's not a criticism of BBR's work, though, rather a fundamental flaw with the electrically assisted rack.

At £2394 for the Super 190 kit, £594 for the suspension, plus wheel and tyre costs, the price seems reasonable for snapping the Mk4's characteristics taut in such a convincing manner. We await BBR's more potent Mk4 MX-5 offerings with renewed excitement.

Specification		💷 Energetic per	formance, vastly better body o	ontrol 🗖 Steering cou	ld communicate more	evo rating	★★★ ★☆
Engine	CO2	Power	Torque	0-62mph	Top speed	Weight	Basic price
In-line 4 cyl, 1998cc	n/a	188bhp @ 6700rpm	176lb ft @ 3550rpm	7.0sec (est)	140mph (est)	1000kg (191bhp/ton)	See text



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But while a grime-caked car is a sure sign that you're not treating it like a trailer queen, most of us enjoy keeping our pride and joy gleaming – we just don't want to invest large chunks of our lives wielding a hose, sponge and cloths to keep it like that, because, well, life's way too short.

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Outside Line by Richard Meaden

Meaden dons a flak jacket and presents a robust defence of the cars we all love to hate

IF 2015 WAS THE YEAR OF THE hypercar, then 2016 is shaping up to be the year of the luxury SUV. In the space of just a few days, **evo** received launch invites for the new Jaguar F-pace and Maserati Levante. And these came hot on the

heels of the newly introduced Bentley Bentayga and Range Rover Sport SVR – cars that along with the raft of other premium luxury SUVs populate an ever-growing sector of the market perhaps most accurately described as 'most-hated best-sellers'.

It's traditional at the launch of such cars for the more easily agitated members of the motoring press to work themselves into a bile-flecked lather, hammering away at their MacBook keyboards with indignant rage. Perhaps I'm out of step with my learned colleagues (and maybe you lot, too), but I've never understood the default hatred of SUVs.

Perhaps the best example of this knee-jerk reaction was when Porsche launched the Cayenne. Yes, in its first iteration it was a powerfully ugly machine and, of course, it challenged all our preconceptions of what a Porsche should be. What mystified me at the time was how the principle of a Porsche SUV could be so offensive when it clearly presented an opportunity to generate huge revenue for the company. Was Porsche going to take its beady eye off the sports car ball? Hardly. Given that its success has subsequently played a major part in funding the development of an unprecedented succession of exceptional Boxster, Cayman and 911 models – and a Le Mans-winner – the decision to build the Cayenne was clearly an inspired one. Yet still the haters hate.

As I write this column, I'm a few days away from driving the Maserati Levante. Should I be offended by the reality of a tridentwearing SUV? Perhaps. Perhaps not. Thanks to the vagaries of print schedules, you can find out what I think of it on page 34. What I do know is that I find it more upsetting that both the Ghibli and Quattroporte lack the verve and Latin sparkle I've previously associated with the brand. If the Levante is a more polished product than these lacklustre saloons, it will be a start. If it flies out of the showrooms and boosts Maserati's ability to build cars like the upcoming – and truly mouth-watering – Alfieri, then surely we should all welcome the Levante, even if it's for an ulterior motive? Business is business, after all, especially as the age of sports car makers surviving by just making sports cars has long gone.

It's no secret that I adore the current Range Rover. To have one in my life would be bliss. Armed with this disclosure, you'd think it unlikely that I'd despise anything wearing the Range Rover badge, yet the very notion of the Range Rover Sport SVR makes my teeth splinter. It's something I can trace back to pre-launch footage of one drifting in slow motion around a rain-sodden Rockingham Motor Speedway's infield circuit. I mean, seriously, what's the point? A Range Rover has the class, confidence and veracity to rise above all that, surely? Dragging it into a willywaving competition seems as undignified as it is unwarranted.

If I've concluded anything from all this, it's that authenticity is the key to credibility and desirability. A car that has it feels right; a car that lacks it feels wrong. The Range Rover has it. The Sport SVR doesn't. Simple as that. The Cayenne didn't have it initially – hence the widespread unease – but it has now come to define the younger, more dynamic sector of the premium SUV market. That's why a Cayenne Turbo S will always be more authentic and more **evo** – if no less pointless – than a Range Rover SVR.

'Given that **its success funded a Le Mans-winner**, the decision to build the Cayenne was an inspired one'

That's why I'm looking forward to the Lamborghini Urus, for if ever there was a brand with the justification to build a full-on SUV, it's that which gave us the LM002. My only concern for the Urus is that it won't be bonkers enough to do its ancestor justice.

I'll probably get flamed for this, but Ferrari's GTC4Lusso could be described as an SUV of sorts; similarly Aston Martin's DBX, which might be tagged a crossover, but that's just industry-speak for SUV-lite. With its elevated stance and electric, all-wheeldrive powertrain, the DBX concept upset many dyed-in-thewool purists, but I took it as an indication of Aston's willingness to confront a challenging future with bold ideas. The recent announcement of a new production facility at St Athan, in Wales, confirms the DBX is set to become reality, albeit it with petrol-only power at launch. As an Aston fan I can't wait to try it.

Done badly, top-end SUVs are the most loathsome, clichéd products the car industry has to offer, but even that's no reason to despise them out of some misguided duty to sports cars. Not only are future versions of the cars you love increasingly reliant on sales of the cars you hate, but as they continue to morph and evolve, the best SUVs are becoming refreshing, intriguing and exciting high-performance cars in their own right.

🕒 @DickieMeaden

Richard is a contributing editor to evo and one of the magazine's founding team

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Petrolhead

by RICHARD PORTER



'Who actually wants autonomous cars?' asked Meaden last month. Having slowly raised his hand, Porter now explains why...



THE INVENTION OF THE CAR DIDN'T kill off the horse. In fact, the advent of four wheels, a seat and some kind of motor released the horse from day-to-day transport duties and allowed it to become part of an opt-in leisure activity, mostly for irls with very glossy bair.

well-spoken girls with very glossy hair.

In a similar vein, central heating turned the log fire from a necessity to an optional accessory that allows middle-class men to talk endlessly about logs as if they live in a cabin on top of the Rockies, while advances in proper ovens switched the AGA from a requirement to something you could choose to have if you wanted a much hotter kitchen and a much lighter bank account. This is called progress. And it's also why I don't entirely agree with Richard Meaden.

You might have read dear old Dickie's last **evo** column, in which he got his trousers in a twist about the impending threat of autonomous cars bringing the death of doing-it-yourself. I'm sorry to say I think he's got it all wrong. The self-driving car isn't the sky falling in over **evo**town. For those of us who like driving, it could be the best thing in the world.

It's pretty clear that for a great many people, driving is not an enjoyable endeavour. Take the blithering knobknuckle I saw yesterday almost clattering into

three other drivers on a major road into London. The sticker in the rear window told me he'd bought his Vauxhall Zafira from Cargiant and this said a lot. He went to a massive car supermarket and bought a sort of supermarket own-brand car that fulfilled his basic needs at a moderate price. There was no joy in this process, just the weary requirement to get some transport and then go through the daily chore of having to pilot the bloody thing. Which, judging from his inability to indicate, keep in a lane or judge distances, was something he wasn't especially good at. In future, a whole suite of computers, sensors and radars could do that job for him, and with far less chance of clattering into a Norbert Dentressangle lorry near the Polish War Memorial roundabout.

Imagine what would happen to major roads if the weary, the disinterested and the feckless were able to sit back, relax and let the car do the driving. Awareness would increase, lane-discipline would improve, major arteries would be freed of the coagulation caused by myopic buffoons who sit in the wrong lane for 40 miles, occasionally dabbing the brakes for no apparent reason. These people don't enjoy driving, so why must we force them do it? Let's bring on the autonomous cars and relieve these poor sods from the stress and misery brought upon them by necessity.

People who don't like driving don't care about doing the job

well or consider ways to get better at it. If you take them out of the equation, the roads won't only flow more freely, they'll get safer too. That effect will be multiplied if we can sell selfdriving to the stressy sales rep who can slide back his seat and fiddle with his PowerPoint rather than attempting to insert his A4 TDI into your exhaust pipe. And robocar tech is bound to be popular with the kind of grunting moron who can't leave their phone alone, currently to be found searching for their favourite emoticon from behind the wheel of a fast-moving Corsa in the middle lane of the M4 or making a call by putting their Samsung on speaker and holding their phone in front of their face in that distinctive manner that seems to count as 'hands-free' amongst the genuinely stupid.

'Imagine what would happen to major roads **if the weary and the feckless were able to sit back and let the car do the driving**'

Get rid of these kinds of drivers and you're left with people who want to drive. And they want to drive because they're interested in it, they pride themselves on being good at it, and they think it's fun. They're probably the kind of people who do it for amusement, not out of dreaded routine, just like modern-day horse riders, logfire makers and AGA chefs.

The good news is, with the inattentive and the inept being taken smoothly and safely to their destination by several tetafrigs of computing power, those of us who like driving will have more chance to enjoy it. As long as we're not forced to join the autopilot revolution – and at the moment there's no suggestion that we would be – then we're free to indulge in something that gives us great pleasure, perhaps with ever greater pleasure as the act of driving is liberated from drudgery for those who want to opt out.

In that respect, I'm afraid I tut at Richard Meaden's complaint that we didn't ask for autonomy in our cars. We might not have asked for self-driving, but I hope we get it very soon. Because, as far as I can work out, the best way to enjoy driving is to take it away from those who don't.

e @sniffpetrol

Richard is evo's longest-serving columnist and the keyboard behind sniffpetrol.com

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by DARIO FRANCHITTI

Fitness freak? Racing and winning in IndyCars, the monsters of the singleseater world, taught Dario a thing or two about staying in shape, too

I LEARNT MY LESSONS EARLY ON.

During that rookie year in CART in 1997 there were times when I was having to slow down, exhausted, as a result of my conditioning, or lack of it. Temperature, the lateral loads on my body and the bearish strength needed to manhandle the chassis took their

the bearish strength needed to mannandle the chassis took their toll. Head lolling to the right through left-hand bends, to the left through right-hand bends, smashing into my chest under braking... I'm not ashamed to admit I was found wanting that season (mainly because I made damn sure it never happened again).

Most of you will know that driving a racing car is tough, that guiding an IndyCar around at 230mph feels like 15kg dumbbells have been strapped to your wrists, and that rally drivers in the WRC rely on executing deft skills in a hurricane of noise, dirt and oversteer to keep them alive on a turnby-turn basis. Likewise, many of you will appreciate that Turn 8 at Istanbul subjected F1 drivers to fighter-jet levels of G-loading. The finesse required to subsequently place the car within a hair's breadth of the polished exit kerb without brushing it isn't lost on us, either.

And the (thankfully dying) notion that racing drivers aren't athletes? Tell me, how many other sports demand that participants' hearts thump out 170 beats per minute for two hours, as is the case in F1 and IndyCar, not to mention longer stints in WEC? The physiological requirements may evolve over time – less downforce and fragile tyres mean drivers now focus more on cardio than strength, whereas even five years ago you needed to be built like a bull to drive an F1 car – but the level of conditioning has for decades been deeply impressive for all top-tier series.

I was never what you'd call overly enthusiastic when it came to fitness, doing enough to win races and championships – to avoid what happened that year in CART – but leaving the extra-curricular Ironmans to guys like Jenson Button. It was still a hell of a lot of work, though, and while I've stuck with the cycling, I'll die a happy man if I never again have to do a ten-mile timed run in 35-degree Nashville heat. You do need that kind of intensity, though, to try to replicate the stresses on your body during the toughest race of the season – probably Singapore for F1, Mid-Ohio for IndyCar.

G-loading is the first thing people talk about, and for good reason. Through fast corners in a 1000bhp/ton single-seater you can't breathe – you cannot inflate your lungs – so you brace yourself coming into the bend, gulp down air on the following straight and then brace yourself for the next turn. And when I say brace, I really mean it. Many drivers put their jaws out of alignment from the constant clenching, which is hardly surprising when your

head weighs the equivalent of 25kg at 5G. I even went as far as to ask my helmet painter to use the least possible amount of lacquer to shave off a few grams. (The forces are so strong that on oval Indy circuits, any saliva in your mouth quickly migrates to the side of your face.) Factor in the restricted breathing and you can capitulate quickly. Still, 200mph in a car destined to crash unless you could get it through the next bend was a great motivator.

IndyCars don't have power steering, and compressions at high speeds would spike the weight of the rack, sometimes leading to pulled muscles in my wrists and forearms. In the bigger braking zones the pedal required 60kg of pressure under forces of 4G (and I wasn't even a particularly heavy braker), and then there

'Many drivers **put their jaws out of alignment** from the constant clenching, which isn't surprising'

was the driving position. Vacuum-packed from shoulders to knees, in the pits the thick belts were pulled so tightly that truly I couldn't breathe, but somehow I found a way to melt into a tolerable position. Fast corners meant torquing your body in such a way that G-forces could be withstood and pain minimised, but also so you could still place the car with pinpoint accuracy.

So, you've spent the off-season in the gym and on the bike, and your diet has been all white meat and greens. You can therefore handle the G-forces and you've met the muscular prerequisites for race-distance flat-out. But can you handle the heat?

Temperature can be dangerous. Again, everybody talks about heat-soak from the engine and high ambient temperatures brought about by baking tarmac, but you know what the real killer is in an IndyCar? The floorpan. Tungsten skidplates generate so much heat when the chassis bottoms out that the driver's backside can blister! I can also remember one time my team's engineers tried out a new aero package that ended up stopping hot air exiting the rads properly. In fact, that air was backing up and escaping in the form of a hot jet through the gearshift gate. I've got the scars to prove it, but again, that 200mph corner is fast approaching, so what are you going to do?

🕒 @dariofranchitti

Dario is a three-time Indy 500 winner and four-time IndyCar champ

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What's pooped on your paintwork this month?



Letter of the Month

Your move, Renault

As a life-long Renault fan I wanted the new Focus RS to be less than perfect. All power, no finesse - that kind of thing. However, your recent group test (evo 220) demonstrated that it clearly is not. In fact it appears to be an excellent example of what you are calling a 'super-hatch'.

But what will Renault deliver that will be competitive in the super-hatch era, and therefore what will I replace my current Mégane 265 Cup with?

The Alpine Vision [pictured above] initially perked me up, but then my enthusiasm was dashed by a ridiculous £50k price tag. The Focus RS base price is a fiver less than £30k: perfect value and mega speed.

Can someone in France please give me a glimmer of hope and tell me that there is a plan for Renaultsport? I fear a similar demise to the one that saw Peugeot fall from hot hatch grace in the late '80s.

Vive la France, please. Andrew Tsierkezou

The Letter of the Month wins an Aviator watch

The writer of this month's star letter receives an Aviator MIG-35, worth £465. Its sturdy and sophisticated design is inspired by elements of the MIG-35 fighter jet, while its 45mm case contains a Swiss-made quartz movement with advanced chronograph functions.



AVIATOR

www.aviatorwatch.ch

www.peterjackson.co.uk

Analogue heirlooms

So Richard Meaden asks who wants one of these autonomous cars (Outside Line, evo 220), rightly saying that no self-respecting driver would ask to be completely removed from the process of driving. But these cars are not built for us – and I don't mean car enthusiasts, I mean our generation. These cars are built for our children and theirs after, generations having grown up expecting and experiencing a higher level of autonomy in all walks of life.

That is why in my will it states that my analogue drivers' cars are to be passed on to my children and theirs afterwards - with the express instructions that they are not to be sold, but to be kept running, driven regularly and above all enjoyed. Mark Jackson

Separated at birth?

l just finished reading about the new Pagani Huayra BC (evo 220). What an amazing car and what an outrageous design with the various carbonfibre bits bolted on.

I was thinking, hats off to the designers at Pagani for being so bold with it. Then I looked a little closer and realised that maybe it should be hats off to the guys at Honda.

Now stay with me here, but surely I'm not the only one who sees the resemblance: the rear wing, the rear venturi, the flared and vented front arches, the square-jawed splitter...

Not so long ago I remember evo describing the looks of the Civic Type R as a bit OTT, yet the BC is described as being 'artfully constructed'. Why the difference in opinion?

Maybe now people will appreciate the design cues on the Type R and applaud Honda for having the courage of its convictions and building a car



Above: Civic Type R is practically a Pagani in design terms, reckons Ali Saddique

that we can all aspire to own and pretend we are driving a mini Pagani. Ali Saddique, London

Coupe cut

I've always slept soundly at night knowing that whatever financial maladies life would throw at me. I could probably always afford to buy and run an evo five-star car: a Ford Puma 1.7. So imagine my consternation when I read last month's 'Used Rivals' article and found that the Puma had lost half a star! Have I missed a memo? When and why did you take my security blanket away?

Doug Isaacs

As we revisit older cars, we reassess their ratings in the context of newer models and their fresh points of reference. Unfortunately the Puma. while still great, no longer cuts it as a five-star car for us. – **Ed**

Keeping it real

I leapt for joy when I read that the Secret Supercar Owner's new 599 GTB HGTE (Fast Fleet, evo 220) had become his wife's daily driver and their autumn grand tourer. Hallelujah, I thought. Followed by: what the hell is an autumn grand tourer?

How about an Aldi grand tourer, I thought. Perhaps I could bring some balance to your Fast Fleet pages by writing about my Manta? Read about my trips to Aldi, yearn about my jaunts to visit relatives up north and savour comparisons to my old and muchmissed Montego Vanden Plas. (It was much better than the Countryman, even though my fourth wife preferred the MG Turbo. Yes, I had all three.)

Let me know when I can start, as I've got a spring tour to Halfords that I don't won't want you to miss. **Rick Jones**



Above: Rick Jones wants to bring our Fast Fleet down to Earth with one of these

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Talking Point

Pagani Huayra BC

Last month, we drove the new lighter, more powerful version of the Huayra, the BC. We also asked if you thought it was the purist's answer to the LaFerrari/918/P1 hybrid hypercars. This is what you said...

It just looks like they've tried to make a Huayra look more like a Zonda, with big wings and a deep front splitter. The cool thing about the Huayra to me was the active aero, which meant it didn't need big wings or a deep front splitter. Rich B

I don't see it as the purist's answer. It's simply just an alternative. A more flashy, stylised one. I love it. I'd have one over a P1, if not the other two. tazsura

It's completely failed as a purist's choice. The great thing about the original was the clever active aero. Fixed wings and additional kit just make it another hypercar with no individual selling point. GraniteV8

If I was that purist I think I'd be going in a different direction with a Porsche 911 by Singer or a similar restomod, maybe an Alfaholics GTA. For all the fantastic performance and handling, to me. Pagani is too much about bling look-atme detailing. It's not really pure in any sense that I can think of. DeskJockey

McLaren, Porsche and Ferrari are institutions with heritage and racing success. Zonda for me is in the same stable as Koenigsegg, so I don't think Horacio has missed out or done too little too late. But there is nothing pure about a hypercar. For that, take a bow Caterham/Ariel/Lotus. Maccmike

With the active aero they had a USP but without, it could be any company trying to get on the supercar ladder. The only thing left is the weird design/shapes in the cockpit. Shame they couldn't have worked in the aero somehow. CCC4U

I'm beginning to wonder if Pagani's magnum opus was the Zonda F. Everything that has followed seems to be a parody of itself. Just like the Countach. Don't get me wrong, the Huayra has some amazing details, but in terms of overall aesthetics, it misses the beat. And as for being a rival to the so-called holy trinity... no. Pagani lacks their years of racing know-how. 27Gilles

While it is an object of beauty to some and no doubt has some fantastic engineering, it is no longer an object of desire. The Zondas had an emotional connection through the screaming engines and visually overtly 'sporty' bodywork. You knew you would never drive one, but the prose penned about the experience ticked those emotional boxes. The description of the Huayra driving experience highlights for me that missing dramatic connection. Markcoopers

It's irrelevant - overstyled, and underteched. FatChris

It's overstyled, underteched and totally sold out. Beany

Join the discussion

Keep an eye on evo.co.uk or follow us on Facebook (facebook.com/ evomagazine) to participate in our regular Talking Point debates. The best comments will be published here each month

From the forums: community.evo.co.uk/forums

Thread of the Month

Obsessed with cars

At what point did you realise you were obsessed with cars? I got quite excited at spotting a P11 Primera estate in rare Nordic Blue this morning...

Way longer ago than this morning! *Rich B*

When I started a business to buy and sell them and ended up with a warehouse full of cars not really for sale. **Bryn_P**

That's like asking at what point did I realise that I love food! *Mito Man*

Most kids had comics, I had Autocar road tests, when I was five. My first word (sadly) was Sierra. I'd guess it was around that time... And I like really mundane stuff that no one understands. My garage, if I had all the money and space in the world, would be a Daihatsu Cuore Avanzato TRXX [pictured], a Citroën Xantia Activa, my Cooper S and a Sapphire Cosworth. **16vcento**

One of my earlier memories is getting told off for scratching our enamel bath by racing Matchbox cars around it. And encountering the RAC Rally on the moors above Chatsworth. **Si_** My mum reckons I used to make car noises before I learned to talk. If I ever become a multimillionaire, I'll start a car museum dedicated to mundane motors: '...and over here, we have the Honda Ballade and Nissan Prairie.' **NotoriousREV**

From about seven. My dad used to take me to watch banger racing, stock cars, speedway and hill climbs. Engines at a high rpm has stayed with me ever since, and is probably why I love natural aspiration over forced induction. **Markcoopers**

There's a photo of me as a six-monthold baby on the edge of the driver's seat of my dad's white 928 S2 holding on to the steering wheel with a massive grin on my face, so I'd say pretty early! **GG**

Toy cars led to radio-controlled cars, which lead to real cars. *Marv*

When I watched *Bad Boys* and was like, 'That's a cool car. I WANT ONE!' *Gavin*



Thread of the Month wins a Road Angel safety camera & blackspot alert device worth £159.99



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RATED

Lighter than a GT3 RS and with the same 493bhp – plus a manual gearbox. Introducing the Porsche 911 R

by JETHRO BOVINGDON



OOKING BACK, THE 911 R HAS BEEN

a long time coming, its specification and philosophy crystalising over time in the sharp minds of the Porsche Motorsport GT cars team. As long ago as 2013 there were hints of what was to come. The man in charge, Andreas Preuninger, was with us

back then to run through the technology behind the thennew 991 GT3 and he was pretty excited about it. But off the record he spoke about how in the future the hardcore model lines might split: 'We still need to be competitive with the fastest cars, to look at lap times with the GT3 and RS models, but maybe we need another sort of car, too. One that is purely about the driving.'

Perhaps this was just a seed of an idea, but it chimed precisely with how we feel at **evo**. Preuninger continued: 'The truth is that even the quickest customers can't really get everything out of these cars. You think you could run a seven-thirty at the Ring? Maybe you can, but you wouldn't want to more than once! In my opinion this leaves room for something new.'

When the Cayman GT4 was released, those comments came floating back to me. So *this* is what he was talking about, I thought. It wasn't, although no doubt its amazing success gave the team a huge boost in confidence. He was talking about another 911 variant: the 911 R. That's some name to revive, perhaps the most evocative of all. However, Porsche Motorsport is not an organisation to shy away from a challenge and I suspect it doesn't slap an 'R' on something not deserving of it (Cayman R included).

When I crossed paths most recently with Preuninger, in August 2015, he was clearly doing his homework, arriving in a 997 GT2 RS. 'I've been driving the older cars quite a bit recently,' he began, smiling broadly. 'And you know what? They're fantastic. The feel and feedback, that manual gearbox... We can still learn a lot from these cars.' It was music to my ears. And although I don't want to overhype the 911 R, it might just be the car that represents the very soul of the thrill of driving in 2016.

So what exactly is it? Well, in simple terms it's a marriage of the GT3's shell and suspension architecture with the GT3 RS's 4-litre flat-six engine and a new six-speed manual gearbox. The result is 493bhp at 8250rpm, 339lb ft at 6250rpm and a kerb weight of 1370kg – that's 50kg lighter than the GT3 RS. Just 991 examples will be built and the list price is £136,901. Sadly, that's all slightly irrelevant, as getting hold of a 911 R will be very difficult indeed, and if your name isn't on the list, well, you know the rest. Even so, it's a car to celebrate because it continues on the path set by the Cayman GT4, references the sublime

PURE PORSCHES

356 A GS CARRERA (1956)

Engine Flat-four, 1498cc Power 99bhp @ 6200rpm Torque 88lb ft @ 5200rpm Weight 850kg 0-62mph 12.0sec Top speed 124mph Number built 447



You could argue that this is where Porsche took its first steps towards aligning its offerings with the motorsport activities customers were using their cars for. The 356 A GS Carrera was not only fitted with Ernst Fuhrmann's legendary four-cam Carrera engine, but it was also the first production Porsche to produce 100hp (not 'bhp').

Revealed at the 1955 Frankfurt motor show, the GS Carrera was identifiable by its wider wheels and tyres, Carrera script on the front wings and an engine cover that featured a dozen additional cooling vents. Fuhrmann's Carrera motor was fitted with a Hirth crankshaft and had two overhead camshafts per bank of twin-plug cylinders. Its designed-for-motorsport dry-sump lubrication remained. Being a race-bred engine meant it was at its best when taken as close to its 8000rpm red line as possible.

The Carrera lived on throughout the 356's production life, with each incarnation gaining a bit more power and losing a bit more weight, the ultimate being the 1960 133bhp 356 B 1600 GS Carrera GT. However, it's the original that set the ball rolling for Porsche's fascination for mixing its motorsport experience with its road car success.

909 BERGSPYDER (1968)

Engine Flat-eight, 2000cc Power 27lbhp @ 6200rpm Torque n/a Weight 429kg 0-62mph <2.0sec Top speed 120mph Number built 2



Strictly speaking, the two Bergspyders built by Porsche in 1968 aren't road cars. However, their sole purpose was to compete in the European Hill Climb Championship, of which some rounds took place on public roads, hence their (tenuous) inclusion here.

To this day, you have to look very hard to find a car that utilises such exotic materials. A regulation change in 1966 scrapped minimum weight rules and from that point on Porsche became obsessed with its scales. The bodies fitted over the aluminium spaceframe chassis were made from single-ply glassfibre and only strengthened where cracking was possible. There was a single coat of white paint.

Porsche decreed that no weight-saving measure could cost more than \$110 per kilo saved. This was fine for the titanium wheel spindles and the four-gallon fuel tank, but not for the beryllium brake discs that cost \$1000 each (saving 14kg). The calipers were made from titanium, as were the steering arms and the coil springs; the wheels were magnesium. Even the oil coolers were moved so the supply lines could be shorter and lighter. When the engineers had finished, the 909 Bergsypder weighed just 429kg.

997 GT cars and the great lightweight icons of the past, and reinforces the link between hardcore driving enthusiasts and Porsche. It might also serve to remind other manufacturers that there's a hungry audience out there for cars that place greater importance on fun and involvement than acceleration figures and lap times.

That's not to say that the 911 R is slow or 'retro'. The technology remains, in the form of PASM dampers, a throttle-blip on downshifts (switchable), rear-wheel steering, and sophisticated stability control and ABS. Porsche claims 0-62mph in 3.8sec and a top speed of 200mph – the latter said to be 'very conservative'. Interestingly, though, there's no mention of a Nürburgring lap time. Officially, Porsche states this is irrelevant for the 911 R, but will quietly admit it's still pretty close to a GT3 RS, helped in no small part by the slippery, narrower body and smaller retractable rear wing that help the R hit massive speeds down the Döttinger Höhe straight. It still runs Michelin Pilot Sport Cup 2 tyres but in GT3 sizes – 245-section at the front and 305-section at the rear – and also features a mechanically locking differential.

Paring back the weight of the GT3 is no easy task, but the new six-speed 'box, as well as being central to the R's philosophy, was crucial to its diet. It uses the same casing as the PDK transmission and seven-speed manual seen in 'The 911 R is a marriage of the GT3's shell and suspension with the GT3 RS's 4-litre flat-six'

Above: this is only the second 911 to carry the 'R' moniker; the rare 1967 original had a glassfibre and aluminium body and made 207bhp

PURE PORSCHES

911R (1967)

Engine Flat-six, 1991cc Power 207bhp @ 8000rpm Torque 152lb ft @ 6200rpm Weight 800kg O-62mph n/a Top speed 152mph Number built 4



Looking for a car that is the epitome of 'less is more'? Look no further than this. Conceived in Ferdinand Piëch's experimental department, the R was considered a prototype for a potential future ultra-lightweight 911 that would compete both in rallying and GT racing.

Retaining the 911's mainframe and inner sheet metal (but with thinner-gauge steel), the body panels looked stock but were produced from a mix of aluminium and glassfibre. The side and rear windows were 2mm-thick plexiglass; the front screen was glass but just 4mm thick. The brake discs were ventilated and the front calipers had an increased pad area. The rear quarter-panels were broader than those of a 911T in order to fit wider wheels and tyres to allow the engine from the Carrera 906 race car to be used to its full potential.

The R first raced in the 330-mile endurance race at Mugello, finishing third, but its greatest success came in the Marathon de la Route – an 84-hour endurance race at the Nürburgring – where it finished first, 12 laps ahead of the next finisher. Later that year, at Monza, a 911R ran virtually flat-out for six days, breaking 11 time and distance records and posting five world records for a 2-litre-engined car.

964 CARRERA 4 LEICHTBAU (1992)

Engine Flat-six, 3600cc Power 265bhp @ 6100rpm Torque 240lb ft @ 4800rpm **0-62mph** 5.0sec Top speed 130mph Weight 1090kg Number built 20



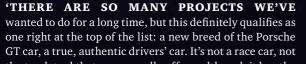
Following Porsche's exit from F1 in 1991, the Motorsport department's head of customer racing, Jürgen Barth, assigned to his team the Carrera 4 'Leichtbau'.

As factory specials go, this most unexpected 911 is up there with the very best. With the help of some leftover parts from the Paris-Dakar 953 project, the team took a 964 Carrera RS and set about shedding some kilos. Lighter aluminium doors were fitted, so too a glassfibre engine lid from the SC Rally Raid car. Plexiglass was fitted almost everywhere. The interior was barren (no carpets, just bucket seats and a cut-away dash) and featured a handmade roll-cage. The chassis and brakes were something else. The suspension was both stiffer and lower than that of the 964 Cup car and the brakes allowed for bias adjustment. The wheels were magnesium.

The engine was a 3.6-litre RS unit with power up to 265bhp. A shortened-ratio five-speed manual gearbox was connected to a manually adjustable four-wheel-drive system (torque bias could be adjusted). When Barth and his team had finished, the Leichtbaus weighed just 1090kg each – 130kg less than a Carrera RS.

'To hear of one treated purely as an investment would be criminal' the Carrera and Carrera S, but features just six bespoke ratios. It's around 20kg lighter than the PDK unit. The R also benefits from a carbonfibre bonnet and front wings and a magnesium roof. There are no rear seats, and the rear and rear side windows are plastic. The dashboard and door cards aren't trimmed in leather, but the delicious 918-style seats are a mixture of leather and classic cloth that calls to mind 911s of old. The R also comes as standard with carbon-ceramic brakes measuring 410mm on the front axle and 390mm at the rear. The exhaust system is titanium. Of course it is. And don't expect air conditioning or a stereo as standard equipment. You can reinstate theses niceties and fit a 30mm front lifting system, too.

At this stage you want a 911 R. We all do, right? That engine, the purity of the unadorned shape, that 'box. Titanium, magnesium, carbonfibre. Meet the team behind the R and you'll want one even more, simply because they understand. They get the little things, they talk about steering feel in terms only people who have the incurable illness we all share could possibly comprehend. So this is the 911 R in Andreas Preuninger's own words. Absorb them all and then pray that the lucky 991 owners of the new 911 R will actually enjoy driving these cars. To hear of one treated purely as an investment would be criminal...



the track tool that we normally offer – although it has the same technology as those cars – but it's more like a purists' car, a car to drive and have fun with on the road. 'We've addressed two types of customer with our GT

we ve addressed two types of customer with our GI cars in the past, the 996 and 997 models: the "purists" and the "track rats". It's important to win races and have the best track-capable but street-legal car, which we still have. But look beyond that and a certain niche opens out. The 911 R is the car we've built for the purists.

'It's definitely a main characteristic of the car that it's only available with a six-speed manual gearbox. This is a call from the customer group who liked their 996 and 997 cars and wanted to keep their involvement by changing the cogs themselves, which I can fully understand on the street when you want to have fun. It doesn't make so much sense when you're looking for the best and most capable track car, so it's a different ethos. We developed this gearbox especially for the 911 R and it's coupled to the 4-litre GT3 RS engine, which was not expected. We're proud to be able to present the most powerful atmospheric engine in our range in the R. 'The engine's response contributes a lot to the driving experience out on the road, in addition to the very nimble feeling of the car – this lightweight characteristic. Everything is carbonfibre, magnesium... The car weighs 1250kg dry or 1370kg with all fluids and a full tank. You feel that lightness as soon as you leave the parking spot. This car is so light and so responsive it makes you grin all the time. It's a really great entertainer.

'The manual gearbox is lighter than a dual-clutch 'box, giving the 911 R car a 20kg advantage. Or even more if it has the optional single-mass flywheel, so maybe 22kg. If you compare with a GT3, the fender might look the same but it's carbonfibre. It's not the RS version, it's new. We've also got magnesium for the roof; we even found another 4.5kg of sound insulation that we took away from the RS. That's a good thing for the visceral driving sensation, not so good for going 2000 kilometres in one go. But that's not the point of the car. It has the PCCB brakes as standard, you can have it without AC and radio, it has a titanium exhaust... It's all those little things that made this car lighter than a GT3.

'Isn't it nice without the wing? It's very modest looking. I didn't want any spoilers on the car, not even a gurney flap on the back end. So that called for additional measures to keep the car in balance at high speeds, because we want Above: bodyshell is inherited from the GT3, but the RS magnesium roof is fitted, while the bonnet and front wings are carbon

Porsche 911 R

Engine Flat-six, 3996cc Power 493bhp @ 8250rpm Torque 339lb ft @ 6250rpm Weight 1370kg Power-to-weight 366bhp/ton 0-62mph 3.8sec (claimed) Top speed 200mph (claimed) Basic price £136,901

PURE PORSCHES

968 TURBO S (1993)

Engine In-line 4-cyl, 2990cc, turbo Power 301bhp @ 5400rpm Torque 369lb ft @ 3000rpm Weight 1300kg 0-62mph 5.0sec Top speed 174mph Number built 17



Surprised to see a 968 amongst our famous five? Don't be. This lightweight homologation special has a right to be here.

The idea of a turbocharged 968 first appeared on Porsche's 'to do' list in 1990, then again in '92 when a 2-litre turbo was mooted to satisfy Italian tax rules. It wasn't for another year, when the ADAC's GT Cup race series was announced and Porsche saw an opportunity to build a new 968 customer race car, that they enacted the proposal.

The 944's single-cam cylinder head was dusted down and adapted to fit the 968's 3-litre block. A single watercooled KKK turbo helped yield 301bhp (up 64bhp on the Club Sport) and 369lb ft. The transaxle also received higher fifth and sixth gears, a stronger clutch and a limited-slip diff.

Visually the Turbo S looked like a Club Sport on steroids. There were NACA ducts in the bonnet, a deeper front spoiler, wider side sills and an adjustable rear wing. The idea was for Porsche to build between 50 and 100 road cars, with a more powerful (345bhp) 968 Turbo RS for competition use. In the end just 17 Turbo Ss were built.







=

S°GO 502



Left, clockwise

from top: cabin has been diligently pared back – note the lack of infotainment and steering-wheel buttons; six-speed manual is the sole transmission option, although there is an auto-blip function; carbon-shelled buckets are borrowed from the 918 Spyder to make a safe lane-change at 320kph [around 200mph]. So we fitted a neat diffuser underneath the car to take the downforce we needed from the underbody. The long vanes underneath the engine really contribute a lot. So the 911 R is always neutral at the front end with a slight amount of downforce at the back. The balance is exactly as a Porsche GT car should be, which I'm very happy about.

'I read on forums and in magazines that we might have narrower tyres, but why should we make the car less competent? The contact patch is actually way less than with an RS because it's on the smaller, 20-inch GT3 wheels, but we've kept the ultra-high-performance tyres as we think they're just brilliant and they play a vital role with the GT3 suspension. All the chassis parts are GT3derived. It'll slide pretty easily, it's a good drift car, but I don't want to encourage that on the open road... Let's just say it's a very entertaining drive and there was no need to make the tyre narrower. It's exactly the way it should be.

'The damper calibration is different from the GT3. It's more for street use, but we have PASM nevertheless. In Sport it will stiffen up for the occasional drift challenge or whatever. Yes, we kept the rear-wheel steering, which is kind of a contradiction. The idea was to get rid of it – it's five-point-something kilos and we want it pure, pure, pure. But we know it does a lot for agility, which is a bonus for the driver because agility is fun. We didn't want to take fun out of the car... so the logical thing was to try both. And I can tell you that the car felt like a truck without it!

'We wanted to make the car even more agile than a GT3, and it is. In fact it's in a league with the GT4, a mid-engined car. How come? It's the same rear-steer hardware used on the GT3 but a completely different calibration. It doesn't turn more, it's still 1.5 degrees in each direction, but the response curve is different. The car is a lot more agile. The system was new [on the GT3] and now we've been using it for quite some time we've had new ideas to get even more performance from it. The car feels very small from behind the wheel, as it should with so little weight.

'When we created the R we thought, "What's important to Porsche in a sports car?" It's not so much the horsepower, because there's a limit to additional horsepower increasing driving enjoyment. I think 500hp is more than enough. What counts is feedback – the absolutely clear information that you get through your hands, your back and your ears. The car has to be honest in its actions. The instantaneous bite of the engine, the direct feeling that the steering offers – this is what makes a sports car. These were the targets. I'm sure if you guys get this car for eCoty this year up in the Highlands... you won't want to get out.

'The steering was recalibrated to get the utmost information from the front axle. You always have to feel exactly what's going on with the forces in the steering rod. We're learning and learning [with EPAS]. The GT4 system was brilliant but this is the best yet and it goes with the recalibration of the rear steering. It's R-specific and with a clear focus on agility. This car is a little bit rock and roll. It's fun, it's raw, you never get tired of it and it feels even more like the pure essence of 911. I think it's the most emotional 911 we've done for decades. For me it's almost a spiritual experience driving the car.'



PHOTOGRAPHY by ASTON PARROTT & DEAN SMITH

v THE BEST OF THE BEST

We've raved about the Cayman GT4 in these pages, and we're not the only ones to have fallen head-overheels for Porsche's mid-engined marvel. But can it really be that good? Here's where we find out

JUST HOW GOOD IS PORSCHE'S CAYMAN GT4? IT IS, after all, the current **evo** Car of the Year, was runner-up in Track Car of the Year, still commands a 40 per cent premium over its list price and is the car that tops the 'one car, for one year' list of pretty much everyone in the **evo** office. But what makes it so special? Why can't we get enough of it? How is it so damn good?

To answer these questions we need to know exactly what makes it the almost perfect performance car. And to do that we need to measure it against the benchmarks, the cars we consider to be the pinnacle in the key areas that separate the very best from the merely good.

So, first up is the Exige Sport 350. Lotus is the originator of driving purity and the master of distilling its craft into the clearest form. How close does a GT4 get to being a pure sports car?

Next, can a derivative of a series production car turn heads and deliver that spine-tingling anticipation reserved for genuine exotica? In other words, parked next to a V10-engined wedge of Italy's finest, does a tracksuit-wearing German have the same wow factor?

How quick is it, really? Is there a performance trade-off for any of the above? Ferrari's 458 and its electrifying naturally aspirated V8 will give the GT4's flat-six its toughest workout on track.

Just how practical is it? Is the GT4 as good at the station run as it is on a trackday? Being the one performance car for every journey pitches it into a talented pool, including BMW's new M4 Competition Package – one of the best track-on-Sunday, commute-on-Monday cars.

Finally, just how *Porsche* is the GT4? It's had Porsche Motorsport magic injected into its DNA, but despite its brilliance there remains a nagging doubt: is it really as good as a GT3?

Over the coming pages we'll try to answer these questions and maybe a few more. Porsche Cayman GT4, do your best.













HOW PURE IS IT?

GT4 v LOTUS EXIGE SPORT 350

by NICK TROTT PHOTOGRAPHY by ASTON PARROTT

THIS IS A TOUGH TEST – AND NOT your traditional test. Sure, it's Britain versus Germany, and both cars have six cylinders, rear-wheel drive, two seats, a manual gearbox and a mid-mounted motor, but it's how each expresses the thrill of driving in its purest form that we're studying here.

Lotus wades in with an acknowledgment that the Exige S – the car the Sport 350 replaces – was not as honed, not as light, and not as focused as it could've been. And this a car that was joint-top in eCoty 2012, remember. So has the best Exige, and one of the best Lotus's of recent times, just got better? To find out, we're pitting it against the current eCoty champ – the Cayman GT4 – a car of mesmerising purity.

The GT4 is a phenomenon. The hottest sports car of the moment. A car that is commanding a 40 per cent premium already, and a car that triumphed over the 991 GT3 RS, McLaren 675LT, Lamborghini Aventador SV and Ferrari 488 GTB in that eCoty 2015 test. If it was human, it would be puffed up and fearless.

At 1125kg, the Sport 350 is 51kg lighter than the Exige S, 2.5 seconds faster around its Hethel test track and strikes 170mph.



If it was human, it would be toned, trim and confident. The GT4 weighs 1340kg – 215kg more than the Lotus – and tops out at 183mph. The Lotus sprints to 62mph in 3.9 seconds, the GT4 in 4.4. But numbers are irrelevant here because these cars covet the drive above the data, and the sensations above the statistics.

You fall clumsily into the Exige; the wide sill needs vaulting and men of a certain age will need to be wary of the turn/twist/slipped disc. You instantly notice the fabulous optional tartan trim, THE CAYMAN
IS LIGHT FOR
A MODERN
SPORTS CAR
BUT IT'S NOT
LOTUS-LIGHT



and the new exposed gearshift mechanism. You sit almost shoulder-to-shoulder with your passenger, faced with a tiny steering wheel and basic dials. The view forward sets your pulse racing, the two deltoid fenders spreading out like falcon wings.

But your first impressions are dominated by contradictions. The car feels light (the door weighs nothing) but the steering is heavy at low speeds. You fit snugly width-wise but the seat is positioned too high, so you try (and fail) to wriggle lower. Finally, the engine starts with the de rigueur (but unnecessary) flare of revs, but when you tentatively blip the throttle to measure response the engine feels lazy.

The Cayman, on the other hand, feels right, just *right*, straightaway. You find a perfect driving position immediately, you feel cocooned by solid-feeling materials and controls, and you marvel at the simple perfection of the pedal weights and springing. It's a car you feel you can very quickly drive hard, but also a car that makes you wonder if it will reveal all its talents too soon.

OK, we've pitched this as a lightweight battle, but while the Cayman is light for a modern

sports car, it's not Lotus-light. And as we know, lightness and purity are dynamic bedfellows. However, in isolation the Cayman doesn't feel heavy. Despite overly long gearing, it leaps off the line and punches hard. Likewise, your first rotation of the (power) steering is immediate with feel and response. And when you use the brakes – optional carbon ceramics on our test car – they haul with startling power.

As you load it harder into a corner, the GT4 spreads the forces evenly across its axis. It neither understeers nor oversteers – it just steers to the point of a gentle four-wheel drift



Left: GT4 can't live with the supercar-fast Lotus for outright pace, but it indulges its driver at any speed and in any scenario

that signals its arrival with a gentle relaxing of steering weight, a mild hushing from the tyres and a joyous sense of gliding. And it's during this moment that the GT4 blows your socks off, because it can operate within this bandwidth seemingly all day long, and with just the tiniest of orchestrations from the driver. It will dance to your tune up to, on, and beyond the limit of adhesion and this, ladies and gentleman, is the glowing neon that signposts every great performance car.

Good luck Hethel.

Once you've acclimatised – to the low-speed steering weight, to the increased noise, to the seemingly dull throttle response, and to the seat height – you start to find greatness in the Exige. That unique, only-Lotus type of greatness.

Punching the Sport button (and never driving the car in 'normal' mode again) is what pushes the door ajar to the Exige's greatness. Throttle response improves, which means your right foot talks to the engine in a much clearer and more confidence-inspiring manner, and that dull response all but disappears. There's still a mild lag when you blip for a heel-and-toe shift, but when you bury your right foot the Exige rips forward with a vivid but linear force that the GT4 can't match. Power to weight is the key here – the Lotus achieves 312bhp/ton and the Cayman 288. The Sport 350 is supercar-quick.

The revised gearshift mechanism is a treat. The throws are short and precise, and the slackness that haunted the old shift has gone. Indeed, you tend to overwork the shifter, just to enjoy the action. This is entirely unnecessary because the Exige has enough torque – 295lb ft – to feel fast in all six ratios and pretty much any throttle opening.

Find a set of corners and the Exige truly comes alive. You feel the unassisted steering tense as the forces grow, and you may feel a temptation to grip the wheel harder. But like riding a motorcycle, your tension will only transfer to the vehicle. Despite its extra bulk, the GT4 feels like it has the same outright grip as the Lotus, but in the interchangeably damp and dry conditions during our test, the Exige yields to understeer sooner than the GT4.

Unlike the GT4, the Lotus asks you to rethink your approach to driving. The Cayman can be bullied, and will mask poor driving, but the Exige will punish clumsiness by exaggerating every uncoordinated input. In other words, the Lotus simply can't be arsed if you yourself can't.

But when you get it right, when you tap into those rich messages that seep into your fingertips, feet and backside, the Exige is pure joy. Yes, it's flawed; the build quality is worse than the Porsche's, visibility is poor, the ride is harder than you'd expect and the pause in the throttle response occasionally frustrating. But despite the total genius of the GT4, the Sport 350 is more of a sports car more of the time.

So these are two exceptional cars, and the Exige Sport 350 is the toughest like-for-like rival the GT4 will ever face. We will revisit this test in summer, and explore their genius further, but for now, as pure as the GT4 is for a Porsche, it's not Lotus-pure. ■

PORSCHE CAYMAN GT4

LOTUS EXIGE SPORT 350

Engine Flat-six, 3800cc Power 380bhp @ 7400rpm Torque 310lb ft @ 4750-6000rpm Weight 1340kg Power-to-weight 288bhp/ton 0-62mph 4.4sec (claimed) Top speed 183mph (claimed) Basic Price £64,451

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Engine V6, 3456cc, supercharged Power 345bhp @ 7000rpm Torque 295lb ft @ 4500rpm Weight 1125kg Power-to-weight 312bhp/ton O-62mph 3.9sec (claimed) Top speed 170mph (claimed) Basic Price £55,900

HOW EXOTIC IS IT?

GT4 v LAMBORGHINI GALLARDO LP550-2

by DAN PROSSER PHOTOGRAPHY by ASTON PARROTT

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LAMBORGHINI GALLARDO LP550-2

Engine V10, 5204cc Power 542bhp @ 8000rpm Torque 398lb ft @ 6500rpm Weight 1380kg (dry) Power-to-weight 399bhp/ ton (dry) 0-62mph 3.9sec (claimed) Top speed 199mph (claimed) Value today £104.990

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UNLESS YOU WERE ONE OF THE LUCKY

few, the Cayman GT4's £64,451 list price means precisely nothing. In the current market, it's a sixfigure purchase, which breaches a very definite psychological threshold. If you were going to drop more than £100,000 on a performance car, you'd want a true slice of exotica, wouldn't you?

With London's financial district twinkling in the background, the Porsche really doesn't give too much away to the Gallardo LP550-2, which is just about as much modern-era exotica as six figures will afford. The GT4's towering rear wing, bulging air intakes and road-scraping front splitter give it enough visual presence to hold its own with the bright orange Lambo.

Parity is short-lived, though. Lower yourself into the Gallardo and you instantly get a sense of it being something special: the huge expanse of dashboard real estate before you, the limited visibility all round, the sense of the weight of the car being behind your shoulders. By comparison the GT4 feels like a derivative of a fairly mainstream sports car, which, of course, it is.

The Gallardo has the Cayman licked for lowspeed theatre, too. You manoeuvre with care, anxious not to scuff a rim or clip a post with a distant corner of the car. It's all classic supercar fare and it induces so many more involuntary, gleeful grins than the Porsche can muster.

The Gallardo claims one more victory. A naturally aspirated 3.8-litre flax-six is by most measures a very evocative engine, but back-to-back with the Gallardo's earth-shattering 8500rpm V10 it feels almost run-of-the-mill.

The Cayman begins to claw back ground on the open road. If we agree that 'exotic' simply means out of the ordinary, the GT4's driving experience is one of the most exotic of any car on sale in the last five years. It's that almost magical blend of immediacy, body control, pliancy over bumps and perfect balance. It finds its way down a tricky road with a quality and lightness of touch that the Gallardo can't hope to replicate.

The Cayman's Michelin Cup 2 tyres are also authentically supercar. When cold they feel rock-solid, the front axle scudding across the road surface. So the Cayman GT4 requires care and thought, at least until they've warmed through, and that's as clear an indicator of an exotic car as any you care to mention.

Ultimately, the Gallardo only feels more special in the superficial terms that have never really mattered to this magazine. We are, naturally, much more concerned with the quality of the driving experience and in that regard the Cayman GT4 distinguishes itself, even in the company of a thoroughbred Italian supercar.

With thanks to Lamborghini specialist Vas Vehicle Solutions (vvsuk.co.uk) for the loan of the Gallardo, which is currently for sale.

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HOW FAST IS IT?

GT4 v FERRARI 458

by JETHRO BOVINGDON PHOTOGRAPHY *by* DEAN SMITH

THE CAYMAN GT4 FINDS ITSELF ON

familiar territory as it faces the challenge of a Ferrari 458. Here at Blyton Park in our recent Track Car of the Year contest, it came within a whisker of winning the big prize and being crowned eCoty and TCoty simultaneously. Today is a subtly different proposition, though. The GT4 is without doubt a fantastic

Today is a subtly different proposition, though. The GT4 is without doubt a fantastic machine, but can it replicate the sharp-edged thrills and sheer sense of unbridled madness that a 458 Italia delivers as it shrieks up to 9000rpm? To find out we've been kindly let loose in the 6th Gear Experience's warhorse... an Italia with 78,000 miles on the clock, one that lives on track and is fitted with nonstandard steel brakes (cheaper to replace). To be completely clear, it's also wearing different tyres on the front and rear axles.

The 458 immediately leaps ahead of the GT4 down the short start/finish straight and into the first tight chicane. It's 0.3sec ahead but the GT4 pegs it by carrying more speed on its Cup 2 tyres and riding the kerb with more composure. The 458's tyre imbalance reveals itself on the long left-hander that leads onto the back straight with marked understeer that means you just have to wait and wait to get on the power. It's a couple of tenths behind now. A little lift as you flick left after the preceding chicane cures it, but instead there's a big spike of oversteer that loses even more time. However, the speed trace reveals that the 458 makes up the time and more, flying up to 146.9mph (versus the GT4's 137.6mph) on the straight, despite those steel brakes feeling slightly fragile and necessitating much earlier braking. It makes up 0.7sec to move half a second ahead.

The GT4 makes all that time back and much more, though. It's got more front-end grip through Bunga-Bunga and carries around 3mph more speed through the turn. Again, the 458's power hauls it back ahead by the entry to Port Froid but the GT4 just murders it for highspeed grip and balance – the minimum speed is 93.7mph to the Ferrari's 85.8mph. The final section is a heavy braking zone and then two tight, technical corners and the GT4's superior grip and traction put it out of sight, the final lap times being 1:03.63 versus 1:04.67.

The GT4 wins, then. And by some margin. However, with new and matching tyres and with the OE carbon-ceramic brakes, I'd expect the 458 to be at least as fast. Which is more fun? Well, the 458's engine is a class apart and its chassis is easier to hold onto and balance when it cuts loose, but the GT4 is so involving, demanding you hustle it and work the 'box and brakes incredibly hard. It's a tough call, but the Porsche just nicks it.

Thanks to 6th Gear Experience and Simon George. Go to 6thgearexperience.com for the chance to drive this 458 and other supercars.

FERRARI 458 ITALIA

Engine V8, 4497cc Power 562bhp @ 9000rpm Torque 398lb ft @ 6000rpm Weight 1485kg Power-toweight 384bhp/ton 0-62mph 3.4sec (claimed) Top speed 202mph (claimed) Value today £104,995





HOW PRACTICAL IS IT?

GT4 v BMW M4 Competition package

by DAN PROSSER PHOTOGRAPHY by ASTON PARROTT

GIVEN THAT THE CAYMAN GT4 has an engine where in the M4 Competition Package you'll find a useful pair of rear seats, it'd be somewhat unreasonable of me to argue that the Porsche is as practical as the BMW. Its aggressive Cup 2 tyres do require caution in the wet, too, and you can't specify the Porsche with an automatic gearbox, but those are the only areas in which the GT4 loses out to the M4 as an everyday car.

The days of Porsche Motorsport machines being uncompromisingly raw are more or less behind us. The current range of GT models can all be specced with climate control and satellite navigation, after all, and, with the loose-limbed ride quality that's common throughout the stable, they aren't terribly uncomfortable in day-to-day use either.

The £3000 Competition Package upgrade was always a part of the M3/M4 product plan, but its arrival just two years after the launch of the mainstream models might well have been hastened by press and owner criticism of the slightly wayward early cars. With their downsized turbo engines and electrically assisted steering systems, the fifth-generation models departed from three decades of M3 tradition in a couple of very significant ways, but to my mind the real issue was a lack of control at the rear axle. The incredibly forceful torque delivery caused the driven wheels no end of trouble, even in the dry, and the back end of the car was so loosely controlled over crests and bumps that you genuinely feared it might pogo you into a ditch.

The Competition Package cars have more power – up to 444bhp from 425bhp – but the M differential has been tweaked in a bid to

BMW M4 COMPETITION PACKAGE

Engine In-line 6-cyl, 2979cc, twin-turbo Power 444bhp @ 7000rpm Torque 406lb ft @ 1850-5500rpm Weight 1515kg Power-to-weight 298bhp/ton 0-62mph 4.2sec (claimed) Top speed 155mph (limited) Basic price £60,005

THE CAYMAN IS NO LESS TIRING OVER A LONG JOURNEY THAN THE BMW

improve traction. Even more significantly, they also receive new springs, dampers and anti-roll bars, which between them have gone a long way to bringing some much-needed control to the rear end of the car (see evo.co.uk for a detailed M4 Competition Package review).

The extra spring rate has made the upgraded model a little less pliant than the standard versions and road noise has gone up a notch, too. It all means the Cayman GT4 is actually no less tiring over a long journey than the BMW and no more of a hassle around town, either.

The M4 does offer 445 litres of boot space to the Cayman's 425 litres, however, so I must concede that bottled water salesmen and drug smugglers would be better served by the BMW.

HOW PORSCHE IS IT?

GT4 v 996 GT3

GT3

by RICHARD MEADEN PHOTOGRAPHY by DEAN SMITH

ARGUABLY THE REAL LITMUS TEST OF

the GT4 is not comparing it with obvious or perceived challengers from rival brands, but going head-to-head with another Porsche. And a modern classic one at that, for there's no more reliable means of putting the present into context than by looking to the recent past.

If the recent past is represented by a Gen 2 996 GT3 then that context is a very fine fast Porsche and one of the last genuinely pure and simple Motorsport 911s. With clear ancestral rivalry, spookily similar on-paper performance and both holding eCoty titles, the comparison is as compelling as it is hard to call. The first challenge is finding a GT3 fresh

The first challenge is finding a GT3 fresh enough to make the comparison representative. Step forward **evo** reader Jack Wood, whose immaculate car is in tip-top mechanical condition, as befits a 911 enjoyed regularly on road and track. There have been a few modest tweaks, such as rose-jointed control arms and suspension pick-ups, and softer front and stiffer rear anti-roll bars to make the car work a bit better on Jack's preferred choice of trackday rubber (Pilot Cups or Pirelli Trofeo Rs), but the dampers are rebuilt factory-fit, the brake discs and calipers, engine and exhaust are all OE, while Jack's road wheels have just been shod with a new set of Michelin Pilot Sport 2s. It's pretty much perfect.

See the two cars in close company and, as ever, it's the compactness of the older car that shocks. The GT3's low nose, slim hips, modest wheels and tyres make the GT4 look bulky, even though, having just stepped out of it, I know the Cayman doesn't feel it from behind the wheel. Ironically it's the newer car that's lighter (by 40kg), though the GT3 is hardly chubby at 1380kg.

Stepping back into a Gen 2 996 GT3 is a graphic reminder of how far fast Porsches in general and the Motorsport cars in particular have come under the custodianship of Andreas Preuninger. This is a very basic car. THEIR ON-PAPER PERFORMANCE IS SPOOKILY SIMILAR No infotainment screen, no PASM suspension or PSM safety net. Just a steering wheel, gearstick, three pedals and lots of textured black plastic. Clearly, back in 2003, GT3s were primarily built for driving, not conducting business or conversation. The GT4 has the purity of a manual gearbox, but is also connected to the modern world. The GT3's austerity makes it more of an occasion, but largely because cars – even Motorsport Porsches – simply aren't like this any more.

I've not felt nervous in a road car for a long time, but the GT3 gives me the jitters. Though we try and fight it, modern cars leave us increasingly conditioned to having stability and traction control systems to rely on as a default. Believe me, when the roads are fringed with frost, dusted in road salt and criss-crossed with slushy meltwater, an old GT3 makes you feel somewhat exposed, at least until you begin to get to grips with it.

You have to coax or cajole the GT3. Nothing less, nothing more. Pussyfoot and the front end feels a bit vague and huffy, not changing direction with the immediacy or positivity of the GT4. Attempt to carry speed without the required conviction and the nose can still scuff wide of your chosen line, undermining your confidence. This is the GT3's test of faith, for if you commit to hustling through the corners it finds more grip, which generates more suspension loading, which in turn allows you to nudge your way towards exploiting the pendulum effect of the engine in the tail. Only then will you get a tune from it.

By comparison the GT4 is an open book from







Left: GT4 has the stronger mid-range; GT3 only really comes alive above 5500rpm. Right: no question which is the biggest challenge; GT3 can be quite scary until you learn to work with it

the moment you get going. Its responses are brighter and sharper, its steering more direct, if less organic in feel. It does what you ask without question or hesitation, so you work it harder, sooner. It's still a deeply satisfying car, but it helps you in situations where the GT3 asks questions, so the gratification is instant rather than hard-won.

The GT3's Motorsport 3.6-litre Mezger engine is a special thing. Gritty and coarse at low revs and low speed, you feel and hear it (and the tight limited-slip diff) rattle and chunter, almost as if the car is gnashing its teeth with impatience. Where the GT4's 3.8-litre engine has a broad spread of performance, the GT3's is an unashamed rev-fiend. Below 5000 you almost wonder what the fuss is about, then as the orange sliver of tacho needle sweeps beyond 5500 it really brings the heat, zinging and howling with increasing intensity all the way to 8k. It's a defining part of the GT3 experience and the single biggest contributor to the difference in character between the two.

The GT4's gearshift is better, but, as few are sweeter, there's no shame in that. Likewise its monster carbon brakes are considerably stronger. It doesn't sniff around so much over bumps under braking, either, so you're not busy making the constant small corrections and adjustments demanded by the GT3.

Busy is a good word to describe the whole GT3 experience, actually. From the noise,

which is less filtered and more industrial, to the ride, which is fidgety and prone to nodding its head over awkwardly spaced bumps, to the rapidity and variety of steering inputs you need to make when you really get it dancing. There's more to do more of the time, which is where the fun is, but also where the opportunities lie for the GT4 to steal advantages.

That much is never clearer than when you watch one car from the driving seat of the other. The GT3 is constantly shimmying and seesawing front to rear with bumps in the road. The GT4 isn't impervious to the bumps, but it's more compliant and balanced, flattening some of the frequencies that get the 911 bucking and broncing. Chasing each in turn is a fascinating and brilliantly accurate depiction of how they feel from behind the wheel.

Having switched from one to the other, then back again, I park somewhere quiet and consider the near-heretical notion that the GT4 may have kicked the GT3 into touch. It's certainly the more capable and accomplished machine – as you'd expect from a younger car – but it's also genuinely exciting and a real occasion to drive on these roads. The way it works so well, yet keeps you so intimately in the loop is its true genius.

And yet. Brilliant though it is, it doesn't have the GT3's quirks. There's less to get to know and fewer challenges. It doesn't have the GT3's hardcore reputation or consequently

its ability to give you the willies in tricky conditions. Whether you see this as a plus or negative depends on how badly you have the Porsche virus. And, famously, the Cayman doesn't have a Motorsport engine, though I'm not sure the difference between them is quite the deal-breaker legend or internet forums might suggest.

Which is best? Answering that is like choosing between a cold pint of beer on a hot summer's day and a single malt sat next to an open fire. Both hit the spot in very different ways: the beer slakes your thirst, the malt demands you pay it the respect of savouring each sip if you're to truly appreciate its qualities. If you need less cryptic proof that not only is the Cayman a true and great GT Porsche, but a new, complimentary spin on the Motorsport 911's well-established recipe, our generous GT3 owner Jack has recently gone half-shares on a GT4 with a mate. A mate who also happens to own a 996 GT3. If *they* can't choose between the two, who are we to argue?

With thanks to Jack Wood for the generous loan of his wonderful 996 GT3.

PORSCHE 911 GT3 (996.2)

Engine Flat-6-cyl, 3600cc Power 375bhp @ 7400rpm Torque 284lb ft @ 5000rpm Weight 1380kg Powerto-weight 272bhp/ton 0-60mph 4.5sec (claimed) Top speed 190mph (claimed) Value today £60,000

GT4 v THE BEST OF THE BEST

JUST HOW GOOD IS PORSCHE'S

Cayman GT4? That's the question we set out to answer. As it methodically picked off some tremendously stiff opposition on our 2015 **evo** Car of the Year test – McLaren 675LT, Ferrari 488 GTB and Porsche 911 GT3 RS included – it dawned on us that the GT4 might just be the most talented performance car of the last few years.

That's why we wanted to know just how close it could get to matching a number of benchmark cars in a series of varied twin tests; a number of duels that would tell us exactly how fast, fun, desirable and useable it really is. We didn't expect it to beat each and every one of the rivals we lined up for it, but nor did we expect it to get quite so close to matching those rivals across the five disciplines. The GT4 proved itself to be more dynamically capable even than its illustrious ancestor, the 996 GT3, although it did fall short in the character stakes. It kept the new Lotus Exige Sport 350 very honest when all that mattered was purity, and it more than held its own on track against a much more powerful Ferrari, both in terms of performance and driving fun. It even felt exotic in the company of a Lamborghini and offered much of the daily usability of a BMW M4, too.

No other car released in the last 12 months would have performed so brilliantly against the same opposition, which is a measure of just how good the Cayman GT4 really is. Would it have won our affections so completely had it used a turbocharged engine and a paddleshift gearbox? Unlikely. The GT4 is all the more special because it adheres to a formula that's desperately under threat these days.

There is an underlying frustration that surrounds the Cayman GT4, though. When Porsche announced the hardcore Cayman we had all waited so long for, we hoped it would serve as a new entry point to the Porsche Motorsport magic, but such was the demand for the GT4, most seemed to be allocated to existing 918 Spyder and 911 GT3 RS owners. And if you weren't lucky enough to land a car from the factory, you'll pay a vast premium to get one on your driveway now. Frustrating though that may be, it isn't enough to diminish the brilliance of what is one of the best performance cars of the modern era.

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The new Shelby GT350 Mustang packs a 526bhp V8, Brembo brakes, MagneRide dampers and Michelin Super Sport tyres. Has Ford finally produced a muscle-car for European tastes? An epic road holds the answer

and members

by HENRY CATCHPOLE PHOTOGRAPHY *by* ASTON PARROTT

mmmm

SEEING THE LGHT

OR REASONS TOO MUNDANE to waste paper on, I wandered around the halls of the Detroit motor show while photographer Aston Parrott flew to Los Angeles and picked up the Shelby Mustang GT350. Once I'd finished looking at the Buick Avista and numerous F-150s, I flew to San Francisco, hired a Kia Rio and met Aston in Morgan Hill, just south of San Jose. He had clearly been having a fine old time these past few days.

'Here's the Mustang and me on the Pacific Coast Highway,' he says as we sit in the slightly fusty-smelling reception of a rashly prebooked motel, 'and here we are with a gorgeous sunset at Pebble Beach. We found this great little wine saloon in Monterey. Oh, and there's the Golden Gate Bridge – there's a hilarious story about...' It all sounds lovely, but eventually I have to tell him that I really need to get some sleep so could we look at the second half of his holiday snaps in the morning?

And now the new day is dawning and it's raining. I can hear the pitter-patter very clearly because the motel walls are so thin it actually feels like I'm camping out in the storm. Hardly ideal weather for a GT350, but I'm still finalepisode-in-a-boxset-find-out-who-the-killeris-excited about driving it. In case you need reminding, this Shelby is possibly the most mouth-watering Mustang ever. At its heart is a naturally aspirated 5.2-litre, flat-plane-crank V8. Not only does it put out 526bhp and 429lb ft of torque, but it also revs to 8200rpm. That is high by European standards but stratospheric for an American muscle-car. Add adaptive MagneRide dampers, Michelin Pilot Super Sport tyres, Brembo brakes, a six-speed manual gearbox linking to a Torsen limitedslip diff between the rear wheels and you have

what sounds like a surefire recipe for success.

And a success it has certainly been, with American magazines heaping praise and fivestar reviews on it ever since it was launched. However, no-one outside North America seems to have been able to get their hands on its Alcantara-clad steering wheel. Until now. It feels like quite a responsibility, especially given that American performance cars don't always translate to European tastes. What we clearly need is a good piece of road to test the GT350 on, something that can hold a candle to Scotland or North Wales. And, after much searching and a few text messages to a friend who works at the Specialized bicycle company nearby (thank you, Chris), I think I've found a suitable strip of tarmac...

An hour or so later the rain has thankfully stopped and the Super Sports are finding remarkable traction as we splash through what water is left on the roads. As we head out of San Jose the Mustang is making a very good 'In case you need reminding, this Shelby is possibly the most mouth-watering Mustang ever' first impression, with an exhaust that is unobtrusive on the freeway in Normal mode but then becomes considerably louder and more boisterous when you push the toggle for its Sport setting. It might seem odd to compare it to the Focus RS, but the change in volume and histrionics when you switch between the Normal and Sport modes is very similar in both cars. I can only assume it is the same person within Ford that was responsible for developing them both.

The Mustang is actually so raucous in Sport mode that I have to turn it back to Normal while we're pottering through the 'burbs for fear of inducing a heart attack in some octogenarian Californian. Soon, however, we are climbing free of civilisation and through some incredibly tight and steep hairpins that almost require a shift back to first. The gearbox is a Tremec six-speeder (a TR-3160 if you're interested) as opposed to the standard Mustang's Getrag MT-82, and it is a genuinely pleasing device. There is some heft to it, but it feels tight across the gate and in no way obstructive. In some past Mustangs, the 'box felt sufficiently ponderous that you would balk at changing gear if it was a last minute decision, but not so in the GT350, which has a nice short throw and can be rifled through the ratios with the stubby lever.

Our route snakes up and over a small ridge into Joseph D Grant Country Park. This is where The Road begins – a stretch of tarmac more squiggly than just about anything I have ever seen on a map. In truth the first section is too narrow for the Shelby. Despite being only 5cm wider than a BMW M4, it still feels like a big car. It is certainly much more direct than its lesser Mustang brethren, though, and there's serious grip available, both of which give you confidence when placing it in a turn.

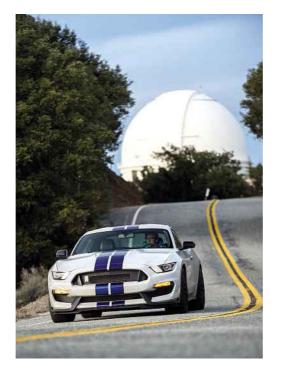
The slopes we're climbing are those of Mt Hamilton, which sits in the Diablo range. It actually has numerous summits that are strung out along a ridge, each one named after something to do with astronomy (Copernicus, Kepler, etc) as it is home to the Lick Observatory. The sky is so clear today that when we reach the top we don't need a telescope to see across to the snow-capped peaks of Yosemite way out east. A curious, almost Spanish wilderness covers the landscape that we're heading into and, more importantly, the road looks spectacular. Aston and I agree that we should spend the morning exploring, so we head off down the San Antonio Valley road, which is a bit wider and very

'Launching the Mustang into bends with much more aggression, it begins to feel more alive'





Above: Sport mode is generally the best compromise, but Track loosens the ESC's grip and also adds steering weight. **Right:** passing one of the observatories that mark the highest points of Mt Hamilton outside San Jose





beautiful as it carves through what I assume are ranches, with huge open fields.

Eventually you reach a junction, which offers you the choice of the Mines road or the Del Puerto Canyon Road. We take the latter, which is lined with reddish rock and is much rougher, exercising the GT350's MagneRide suspension. Three damper settings are available: Normal, Sport and Track. Perhaps predictably it is the middle setting that offers the best compromise, but the Shelby feels pretty ruthlessly tied-down and short of travel. You're certainly kept informed of any imperfections in the road surface, and over the bigger bumps I'm sure that individual wheels are getting airborne at times.

Free of the canyons, the road spits us out into a final fast flourish through lush green rolling hills, just before we reach the West Side Freeway, or Interstate 5. We stop to refuel on unleaded (still amazes me how cheap it is – about \$40 for a full tank) and some vitamin water the shade of Calpol. It has been a long drive across the Diablo mountains and now



we've done our recce the only thing to do is head back the other way, stopping to take some photos at the points we noted on the way over. Typically, of course, the weather has been chasing us and the light is not what it was – 'unusable' is the word Aston plucks from the photographer's lexicon of exaggeration – meaning we stop less often than intended and I get more time to get to know the 350. Fine by me.

By the time we regain the Summit of Mt Hamilton, however, I am slightly puzzled. It sounds glorious and it is capable of monstrous straight-line speed, but I can't escape the feeling that in the corners the Mustang is an awful lot of effort for not a lot of dynamic reward. I've been driving quickly, although not flat-out, and it feels heavy and hard work, particularly in the first stage of any corner. A big part of the problem is that the steering isn't giving me enough information, so I can't judge the grip level. And then there's the tyres, or more specifically their size. The 305-section rears are big and sticky, but of greater significance is the fact that the 295 section fronts are nearly as broad and tacky, giving the Shelby a pretty square balance.

At seven-tenths you know the front is sticking, but it just feels slightly cumbersome and aloof. As a result you seem to spend a lot of time steering the big nose through a large part of each bend before you feel confident to get on the throttle and fire it down the next straight. What I want to do is turn in and with that first application of lock instantly feel how much the tyres are or aren't keying into the surface of the road. That would then give me confidence to get on the power early and start working the car through the majority of the corner with the throttle as well as the steering.

The only thing to do is trust in the tyres' tenacity. Launching the Mustang into bends with much more aggression as we plummet down from the summit of Mt Hamilton, the 350 begins to feel more alive and enjoyable. It's certainly hard work, and it doesn't exactly feel light on its feet, but it's much more like the car I had hoped it would be. The six-piston Brembo

brakes also prove to be superb allies on the long descent, the middle pedal remaining firm and reassuring from the top of its travel despite the constant abuse. It feels like a slightly frantic drive, but it's invigorating and I'm certainly buzzing by the end.

That evening I realise that my arms and shoulders are gently aching from the day's effort. As we eat our Five Guys burgers and slurp on salted caramel milkshakes thick enough to seal a tyre with, I ponder that it feels like I've done a session in the gym that is ironically placed in the building next door. It's not a feeling I'm used to, but I like a challenge. I'm looking forward to driving the GT350 again in the morning...

EVEN THOUGH IT'S STILL DARK, THE

pool of white light from the street lamp makes the differences between the two cars plain to see. I parked up next to a standard Mustang last night and it's amazing just how much more aggressive the Shelby looks. We're up early because we've only got a few hours before Aston has to take the Shelby back to LA (no



'The car is moving nicely underneath me. I finally feel like I've got a handle on it'

doubt via Laguna Seca or the Hollywood sign). Climbing back up through the tight switchbacks, we get the most incredible view of San Jose sprawling in slumber below us, an ocean of orange and white lights.

The run up to Mt Hamilton is taken swiftly, partly as I'm feeling more and more comfortable with the Shelby, but also because we're chasing a sunrise. The V8 is clearly enjoying the cold morning air and feels incredibly strong. It's responsive, too, and the sounds it produces are endlessly fascinating. It starts off really gruff and rumbly low down, then from 2000 to 4000rpm there's a burble almost like a Subaru with a drainpipe exhaust, before changing back into something that is more sonorously V8 but also acoustically much harder-edged. During the final 6500 to 8500rpm you almost get this VTEC timbre, with a slight vibrato right up at the top that is unexpectedly quite harsh.

Perhaps that's why the natural point to change up seems to be just over 6000rpm, rather than hanging on for the red line at over 8000. When I do steel myself to keep the throttle pinned until the needle is approaching the red hatching, it's a huge rush that's almost intimidating, but the 5.2 litres aren't quite possessed of the sort of screaming, free-revving top end that we've become used to with Maranello's flat-plane-crank V8s. On the road, at least, I think it's better just to revel in the more natural-feeling band between 4000 and 6000rpm. It's enough.

One peak that certainly doesn't disappoint is the one atop Mt Hamilton. As we arrive on the ridge, a palette of pinks and oranges is beginning to bleed into the dark blue eastern sky, so we park up near one of the white observatories and watch the dawn grow ever more violent in its colouring.

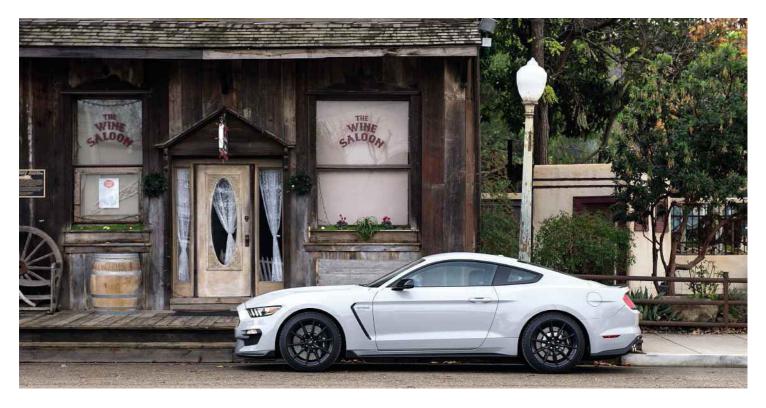
After Aston has got some shots in the 'borderline acceptable' light, we drop down to the valley where a thin frost is clinging to the fields. Once again we seem to have the place to ourselves. There was a rush around lunchtime yesterday when we saw two cars in the same hour, but apart from that we really have been left in total peace – the Ford V8 a loud lone voice growling in the wilderness

I've decided the best bit of road is the stretch running along the valley before climbing up Mt Hamilton from the east. It's fast at first and, although the light grey surface is quite loose and far from smooth, it feels like the perfect width and speed for the Shelby. I had thought the hairpins would be the most fun, but actually the limited-slip diff struggles to lock adequately on the steeper 180s and the Mustang feels more fluid on the quicker stuff where it can truly stretch its legs.

By mid-morning I've also concluded that I've never driven a car that requires you to grab it by the scruff of the neck quite so forcefully to get the best from it. There is a leap of faith that you have to take, trusting rather than feeling the grip in the initial part of every bend where you need to be quick and committed with your first steering input. Because there isn't much feel through the wheel (the three different 'steering feel' modes just change the weight, not the texture) you need to learn how aggressive you can be with the front end, taking time to gain confidence in the huge grip. As you get braver, you work through the







'When you get it right and the speed flows, it is deeply satisfying'



heavy, slightly uncooperative phase at seventenths, gradually pushing harder, nudging it faster and faster, until after a while you are almost throwing the front end into corners. It's only then, once you are really, really pushing it, that the GT350 finally starts to come alive, feel agile and make sense dynamically. Imagine a hi-fi that has nasty distortion at medium volume but suddenly gains audio clarity as you turn it up tub-thumpingly loud and you get the idea.

The GT350 is massively exciting when it's in full cry, too. As I head along the valley road for the last time I'm putting in a lot of effort and the suspension still feels ruthlessly aggressive (it's still in Sport despite everything else being in Track, which slackens the ESC plenty and adds the most appropriate weight to the steering) but the car is moving nicely underneath me and I finally feel like I've got a handle on it. The key is to get the nose pointing into the corner and to do so quickly. Once you've got the front Michelins hooked on line you can get on the throttle and switch your attention to the rear. Traction is mighty and you'll feel serious lateral grip pushing your torso into the seat bolsters before it lets go. Then it does so quickly and you need to be paying attention, but if you're on top of the car then you can hold the oversteer at a small angle and keep driving through the slide as the corner unfurls.

As you get faster still, leaning on the brakes harder and later, using them to lessen the required steering input as you trail the middle pedal into the corners, so the Mustang becomes truly intoxicating. While the engine obviously has enough torque to make progress in pretty much any gear you choose, if you want to keep the car on its toes out of corners you can't be lazy with your shifts. Down-changes need to be smoothed with footwork across all three pedals, otherwise you'll unsettle the car on the way into the bends and find yourself grappling with it rather than flowing through. Similarly, the throttle needs careful, precise modulation to keep the roaring 5.2-litres spinning the rear tyres enough but not too much. When you get it right and the speed flows, it is deeply satisfying as you wrestle and coax smooth progress from this hard, brutish, physical car. It's like teaching a reluctant but ultimately talented bear to quickstep.

By the time I pull into a layby just under the summit, I know I've had a drive I'll remember for a long time. The Mustang is entertaining when you're pottering about because the sound of the engine is wonderful, the gearbox is satisfyingly mechanical and the view over the striped bonnet is majestic. However, if you want to enjoy it dynamically, then there is no middle ground - you have to commit. All morning I've flitted between finding that hardcore nature rather satisfying as I worked to get the best out of it, and at other times feeling that it was making the process of going quickly too much like hard work. Drive a Porsche down the same piece of road at the same speed and you would probably only have to put in half the effort. But that is why I ended up liking the GT350.

No, it won't flatter or indulge half-hearted commitment. Those massive front tyres make

it intimidating and it can be difficult to get under its snakeskin as a result. It doesn't feel as sophisticated as the spec-sheet might have you believe either. Yet to drive the Shelby GT350 fast engages you totally, immerses you in a barrage of sensations and leaves you feeling very much alive, if a little tired.

It would be interesting to try the Shelby on a track, as that could prove to be its real home. Ironically, I wouldn't mind betting that the supposedly more track-focused R version of the GT350 is the better road car because of the reduction in unsprung weight thanks to its fancy carbon wheels. Some will say it is all academic anyway, because Ford sadly isn't going to produce it in right-hand drive. Nonetheless we'd love to try one in the UK.

What I know for certain is that the Mustang couldn't have wished for a better road than the one we found in the shadow of Mt Hamilton. And the reason I know this is that after I've waved Aston on his way, standing and listening to the big V8 diminish into the deserted distance, I climb into the automatic Kia Rio saloon and still manage to have quite the brake-fading hoot as I drive back to San Jose.

Ford Mustang Shelby GT350

Engine V8, 5162cc **CO2** n/a Power 526bhp @ 7500rpm Torque 429lb ft @ 4750rpm Transmission Six-speed manual, rearwheel drive, limited-slip diff, ESC Front suspension MacPherson struts, coil springs, adaptive dampers, anti-roll bar Rear suspension Multi-link, coil springs, adaptive dampers, anti-roll bar Brakes Ventilated discs, 394mm front, 380mm rear, ABS, EBD Wheels 10.5 x 19in front, 11 x 20in rear Tyres 295/35 R19 front, 305/30 R20 rear Weight 1715kg Power-to-weight 312bhp/ton 0-60mph 4.3sec (claimed) Top speed 180mph (claimed) Basic price \$48,695 On sale Now (US only)

evo rating: *****

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FUTUR

BAC blew us away with its single-seater Mono in 2011, and the model has just been updated. But what next for the Liverpudlian sports car maker? **evo** visits to talk motorsport and a second model line



THE ACRID SMELL OF PIPE TOBACCO

and spilt brown ale seems to be fading. For decades the lightweight British sports car industry has evoked images of bearded men in dark sheds, with worn down tools stuffed into leather aprons. But times have changed. What was once an outdated and inward-looking niche is now a major player on the global automotive scene, exporting ultra-modern sports cars to every corner of the globe and developing new technologies and manufacturing processes that will underpin the mainstream sector in years to come. Don't call it a cottage industry.

That's the view of Neill Briggs, anyway. Briggs founded Liverpool-based BAC (Briggs Automotive Company Ltd) with his brother Ian in 2009. The company delivered its first Mono – the beautifully detailed single-seater track and road car – two years later. When we visit BAC's pristine factory ('manufacturing facility' would probably be more appropriate) in January, the 50th Mono is halfway down the production line, with the order booked stuffed full well into 2017.

'We've gone from strength to strength and in the last 18 months we've really felt the brand power kick in,' says Briggs. 'We've got distributors in the US and Japan, and when we launched in Hong Kong last year we sold out in a week. The Middle East is an important one for us and we're about to get type approval there.

'What we're finding is that in every new territory we go to there's an explosion of interest. The UK is important. We're a UK company and the car is UK-designed and built, but we're exporting 95 per cent of the cars we make. The brand of Britain is super-strong at the moment and if you talk to any small manufacturer you'll see that export is key to a successful business.

'We'll ramp up to four cars a month by the end of 2016. Our waiting list is over a year and we think the sweet spot will be around 100 cars per year, so we've got aggressive targets for 2017.' BAC delivered the first 2016MY Mono (see panel) just before Christmas and during the next 12 to 18 months the Briggs brothers will map out BAC's strategy for the coming decade.

'We're still getting over the pleasant shock of how many people share the Mono's singularity of purpose and enjoy the thrill of driving,' says Briggs. 'We're in the here and now and as a business our biggest challenge is to grow and continue to understand the customer base, but every manufacturer needs to be looking ten years down the line with a vision. As designers and engineers, you're always thinking about what could be possible in the future.

'There are no immediate plans [for a second product line], but that's not to say it wouldn't be part of a plan that we're currently mapping out. Whether that's a single-person commuter city car or a £2million hypercar, who knows? The future is diverse for us, but as an engineer I'd be lying if I said we were equally as interested in doing a city car as an ultimate hypercar. Obviously we have a performance orientation, so anything we do is likely to be in that space.

'We would take the same approach we took

'BAC could be that rarest of things: a newcomer to the British sports car scene that survives gestation'

with the Mono, whatever we decided to do next. Ian and I use the phrase, "You've got to pick your battles because you'll never win the war." If you look at the way [mainstream] manufacturers are set up, the development spend they have, you are really putting your head in the lion's mouth if you try to do a two-seater roadster at £50,000, because it's a densely populated area. That's Audi TT and Porsche Boxster territory. You'll never be as good as they are, so don't try. That's not to say we'll never do a two-seater car, though, or any other configuration.

'With the environmental challenges we've got, we will start to look at different power units. Hybrid, EV... it's all eminently doable.'

Is motorsport on the cards for BAC? 'There's no natural fit for our car in terms of a GT3 racing championship,' says Briggs, 'so in all likelihood it would be a single-make championship. Come and see us this time next year.'

BAC could be that rarest of things: a newcomer to the British sports car scene that survives the difficult gestation period and expands to become a sustainable, global business. Whatever future success the company achieves, it'll be a result of its commitment to quality, the enormous experience and expertise of the handful of individuals that sit on the board, and the application of the very highest engineering and manufacturing standards. The Briggs brothers' separate automotive engineering consultancy has worked with OEMs such as Mercedes, Audi and Porsche for 20 years, and although BAC's manufacturing facility is modest, it operates with much of the precision and efficiency of an automated production line. Niche car manufacturers do not get more progressive that this.

The other cornerstone of BAC is innovation. 'A lot of technology that's seeded in motorsport will transcend into the mainstream car industry, and we're a vital stepping stone for









Above: road test editor Dan Prosser (left) discusses the updated Mono with BAC co-founder Neill Briggs (sequential gearbox from Hewland in foreground)

2016 MODEL Year Mono

'The 2016 model year Mono was a step change for us,' says Neill Briggs. 'The latest version is still built around a steel safety cell wrapped in carbonfibre, but the structure has been widened to accommodate larger drivers.'

The four-cylinder Cosworth engine has also been expanded from 2.3 to 2.5 litres and now develops 305bhp, up from 280bhp, with torque up to 228lb ft from 206lb ft. There's variable valve timing and a drive-by-wire throttle, too, and a switch from roller-barrel to butterfly-type throttle bodies. The engine and gearbox control units, meanwhile, have been integrated, which makes for much faster gearshifts and rev-matched downshifts. Carbon ceramic brakes are also available. that,' says Briggs. 'I strongly believe that niche manufacturers are a crucial stage in that process. You're not going to go from something that's seeded in motorsport to something that's on my mum's Fiesta. There has to be a staircase.'

Briggs cites carbonfibre as the definitive example of this. The technology was pioneered in the money-no-object arena of motorsport, picked up by a number of niche road car manufacturers and developed to a cost and manufacturing readiness level where mainstream car companies could adopt it. **evo**'s Fast Fleet 7-series is built around BMW's Carbon Core technology, for example.

'Real innovation is making new technologies affordable and available to a wider audience,' says Briggs. 'That's what we've done. The Mono's floor system, the steering-wheel system, the body structure, the body architecture... That gearbox was never intended for road use. We're using racing technology and developing it so that it has the longevity and usability needed for the road. That's what our innovation is about.

'We're close to the guys at Bentley and McLaren. They won't adopt a technology for 2000 units a year unless there's a precedent of, "Look, this has been running around on a fleet of 50 cars and they've had no issues in the field, no warranty claims." Then they'll say, "This is now at a technology and manufacturing readiness level where we will adopt it." That's where niche vehicle manufacturers have got the opportunity to be demonstrators.'

Innovation is one important opportunity for BAC and the like; the changing automotive climate is another. 'With the way the world is going with autonomous vehicles,' says Briggs, 'more and more people like ourselves and your readers will be forced towards driving holidays, race resorts and car clubs. We firmly believe that our customers see driving as an extreme sport. This is complete escapism for them.

'Our sector is expanding. It's twofold – we've got this route of innovation that's seeded in motorsport and transcends into mass production, and with the way it is on the roads these days people are being forced to have a weekend toy. I think the UK's niche manufacturers have a real opportunity here, particularly because the brand of Britain is such a hot export property around the world.'

Times have changed. Once the domain of stout men with blackened fingers, the British sports car sector – with the likes of BAC at the vanguard – is now a linchpin of the global automotive industry. \blacksquare



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by HENRY CATCHPOLE PHOTOGRAPHY by DEAN SMITH

HANDLE WITH CARE

Mattias Ekström – the former DTM champion who beat Sébastien Loeb at the Race of Champions – suggested that **evo** might like to drive his 565bhp World Rallycross Audi S1. How could we refuse?



T COULDN'T BE A MORE IMPRESSIVE

introduction. We're approaching the small Maggiora rallycross circuit near Milan and the access road is providing us with a view directly down the barrel of the short start/finish straight. A pale, golden winter sunlight is cutting through the trees. In my mind's eye I have captured the scene in Ultra Panavision, the camera slowly zooming in as a small ball of vehicular fury slides into the widescreen shot ridiculously quickly from stage right, trailing dust in its wake.

It's an angry, four-wheel drift, only a hint of oversteer, mainly just sideways movement, every wheel spinning as the compact riot of arches and wings struggles to contain the energy beneath. It's like an adrenalin-filled cartoon mouse running for its life on a polished parquet floor. I almost expect to see the motorised equivalent of Tom – a monster truck, probably – arrive a second later, scrabbling untidily into view and filling the screen as it gives chase. But it's just Jerry today.





'IF EVER THERE WAS A CAR THAT COULD CLAIM TO BE A MODERN GROUP B CAR IN ETHOS, THIS IS IT'



The drift turns to frantic forward acceleration and the Audi seems to cover the ground between us in the blink of an eye before the tiny ball of temper is sliding again. This time the nose is diving and the light rear end is adopting a few degrees of yaw as the S1 brakes hard for the upcoming corner. The sound – a buzzing, banging, compact cacophony – seems to have caught up now and it merely adds to the palpable rage. I'm in awe. Terrified awe. Because in mere hours I'm going to be right in the middle of all that fury, trying to steer it.

LAST YEAR I MET MATTIAS EKSTRÖM

(evo 208). After chatting about all sorts of things, I asked him a slightly tame question about what his favourite car was out of the many and varied ones he had raced. I expected a non-committal answer citing different thrills from different disciplines, but his unequivocal response was his Rallycross Supercar. He then said, very kindly, that I should try it some time...

It's no secret that I've had a bit of experience with dashing down lanes and through forests, but I've never had a go in a rallycross car before. To me rallycross has always seemed like rallying's curious cousin. A sort of hybrid of gravel rallying, circuit racing, DTM and NASCAR condensed into a neat, fascinating and insane package. I say neat, but actually it's a bit confusing as there are two codes of Rallycross, or RX – World and Global. World Rallycross is the FIA championship, with rounds mostly in Europe (and, for 2016, a certain Sébastien Loeb among its drivers). Meanwhile, a little like baseball's World Series, Global Rallycross is confined to the USA.

Cars in both championships run to the same technical regulations. The only differences are that the fuel used in America is of a higher grade, and while the Global championship uses a Yokohama radial slick tyre, the World Rallycross cars, such as Ekström's Audi S1, must use a Cooper crossply with moulded tread. These tyres somehow have to cope with both tarmac and gravel.

Walking up to the S1 in the Team EKS pits, it strikes me that there are, surprisingly, some inherited genes from the legendary 1980s Audi Sport Quattro S1. Catch it from some angles and those huge, distended box arches are like family bone structure passed down through the generations. Of course, many Group B cars ended up in rallycross events after they were banned from World Rally stages in 1986, and if ever there was a car that could claim to be a modern Group B car in ethos, this is it.

Open the boot and you'll find fans and radiators. Look under the bonnet and you'll see the engine sitting transversely, just as it would in a normal hatchback, but here mated to Sadev's almost ubiquitous six-speed sequential gearbox. Every RX car runs a 2-litre, in-line four-cylinder turbocharged engine with a 45mm restrictor and they all put out around 565bhp and a frightening 600lb ft of torque. That's in a car geared to just 120mph in top and designed to weigh a mere 1320kg including the driver, which today is Edward Sandström.

My turn in the car isn't until after lunch, once the important testing is done. Despite the sunshine it's bitingly cold, so I bung on a big coat



and set off for a walk round the circuit to try and soak up as much useful information as I can. It's immediately obvious that the track is quite narrow, and there isn't much room for error. Not good. The car heads out for short stints of probably no more than ten laps at a time, but after a while I notice that no two laps are quite the same. If this was a test session for any other top-flight series, you would see the same line being hit with metronomic, almost laser-guided precision, time after time. The little Audi, however, is clearly such a potent handful that line choice is a bit more unpredictable. A kick of boost and instant wheelspin can move the car by feet at a time on the exit of a corner, leaving the driver wrestling with a different line into a jump. This then sets you up awkwardly for the next braking zone, the weight balance pitched in a marginally less than ideal way for the following right-hander, which now requires more throttle earlier, which again has the car thumping forward slightly indiscriminately. And so it goes on. It is still balletic and deeply impressive in skilled hands, but it strikes me that it must be a bit like trying to ride a rodeo horse round a showjumping arena.

Over the last decade of doing this job, I have gradually found that there are a few things that

help me approach cars that make me nervous. Firstly, I tell myself that it is just a car, with fundamentally familiar controls. *Breathe*. Secondly, I try to think through the basic dynamics of what this particular mechanical layout should mean at the limit, so that I instinctively do the right thing – no point lifting off when you should be hard on the throttle. *Breathe*. Finally, I try to remember how it felt to drive anything that I think might be similar – in this case a WRC car. *Breathe*.

I still don't feel very calm but it's better than just panicking, and I'm at least feeling a bit more primed and focused before I'm given my briefing. 'Be careful on the first corner because it is *very* slippery,' says Sandström. 'Remember to brake much earlier than you think on the straight because it switches to gravel halfway through the braking zone, so you need to be wiping off speed while you're still on the tarmac. The fourth corner has a strange bit of tarmac just on the inside, so be careful. We're not jumping the car much today, so please lift before the two crests. Do you left-foot brake?'

My head still swimming with instructions about how to tackle a circuit I've never driven before, I try to remember whether I do or not. I decide that it must be like a WRC car so I nod. 'OK, well just remember that you can flatshift on the tarmac but you need to use the clutch when you are on the gravel.'

I decide there and then that I won't be left-foot braking today. I feel like I've psyched myself up for a bungee jump only to be told while standing on the platform that I'll have to tie the rope to my ankles with a very specific knot – on the way down. *Breathe. Breathe.*

Normally some passenger laps would help me acclimatise and put me more at ease, but they go past in a blur. Even as an interested sack of ballast with nothing to do other than observe, the physicality of the acceleration is hard to comprehend. I can't imagine what it must be like when you are the one in – and I use the term lightly – control. Only one way to find out.

The AP Racing clutch is mercifully friendly and will take a bit of slipping, so reversing out of the temporary garage isn't too much of an ordeal. The steering is light, too, and with the anti-lag system turned off the trundle from the truck to the circuit is actually calm enough to lower my heart rate below 200bpm. Then Edward tells me to press the blue button on the steering wheel, which turns the anti-lag system on and promptly rearranges my perception of 'fast'. A few seconds later, as I'm braking 'DRIVING THIS HARD FEELS LIKE SOMETHING BEYOND CONCENTRATION. IT'S MORE PRIMAL'







Above left: enormous handbrake disconnects drive to the rear wheels, allowing the driver to lock the brakes. Above: press blue for anti-lag. Left: transversely mounted turbocharged 2-litre engine develops around 565bhp



(early on the tarmac) for the slippery first corner, I realise that it was futile trying to prepare myself for this. How can you prepare when the ferocity is so far beyond what your previous reference points have been? Veyron? Don't be silly. WRC car? Not even close.

With the ALS on, the throttle has turned into a trigger, seemingly firing all 600lb ft through the transmission as soon as you touch it. Out of the first right-hander the car spits sideways and I have to correct with one hand as I'm frantically pulling gear after gear. There are no shift paddles here, just a sturdy, high-mounted lever that you pull back to go up the 'box and push away to go down. There literally isn't time to put your right hand back on the wheel between shifts. Never have I been in something that eats through revs and demands gears so quickly. Bang-bang-bang. I pile on the ratios as fast as I can yet still it feels like I'm lagging behind the angry rainbow of shift lights in my peripheral vision. An analogue needle would snap under the duress within the first half lap.

I forget to lift for the first jump, apologise, then brake and punch down two gears for the next corner, which changes from tarmac back to gravel on the apex. Up two gears, down two gears, tight right-hander, short straight, up three gears, back down three for the left with the tarmac strip, up three gears round a long gravelly left-hander (clutch) with a jump, then brake and down two for a long opening tarmac right, sliding and changing up (no clutch) constantly as you feed back onto the start/finish straight, by which time you'll be up to fifth or sixth, depending how good your exit was. A lap probably takes slightly less time than this last paragraph took to read.

I've never experienced such a surfeit of power. It dominates the experience. Never mind that the S1 has a short wheelbase and an almost square stance, so feels quite twitchy. That feels like the least of my problems. Instinctively I know that the four-wheel-drive system should help me if I'm on the power, but such is the ferocity of the delivery that it's hard to see the throttle as your friend. It doesn't help that every violent flare of revs is accompanied by a sound like hornets massacring wasps with chainsaws.

I think it is towards the end of the fourth lap that I spin. I'd love to tell you how or why, but to be honest my brain has felt in need of a healthy RAM upgrade, or possibly its own ALS, since the first corner. It's early in a righthander, there is a flash of revs, we're round in our own length, the clutch is out, I'm on the brakes, and as we stop safely in the middle of the bend I suck in some air for what feels like the first time in minutes. As I find reverse and point us back in the right direction, I realise that I've been straining every last iota of my mental capacity just to keep up with the S1.









Driving this hard feels like something beyond concentration. It's more primal and more immersive, and I think I probably just ran out of processing power. All I can say is that I haven't spun any of the WRC cars I've been lucky enough to drive, nor have I felt close to doing so. But I will spin this rallycross Audi twice more in the next ten laps or so.

Initially I do a couple more laps then head back to the pits. I'm not a big user of superlatives, but this car has me overdosing on hyperbole as I try to describe in a hyperspeed stream of consciousness what it was like to the people asking. I'm not really one for swearing, either, but a single, heartfelt expletive is all I can manage at one point.

Then it's back out and I try the car without the ALS for a few minutes. This makes it much easier, as although it's still rabid, you can feel the swell of boost and give yourself just a bit more time to prepare for the arrival of the grenade. I realise I've actually adapted to the constant surface changes relatively well, and the tyres have a surprising balance between the gravel and tarmac. I almost feel like I'm getting to grips with it and begin craving the ALS, so I turn it back on. Within two seconds my head is threatening to overload and I'm on the back foot once more as the throttle reverts to detonating the 600lb ft bomb instantly under the slightest pressure. I fear nothing will ever truly feel quick again after this.

When I speak to Ekström on the phone afterwards, the first thing he says is: 'Do you understand now why it's my favourite? I never want to get used to that power. It is crazy.' I spend some time speaking to Edward, too, who says that when he first gets back into a rallycross car, he doesn't have any spare mental capacity to assess tyres or setup, he just has to concentrate on simply controlling the car. This is something of a relief, but I still can't imagine what it must be like trying to race one, fighting for the same piece of ground as five other cars. As Mattias says, 'You can see why there are some accidents!'

Despite having my capabilities in a car stretched to breaking point, I wanted to keep wrestling with the S1 all afternoon. The power is terrifyingly addictive. And in the moments when I did feel in control of it, when I was pinned to the bucket seat but sensing that I was actually manipulating the four spinning wheels underneath me in the way that I wanted, it felt as satisfying as any driving I have ever done.







































ENGINE FOUNDRY

by COLIN GOODWIN

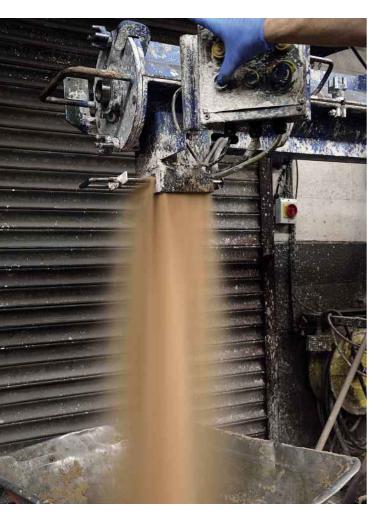
PHOTOGRAPHY by ASTON PARROTT



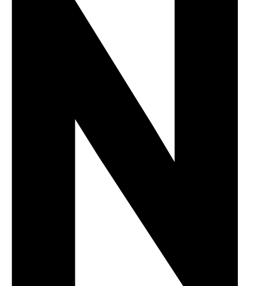
They say that Britain doesn't get its hands dirty any more, but they obviously haven't heard of Grainger & Worrall, engine-block supplier to the stars of the automotive world. **evo** heads to Shropshire

A W A Y









NASCAR TEAMS USED TO GET THROUGH

over a thousand OEM-supplied engine blocks per season. There are lots of races in a season, but even so that's a lot of crankcases in a year. A big failure rate is the reason. Today a quarter of that number are used. Why so many less? Because today those engine blocks are made by a company in Bridgnorth, Shropshire. The media loves to make out that Britain no longer makes stuff. Yes, we make Japanese cars and bits and pieces of electronickry, but not your good old Victorian fire-smoke-andhammers type of making stuff. They need to visit Grainger & Worrall. A large number of the world's car companies knock on G&W's door and so do most F1 teams. Today **evo** is visiting.

Foundries and casting shops are the most amazing places. I know this because I used to work in one. Thirty years ago, in a placed called Toowoomba in Queensland, Australia. Gutty work. A blast furnace feet away brewing up iron and steel at over 1500C, hotter for high-strength steel, and in ambient temperatures approaching 40C. We cast stuff like lorry brake drums, master cylinders for cars and lots more. I never saw a computer in the place but there was a lot of fire and sweat.

Edward Grainger is giving us a whistle-stop tour of the works. His grandfather founded the firm just after WWII with a brother-in-law called Worrall. Although the company retains the original name, it is now entirely owned by the Grainger family. Forty-three-year-old Edward started as a patternmaker, like his grandfather, and runs the company with his two older brothers. And the family really do own the company. They're not bankrolled by some big-shot financiers who would think a capstan lathe was a trendy coffee.

This is a very different world from the one I experienced Down Under in the '80s. As you will read shortly, there's still smoke, fire and bubbling cauldrons, but there is also a dramatic contrast between the casting process itself and the banks of engineers at computers manipulating designs using CAD.











'We design, prototype and cast about 300 new products a year,' explains Grainger. And that's not just simple castings. Grainger says that number might include 100 different cylinder heads. 'We can design, cast and have a head fitted to an engine in four weeks. Thirty years ago it would have taken six months.'

There's a lot of client confidentially in this world, especially concerning motorsport. I'd need to hang Grainger over a vat of molten aluminium by his ankles for exact details, but he suggests a large proportion of F1 teams have at some time come to the family firm for engine blocks and other components. A *large* percentage. We're not allowed into the motorsport department, but walking around the factory you see some interesting sights. Grainger smiles as I point out a crankcase that has sixteen holes in it arranged in a 'W'. Clearly these lumps of aluminium will soon cross the Channel and find themselves in the back of something called a 'Chiron'.

Here's another recognisable set of components: a flat-six engine sitting proudly on a stand. G&W doesn't make all the cylinder heads for Porsche's flat-six motors, just the ones that go on the GT3 and GT3 RS. Surely when Zuffenhausen comes knocking it is better than having a royal warrant? Elsewhere there are stacks of three-cylinder blocks. Grainger is keeping shtum but these will be prototype blocks for a major manufacturer. The company can handle volumes up to a couple of thousand

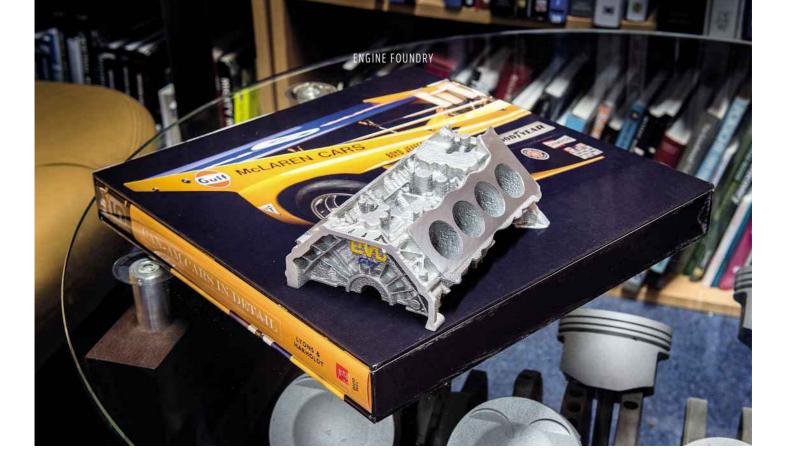
'These lumps of aluminium will soon cross the Channel and end up in the back of something called a "Chiron" units per year but leaves mass production to the big boys, so once G&W has carried out all the design work, prototyping and testing programme, the customer will then take over for the mass production of the parts.

It's all fascinating, but I want to get my hands dirty. Forewarned that I'd like to do a bit of graft, G&W has gone to considerable effort. Up in the crowded drawing office, one of the design engineers has pulled out of the system one of the company's most impressive pieces of work: the engine block used in all McLaren's supercars. With a few sweeps of a mouse the block has been shrunk by around a quarter, so that it will sit on the palm of a hand. Now the fun starts. To cast the full-size block, sixteen different moulds and intricate cores will have to be made, but for our minimotor only four will be needed because we're not bothering about water passages, oilways and other details. In the past, craftsmen like Edward and his grandfather would laboriously carve away at hardwood to create the patterns (which is why new components could take six months to make).

For our **evo** small-block, a machine similar to a 3D-printer will create the moulds and cores out of a mixture of special sand and a chemical that keeps the structure solid. This machine is used for prototyping and creating one-off parts quickly. Once series production is started, patterns will be made out of composite material that is CNC machined. It's amazing watching the machine's head

This page, anti-clockwise

from above: centrifuge packs the sand-based cast mixture densely; sand casts ready for work; aluminium ingots are melted at 750C; molten aluminium is then poured into the cast through the top and left to set; experienced hand Goodwin hammers the cast away from the now-cool block before it goes for testing



move backwards and forwards, building up the sand millimetre by millimetre. It takes hours to build up the complete parts, but in *Blue Peter* style we have one that was done before the programme started. Now time for the drama of actually pouring molten metal.

Before that, a bit of health and safety and some PPE (Personal Protection Equipment). I'm not a health-and-safety sort of chap, but I remember leaping around the foundry in Oz when a splatter of molten steel went inside my boot – I have the scars as a memento. Suitably togged-up, it's off to the part of G&W where the sexy stuff happens. All around are stacks of aluminium ingots. The company uses around 40 different alloys depending on use. Eighty percent of the work is in aluminium.

Aluminium is produced from bauxite ore, which is mined globally but in the greatest quantity in Australia. Most of the ingots used at G&W are produced in Norway because the it has relatively cheap naturally produced electricity, of which enormous amounts are required to smelt aluminium.

The ingots are dropped into an electrically heated furnace that melts the material and keeps it at around 750C. It's like a pinky-silver custard, complete with skin. There's more than enough work to keep a nightshift busy, so the furnaces are kept running until they need to be cleaned or serviced.

In front of the furnace, sitting on a track, is our mould. It's pretty simple: you dip a ladle into the molten alloy, carefully walk to the mould and then quickly pour the liquid metal down the hole on top. Because our block is 'There's an amazing contrast between the noise, smell and heat of the foundry floor and the testing labs'



small the ladle isn't too heavy, but for a big item it can be tough on the forearms. Also, you can't faff about because you need the metal to flow into all the nooks and crannies quickly so that a part of the structure doesn't start cooling before you've filled the mould.

It'll take a couple of hours for the metal to cool enough for us to break away the sand and see our block. In the meantime we visit the testing department. There's an amazing contrast between the noise, smell and heat of the foundry floor and the clinical environment of the testing labs. It's a thorough business, from dye-testing for cracks to CT scanning to destructive testing and X-ray examination. We'll soon see if I've made an engine that would split in half as soon as it turned over.

A few hours later, back in the foundry, I'm handed a sledgehammer. I remember this from my youth, bashing away at a casting to knock the sand from it, knowing exactly where to hit it and how hard. After a few whacks we have our baby block. Aluminium shrinks by about seven per cent when it cools, so the block is slightly smaller than the mould. Again, in *Blue Peter* fashion, a block had been cast earlier and has had the cylinder deck, bellhousing flange and main bearing bosses machined. It'll make the coolest paperweight.

Around 550 people work at G&W, in this factory and at another in Telford. The company has few rivals globally (the two main ones are in Germany). Edward Grainger is modest, but then he doesn't need to boast, because the company's achievements are there to see in the metal.









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In schoolyard terms it would be like getting beaten up by a kid in the year below.

The family equivalent would be an unexpectedly robust whack from a younger brother. Whichever way you look at it, the VW Golf R's victory over the Audi RS3 in last month's super-hatch group test was an ignominious one for the Audi, as bruising to pride as flesh.

The RS3 is more powerful, more expensive and more prestigious than the Golf, but more of a disappointment, too. The VW didn't even win the test (it was narrowly taken care of by the Ford Focus RS), which highlights just how far off the pace the RS3 really is in this new class of white-hot four-wheel-drive hatchbacks.

In terms of price and performance, the RS3 actually has a closer rival than either the Ford or the VW. The Mercedes-AMG A45 was a similarly frustrating car when it first arrived in 2013, but Mercedes has recently overhauled it. With a touch more power and some choice revisions, is the A45 a more accomplished superhatch than the RS3?

There's barely a chink of light between their spec sheets. The Mercedes is slightly more powerful, with 376bhp to the Audi's 362, and it just about shades the RS3 on torque, with 350lb ft versus 343. The Audi uses a 2.5-litre five-cylinder engine, though, whereas the Mercedes makes do with two litres and four cylinders. Both, naturally, are turbocharged and both are limited to 155mph, but the A45 is a tenth quicker to 62mph than the RS3, setting a launch-control-assisted time of 4.2 seconds. The Audi will set you back £40,795, a marginal £800 more than the Mercedes.

Our main criticisms of the original A45 related to its uncompromisingly stiff ride and slightly flat engine, which are both areas that have been addressed in this overhaul. AMG Ride Control (£595, and fitted here) enables you to choose between two damper settings, whereas the original had fixed-rate dampers, and the engine has been pumped up by 21bhp and 18lb ft (and is now linked to shorter gear ratios). You can specify a limited-slip diff in the front axle as part of the AMG Dynamic Plus package, too, but this car does without.

There are wins and losses for both cars in the battle of the cabins. The Audi feels altogether more premium, with better quality materials and a classier dashboard layout, but the Mercedes has far superior seats and a much better seating position.

The A45 rides firmly along a broken road surface. Its chassis always feels very tough and tightly wound, picking out imperfections and failing to deal with bigger intrusions such as potholes. It's hard to imagine a road where the firmer of the two damper settings

by DAN PROSSER PHOTOGRAPHY by ASTON PARROTT

The 362bhp Audi RS3 Sportback and the revised, 376bhp Mercedes-AMG A45 are the most powerful hot hatches on sale. But which is the better drive?

B RAWN E NE NIE S

'Both cars find such enormous turn-in bite that you find yourself getting braver with every bend'

would offer any sort of dynamic advantage. Still, this revised model is an improvement in terms of ride quality, if only by a slim amount.

If that reads like a setup to the RS3 claiming the first meaningful victory of the test, be aware that it rides just as solidly as the Mercedes. It's the inability of these cars to combine taut body control with a pliant ride quality - something the Golf R manages very well indeed - that counts against them more than any other shortcoming. It gets worse for the Audi, though, because there's a degree of looseness to the chassis on initial turn-in and over crests and undulations that cannot be reconciled with that tight ride quality. How is it that the much cheaper VW feels both better locked down and more pliant over bumps? At least the A45 can justify, to some degree, its firm ride with a quite staggering level of control and immediacy. Turn into a corner and the body stays almost perfectly flat; launch it over a crest and there's no heart-in-mouth moment as the wheels and body drop out of phase. The Mercedes is fantastically capable over a smooth road.

What these cars major on is outright grip. Both find such enormous turn-in bite that you find yourself getting braver with every bend, carrying more speed in and leaning ever harder on the chassis at the midcorner point. Both are devastatingly quick, getting from A to B at such a rate that Porsche Boxster S drivers would be well advised to politely indicate left. If you











Above left: updated A45 AMG answers some of the criticisms about the original version's ride, but the RS3 (above) still has the more charismatic engine. **Left:** of the cabins, the Audi's (far left) feels higher quality enjoy driving, I have to believe that this astonishing performance will light some sort of fire within you.

It's the Mercedes, however, that's more satisfying. This can mostly be attributed to its more neutral chassis balance; it seems to work front and rear axles in unison where the RS3 leans oh-so hard on its front tyres. The net result is that the Audi will start to understeer sooner, giving you fewer options once the front axle has begun to push. Neither car scores points for its steering because both helms are vague and short on detail, although not to the point where you cannot intuitively place the car right on the limit of grip corner after corner, given time and familiarity.

Driving out of corners, both cars, each equipped with a Haldex four-wheel-drive system, feel entirely neutral under power. You can just about sense the rear axles being driven, but never to the point where the back end takes an attitude and the steering wheel naturally straightens itself in your hands.

The A45 might have the more engaging chassis, but the RS3's five-cylinder engine is abundantly more satisfying than the Mercedes' four-pot. Even on startup it sounds a more exotic power unit, and once on the move it responds more immediately to throttle inputs and feels more linear throughout the rev range. The A45's engine isn't so muscular from low speeds and it's slightly flatter right at the top end, too, although the bump in power and those shorter gear ratios do give this revised model a greater sense of urgency in a straight line than the old car. Both the A45 and RS3 use twinclutch 'boxes and each offers rapid gearshifts, but we've long since become accustomed to even more immediate dual-clutch transmissions in other types of car.

It's difficult to be completely derisory about either car because they are both so tremendously fast, and that just happens to be rather good fun. Like a journeyman racing driver, though, they manage the basics well without ever executing the really difficult stuff that would mark them out as true greats. It is the Mercedes-AMG A45, though, that outscores the Audi RS3 on this occasion.

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RACK

GET

ΟΝ

Track driving is an immensely satisfying and thrilling experience. After a day on track you will have developed a stronger bond with your car, improved your driving skills and discovered nuances in vehicle dynamics that you hadn't noticed before. If you love the science of driving, and the thrill that comes from teasing speed from a machine, there are few better ways to experience those than at a trackday.

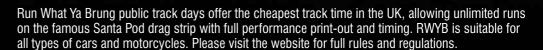
But there's another side to it – making friends, having a laugh, enjoying the company of petrolheads and creating memories. From a purely social perspective, for those like us, nothing really gets close.

This guide will assist you whether you're a beginner or an expert, and take you through the kit to have, the tracks to visit, the cars to drive, plus tuition and the latest tech and gadgets.

And if you're a track virgin and unsure whether to give it a try, why not come to one of **evo**'s track evenings this year? These events are perfect for beginners, as tuition is on hand and Bedford Autodrome is a fantastic track on which to learn about circuit driving. See you there!

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Hand-laminated composite shell. removable flame-retardant liner. Kevlar chin-stran with double D-ring fastener, anti-scratch, flame retardant visor. Snell SA2010



٧2 ELITE c£199

Glassfibre construction, duck-bill, Kevlar chin-strap with double D-ring fastener anti-fog scratch-resistant visor, fire-resistant lining. Snell SA2010



RACE SAFETY ACCESSORIES **PRO** c£215

Entry-level HANS-compatible motorsport helmet with drilled and tanned nosts (sold senarately) composite construction, fireretardant, washable liner. Snell SA2015



£250-£400



RRS HANS FULL FACE HELMET c£300

Factory-fitted HANS posts. washable interior, removable earpieces for intercom fitment, visor interchangeable with peak SA 2010 & FIA8858-2010



BELL SPORT 5 c£330

Fibreglass shell, flame-retardant Nomex lining, adjustable anti-dazzle peak (available separately), optional factory-fitted HANS posts. Snell SA2010 & FIA 8859-2015 (with HANS)



SPARCO WTX-5W c£354

Fibreglass shell wide visor aperture factory-fitted HANS posts, removable liner, pre-moulded with drink tubes and intercom system. Snell SA2010 & FIA 8858-2010



KODEN **CARBON KSC-25** c£380

Carbon composite construction flame-proof liner, Kevlar strap, 3mm anti-scratch clear visor, HANS posts optional Snell SA2010 & FIA 8858-2010 (with FHR)



SIMPSON BANDIT c£395

3mm visor, recessed eve-port, predrilled for HANS post fitment. Snell SA 2015 & FIA 8858-2010 (with FHR)

Fire-retardant one-piece EPS liner.

£400+



STILO ST5 GT COMPOSITE c£600

Kevlar composite shell, integrated radio connection, prepared for drink system, HANS posts option, standard sunshade, optional visor. Snell SA2015 & FIA 8859-2015 (with FHR)



SPARCO WTX-7 c£700

Autoclaved carbonfibre shell, washable removable liner, narrow visor aperture, fitted HANS clips, provision for intercom and drinks tube, optional peak. Snell 2010 & FIA 8858-2010 (with FHR)



ARAI GP-6S c£715

Lightweight complex laminate shell, emergency removable cheek-pads, fire-retardant lining, Kevlar chinstraps, 3mm visor, FHR studs. Snell SA 2015 & FIA 8859-2015 (with FHR)



ОМР SPEED CARBON c£900

Carbonfibre shell, adjustable peak & sun visor (or optional full-face visor), wide aperture, HANS posts, closed cheek-pads for intercom use FIA 8860-2010



ARAI GP6-RC c£3000

Developed for Formula 1, hand-laid carbonfibre shell, wide-field aperture, 3mm compound curve visor, factoryfitted HANS posts, emergency release cheek-pads. FIA 8860-2010

FHR & HANS

Frontal Head Restraints are devices that restrict neck extension during rapid deceleration, thus lessening the chances of Basilar skull fractures - a common injury in motorsport.

The most common is the HANS device which fits around the neck and above the shoulder and is tethered to posts that are attached to a helmet.

Do you need a FHR? If you're racing, most likely it'll be mandatory. If you're a trackday regular, then consider it - especially if you visit fast tracks in fast cars.

HELMET RATINGS **EXPLAINED** ECE 22.05

'Economic Commission for Europe' regulation for helmets, accepted in 47 countries. Good for road use, most karting and trackdays, but not motorsport.

SNELL SA2010 & SA2015

Snell is a private, nonprofit organisation formed in 1957 to improve helmet safety. Testing is more rigorous thant governmental rocesses, and includes fireretardant qualities, impact testing, and removability. The former rating, SA2005, may not be eligible for current motorsport series.

FIA 8860-2010 & 8859-2015

Any driver competing in an FIA event must wear a helmet that meets FIA homologation - currently the most stringent standard in the world. FIA 8860-2010 still valid, with FIA 8859-2015 the most up-to-date.

EVO TIP

A helmet will only perform at its best in an emergency if it fits - and we all have subtly different-sized and shaped heads. So measure your head to get a rough guide (use a tape measure horizontally about an inch above your eyebrows), but always try on as many brands as you can. Helmet linings will soften a little, so go for a snug fit. And buy the best and most up to date helmet you can afford. After all, it's only your head.



It's not about looking the part, it's about having the right kit for the job by Henry Catchpole



RACE SUIT P1 Promo Racesuit £239.94 nickvgrist.com

2 GLOVES Turn One FIA 8856-2000 **Homologated Race Glove** £44.34 nickygrist.com

BOOTS Sparco Slalom RB-3 Race Boots £90.00 demon-tweeks.co.uk

BALACLAVA **GPR Skin Balaclava** £29.94 gprdirect.com

5 HELMET BAG **Headcase Helmet Carry Case** £34.99 demon-tweeks.co.uk

RACE SUIT Alpinestars GP Race Suit £549.95 demon-tweeks.co.uk

GLOVES Puma Avanti Race Gloves

£66.82 demon-tweeks.co.uk BOOTS

OMP First Evo Race Boots £127.32 gprdirect.com

OUNDERWEAR Puma Nomex underwear (top, leggings, socks and balaclava) £201.81 demon-tweeks.co.uk

HELMET BAG Sparco Cosmos Helmet and FHR Bag/Dryer £53.64 gprdirect.com

EVO TIP

All the gear and no idea. As with any sport, it's easy to spend eye-watering amounts of money on kit that won't make you any better at whatever it is you are doing.

Having said that, when it comes to trackday clothing (safety kit, not retro T-shirts), some brands fit some people better than others, so the most expensive option may not be the best fit for you.

Everything from helmets to boots can vary in size and shape between brands, so try as many as possible and buy what fits you best rather than those that have an image you like; comfort is more important than looking good in the pitlane.



THE TRACKDAY SURVIVAL KIT

You might not associate a big warm jacket with driving your car quickly on a trackday, but circuits are often cold and windy places, so it's an essential piece of kit.

Earplugs are another good idea, as is a basic toolkit and torch so that you can see what you're about to skin your knuckles on.

A fuel-can is a good precaution and you need to keep yourself fuelled and hydrated through the day, too, so some energy rich snacks such as bananas are great to have.







A made-to-measure suit is perhaps a cost too far for a trackday, but if you're driving an ex-race car, you may want to fit in and look the part. Not that it will make you any quicker...

More money offers

better comfort and

improved durability on items such as

boots and gloves.

Nomex underwear

isn't essential but

we're assuming you've upped the car

and track stakes.



RACE SUIT Stand 21 La Couture HSC (made to measure) £POA stand21.co.uk

2 GLOVES Sparco Tide RG-9 Race Gloves

£149.95 demon-tweeks.co.uk BOOTS

OMP One Evo R Race Boots £309 demon-tweeks.co.uk

OUNDERWEAR **OMP FIA Approved Nomex** Coolshirt £690.00 demon-tweeks.co.uk

G HELMET BAG **Edec Race Case** £199.99 nickygrist.com

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TUNING

Want your car to be sharper and faster on track? Then consider these upgrades by Will Beaumont



PREPARING YOUR CAR

Whether your car is standard or modified, don't neglect these basics by Will Beaumont

You're about to take your car on track for the first time. It's a daunting prospect. Will it be any good? Will it feel slow? And most nerve-wracking of all: will it break?

Minimising the risk of anything failing is mostly common sense. Check everything: oil, brake fluid and coolant levels and top-up if necessary. Take the wheels off to inspect the brake pads and look for any signs of damage to the suspension and brake lines. You'll be putting each component under much more stress than usual, so anything close to the end of its life will wear out

more quickly or break more easily on track.

Once on track, the best way to make sure you don't blow your car up is to look after it. Don't do endless laps giving it the full Stephan Roser because. unless you have a factorysupported Ruf Yellowbird, you'll over-stress your car even before vou've been black flagged.

It will be the brakes that first show signs of fatigue. The pedal will feel soft and its travel will increase. This is a good sign to back off, do a cooling-down lap or two and return to the pits. Take the opportunity

to check your tyre

pressures. Your tyres will be hotter than they get during road driving, lifting their pressures beyond the optimum level, so you could let some air out to compensate. Aim for 4 to 6 psi above the cold-temperature recommendations. You could also adjust the pressures front or rear to tweak the car's balance.

After a trackday it's worth checking everything again, so you can gauge how quickly things wear out on track. Changing oil, coolant and brake fluid after every third or fourth trackday is also a sensible precaution.

TYRES

Get an instant cornering-speed upgrade with some stickier rubber



Stiffer and lower springs will make your car feel much more at home on track, being able to cope with higher cornering forces better and reducing weight transfer. Also try: H&R, Spax, Tein Koni, GMax

2 ANTI-ROLL BARS H&R.£403.18 For: Volkswagen Golf GTI and Edition 30 (Mk5) Relatively easy to fit, but make a marked difference to handling. Best to chose adjustable ones so vou can

O COILOVERS Bilstein, From £910.86 For: various

start to tailor your car to

Not just about lowering. Choose ones with damper adjustment to help adjust the balance of your car to your preference. Also try: KW, Eibach, H&R, Yellow Speed, Tein

2 CAMBER ARMS Eibach. £492.26 front. £180.91 rear For: Nissan 350Z Changing your ride height will affect suspension geometry Take control and

fine-tune further. Also try: Whiteline Powerflex, Forge

CP Carrillo \$1112

CON RODS difference Also try: Kaaz, SQS Racing, OS Giken For: Lotus Elise (Toyota

OMP

O WING

2ZZ-GE engine) 8 ROLL-CAGE An engine rebuild with serious upgrades will Safety Devices, £1308 not only improve power For: BMW 3-series but also reliability during Coupe and M3 (E46) frequent high-rpm driving. Improve your safety and Also try: Arrow Precision add rigidity to your car's Schrick, JE Pistons, ARP chassis.

DIFF Gripper, £1212 For: BMW M3 (E92)

Even if your car already has a limited-slip differential. a multi-plate mechanical locking diff that you can have set up for how you drive will make a noticeable

EXHAUST Akrapovic. £1701 For: Renaultsport Mégane 265

your own tastes.

KW, MTFC Brakes

8 BRAKE

UPGRADE

EBC.£564.79

longer period.

Mintex

Also try: Eibach, Whiteline,

For: Mini Cooper S (R53)

first part of a car to suffer

Brakes are always the

on track. Some more

appropriate pads, discs

fluid and lines will maintain

feel and effectiveness for a

Also try: Pagid, Brembo,

For: VW Golf GTI (Mk5)

Choose a lighter set of

Black Diamond, Tarox,

WHEELS

Sparco.£599

As with the air filter, the extra noise of an uprated exhaust will help you feel more connected with the car when wearing a helmet. Just make sure it's not too loud. Extra power and saved weight are bonuses. Also try: Milltek, Piper, Scorpion, Cobra Sport, Remus

O SEAT Cobra.£519 For: Porsche Cavman (987) The importance of being

Also try: Wiechers Sport,

Custom Cages, Sparco,

APR Performance.

£1269.60-1483.20

Forget generating

downforce, this is to

For: universal fitment

reduce lift to benefit in quick corners. Also try: DJ Race Cars. Seibon Carbon Elite

Carbon Fibre Geoff Steel LEXAN

WINDOWS Plastics 4 Performance, £550-935

For: Ferrari 360 Modena As well as simply removing unnecessary items replacing body panels and glass with lighter materials can help shed weight from higher up, lowering your car's centre of gravity too. Also try: Reverie, ACW

Motorsport Plastics, Seibon Carbon Fibre

Yokohama Advan Neova AD08



Nankang NS-2R Widths: 175-265mm Diameter-: 13-18in



Federal 595RS-R Widths: 195-285 Diameters: 15-18in



DMACK Trackday Widths: 195-305mm. Diameters: 15-19in



Michelin Pilot Super Sport Widths: 205-345mm. Diameters: 17-23in



Kumho ECSTA V70A Widths: 175-335mm, Diameters: 13-18in



Tovo Proxes R888R Widths: 185-315mm, Diameters: 13-20in



Pirelli Trofeo R

Widths: 205-345mm, Diameters: 15-21in

Michelin Pilot Sport Cup2 Widths: 215-345mm Diameter: 17-21in

www.evo.co.uk 121





Tarox, Brembo, Wilwood

wheels to help improve

unsprung weight. Don't

be afraid to change size to

increase your tyre choice.

but be careful of brake

clearance and consider

Also try: OZ Racing, BBS,

Team Dynamics, Image

Wheels, HRE Wheels

O AIR FILTER

Pipercross, £37.99

A performance air filter

will make your engine

feel sharper at the top

of the rev range. Some

extra noise is welcome,

especially when wearing

Also try: K&N, ITG, Green

Filters, Revo Technik, HKS

secure in the car should

not be overlooked. Most

aftermarket seats are

Also try: Recaro, obra,

Sparco, Corbeau, OMP.

6 BIG BRAKE KIT

AP Racing, £2303.62

lighter, too

Bride

a helmet!

For: Ford Fiesta ST (Mk7)

rolling radius.



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Performance Brake Discs: Aid Cooling Under Braking Help Reduce Build Up Of Dust & Gas Help Reduce Water Build Up Look Great Behind Alloys

Available in: Drilled & Grooved Dimpled & Grooved Grooved Only Drilled Only NEW C-Hook





...To Track

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MTEC Premium Pads



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Performance Brake Fluid CG29 Copper Grease

High Performance DOT 5.1 Brake & Clutch Fluid. Copper Grease Helps Prevent Brake Squeal & Corrosion.



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CIRCUITS & TUITION

TRACKDAY **TUITION**

'There's no such thing as a dangerous track, only dangerous drivers.' Jonathan Chan at RSRNurburg doesn't pull any punches when it comes to tuition. He continues: 'When you behave and stay within the limits of the car, the conditions and your skill level, nothing needs to go wrong. It's difficult to know where the limits are, but that's exactly what a trained instructor is for '

For the novice, tuition is the difference between enjoying yourself on track and over-driving, causing avoidable wear and tear and genuinely looking like a fool. For those with experience, tuition is the opportunity to fine-tune your skills, eradicate bad habits and get the best from the car you've invested so much in.

Trackdays run by both the circuits and trackday organisers (TDO) offer tuition no matter what your experience, so talk to them when you are booking your day and tell them about your ability and what you are looking to learn so you can be paired with a suitable instructor

On the day the key is to be honest with your instructor. Don't pretend to be better than you are - they'll work out your ability within a lap anyway. Ask questions if you're unsure why they want you to do something in a certain way. The idea of tuition is to understand what you are being taught.

The majority of instructors have a racing background, but don't think they are only going to focus on reducing your lap time. The key to enjoying a trackday is knowing your and your car's limits, and tuition will help you learn where those limits are. 'Driver tuition is the one area which often brings the greatest amount of gain and reward and is often overlooked,' concludes Ionathan

Where to drive, and how to develop your skills and make the most of your time on track by Stuart Gallagher



BEDFORD AUTODROME (SOUTH EAST CIRCUIT)

Circuit length: 2.3 miles Number of corners: 10 Elevation change: 0 metres Direction: anti-clockwise Contact: hedfordautodrome.co.uk Trackday organisers: MSV (as above), Javelin Trackdays (javelintrackdays.co.uk)

BLYTON PARK (OUTER CIRCUIT) Circuit length: 1.4 miles Number of corners: 8 Elevation change: 0 metres

Direction: anti-clockwise Contact: blytonpark.co.uk Trackday organisers: Javelin Trackdays (javelintrackdays.co.uk)

MONDELLO PARK (NATIONAL CIRCUIT) Circuit length: 1.5 miles Number of corners: 6 Elevation change: Ometres Direction: clockwise Contact: mondellonark ie Trackday organisers: Mondello Park (as above)

DONINGTON PARK

Circuit length: 1.9 miles

Number of corners: 10

Elevation change: 30 metres

(NATIONAL CIRCUIT)

OTHER TRACKS

Track driving isn't limited to conventional trackdays. Hill climbing is steeped in history and venues such as Shelsley Walsh (shelsley-walsh.co.uk) run a number of events, including traditional hill climbs, sprints and trials.

Curborough (curborough. co.uk) is a purpose-built sprint course. The 0.8-mile circuit is designed to test the driver's precision as much as their pace, and it's a great discipline to master. If you're new to the sport, introduction days are run at the venue.

On a grander scale are venues such as Bilster Berg (bilster-berg.de). This purpose-built driving resort offers everything from guided tours to race-car experiences on a circuit considered to be one of the most daunting and exhilarating you can drive.

ON TRACK IN 2016

4 APRIL Nürburgring Nordschleife RSRNurburg (rsrnurburg.com)

8 APRIL Spa-Francorchamps GoldTrack (goldtrack.co.uk)

26 APRIL **Brands Hatch GP** Gold Track (goldtrack.co.uk)

26 APRIL Oulton Park (novice day) MSV (msvtrackdays.com)

3 MAY Silverstone GP Gold Track (goldtrack.co.uk)

20 MAY Bedford Autodrome evo (evo.co.uk/trackdays)

2 JUNE Anglesey (GP & Coastal) Javelin (javelintrackdavs.co.uk)

17 JUNE Bedford Autodrome evo (evo.co.uk/trackdays)

8 JULY Donington Park (National) Javelin (iavelintrackdavs.co.uk)

18-19 JULY **Bilster Berg** RSRNurburg (rsrnurburg.com)

22 IIII V Bedford Autodrome evo (evo.co.uk/trackdays)

19 AUGUST Bedford Autodrome

evo (evo.co.uk/trackdays)

28 AUGUST Bivton Park Javelin (javelintrackdays.co.uk)

www.evo.co.uk 123



(COASTAL CIRCUIT) Circuit length: 1.5 miles Number of corners: 10 Elevation change: 40 metres Direction: clockwise Contact: anglesevcircuit com

ANGLESEY

OULTON PARK

Circuit length: 2.6 miles

Number of corners: 12

Direction: clockwise

Elevation change: Ometres

Contact: oultonnark co uk

Trackday organisers: MSV (as above), RMA

(rmatrackdays.com), Gold Track (goldtrack.co.uk)

(INTERNATIONAL)

Trackday organisers: Anglesey Circuit (as above)

(INDY CIRCUIT) Circuit length: 1.2 miles Number of corners: 5 Elevation change: 35m Direction: clockwise Contact: brandshatch couk Trackday organisers: MSV (as above), RMA

Direction: clockwise Contact: donington-park couk Trackday organisers: RMA (rmatrackdays.com), Gold Track (goldtrack.co.uk) (rmatrackdays.com), Gold Track (goldtrack.co.uk)

NÜRBURGRING NORDSCHLEIFE Circuit length: 12.9 miles Number of corners: 73 (33 left, 40 right) Elevation change: 296.8 metres Direction: clockwise Contact: nuerburgring.de Trackday organisers: RSRNürburg (rsrnurburg.com), RMA (rmatrackdays.com), Gold Track (goldtrack.co.uk)

SPA-FRANCORCHAMPS Circuit length: 4.3 miles Number of corners: 19 Elevation change: 97 metres Direction: clockwise Contact: spa-francorchamps.be Trackday organisers: RSRNürburg (rsmurburg.com)



PRACTICAL KNOWLEDGE

What to consider when planning a trackday, including logistics, safety and fitness by Dan Prosser



HELMETS, RACE SUITS, STICKY

tyres, driver training, uprated coilovers? That's the glamorous stuff. But trackdays are not without their chores and menial tasks. Depending on your choice of car, you may have to trailer it to the circuit. And if that circuit happens to be more than a couple of hours from home, you'll want a hotel with secure parking. That's after you've arranged trackday insurance and prepared your body and mind for a day of high concentration at the wheel, of course.

Driving your car to the circuit might

well be less of a hassle than hitching up a trailer, but if your car isn't roadlegal or if it's downright unbearable on a long motorway run, towing could be the only option.

Brian James and Ifor Williams trailers are among the most popular in trackday and motorsport circles. You should reckon on spending £1500 on an entry-level trailer. The maximum you can tow with an unbraked trailer is 750kg (load and trailer combined), while the maximum weight of tow car, load and trailer combined is 3500kg, unless you took your driving test before January 1, 1997, or have passed the specific trailer test. You'll also be limited to 50mph on national-speed-limit single carriageways and 60mph on NSL dual-carriageways and motorways.

Given the risks of circuit driving, it's wise to take out trackday insurance. The likes of Sky Insurance (skyinsurance.co.uk) and MORIS (moris.co.uk) specialise in trackday insurance. As a rough guide, expect to pay around one per cent of the value of your car for a day's cover, with a ten per cent excess.

TEAM TIP

'Always fit your car's towing eye before venturing out on circuit, just in case your luck does run out. It's also sensible to scope out a petrol station close by, because although many tracks have fuel on site, it can be very expensive.' **Dan Prosser**



WHAT TO DO WHEN IT GOES WRONG...

Unless you're blessed with a rare talent and uncommon good fortune, the chances are you'll stick it in the gravel or suffer some sort of car failure on circuit eventually. In the event of a spin or mechanical fault you should return to the pitlane, or if that's not possible try to reach a gap in the safety barrier. That'll help the marshals to retrieve your car quickly and with a few short steps you'll be safely behind the barrier



AT As t Pro wor pro in t

ATTITUDE AND FITNESS

As the director of Boomerang Pro Fitness, John Camilleri works closely with several professional racing drivers in the World Endurance Championship. 'Endurance racing is much more strenuous than trackday driving, but from a fitness and preparation point of view many of the same principles apply.' he savs.

'If you are well rested, your energy levels will be maximised and your cognitive processing will run at an optimal level. You will be able to concentrate for longer and react quicker on track. Being well hydrated also helps.

'Ditch the bacon buttie! Porridge with honey or dried fruit would be a beneficial breakfast for sustained energy. But don't miss your morning coffee. If this is part of your morning routine then it's important you do this at the track, too, because your body will be expecting the caffeine hit. For the rest of the day meals should be light, but consumed quite regularly for maintaining energy levels.

'It's important to identify areas on the track where you can relax while you are behind the wheel. On long straights it's good to sink into the seat, take in a couple of deep breaths and relax your shoulders. This helps reduce energy expenditure during a long stint.

'Irrespective of what car you are driving, there are three fitness attributes that are worth considering.

Cardiovascular fitness is important for efficient oxygen utilisation, especially if the car has relatively poor ventilation, which is common. Core strength is also important because it can help with maintaining control while experiencing G-forces both laterally and under braking. Finally, you are likely to reduce your risk of injury if you take the time to work on your flexibility. This is an area of physical fitness that benefits all drivers '

Circuit de Spa-Francorchamps

Premium Trackdays

A legendary experience. They have the best cars available at the best race tracks with the most available dates to chose from. I thought I was in a dream. If you're contemplating booking because of money, just book it. As an enthusiast there is no better experience. - Joe Storione



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Upcoming Dates...

10.04.2016 (Sun)
27.05.2016 (Fri)
14.06.2016 (Tue)
15.06.2016 (Wed)
06.07.2016 (Wed)

03.08.2016 (Wed) 12.09.2016 (Mon) 27.09.2016 (Tue) 21.10.2016 (Fri) 12.11.2016 (Sat)

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The evolution of data logging

Data logging has been around for some time, but only recently has the technology become both unfailingly accurate and affordable. In early racing, the acquisition of data was no more advanced than a stopwatch and a pencil. In the realms of magazine road testing, a 'fifth wheel' to record accurate speeds and acceleration times was the norm, followed by laser tracking systems.

Access to better GPS data, thanks to the US military turning off selective availability of its more accurate signals, has since made GPS the best way to measure speeds and lap times. Accelerometers measure acceleration, cornering and braking forces, while the multitude of data fed back from a vehicle's electronic systems - from temperatures to fuel injection to tyre pressures mean virtually every aspect of a car can be analysed. Antony Ingram

Using data on trackdays

If you're going to use data on a trackday, make sure the baseline comparison trace is a decent lap. If you have an experienced mate, ask them to do a few laps. If not, most trackday companies have instructors, so use them if you can. Don't obsess about braking later or harder. Focus instead on carrying speed.

'Lift and coast' is boring in F1, but easing off the power a bit earlier and braking smoothly reduces wear, calms things down a little and help you learn to build minimum corner speeds. Once you've got that nailed you can work on compressing the braking zones.

Fast corners are good for paddock banter, but by and large it's the slower, more technical corners where you'll make the biggest improvements. And one last thing: don't be the idiot who clatters into another car because you think you're on a 'good lap'. Back-off, take a breath and find some space. **Richard Meaden**

view video, so get the best

angle with this helmet mount.

recordings via your tablet,

phone or even Apple Watch.

TRACK CAR GUIDE

The world map of specialist track car makers and tuners, plus the best cars to buy by Will Beaumont

Ariel Crewkerne, Somerset, UK BAC Liverpool, Mersevside, UK Caterham Ginetta Lotus Radical Ultima Westfield Zenos AC Schnitzer Arrinera Donkervoort ктм

Lazareth

Romeo Ferraris

МТМ

Praga

Ruf

Panoz

Rossion

Mastretta

Saleen

Vuhl

JUN

Mines

OZ Track

Hypercars NZ

Crawley, West Sussex, UK Leeds, Yorkshire, UK Hethel Norfolk UK Peterborough, Cambridgeshire, UK Hinckley, Leicestershire, UK Kingswinford, West Midlands, UK Wymondham, Norfolk, UK Aachen, Germany Warsaw, Poland Lelystad, The Netherlands Mattighofen, Austria Annecy, France

Ingolstadt, Germany

Milan, Italy

Orechová Potôň, Slovakia

Pfaffenhausen, Germany

Hoschton, Georgia, USA

Corona, California, USA

Mexico City, Mexico

Mexico City, Mexico

Kanagawa-ken, Japan

Auckland, New Zealand

Penrith, Australia

Tokyo, Japan

Riviera Beach, Florida, USA



TOP TRACK CARS TO BUY









RENAULTSPORT **CLIO 200 CUP** £8500-11,500

A really enjoyable and predictable car. Feels at home on track, especially in Cup spec.

BMW E36 M3 EVO £7000-10,000

Needs modifying to be at its best on track, but there's a huge array of upgrades to choose from.

PORSCHE **BOXSTER S (986)** £6500-9500

Exquisite balance. Be careful, though-they can become quite expensive to run.





Possibly the most accomplished front-wheel-drive trackday car. NISSAN 370Z

NISMO £26.000-31.500

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THIS MONTH

CHEVROLET CAMARO Z/28 // SEAT LEON ST CUPRA 280 // PORSCHE 996 CARRERA // NISSAN GT-R // BMW 730Ld M SPORT // JAGUAR F-TYPE R AWD // CATERHAM SEVEN 420R // FORD ESCORT Mk2 // VOLKWAGEN GOLF R // FORD FOCUS ST TDCI ESTATE // MCLAREN 650S

NEW ARRIVAL

Honda Civic Type R

Unashamedly ostentatious and now with a turbocharger, Honda's latest Type R arrives on the Fast Fleet CONFESSION TIME. I'M not sure I ever really got the big deal

about naturally aspirated VTEC engines. Sure, the way the rate of acceleration picked up for the last couple of thousand revs towards the red line was exciting enough, but I couldn't help feeling it was only so because the 5000 or 6000rpm that had come before had been so, erm, ordinary.

The loss of that 'VTEC rush' with the introduction of turbocharging for the FK2 Civic Type R is apparently a cause for great mourning among hot-Civic aficionados. For me, though, the loss of nothing happening for three-quarters of the rev range only served to increase my interest levels in this latest version. It certainly removed a possible cause for hesitation when it came to putting my name forward to run our new long-termer. More performance, more of the time? Yes please.

Our Civic arrived in mid-January with 345 miles on the clock. The Type R costs £29,995 basic, although ours has been upgraded to GT spec, which costs an extra £2300 and adds a bunch of goodies. These





Above: two-tone interior mirrors vibe of the bombastic exterior; driving position is spot-on, firmly bolstered seats reassuringly supportive

include auto lights and wipers, parking sensors, dual-zone climate control, electrically folding door mirrors, an upgraded sound system and a bunch of driver-assisting safety systems. For the paint I opted for Misano Red, because, well, when a car's styling is as bold as this, I can't see the point in going for a shy and retiring paintjob.

Ah yes, the styling. It is, undoubtedly, going to be an important part of this test. We've become accustomed in recent years to hot hatches being rather understated things. Last year I ran one of the Honda's rivals as a long-termer, a SEAT Leon Cupra 280 hatch, and brilliant though it was to drive, I'm sure the majority of other road users had no idea that they were sharing tarmac with something quite special. With the Civic, there is no such ambiguity. Everyone notices it. In fact it received its first full head-turn from a pedestrian within

two minutes of leaving the office car park for the first time (and there are no footpaths for the first minute and a half). It's going to be interesting to see what other reactions it gets.

Looks aside, my first impressions have been dominated by things more closely related to the driving experience. Getting into the Type R you can't fail to notice how snugly you are held by the seats, the thigh supports in particular being taller and firmer than is the norm. On the move, the ride is distinctly firm, and that 306bhp engine has plenty of mid-range torque (295lb ft from 2500 to 4500rpm to be precise) and emits a prominent *pshhh* sound into the cabin whenever you lift off the after building up some boost.

It all sets a tone that suggests that while this car may do day-today, that isn't its *raison d'être*. How well it does the purposeful hot hatch thing, I am genuinely looking forward to finding out. ⊠ 'We've become accustomed in recent years to hot hatches being rather understated things. Not so with the Civic'

Date acquired	January 2016
Total mileage	2015
Mileage this month	1670
Costs this month	£0
mpg this month	30.2

Chevrolet Camaro Z/28

What better machine for ice-driving than a 505bhp muscle car?



HAVING GOT THE 'Redneck Enzo' shod in its snow boots and

then driven a good few miles to scuff them in, I had to park it. Why? Because I had to go to California for a couple of weeks of meetings, and suffer the 80-degree blue-sky days...

Luckily I got back to Switzerland just in time for halfterm and skiing in Chamonix. The Z/28's boot is pretty big. Bigger, in fact, than a regular Camaro's, because GM took out all the soundproofing to save weight – very handy for gear. I hadn't fitted a proper ski rack, though, so I affixed some magnetic ones

END OF TERM

SEAT Leon ST Cupra 280

It fitted our staff snapper's needs like a glove, but now it's gone



MY FAVOURITE long-termer to date

has sadly gone back to SEAT. Truly, I enjoyed every minute with this car. OK, maybe not the time I had to change a flat tyre in the rain on a busy motorway, but generally speaking the Leon ST Cupra was a great car to live with. It took me all over the UK in comfort, carrying all my photography gear with ease and transforming itself into a sports car seemingly on command.



Date acquired	June 2015
Total mileage	5701
Mileage this month	81
Costs this month	£0
mpg this month	17.2



I'd bought for my Clio Trophy and, voila, I was ready to take my son to race training!

The Michelin Alpin winter tyres have been great so far – grippy enough on damp tarmac and amazingly good on our snowy driveway. Gently letting the clutch out on tickover, avoiding any throttle input, and not touching the brakes, the Z/28 just rolls along, the huge front splitter acting as a snowplough. On snowy roads it's been impressive, but it's hopeless in deep slush (most things are).

Half-term turned out to be a good, cold week, and the team at Circuit Glace Flaine ice-driving school told me they were going to close on some evenings and take advantage of the conditions to 'make' ice. Naturally I booked a spot on the next available session after that, and knew I would love every moment.

Driving on the ice, in the dark, in a 7-litre muscle car was hilarious. Almost as funny as the last time we'd gone, when my son Monty got his first drive ever in anything bigger than a go-kart: a lightly 'Brabused' GL500. That time we had the circuit to ourselves and kept driving until one of the wheels literally fell off. It wasn't the car's fault. It seems some local French *voyous* had loosened the lugs to try to steal the wheels while we were having a coffee!

Next morning was the first day of the Chamonix World Cup downhill. and we'd managed to get a pass to drive right to the bottom of the race piste, ready to cheer on our favourite local ski-team member, Blaise Giezendanner - the son of the insurance agent who covers the Z/28! The Kandahar Downhill, as the race is known (after Lord Roberts of Kandahar, who kind of invented the sport - don't let any Continentals tell you otherwise), is watched by more than 200 million people on TV and considered one of the scariest races in the world, with a 90-metre jump over a drop, an 80-metre jump over a road and speeds of 86mph. Racers notoriously don't sleep the night before. Fast, scary and on icy snow, it demands respect. Just like the Z/28. 🛛 **David Price**

SEAT Leon ST Cupra 280

Everybody who drove the Leon was surprised at just how good it felt. The front end, for example, turned in with heaps of feedback, while the rear remained flat and balanced, staying on line. The car's overall composure had a lot to do with the electronically controlled diff lock, which can deliver up to 100 per cent of torque to the outside wheel via a hydraulic clutch system.

The straight-line speed was impressive, too, the 276bhp 2-litre turbo engine powering the car to 62mph in 6.0sec. And there were never any signs of torque-steer, even with 258lb ft starting at 1750rpm.

One of the more memorable trips in the Leon was on last year's eCoty. The endlessly changing Scottish scenery allowed **evo** art director Rob Gould and me to really see how the car coped on everything from fast A-roads to bumpy gravel tracks. We covered more than 2000 miles and had great fun along the way, the only issue being a flapping section of the plastic undertray (Rob's fault, promise) that we temporarily repaired with gaffer tape (see below right). The front brakes were also always dazzlingly strong – as you might hope – and showed no signs of fading, even with two men and all that equipment on board.

The Leon had it all: it was fun to drive, was a sensible choice for my needs, and looked and sounded superb, in a subtle kind of way. It also proved very reliable, requiring only new tyres and a 10,000-mile service in the time I had it. I loved it. ▲ **Aston Parrott** (@AstonParrott)

Date acquired	May 2015
Duration of test	8 months
Total test mileage	17,998
Overall mpg	32.8
Costs	£544.60 four tyres,
	£179 service
Purchase price	£32,020
Trade-in value	£24,000
Depreciation	£8020







Porsche 996 Carrera

Porsche 996 Carrera

Having settled on a suitable suspension setup, Bovingdon's already tinkering again...



MUCH AS I DREAM OF owning an RSR with a full

roll-cage, 12-inch-wide rear wheels and an exhaust note measured on the Richter scale, the truth is that my 996 is a road car first and foremost and I want it to perform best on bumpy, crazily cambered B-roads. Even so, the lure of anodised suspension arms, stiffer bushes and a GT3-style ride height is strong. To recap, my car already has Bilstein PSS10 adjustable suspension - an upgrade by the previous owner - and I've fitted stiffer, lighter semi-solid RSS Tarmac Series engine mounts. So it already drives with more edge than a standard Carrera but a lovely fluency, too.

That fluidity is something I'm keen to keep, and so I'd ruled out doing anything more to the suspension. That was until late last year, when I drove an early 996 GT3 owned by photographer Antony Fraser. His car is fitted with really trick Rennline rose-jointed arms and various other bits of pretty extreme componentry and yet it still has that trademark 996 flow that I so love. In fact, it felt so precise and controlled that I knew a few more tasty upgrades on my car wouldn't hurt.

The simplest decision was to get my Bilstein dampers reconditioned. Bilstein UK offers a full rebuild service where each damper is dyno'd to check its performance and then stripped and fitted with new seals, valves and shims; the internals are also upgraded to the very latest spec. If new rods are required there's a small additional cost and you can ask for bespoke settings, too, At £120 per damper for my PSS10s, it's very cost effective. The work is carried out at a huge facility in Leicestershire where they're flat-out rebuilding road and competition dampers, which is pretty cool.

I asked Litchfield to carry out the suspension work. Of course, they're renowned GT-R specialists, but I really admire the level of professionalism that's evident in all of their work and they've got a great relationship with Bilstein, too. And because lain Litchfield knows the top experts at Bilstein, he could draw on their knowledge for my 996. I even got to talk to Jörg Hoffmann – Bilstein's Porsche



'I knew that a few more tasty upgrades on my car wouldn't hurt'

Date acquired	May 2013
Total mileage	145,146
Mileage this month	125
Costs this month	£480 dampers
	£489 bushes
mpg this month	27.8

guru – to discuss the perfect setup (stay tuned).

With the suspension in bits, I decided to fit Powerflex poly bushes – the more aggressive Black Series units. I spoke to Powerflex directly and they allayed any fears that the car would become too harsh. Black Series bushes can be 30 to 50 per cent stiffer than the standard items in certain instances, but for my 911 they're 10 to 20 per cent stiffer. Powerflex also offer a front track control arm inner bush with adjustment to allow for more camber, saving me the expense of new adjustable top mounts.

The final upgrade was even more cost effective. My car came with a whole box of bits and bobs from the previous owner, including a set of blue anodised Agency Power rear control arms. So Litchfield are also fitting these, which will help with the final geometry settings and, hopefully, create even more agility and control. I can't wait to see if the end result can replicate that amazing GT3...

Jethro Bovingdon (@JethroBovingdon)



Nissan GT-R

Has our GT-R been tickled? An independent dyno session reveals all

Date acquired	November 2015
Total mileage	16,452
Mileage this month	831
Costs this month	£0
mpg this month	19.6

IF THERE'S A CAR TO GET engineers riled, it's the GT-R. The famous

Porsche/Nissan spat from a couple of years ago neatly summarises the general narrative: A senior Porsche figure stated that the GT-R they'd bought wasn't capable of the Nürburgring lap times supposedly achieved. Nissan, rather cheekily, then publicly offered to put the Porsche testers through its drivertraining scheme. The result? A lot of noise but not much corroborative evidence from either party.

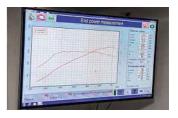
I've heard the accusations a million times myself off the record from all sorts of engineers, test drivers and PR people. Do I care if our 45th Anniversary car can do a 7min 19sec lap around the Ring? Not really. Does this press car have – as many engineers and internet sages would lead you to believe – about 4000bhp? That, I can answer...

While picking up my Porsche 996 from Litchfield, I asked if they'd mind sticking our GT-R on the dyno. No problem, they said. They've seen 2015MY customer cars generally running a little more than previous years – in the 560-570bhp range against a claimed 542bhp – so we'd quickly see if my car was a bit hooky. Before it arrived at **evo** it was figured by another magazine and achieved 0-60mph in 3.1sec and 0-100mph in 7.2, which is staggering. So it's quick, but has the boost been tickled?

The anticipation as the car was tethered in place with thick chains (they've had cars running 1450bhp on here, so it pays to have sturdy tethers) was unbearable. Were we about to uncover some VW-style scandal? Or at least a bit of gentle cheating that would ignite a raging debate on the internet and make all those engineers and PRs ring us with a smug 'I told you so'?

Erm, no. I thought our GT-R sounded amazing on the MAHA dyno but the guys described it variously as 'tame', 'civilised' and 'so refined'. The output was tame for this particular dyno, too: 558.6bhp at 7065rpm and 480.9lb ft at 3825rpm. Slightly above the claimed 542bhp at 6400rpm and 466lb ft at 3200rpm, but well within the normal range of new GT-Rs. Move along, then. Nothing to see here. ➡ **Jethro Bovingdon**

(@JethroBovingdon)



BMW 730Ld M Sport

BMW 730Ld M Sport

Once a barge, always a barge? Not in this case



IT'S BEEN A FASCINATING first month with the BMW 730Ld. As alluded to in last

month's report, it's the quality of the driving experience that makes the strongest impression, rather than the extensive technology features.

So what impresses? Firstly, the steering. Fluid, linear, evenly weighted and precise, it allows you to place the car with an accuracy that belies its colossal size. How big? At 5.25 metres long it's longer than a long-wheelbase Range Rover, and it's about the same width as an F12tdf. The rear-steer intervenes subtly, improving turn-in and creating quite fantastic high-speed stability, while the air-suspension matches the very, very best for ride and handling. That includes Bentley and Rolls-Royce.

Most importantly, the 7-series is proving capable of dishing up pretty solid driving thrills. Of course, it's not a car to drive on its door handles, but dialling in Sport mode and tackling a series of bends is far from joyless.

Of the on-board tech, I don't think I'll ever mention the gesture-control again because it does nothing that the steering wheel buttons or voicecontrol can't do more safely. I can't see how a UI that asks the driver

to take their hand off the wheel fulfils any need. A colleague argued that perhaps BMW is preparing us for gesture-control being part of an autonomous future, but I figure voice-control will be nailed by then.

On the positive side, the rear tablet works brilliantly, as do the on-board internet and HUD. Also, thankfully, the owner's manual that's buried in the iDrive is keyword searchable and easy to use. And I've been using it rather a lot.

Lastly, our car has suffered a crack in the windscreen. And this isn't an ordinary windscreen – it's a 'climate comfort' windscreen that reflects



certain wavelengths of sunlight. It's not exactly an off-the-shelf part, so there'll be a short wait before BMW can replace it. ☑ **Nick Trott** (@evoNickTrott)

December 2015
7844
1337
£0
33.0



NEW ARRIVAL

Kia Proceed GT

We liked our old Proceed GT so much, we've added a facelifted version to our fleet. Here's what's new



DRIVING AROUND IN A bright yellow hatchback

from South Korea might once have been considered some sort of embarrassing punishment at **evo**. How times have changed. The Kia Proceed GT you see here is a thoroughly impressive device, and its exterior hue a welcome dose of brilliance on otherwise gloomy winter mornings.

We've been here before, of course, albeit in a more subdued hue and a slightly different form. Around six months ago we said goodbye to our previous long-term Proceed GT (evo 214). That car soaked up over 26,000 miles at the hands of editor Nick Trott and later snapper Aston Parrott. It also saw off the Focus ST in our hot hatch test in issue 207 and generally pleased us with its neat styling, easy-driving demeanour and comfortable, high-quality cabin.

Kia has since implemented a small range of improvements that

should make our latest acquisition even better than its predecessor and justify its slight price increase to £23,105. There's a new, higherpressure turbo, lowering the arrival of the 1.6-litre engine's 195lb ft torque peak by 250rpm to 1500rpm. Peak power remains 201bhp at 6000rpm, but there appears to be some extra fizz at the top-end.

Some credit for this should go to the new sound generator. I'm fairly open to the intangible value of such devices, despite their fakery, and the Proceed's adds a welcome growl to larger throttle openings, where the old car simply buzzed. This GT feels more enthusiastic, and while the bare numbers have barely changed – at 7.3sec to 62mph, it's a single tenth quicker than before – it's now more rewarding to stir along.

The front tyres still relinquish their grip quicker than some – whether pointing into corners or accelerating out of them (there's still no limited'This updated GT feels more enthusiastic, and it's now more rewarding to stir along'

Date acquired	December 2015	
Total mileage	3799	
Mileage this month	664	
Costs this month	£0	
mpg this month	31.7	

slip diff) – but this Proceed still responds well to a smooth, flowing driving style. It's fairly foolproof if you steer with fists of ham, too.

Inside, the steering wheel is now flat-bottomed, which is mildly irritating, but the slightly thicker, squidgier rim is good to grasp. There were few complaints of the old stereo, but the new infotainment system, complete with a 7-inch touchscreen, works well and throws in navigation for good measure.

And of course, there's the way our new Kia looks. Having not being specified by Stuart 'Fifty Shades' Gallagher, it has a coat of Yellow Flame rather than British Drizzle. It's not as urbane as our black GT, but eye-catching looks are surely part of the hot hatch appeal.

Far from being a punishment, the next 12 months in our yellow, South Korean hatch are something I'm looking forward to. Antony Ingram (@evoAntony)

Jaguar F-type R Coupe AWD

A V8 Jag could be the perfect alarm clock – assuming, that is, you want to be woken

LIKE THE FACT THAT THE British Airways flights I usually seem to catch to and from Stuttgart have the Porsche-appropriate numbers BA918 and BA919. What I like less is 918's early departure time of 7.30am from Heathrow Terminal 5. I've never been one of those people capable of leaping fresh-faced from under a warm duvet. Several unsnoozable alarms need to be set, particularly in the depths of winter.

The most recent time this happened, the knowledge that I was going to see the new 911 R certainly made getting up easier, but so did the Jaguar. The heated seats are spectacularly toasty, the heated windscreen wonderfully convenient and the heated steering wheel... unexpectedly nice actually. The only hot wheels I've ever seen the point of before have been die-cast. but the Jaguar's hand-warming wheel is extremely pleasing on a bitingly cold day. The feeling of a thaw permeating stiff fingers that have been chilled to the bone is delicious, and somehow it's exacerbated by the juxtaposition of the cold metal shift paddles that greet your fingertips on the back of the wheel.

Talking of unsnoozable alarms, I love the noise of the 5-litre V8 starting up. As reveilles go, I think it is eminently preferable to bugles or cockerels or Chris Evans, However, at 4am I'm not sure my neighbours shared my enthusiasm. It sounds like the Jaguar's exhaust is automatically switched to its noisy mode for the first few seconds of the engine cranking into life, and although the exuberant eruption settles to a discreet idle relatively quickly, by then the damage is done. As lights flicked on behind curtains and the sound of a baby beginning to cry drifted through the cold air, it seemed best to make a sharpish getaway as guietly as I could.

At least the all-wheel drive meant there were no unseemly spinning wheels on the frigid tarmac. I'm actually beginning to appreciate the AWD more and more, because it undoubtedly brings a much greater feeling of security to the car, yet it is also still capable of being a bit unruly. Just how unruly I'll examine in a bit more detail next month. Henry Catchpole

(@HenryCatchpole)

Date acquired	January 2016
Total mileage	2692
Mileage this month	1188
Costs this month	£0
mpg this month	26





Caterham Seven 420R

The Seven gets on track again, and then gets upgraded

A WET-TO-DRY



trackday really is a marvellous thing. Just when you think you've worked out how much grip there is, or more realistically how little, and you've improvised your own unorthodox line to avoid the really treacherous bits, the conditions start to change. You spot lighter patches in the tarmac that weren't there a couple of laps ago, then a dry line emerges.

That's when you enter this particularly interesting phase; you can drive just as hard as you would on a fully dry day, but get your line fractionally wrong, or miss your braking point by a couple of metres, and you'll drop a wheel onto the wet stuff and have a problem on your hands. Tremendous stuff.

I only worked this out recently. Mission Motorsport invited us to one of its trackdays at Donington Park and I took our Caterham for



a run out. For the first couple of hours the circuit was desperately slippery and Craner Curves was taken with a great deal of caution, and a couple of firm braking inputs, in fourth gear.

Throughout the morning, though, the circuit started to dry. Within an hour there was a fully dry line through Craners, and over a handful of laps I built up my pace. Just before the lunch break the 420R would get through the sweeping, tumbling sequence in fifth gear with barely a lift. I don't think it's possible to have more fun on a trackday!

Some idiot managed to flat-spot the tyres at Donington, so we've since had a new set of Avon ZZS rubber fitted. Caterham has also treated our 420R to a 'flat-floor setup' to get all the corner weights just right and, as you'll have spotted, they also fitted roller barrel throttle bodies. We'll report back soon, but the first impressions are very positive indeed. Dan Prosser (@TheDanProsser)

Date acquired	August 2015
Total mileage	4266
Mileage this month	211
Costs this month	£443.40 tyres
mpg this month	26.5



Ford Escort RS2000

Finally dolled up in new livery, Henry Catchpole's Escort is ready for a gravel test and a rally or two



NO DOUBT MANY OF you reading this have

applied an **evo** sticker to the rear window of a car. I've stuck numerous ones to bits of glass on long-termers over the years and it is always a nervous process. Will it be straight? Will I manage to keep the air bubbles out of it? Is it the right way up? On one occasion as I stood back after 15 minutes to admire my laborious handiwork, the answer to all three questions was no.

In short, I would not be a suitable candidate for employment at Creative FX. Based in Bromley, they are experts in vehicle graphics and wraps. Seen a Mini with a fun-looking roof? That was probably Creative FX, as they are the official supplier. The Citroën World Rally Team has used them, as has the Skoda IRC team. The chrome Bonneville Skoda Octavia was a Creative FX project and, unbeknownst to me at the time, they also applied the graphics to 'my' Suzuki Swift rally car back in 2008. You might even remember the name from a previous **evo** long-termer – Nick Trott and Roger Green's Radical. This had a great livery designed for it with the outline of different circuits scattered all over the body. Sadly the only people who ever got to see it in the light of day were the thieving ne'er-do-wells who pinched the car a day after it had been done.

DNF 5571

Anyway, a while ago I asked **evo**'s readers to design a livery for my Escort, and Mark Dyment's winning design has now been turned into reality by the chaps in Kent. After printing, it took about four hours to apply the graphics. They use a 3M vinyl, which is gently heated with an industrial version of Dan Prosser's hairdryer, before being stuck on and smoothed over the bodywork 'The end result looks even better than I had hoped, the design making the Mk2 look much tougher'
 Date acquired
 August 2011

 Total mileage
 n/a

 Mileage this month
 n/a

 Costs this month
 £403 graphics

 mpg this month
 n/a

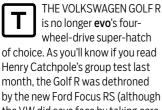
and into any nooks or crannies. The trickiest bit on the Escort was apparently the lining up of the bonnet to front wing transition, as the front wheelarches also had to be taken into consideration.

The end result looks even better than I had hoped, the design somehow making the Mk2 look much tougher – almost like it has been arched. So far I've yet to splatter mud all over it, but a few days after it was completed, the car did find itself parked in a field outside a large tent as it adorned my wedding reception. The (modest) plan for 2016 is to do a test session and then plan a couple of gravel rallies. The Escort will certainly now be much easier to spot on a stage, so I feel a certain amount of pressure to make sure the driving lives up to the livery. **Henry Catchpole**

(@HenryCatchpole)

Volkswagen Golf R

Freshly beaten by the Focus RS, our Golf R demonstrates where it still has the upper hand



of choice. As you'll know if you read Henry Catchpole's group test last month, the Golf R was dethroned by the new Ford Focus RS (although the VW did save face by taking care of its more expensive in-house rival, the Audi RS3).

As a Golf R driver (and apologist) I was, of course, furious. How could Catchpole have got it so wrong? I can only assume the thin Montserrat mountain air starved his brain of oxygen and affected his judgement. A Ford? Please...

In all seriousness, I have driven the Focus RS and I reckon it's probably the right decision. I wasn't on the group test myself, so I'll wait until I've driven both cars backto-back on the same roads before reaching my own conclusions, but

the Ford certainly is a very special machine.

Catchpole and photographer Aston Parrott shared the Golf R for the monster 2000-mile round-trip to Barcelona. Armed with an iPhone stuffed full of Desert Islands Discs episodes and a glovebox loaded with Haribo, the dynamic duo dispatched each run in a single hit. Catchpole was so full of praise for the R as a long-distance device, in fact, that I reckoned I'd struggle to get the keys back upon his return.

Would the Focus RS have been so amenable over such a long journey? Will it prove to be as effective as a daily driver as the Volkswagen? Having now covered so many miles in the Golf R. I would be stunned if the Ford manages to match it in this regard.

Although they look like direct rivals on paper, I wonder just how



much crossover there'll be between Focus RS and Golf R buyer groups. I could well imagine certain Ford buyers thinking the VW deathly dull, and some of the Golf R crowd reckoning the RS to be decidedly low-rent. 🛛

Dan Prosser (@TheDanProsser)

September 2015
11,234
3988
£0
31.3



Ford Focus ST TDCi Estate

Bags of torque but not enough traction means new rubber for our diesel

Date acquired	August 2015
Total mileage	13,610
Mileage this month	552
Costs this month	TBC
mpg this month	43.0



THE ST HAS PUT IN A LOT of miles recently. So many, in fact. that it was due a

service. Ford's press office offered to take care of the work, and thinking I could kill two birds with one stone. I also asked if they had a winter tyre that I could try out.

I've been running Michelin Pilot Sport 3 summer tyres, which, for the most part, are fantastic. They hold the Focus well in the corners, grip strongly under braking, and are much quieter on the road than Pilot Sport 2s. It's just that, in this cold, damp. British winter weather, the lack of traction in first and second gears is starting to grate on me.

The diesel ST's 2-litre TDCi engine isn't as frantic as the 2-litre turbo four-cylinder EcoBoost unit in the petrol ST, and that's reflected in its performance figures. The petrol engine produces 247bhp and

Ford Focus ST TDCi Estate

265lb ft, giving 0-62mph in 6.7sec (6.5sec if you opt for the hatchback rather than the estate). Our diesel has 182bhp, 295lb ft and takes 1.6 seconds longer to reach 62mph. The numbers don't lie. but the diesel still feels quick off the mark and is currently struggling to get the power down when leaving the lights.

Thankfully the guys at Ford said they had some Michelin Pilot Alpins available. These winter tyres should provide better handling in cold conditions and deliver more traction on snow and ice. On snow - not likely now, admittedly - they claim to offer considerably shorter stopping distances than a summer tyre.

I'll let you know the financial damage once the work is done. Hopefully the ST will be better suited to the bad weather and I can get back to enjoying driving it. Sam Riley (@samgriley)

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McLaren 650S Spider

It seems McLaren knows how to build a supercar for use on a daily basis

I WAS ORIGINALLY QUITE hesitant to trade in the McLaren 12C Spider for the 650S Spider. I really wasn't sure the upgrade would be worth the cost, as the 12C was already very, very good.

Eight months in, however, I am delighted I took the plunge. While none of the changes are dramatic, together they add up to a car that is simply that bit better at everything it does. The other bonus has been complete reliability and a noticeable lack of any unexpected mystery warning lights (which are a staple of the Ferrari experience). Even the notorious IRIS infotainment system has yet to throw a tantrum.

In its role as a daily driver, the 650S continues to perform with distinction. The short stretch of highway on my commute is currently being expanded and the construction has left the road surface quite chewed up in places.



While I can see other cars bouncing around, the McLaren's suspension soaks it up. The construction has also resulted in a hairpin ramp that connects two highways being cut to one lane before it drops you right into the flow. Given the tightness of the corner, nearly everyone takes the ramp at 25-30mph, which presents quite a challenge as you need to then merge with traffic moving at 60mph. The 650S handles the turn easily at 50mph, so merging is no problem.

The 650S has also become my

default choice for airport runs and even for smaller supermarket trips. Whoever designed the car's front boot did a great job, as it will easily swallow a cartful of groceries or any bag that will fit in the overhead locker on a plane.

The fairly fruitless search for great driving roads in my part of the States continues, with the 650S getting the majority of the Sunday-morning calls to duty. With the mercury here bouncing all over the place recently, the McLaren's brilliance in both roofup and roof-down configurations has made it an easy choice to take on these drives. In fact, of all the supercars I have used as daily drivers over the years, the 650S is easily my favorite... so far. ■

Secret Supercar Owner (@SupercarOwner)

Date acquired	July 2015
Total mileage	1865
Mileage this month	362
Costs this month	£0
mpg this month	18.5

Skoda Octavia vRS Estate

Skoda Octavia vRS

Our diesel vRS Estate finds another fan

I'VE MADE SO MANY TRIPS to studios to present 'evo Unwrapped' videos this month that I've needed a bigger car to transport camera kit, hence why I'm writing this Octavia vRS report. If you've not seen these videos yet, head to our YouTube channel. The



BMW M4 GTS film is a highlight, not least for the trousers I'm wearing.

Putting my sartorial issues aside, the Skoda has been fantastic. I have to echo regular keeper Stuart Gallagher's observation that it has cavernous interior space. We've transported a huge steady-cam rig, bags of lenses and a rucksack full of cameras, with room to spare.

What I've loved the most, though, are the seats. My MX-5 has gradually been damaging my back, its pedal offset just starting to grind a little on longer journeys. The Skoda is perfect – there's plenty of seat bolstering and you can sit upright and get close to the wheel in real comfort.

The idea of a diesel DSG vRS doesn't appeal to me, as it sounds like it's getting away from what a vRS should be all about, as discussed by Stuart last month. Driving the car shows things to be a little different for me, however. It's smooth, with plenty of torque, and combined with the comfort and space, it feels like a baby Audi Avant. If you're after something functional and fast, why wouldn't you get the diesel vRS estate? The petrol equivalent has more character, but near-50mpg on the motorway is a strong persuader.

Ultimately, the motor is powerful enough, the chassis is firm without being so stiff that comfort is compromised, and the amount of space on offer is remarkable.

Hunter Skipworth (@HunterSkipworth)

Date acquired	October 2015
Total mileage	9466
Mileage this month	632
Costs this month	£0
mpg this month	39.9

209 NVX Subaru Impreza Turbo

It's still going strong, and now it's up for sale. Definitely. Don't miss out...

IT'S A BLOODY STUPID, irrational type of love, this love for cars. I've owned my Subaru Impreza Turbo for just over 14 months, and for 11 of those the car didn't move. Parked outside our office, I looked at it with scorn because it broke down before I even drove it. 'How dare you?' I would say, forgetting that cars are not in fact human but the most extraordinary

mix of metals, fluids, electronics and gears, and the fact that this all coalesces into motion at all is some kind of miracle (especially when the car has done 107,000 miles and has clearly been 'enjoyed' in the past).

Then, behold, last November I poured some Steel Seal into the engine and the Impreza fired up, and stayed fired up - without catching fire. Result. I insured it, taxed it,

replaced the radiator and water pump and then spent three months experiencing a quite intense affair.

Shamefully, I'd forgotten why I bought it, but it all came back. The noise, the suspension fluidity, the torque, the wonderfully neutral handling, the Colin McRae, but ultimately the fact that nothing feels quite like a 'classic' Impreza. And in this day of the increasingly

homogenised driving experience, this was a thing to treasure.

Yes, by now it owed me £3200, and yes, there was some rust over a rear arch, and the bodywork and interior could be best described as 'tatty', but to drive it was magnificent. Boy were we making up for lost time. I got up early on icy mornings. I sought out greasy roundabouts, long sweepers and left-over-crest-maybes.

But it has to go. We have to part ways. That bitch of an air-cooled 911 needs my attention. And despite the pure joy I've experienced slithering about in the Impreza, the 911 is my first and oldest love and it needs me back. Well, it needs my wallet back.

For sale. One deeply loved, blue (with gold wheels) Impreza Turbo. Taxed and MOT'd. £2000. Sob. 🛛 Nick Trott (@evoNickTrott)

Date acquired	January 2015
Total mileage	107,661
Mileage this month	611
Costs this month	£0
mpg this month	n/a

Porsche 911 SC

Porsche 911 SC

And here's where the Scooby sale funds will go



THE SC ENGINE REBUILD continues. To recap, six bent exhaust valves last year meant an engine-out rebuild -

and of course an excuse to improve performance. The aim is to make the existing 3-litre unit the best it can be without increasing displacement.

The first job has been to 'flow', or 'boat-tail', the case. Much is made of flowing the cylinder heads, but if gases can move freely deep down in the case. then further efficiencies can be found. 'As the piston travels back down the barrel, the air it displaces has to move within the case, so flowing aids this,' explained RPM Technik's technical chief, Ollie Preston. There is a word of warning,

though. The webs that are flowed contribute to the strength of the case. Go too far with the flowing and they can crack. 'You really cannot overdo it,' said Preston, 'so we always make sure we hand finish.'

Continuing the 'breathing' theme, I asked RPM to look into my SSI exhaust system to check that it's in good nick and is the best option when combined with the other mods. The car was fitted with this system when I bought it.

The answer was a resounding 'yes', thankfully. 'The SSI exhaust and heat exchangers are like the early 911 system,' explained Preston, 'and they basically get rid of the pre-silencer at the side. The key benefits are a freer flowing exhaust, less weight, and a better sound. They're also stainless.'

I'm starting to get an idea of the parts I may need to complete the rebuild. It's quite a list, but there's no point in scrimping at this stage because I don't want to crack open the engine again, so it looks like I'll need gasket sets, plugs, air and oil



filters, exhaust guides, piston rings and possibly inlet guides, cams and rocker arms. And even if valves aren't bent, they often need replacing due to wear on the stems. 'This is pretty much the norm,' explained Preston. Lastly, as the engine build

continues, for some stupid reason I find myself thinking more about the SC's exterior. In that respect, does anyone know a good bodyshop with experience of Porsches? Nick Trott (@evoNickTrott)



Above: the cylinder case before (left) and after the webs were 'boat-tailed' for smoother air movement

Date acquired	March 2014
Total mileage	90,993
Mileage this month	0
Costs this month	TBC
mpg this month	n/a

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BG RACING BILLET CAMBER/CASTOR BUBBLE GAUGE £155.99 b-gdirect.com This BG Racing gauge uses spirit-leveltype gauges to measure your camber and castor. It's made from billet aluminium and looks and feels like a top-quality item. The bubble gauge doesn't provide the most accurate reading, but it's enough to be able to match the angles on each side. However, the gauge can only really be used in conjunction with a lot of other bits

of equipment that BG Racing also sells.

As the gauge mounts to the wheel with

magnets, it doesn't attach itself onto

mount to support the car rather than the wheels, so you could attach the gauge to the steel hub. To measure castor, you need to turn the wheel exactly 20 degrees. Not the steering wheel, but the actual wheels. For this you'll need some turn plates for the wheels to sit on, too. It's a great item to add to an already

most alloy wheels. Ideally, you'd use a hub

It's a great item to add to an already well-equipped workshop, but not that useful for your average trackday punter. **Will Beaumont** (@WillBeaumont)



AUTOGLYM INTERIOR SHAMPOO

£7.29 autoglym.com Despite my best efforts, I still managed to get oily fingerprints on my roof lining. I wore brand-new gloves but still picked up dirt from somewhere and transferred it onto the off-white lining. The felt-like material seemed to absorb the grime and I thought the lining was ruined.

A few sprays of Autoglym's Interior Shampoo, though, and all my worries were gone. It didn't require much elbow grease either: a spray, a light brush, a wipe with a damp cloth and the oily marks were gone. It didn't quite get rid of all of the stains: some of the marks that have been there for years won't disappear, but they're now no longer as obvious. **WB**





3M SCOTCH WATER-RESISTANT BLUE MASKING TAPE

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You may have heard it called 'scene tape'. It's the blue masking tape you see adorning the fronts of cars being driven to shows. Or plastered all over the wide arches of immaculately restored Californian long-hood 911s that occasionally take to the track.

I've been using it to surround any area of my BMW 2002 I've been working on. My biggest fear is slipping with a screwdriver or dropping a bit of trim onto my new paintwork. The tape has a spongy feel to it, which helps absorb any impacts. It's also much harder to tear than normal masking tape – only slightly inconvenient when grabbing a new length, but brilliant at resisting being torn by sharp objects. It has a low-tack adhesive, so it doesn't leave any nasty residue behind once you've removed it. I can now relax when working on my car. **WB**

'MASERATI – ALL THE CARS' €18 giorgionadaeditore.it

If you've ever doubted the concept of 'car as art', Gianni Cancellieri's book might convince you otherwise. Partly because Maserati has created a great many cars in the past that, if mounted on a plinth, could pass for art at the most stringent of galleries, and partly because every page features a wonderful profile illustration (by Michele Leonello) of the cars.

There's detailed technical data, too, and a summary of each car's story. Every car is covered, from the 1926 'Tipo 26' to the Alfieri and Levante concepts, and even outliers such as the 1967 Cooper-Maserati, and Citroën's glorious SM. **Antony Ingram** (@evoAntony)





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Year: 2012 Mileage: 7,700



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VB Vantage

£45,850 Year: 2007 Mileage: 32,600



Year: 2007 Mileage: 31,980



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Market

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ANALYSIS: NEW-ERA ASTON MARTINS

The 'VH' era is one of Aston's strongest. Here's why now is the time to get a part of that legacy by Adam Towler **HE 'VH' PLATFORM THAT HAS** underpinned almost every production Aston Martin since 2004 is evolving once again with the recently revealed DB11. In various forms the platform has spanned almost the entire Ulrich Bez era, and during this period there have been some fine cars and more specifically some outstanding Aston Martins – and they may just be more affordable than you think.

If we discount the original Vanquish for being the bridge between the old and new worlds, then the first of the 'Gaydon' cars to consider is the DB9. It's easy to forget what a sensation this V12-engined GT created back in 2004, but in its smooth form lies the genome of all the Bez-era Aston Martins. That's arguably something that will play in the car's favour as the years go by, for while its spoiler- and carbonfibre-free bodywork is more subtle than anything that has come along since, it also gives the car a timeless appeal. Decent examples have certainly stopped depreciating, and some experts will argue they're on a gentle rise. It's not easy to find something worth buying below £40,000, while later, 2009MY-on cars, with 470bhp (up from 450) and various other changes, start at around £55,000. The latest, 2013MY-on version, with 510bhp, begins around £90,000

The DB9's little brother, the V8 Vantage, arrived in 2005 and caused grown men to sigh pathetically with its handsome, chiselled design. They tend to be hardy things, and save for the electrolytic corrosion issues that

'We may well be seeing a slice of motoring history slip away'



affect the VH cars with age, they're a reasonably safe bet. The market for these seems to be fairly static at the moment, which is good news because you should be able to own one for a while and get back at least what you paid for it. Decent early V8s start at £35,000 - considerably more than the equivalent Porsche 997 Carrera S. As a rule of thumb, the best early 4.3-litre cars reach into the £40,000 bracket, then nice 2009 4.7-litre cars are in the high-£40,000 region; the N400 special edition can command even more, but our experts are split on whether it's worth the extra over a decent 4.7. The Vantage S is a considerable leap upwards, costing more than £60,000. And as for the ultimate Vantage, the V12 (and Sportshift V12 S), there are plenty of signs this will be very sought after in the future. Just consider the combination of glorious good looks, a large naturally aspirated V12 in a small car, and a stick and three pedals to change gear with. One day the £80,000 entry fee will seem laughably cheap.

The DBS was the first of the VH cars to suffer from a form of identity crisis. Ostensibly a spiritual successor to the original Vanquish, but in reality more like a DB9 GT and then some, the early manual-gearbox versions are tipped by some to be future classics. Whatever the reality, these supercoupes are deeply loveable things and also have that James Bond factor, which won't do values any harm in the future. Black and the Bond-spec grey are popular colours, with later auto 'box cars also keenly sought after. Specialists such

Above: DB9's simple lines are preferable to the DBS's beefed-up stance to many. Above right: V12 Vantage set for collector status. Below: early DB9 put out a healthy 450bhp



NOW BUY ONE

DB9 £47,950

A 2007MY DB9 registered in 2006, this attractive example is finished in specialorder Mendip Blue with a Sandstorm and Caspian Blue interior. Just 20,600 miles recorded, and options include the Linn 950W hi-fi system, although there's always the VI2 to listen to as well...

nicholasmee.co.uk 02087418822



V8 VANTAGE ROADSTER £45,850

This Onyx Black Roadster was registered in late 2007 but is to 2008MY spec. It's a 4.3-litre car with the Sportshift auto 'box, as many Roadsters were so configured. This one has done 32,600 miles and has been sold by McGurk in the past. Extras include 19-inch allovs.

> mcgurk.com 01926 691000



DBS £89,995

A Lightning Silver DBS with black aniline leather interior and Alcantara headlining. This rare manual car looks very striking with its 20-inch wheels finished in titanium. It has recorded just 13,000 miles since first registration in 2009, and has a full Aston Martin dealer service history.

bhpmsport.com 08452241968



RAPIDE S £89,950

A 2013 Rapide S on a 63 plate, this example is finished in Lightning Silver with an Obsidian Black leather interior. It has just 4500 miles showing and benefits from an Aston Martin warranty until October of this year. It also has the rear-seat entertainment package fitted.

> romansinternational.com 01737 749415





as McGurk Performance Cars (see Expert View) report that supplies are currently limited, with values starting at £80,000.

The short-lived Virage of 2011 was arguably a VH car too far, but it does have a following. Values have remained static over the past couple of years, with prices similar to those of 2013 DB9s. It's the look of a new DB9 for a lot less money.

And the Rapide? Like most big. luxurious four-door cars, the limothat-isn't-really has suffered chronic depreciation. Whatever you think about the design, noise, performance or dynamics of the Rapide and Rapide S – and they're all very palatable - it simply isn't very good at carrying four adults in comfort. However, view the car as a highperformance 2+2 GT, perhaps for a family with two young children, and suddenly it makes sense, offering more driver appeal than most Porsche Panameras, let alone a diesel S-class. Suddenly, £60,000 for an early Rapide looks tempting.

SUMMARY

The oft-heard jibe that all Astons from this era look the same could one day be replaced with flowery prose about how this was a glorious time for the marque. Certainly, the company made many more cars than ever before. Many models crossover in value, too, so it's about considering what you want to use the car for, and what it is about it that you find special.

'There are no turbos here - these cars are a dying breed,' laments Aston specialist Nicholas Mee, and viewed as such we may well be seeing a slice of motoring history slip away right from underneath our noses.

From the howl of the Vantage's boisterous V8 to the crackle of the fabulous V12 on the overrun, whatever criticisms can be levelled at these cars, a lack of an emotive aura isn't one. For that reason alone, and with values stable or on the rise, now may be just the right time to become an Aston Martin owner.

Expert view



'The V8 Vantage is currently a lot of car for the money. The V12 Vantage, meanwhile, I call "the quickest 200mph hatchback", and there are not many V12s you can crawl around town in but then be as quick as you'd ever need in the real world. They're £75,000-plus now, although the S is still coming down a bit.

'The DB9 had a gradual evolution over the years. I think one day it'll be down to what people prefer: some will want the early type for the design, others the late cars.

'The DBS commands £80.000 and upwards now. While the manuals are sought after, plenty want the auto.' nicholasmee.co.uk 0208 7418822



Aston Martin specialist

'People are now realising the DB9 is a beautiful car, and we're seeing a slight increase in value for them five per cent last year, but only for the good cars. It's quite a reliable car; only silly things go wrong.

'Good early V8 Vantages start at £35,000 and they're selling like hot cakes at the moment - we can't get enough of them.

'The DBS has great residuals they're £80.000 and upwards now - but there's a lack of choice on the market. I'm a big fan of the Virage, and values have remained static for a couple of years, but the Rapide is the hottest car on the market: they're great value, and one to watch.' mcgurk.com 01926 691000

OPINION

'I BOUGHT ONE'

CHRIS STERN

V8 Vantage Roadster & DBS

'I had a V8 Vantage Roadster for four years and took the mileage up to 70,000; I've now got a DBS. I use it every day - what a joy! On a run I get the same mpg from the DBS as the V8, but I get much less around town. It's awesome.'

THE SPECIALIST

BRYAN McMORRAN

Aston Martin specialist

'I think there will be renewed interested in the VH cars with the launch of the DB11. The V8 Vantage has pretty much bottomed out - I can't see them getting to old Boxster money. DBS manuals and V12 Vantage manuals are the two to really watch.'

EVO ROAD TESTER

STUART GALLAGHER

The DBS is hard to ignore, for that V12 and the blend of Vanquish exclusivity and DB9 civility. Using a Rapide as a 2+2 GT appeals; for the money there is no better-looking saloon. But it's the V8 Vantage that offers so much for so little. A 911 may be more resolved but we'll have a 4.7 V8 please.



THE PERFECT **EVOLUTION II?**

Last month a Mercedes 190E 2.5-16 Evolution II sold at auction for an astonishing £292,500. The Evo II was the most extreme road-going 190E that Mercedes built and, as with the Evo I, only 502 were made. This example had covered just 1723 miles and Silverstone Auctions described it as 'the best Evo II we have ever seen!



BMW'S EU CONCERN

BMW has written to the employees at its Rolls-Royce and Mini factories to warn them of the possible effects of Britain leaving the European Union. On June 23 there will be a referendum on whether the UK should remain in the EU. BMW fears that, without a free movement of people within the EU, knowledge transfer within its business could be affected.



PETER VARDY **BRANCHES OUT**

Peter Vardy, the Scottish car dealer group, has launched a new dealership specialising in classic cars. Based in County Durham, it is called Peter Vardy Heritage and carries the tagline 'iconic investments'. Its current stock includes classic Porsches, Lancias and – the margue the Peter Vardy group is best known for - Jaguars.



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USED RIVALS: SIX-CYLINDER SPORTS COUPES

by Adam Towler



HONDA NSX

Engine	V6, 3179cc
Power	276bhp @ 7300rpm
Torque	2241b ft @ 5300rpm
Weight	1410kg (196bhp/ton)
0-60mph	5.5sec (claimed)
Top speed	168mph (claimed)
On sale	1997-2005 (266bhp 3.0 engine until 1997)
evo rating	****

'I BOUGHT ONE

'I've currently got three Honda NSXs, and have owned six in total. I've bought and run many different cars apart from these Hondas, but I've still never driven anything that matches the NSX for pure driving pleasure. I've never had any problems with them, either, and there really is nothing I dislike.' **Neil Shaw**

'Values have been appreciating strongly over the

past three years, but a good NSX is still much better

value than the equivalent Ferrari - and you can use

it whenever you like without fear it's going to break

down or rot away. While basic servicing is not dear.

NSX-only parts can be expensive. £1000 per year to

run is realistic. Beware accident damage and watch

Graham Horgan, plansperformance.com

the provenance of imported cars."



BUYING

ADVICE

Private sale Pop-up headlights and the 3.2-litre engine. Manual transmission with 37,700 miles on the clock

2000 £65,000

every time.' Paul Southouse

Strasse A C4S in silver with a grey leather interior. In desirable coupe/manual-

Three distinct coupes from the early

2000s, each with its naturally

aspirated six-cylinder engine in a

different configuration and location: vee, flat

There's no denying the appeal of the NSX's

VTEC V6, or its superlative gearchange.

Rising prices reflect that. Earlier examples,

with the pop-up lights, are more plentiful

than later, fixed-light cars (2002-2005).

PORSCHE 996 CARRERA 4S

'A friend lent me his Boxster S for six months, and

after that I just had to have a Porsche in my life. My

Flat-six, 3596cc

316bhp @ 6800rpm

273lb ft @ 4250cpm

1495kg (218bhp/ton)

5.1sec (claimed)

174mph (claimed)

2002-2004 ****

and in-line; mid, rear and front.

'These are fantastic cars, and offer unbeatable value for money given the performance and driving experience. There are a few well-documented engine issues, and our best advice is to assume vou'll need to do something one day, so keep a slush fund available in case. They were expensive new, and do cost money to run. Eventually a suspension refresh is worthwhile but all in all they are terrific.' Grant Pritchard, hartech.org

996 C4S has done 115,000 miles but the engine just amazing response from other road users - thumbs sings. I've tracked it and toured in it. It wants to be up and so on. It's tiny, and feels almost like a toy driven hard all the time and there's so much traction. car from inside. It feels very connected to drive. This or my Aston Martin V8 Vantage? The Porsche Everything is very precise, and the engine has a lovely rasp.' Alex Read



gearbox configuration

2002 £27,995 **Munich Legends**

A Sapphire Black car with the S54 engine and 92k miles - described as being in 'excellent mechanical order'.

'Look for VANOS oil leaks and big-end bearing wear on the engines. Most have the earlier S50 engine; S54s are rare. The rear diff mounting bracket breaks, and rear subframe bushes wear out. Windows sometimes iam and a rattle is often heard from the rear damper top mounts. It can be hard to get comfortable in these cars, and watch out for accident damage too'

Jags Bhamra, bmsport.com

THE EVO

CHOICE

This was an impossible decision in the evo office. We could build a strong case for each of the three: the NSX for its iconic status and brilliance, the Carrera 4S because it is the best 996 this side of a GT3, and the M Coupe because it's fantastically bonkers and a true one-off.

In this company the 996 plays it safe. It's the most predictable package and you know exactly what you are getting: a car that's incredibly well supported in the specialist network, ticks every driver's box and will always be in demand. And despite its looks, the M Coupe would slip into your

life as easily as the Porsche for similar reasons (bar the last, perhaps). The NSX would take the biggest leap of faith in terms of running costs and maintenance, which would need some careful planning, but it's the most special of the trio and gets the evo nod. Stuart Gallagher

The 996 is a more familiar sight, with plenty now in 'bargain Porsche' territory. However, the Carrera 4S, with its widearched Turbo body and four-wheel drive, has always been sought after; drive one and you'll realise why this car was so lauded when new.

The M Coupe is the real oddball here, a mix of relatively crude underpinnings, weird styling and a hardcore engine. Love it or loathe it, it's an unforgettable experience.

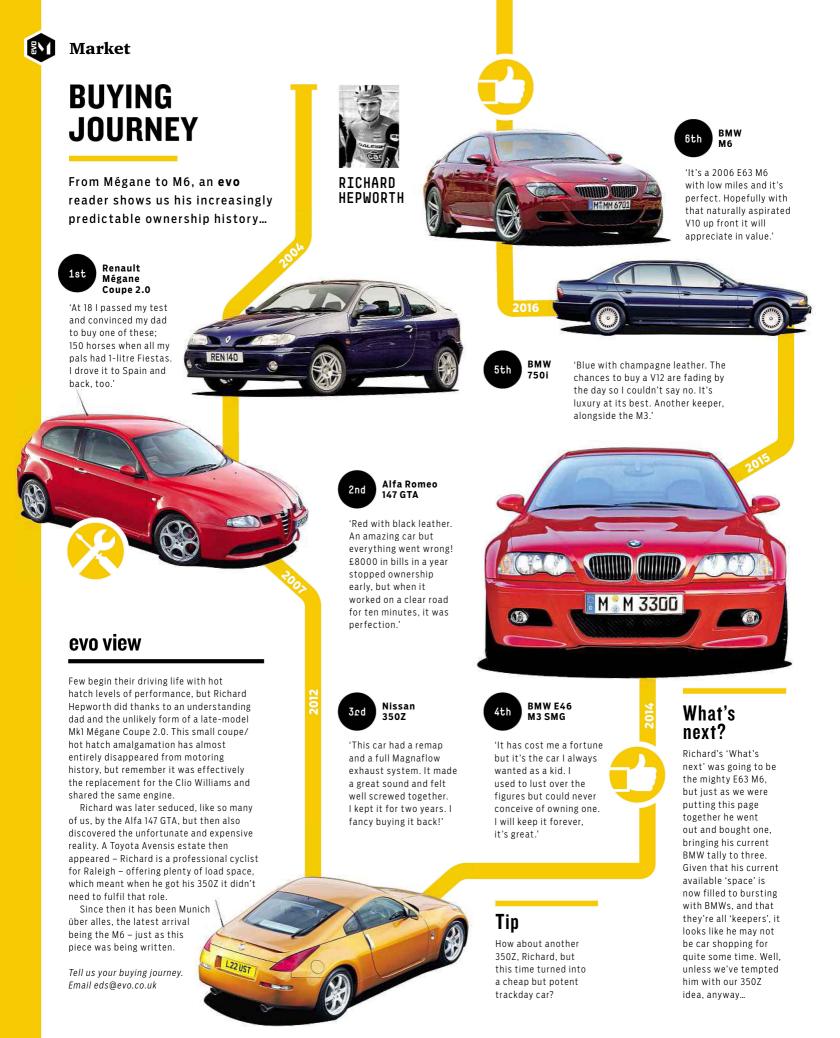


BMW M COUPE

In-line 6-cyl, 3246cc ('S54' engine)
321bhp @ 7400rpm
258lb ft @ 4900rpm
1375kg (237bhp/ton)
5.3sec (claimed)
155mph (limited)
1998-2002 (317bhp 3201cc'S50' until 2000)
★★★★☆

'I have a low-mileage S50-engined car in black. I've never seen another one on the road, and you get an

153





BUYING GUIDE: FORD FIESTA ST 2005-2008

The Mk6 Fiesta ST is a corking little hat h – but only when you unlock its potential by Peter Tomalin

WEN FORD ADMITTED IT. THE FIESTA ST – as launched at the back end of 2004 – wasn't the car that people like us had been hoping for. In ST150 form, with its 2-litre engine pegged at 148bhp (150PS) to make it insurable for young drivers, and a chassis short on real flair, it was a decent hot(ish) hatch but no match for a contemporary Cooper S or Clio Cup. As John Barker wrote in **evo** 075, the standard ST was a 'missed opportunity'.

This was a shame, because we'd waited a long time for a new go-faster Fiesta. It looked great, too, with its 17in multi-spoke alloys and subtle bodykit, and for £13,595 you got plenty of kit, including half-leather, a six-CD hi-fi, switchable ESP and air con. Full leather was an extra £700, metallic paint £325, and a full set of stripes another £200.

Underneath was the then-new 2-litre Duratec also found in the Mondeo and Focus, with freerflowing inlet and exhaust manifolds and a lightened flywheel. Peak power came at 6000rpm, and it went to the front wheels via a close-ratio five-speed 'box, giving 0-60mph in 7.9sec and 129mph all-in. Chassis changes included stiffer front springs, a stiffer rear twist-beam, retuned dampers, discs all round (rear discs being a first on a Fiesta), and a quicker steering rack.

Alas, the ST was something less than the sum of its parts, and Ford acknowledged as much when it quickly revealed a raft of aftermarket upgrades developed by Mountune. Stage 1 - improved breathing and a sports exhaust – gave 165bhp; Stage 2 added high-lift cams for a properly punchy 185bhp, Stage 3 brought a new inlet manifold and 200bhp. There were lower and stiffer KW coilovers, developed at the Ring, and some rather fine Recaros. All were available through selected Ford dealers and, except for the ST200, wouldn't affect the warranty. We tried a 185 and found the ST transformed (see 'What we said').

E005 WLJ

In time other tuners offered their own upgrades. There's a wealth of information on the best of these on the ST dedicated forums. Variant-wise, November 2005 saw a facelift with new lights, better interior plastics and some extra toys, while the ST500 was a limited edition (of 500) with black 11-spoke alloys, red calipers, special graphics, ebony leather heated seats and a Sony hi-fi.

CHECKPOINTS

ENGINE

Our guide to the ST is Ben Hayes, general manager of fast Ford specialist Jam-Sport, and his first piece of advice is not to be put off by modified cars; most STs have had some sort of aftermarket upgrades, even if it's just a cold-air induction kit. And if you do find an unmolested example, you'll almost certainly want to modify it

anyway. Without going to forced induction. 185bhp is easily attained with cams and a remap, while adding a Cosworth inlet manifold gives around 200bhp. The Duratec takes these sort of outputs in its stride. 'Supercharging is OK up to 300bhp because of its linear delivery,' says Ben, 'but with a turbo we cap the power at around 260bhp, otherwise you

really need new pistons and rods.'

Mechanically, STs are basically sound, but upping the power – and driving them hard – can expose weak points. 'The biggest problem is oil starvation,' says Ben. 'Ultimately you get bigend failures. There's not much you can do apart from keeping the oil topped up.' So ascertain that the oil has been checked regularly and changed at least annually – Ben recommends every 6000 miles.

TRANSMISSION

'Probably the most common issue we see with the ST is the transmission,' says Ben. 'Because it's an open diff, where the planetary gears are mounted on the pinions there's only a very small circlip to hold them, and these clips tend to fail... The result can be a nice big hole in the side of the casing. One minute it's fine, the next, bang.'

A reconditioned gearbox costs around £540. If you're uprating the engine, a limitedslip diff is highly desirable, with the big bonus of eliminating the weak point (a Quaife diff is currently around £700). The gearshift can feel stiff when cold but should ease as it warms up; if it gets worse, the linkage/ bush may need greasing.

SUSPENSION, Steering, Brakes

'Obviously with the age of the cars now, you're looking at the bushes in the front arms and the rear beam,' says Ben. 'If they're worn it's well worth getting replacements.'



Right: handling on leggier cars will benefit from new suspension bushes. **Bottom:** 2-litre engine can be upgraded well beyond the stock 148bhp







The power-steering fluid should be red – if it's black, it's 'boiled' and needs replacing, but it's a cheap and easy job. If you're doing trackdays, a brake upgrade, usually to a Mondeo caliper with a Focus ST170 disc, is desirable.

BC Racing coilovers are a popular choice for fast road use and the occasional trackday; Bilstein B12s for general road use, and Michelin Pilot Sport 3s are the tyre of choice on standard wheels.

BODY, INTERIOR, Electrics

Some early cars have started to rust, particularly around the wheelarches, so check carefully. The heated front screen elements can start to fail, so that's worth testing (if conditions allow). Check both seats tilt forward as the catches can break.

RIVALS

RENAULTSPORT CLIO 182

The Clio 182 (2004-06) and its Cup sibling (both 180bhp, 0-60mph in 6.5sec, 139mph) was the feistiest hatch of its day. Now from just $\pounds 2k$. Trophy is best of all, but $\pounds 5k$ -plus.

MINI COOPER S

The supercharged Cooper S (2002-06) is a hoot to drive (168bhp, 0-60 in 7.8sec, 135mph) and cuter than a kitten. Four grand buys an '05/'06 car with a full history.

VAUXHALL CORSA VXR

Direct rival for the ST, introduced in 2007 with snazzy looks, plenty of go (189bhp, 0-60mph in 6.8sec, 140mph) and a decent chassis too. Prices start at around £4500.

INFORMATION

FIESTA ST

(ST185 in brack	ST185 in brackets)								
Engine	In-line 4-cyl, 1999cc								
Max power	148Եհր @ 600Օբրm (185Եհր @ 670Օբրm)								
Max torque	140lb ft @ 4500rpm (147lb ft @ 3500rpm)								
Transmission	Five-speed manual, front-wheel drive								
Weight	1137kg								
Power-to- weight	132bhp/ton (165bhp/ton)								
0-60mph	7.9sec [6.9sec]								
Top speed	129mph (130mph+)								
Price new	£13,595 [£16,328]								

PARTS PRICES

Prices from jam-sport.co.uk. Tyre price from blackcircles.com. All prices include VAT but exclude fitting charges.

Tyres (each)	£70.18 (Michelin Pilot Sport 3)
Front pads (set)	£28.92 (Pagid), £154.93 (Ferodo upgrade)
Front discs (pair)	£84.24 (Pagid)
Dampers (set of four)	From £268.64 [aftermarket]
Clutch kit	£324.74 (Helix upgrade)
Exhaust (cat back)	£396.40 (Milltek)
Spark plugs (set)	£32.16 (NGK Iridium)
Air filter	£28.O3 (Ford), induction kit from £99.95
Oil filter	£7.56 (aftermarket)

SERVICING

Prices from jam-sport.co.uk, including VAT. Service at 6000 miles or annually, whichever is sooner.

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 From £129

 Full service
 From £219

From £219

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'I BOUGHT ONE'

ALEX MCCUTCHION

'As soon as insurance became less of an issue, I started to look for something interesting to drive and stumbled across the Fiesta ST. This was about six years ago. I looked at about six before I ended up with a 2005 Performance Blue prefacelift model with around 67,000 miles on the clock.

'In standard guise these cars are a little bit lacklustre. Fortunately I discovered FiestaSTOC and found that with some simple bolt-on mods for the breathing side of things, they free up nicely and transform into a whole different car. Mine ended up with a K&N induction kit, a full Milltek exhaust, AP coilovers, Cosworth Streetmaster front brake pads and a front strut brace, along with some visual mods including a TRC splitter and a finned diffuser.

'It wasn't the quickest car, but it was an absolute dream to drive and would put a smile on my face every time I got behind the wheel. I sold it last August after five years of ownership and having clocked up a further 40,000 miles. It would average around 30mpg quite easily, with this obviously dropping the more you enjoyed it. Not bad, though, for a fun 2-litre hatch.

'I had a few issues with it over the years. The front brake discs kept warping, which turned out to be a warped hub face causing run-out on the discs. The offside front top mount sheared, the cabin flooded due to blocked drain holes in the bulkhead, and the heated front screen stopped fully working, though only the last of these is a common fault on the ST.

'To this day I kind of regret selling mine, as it ticked all the boxes. I replaced it with a Mk6 Zetec S that I bought from a friend at a very good price as I am in the process of buying my first house. Needs must...'





IN THE CLASSIFIEDS

2007 (07) FIESTA ST £3975

91,940 miles, Performance Blue, white side stripes, white alloys, half leather, sports exhaust, service history junction17cars.co.uk



2007 (57) FIESTA ST £4685

58,100 miles, Performance Blue, half leather, Bluetooth kit, heated door mirrors, aluminium scuff plates, service history **perrys.co.uk**



2008 (08) FIESTA ST £6250

42,942 miles, Frozen White, blue side stripes, half leather (black with blue inserts), two owners, full service history (seven stamps) parkwaymotorgroup.co.uk



WHAT WE SAID



STI50 DRIVEN, JAN 2005

'There is no shortage of traction or cornering grip and, like the best Ford chassis, the Fiesta is essentially benign. Pile into a tight corner, back off sharply and the rear is reluctant to edge out by more than a few degrees. That's with ESP switched off; left on, the Fiesta won't budge from its line.

'But this isn't a chassis that flows, the odd bump unsettling its poise while the wooliness on turn-in and the lack of steering feedback are dissatisfying. The engine isn't a source of joy either. Coarse and characterless, it labours up through the mid-range and you find yourself at the red line wondering what happened to the sweet-spot where it comes alive.' – **evo** 075

ST185 ROAD TEST, FEB 2008

'For the first handful of miles, the ST185 feels quick but less than spectacular. Press a little harder and it not only starts to sound different – loud and rude – it climbs on cam and hauls tarmac in an altogether more serious style, scything through four, five and six thousand revs.

'The 185 feels harder-edged, more precise and more physical, with modest body-roll and keen turn-in. The quality of the steering is a real bonus, complementing a peachy chassis balance: shut down the power on the limit mid-bend and you get to apply a tweak of corrective lock. It's a good deal of fun.' – **evo** 114

WHAT TO PAY



Privately advertised '05/'06 cars with average to high miles and at least some service history start at £2500, rising to £3000 for lower mileage examples with full histories and higher spec (full leather, etc). £3000 is also the starting point for early cars from dealers. £4000 gives you a good choice of '06/'07 cars with low miles and the right sort of upgrades. £4000-5000 brings in '07/'08 cars, while £6000 buys the very best 2008 cars with low miles and impeccable provenance.



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The reliable and stylish hatchback-cum-coupe Golf alternative, available with up to 276bhp by Adam Towler



OLKSWAGEN'S SCIROCCO OF 2008 revived a much-loved nameplate. Like those earlier Sciroccos of the 1970s and 1980s and the Corrado in between, it used the Golf hatchback as a basis, sacrificing some practicality for coupe style.

Built on the PQ35 platform used for the Mk5 Golf, the Scirocco was launched with the familiar 2-litre TSI turbo petrol engine and 197bhp. Diesels soon arrived, in 138bhp and 168bhp forms, and in due course so did an entry-level 1.4-litre petrol engine. The 1.4 could be had as a straightforward turbo engine with 121bhp, or with 158bhp courtesy of a turbo *and* a supercharger. The 2-litre TSI GT was soon upgraded to 207bhp, and more recently, in 2014, to 217bhp, with considerably more torque. At the same time a 2-litre, 178bhp car replaced the 158bhp model, and the diesels were now 148bhp and 182bhp. An R-line trim had already appeared above the GT in 2012, and a bestriped GTS (pictured bottom right) sat above that.

Perhaps the biggest draw for **evo** readers was the launch of the R in 2009. This shared an engine with the Mk6 Golf R but did without the fourwheel-drive system. For the 2014 facelift, power increased from 261bhp to 276bhp.

The cheapest Sciroccos start at around £7000, which can be for either an early 1.4-litre turbo or a very high-mileage 2-litre GT. The rarer, 158bhp car tends to begin at £8500, while an early but low-mileage 2-litre GT will be around £9000, with £15,000 getting a nice three-year-old example.

The earliest Rs have now dipped to £14,000, but £17,000 nets a 61-plate car with 30,000 miles. Expect to pay £20,000 for a three-year-old R, and £25,000 for a very low-mileage facelifted example.



Expert view

ALEX ROGERS at MAUNDRELL & CO maundrells.co.uk 01235 762033

'If we were going to buy one for stock, it'd be the R. The values of the GT fall faster, but we'd definitely take those in part-ex. With an R, the bucket seats are good to see, and the blue exterior paint sells well. As long as there's a good service history it should be a great purchase; they're really good value for money. The cars with the DSG gearboxes are more desirable, and hold their value better – I prefer them for the usability they offer. The Scirocco Rs tend to be a bit cheaper than the equivalent Golf Rs, but then they don't have the benefit of four-wheel drive. For under £20,000 it's a really compelling buy.'

SIMON METCALF at TC GARAGE tcgarage.com 01342 718556

'We replace a lot of the rear spring arm bushes. VW will only supply the bush with the whole arm, for £77, but we cut out the old one and fit a SuperPro poly bush at £52 for the pair. It's the same with the front arm bushes. They last longer, and the car feels more direct. Other than that, there are very few problems with these cars, and we see virtually none with any running issues. The DFI petrol engines can occasionally require a port clean, which we do in situ, and the tappet on the fuel pump can sometimes need replacing. DSG gearboxes are fine – it's when they don't have the 40,000-mile oil change that you'll get trouble.'



'I had a Polo at 17, then bought an Astra but missed owning a VW. I looked at Mk5 Golf GTIs, but the Scirocco seemed to make the threedoor Golf redundant, so I bought my first one, a 2-litre TSI GT, just over three years ago. I tried a DSG car and really liked it. It's perfect with the Adaptive Chassis Control as you can set that to Comfort and use the automatic 'box in traffic, then select Sport for the chassis and use the paddles when you want to *drive*.

'I fitted 19-inch wheels to it, but it then looked too high, so I also gave it new suspension and finally a remap up to 260bhp. These made it feel like a completely different car.

'I'd always wanted an R, though, and when one of the local Scirocco owners that I meet up with decided to sell his, I had to have it. It's an unusual Midnight Blue colour and had been lowered on coilovers, but I raised it up a bit to improve the ride, and it has been remapped to about 310bhp. I put the standard R exhaust back on as I love the factory sound, especially the pop when you change gear with the DSG 'box.

'Apart from two coil packs on the GT, I've had no issues with either Scirocco. There's also a really good community around these cars.'







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Car outgunned by newer machinery? Then take a look at the latest options to upgrade and improve it **by Antony Ingram**

S O, THAT FOCUS RS IS QUITE SOME CAR, isn't it? Gee whizz, those Focus ST owners must be feeling glum right now. For a few quid more a month they'd have got an extra pair of driven wheels, a bigger engine, more power...

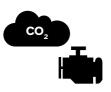
Luckily, Essex-based Ford specialist Mountune has a solution: £1195 (plus fitting) gets you the MP275 package. A high-flow intercooler, induction kit and ECU remap increase power from 247bhp to 271bhp, and torque rises by 30lb ft to 295lb ft. We drove the much-improved results in issue 215.

Mountune also sells a billet short-shift kit for the ST, which shortens the slightly baggy standard shift by 25 per cent. It's £159 from mountunestore.com. A Quaife ATB helical limitedslip diff (£726 from Mountune, excluding fitting) should help fix the Ford's unruly front axle, too. Not quite an RS perhaps, but closer than before.

Aftermarket news



GT86/BRZ DIFFUSER Keith Charvonia, builder of the Scion FRS (the US version of the Toyota GT86/Subaru BRZ) that won 2015's Scion Tuner Challenge at SEMA, will now sell you his custom diffuser. The £325 aluminium part is compatible with the car's crash beam, but bumper trimming is required.



RACERS KEPT CLEAN Building a racer based on a road car has just become more difficult in the US due to the Environmental Protection Agency. Clarified rules state that it's illegal to remove emissions controls from a car, even if converting it for racing. This could have big implications for dozens of series.



BRABUS G500 Lily-gilding specialist Brabus has revealed its latest power package for the Mercedes G500. The B40-500 PowerXtra upgrade takes the 4-litre twin-turbocharged V8 to 493bhp from 416bhp. Torque jumps 73lb ft to 523lb ft. The 0-62mph sprint takes 6.9sec while top speed is 130mph.



EAGLE SPYDER GT Renowned E-type builder Eagle has unveiled its latest car. The Spyder GT is broadly similar to the well-known Speedster, but with a taller windscreen and retractable hood for weather protection. Power comes from the Low Drag GT's 345bhp 4.7-litre in-line six.

NEXT MONTH

ANALYSIS Has the supercar market stumbled? The Secret Supercar Owner gives his view.

USED RIVALS Big-power super-saloons: Audi C6 RS6 takes on BMW's E60 M5 and the W212 Mercedes E63 AMG.

BUYING GUIDE Aston Martin Rapide: the quirky four-door V12 Aston that's a bargain super-GT car.

MODEL FOCUS

Ferrari FF: the low-down on the first four-seat, four-wheel-drive Ferrari's pre-owned performance.

'Why I've kept it'

NEIL MASON

MERCEDES C43 AMG ESTATE



I'll always remember 2001. It was the year I got a job that paid a decent enough salary for me to buy my first house and spend the rest on a three-year-old Mercedes C43 AMG Estate. The car repayments were more expensive than my mortgage but I thought the C43 would provide better entertainment than anything shown on the 48-inch TV my mates said I should buy.

'Why an estate? It was the only C43 for sale at my nearest Mercedes dealer and I wanted the security of an approved warranty. And the estate looked cooler.

'In the 15 years I've owned the car, the engine has needed nothing but regular oil and spark plug services, but the gearbox has required more attention – I have the filter and fluid changed every year. The first time I replaced the brakes using OEM parts I nearly fainted at the cost, and that's what led me into the specialist network. The knowledge and expertise available to keep the car running on budget is second to none.

'Rust attacked the rear arches three years ago, when the thought of trading the C43 for a C55 surfaced. But after looking for one, the cost to change was similar to what I paid for the C43 all those years ago, so I decided to invest in the C43's bodywork and since then I've set aside £1000 a year for any additional work above the regular servicing, which is less than £500 a year. There are also a few practical reasons why I've kept it: two further house moves, a wedding and two kids.

'The Merc is now our family car. I've got a Golf GTD company car and have just bought a tatty MkI Elise with my brother that we plan to restore and use for trackdays and road-trips, leaving the Merc to be the faithful family wagon.'

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- 19	995	FERRARI 512M LHD Rosso/Black, E/Windows, 1 Of Only 501, 14,600m, Great Condition	£239,950
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- 19		FERRARI TESTAROSSA Rosso/Black Daytona Seats With Rosso Inserts, E/Windows, 1 Of Only 438RHD UK Cars, 23,000m FFSH, Immaculate Condition Throughout	
- 19	991	FERRARI TESTAROSSA Argento Nurburgring/Black, E/Windows, 1 Of Only 438 RHD UK Cars, 2 Owners, 41,000m FSH	£139,950
- 19	983	LAMBORGHINI JALPA P350 TARGA Red/Cream, 1 Of 35 RHD, Featured In Many Articles, Original Tools, Books & Spare Wheels, Award-Winning Example, 40,000m	£109,950
- 19	973	LAMBORGHINI URRACO P250 Orange/Cream & Orange, Extensive History File, Very Rare RHD, UK Supplied, 24,000m, Concours Condition	£99,950
- 19	958	MERCEDES-BENZ 190SL LHD White/Black, Hardtop, Comes With Service Book & History File, 1 Of Only 3 Cars Originally Imported To Greece, 54,000m	£114,950
19		RANGE ROVER 2 DOOR White/Beige Interior, Nut & Bolt Restoration With Invoices Totaling Over £60,000, 28,000m, 2 Owners, Beautiful	
F	EE	RRARI & LAMBORGHINI	
13	3	FF Canna Di Fucile/Charcoal E/Seats, Sat Nav, Carbon Fibre Interior, Rear DVDs, R'Camera, Privacy, Shields, 20" Dark Painted Alloys, Massive Spec, 8,000m FSH	£174,950
0	7	599 GTB FIORANO F1 Blu Tour De France/Crema E/Seats, Carbon Fibre Interior, BOSE, Ceramics, Parking Sensors, Red Calipers, 38,000m FSH, Excellent Condition Throughout	£99,950
Ľ	1	458 ITALIA Grigio Silverstone/Rosso Hide, Sat Nav, Carbon S/Wheel With LEDs, AFS, Upgraded Hi-Fi, 21" Alloys, Big Spec, 7,900m FSH, As New	£144,950
5	2	575M F1 LHD Nero Daytona/Black E/Daytona Seats, Fiorano Handling Pk, Shields, Carbon Fibre F1 Paddles, 8,000m	
9	7	550 MARANELLO LHD Rosso Corsa/Nero E/Seats, Leather Headlining, 31,500m	£114,950
0	6	F430 SPIDER F1 Nero Daytona/Black H/Seats, Shields, Yellow Calipers, Carbon Rear Moulding, 28,000m FSH, Excellent Condition Throughout	£79,950

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05	CARRERA GT GT Silver/Ascot, Sat Nav, Full Fitted Luggage, Just Serviced, 7,000m, Immaculate Throughout	£550,000
15	991 TURBO PDK Jet Black/Garnet Red, H/Seats, PCM, Phone, Sport Chrono, Turbo S Alloys, Chrome Surrounds, Red Calipers, 3,600m, As New	£112,950
63	991 TURBO 'S' PDK Basalt Black/Natural Red Leather, PCM, Burmester, Sport Chrono, Carbon Interior, Glass Roof, PDC, Massive Spec, 4,000m FSH, As New	£111,950
15	991 CARRERA 7 SPEED MANUAL Rhodium Silver/Espresso Heat & Ventilated Seats, PCM, PDLS, Sports Pipes, Phone, Privacy, 5,000m, As New	£69,950
03	996 GT3 CLUBSPORT Silver/Black Racing Seats, Front & Rear Roll Cage, Air Con, Radio, CD, Special Features, 21,000m, As New	£69,950

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13	CONTINENTAL GTC V8 'MULLINER' Dragon Red/Black Stitched White, Piano Black Veneer, Power Boot, R'Camera, 21" Propeller Alloys, 5,000m, 1 Owner	.£99,950
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08	CONTINENTAL GT SPEED Beluga Black/Black M'Seats, Sat Nav, Bluetooth, Piano Black, Power Boot, Good Spec, 45,000m FSH	£49,950

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06	ASTON MARTIN VANQUISH 'S' 2+2 Onyx Black/Black Hide, Sat Nav, H/Seats, Quilted Headlining, 19,000m, Exceptional Condition	£124,950
61	MERCEDES-BENZ SLS AMG ROADSTER Le Mans Red/Black Designo H/Seats, Comand, Carbon Interior & Exterior Mirrors, Painted Alloys, R'Camera, Huge Spec, 9,800m, As New	£164,950
65	MERCEDES-BENZ AMG GT-S Silver/Black & Red Nappa, Comand, Sports Exhaust, AMG Ride Control, 10 Spoke Alloys, Big Spec	£106,950
16	MERCEDES-BENZ S500 COUPE AMG LINE PREMIUM Palladium Silver/Light Grey Nappa, Comand, Night View, Comfort Pk, Cameras, Delivery Mileage, Cost New £112,000	£89,950
14	MERCEDES-BENZ C63 AMG 507 EDITION Matt Grey/Black, Comand, Harmon Kardon Sound System, R'Camera, Privacy, 19" Matt Black Alloys, 17,000m FSH, As New	£47 ,950
03	MERCEDES-BENZ CLK55 AMG Silver/Black H/Seats, Sunroof, 18" AMG 5 Spoke Alloys, 21,000m, Exceptional Condition	£12,950
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14	RANGE ROVER SPORT 3.0SD HSE DYNAMIC Corris Grey/Black, Sat Nav, Panoramic Roof, Remote Boot, 21" Diamond Turned Alloys, Massive Spec, 28,000m FSH	£57,950

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1968 Italian Job Miura Price: POA I Mileage: 11,800

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This stunning DB6 Volante was sold new by H R Owen and has had only 4 owners since. With extensive and interesting history, this represents a great



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This stunning example has recently benefitted from extensive renovation and improvement, including a Dave Jarman engine to Samuri fast road spec.



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2012 Audi R8 GT Spyder Price: £199,995 | Mileage: 4,100

This Special Edition Audi R8 Spyder is beautifully presented in Suzuka Grey, a rare and stunning satin colour scheme, and has a very comprehensive specification



1984 Ferrari 308 GTSi QV Price: £94,995 | Mileage: 46,794

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Lamborghini Murcielago LP670-4 SV Colour SatNav, Ceramic Brakes, High Level Rear Wing, 7,000 miles, 2010, £379,990



Lamborghini Diablo Roadster 5.7 Sports exhaust, Full leather interior, 30,000 miles, 1997, £179,990



Lamborghini Gallardo LP550-2 HIGH Skorpius Alloys, Lifting Gears, 11,000 miles, 2011, £104,990



Lamborghini Gallardo Carbon Driving Zone, Full Electric Heated Seats, 25,000 Miles, 2007, £79,990



Audi R8 LMX Bang and Olufsen, Magnetic Ride, 2,000 miles, 2014, £121,990



Lamborghini Murcielago LP670-4 SV Ceramic Brakes High Level Rear Wing Small Decal option 4,000 miles 2009 £369,990



Lamborghini Murcielago V12 LP640 Coupe VAT QUALIFYING Ceramic Brakes, Carbon Fibre Inserts, Carbon Fibre Driving Zone, 6,000 miles, 2008 £144,990



Lamborghini Gallardo LP560-4 Spyder LHD Lifting Gear Reverse Camera Full Electric Heated Seats 8,000 miles 2009 £94,990



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FERRARI 599 Full Electric Heated Seats, Satellite navigation system, 26,000 miles, 2006, £119,990

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Lamborghini Murcielago LP670-4 SV colour Satnav, Ceramic Brakes, High level Rear Wing, Grey, 5,000 miles, 2010, £199,990



Lamborghini Gallardo Superleggera LP570-4 Rear Lifting Gear, Rear Camera, High level rear wing, 25,000 miles, 2010, £122,990



Lamborghini Gallardo LP560-4 Coupe LHD Glass engine bay cover, Rear Camera, 25000 miles, 2008, £85,990



FERRARI 458 20 inch Alloys, Scuderia Shields, 5,000 miles, 2012, £149,990



FERRARI 599 HGTE Alloy Wheels, Ceramic Brakes, 2007, 29,000 miles, **£109,990**

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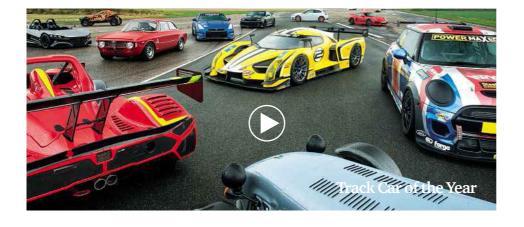
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THE Knowledge

€ = new entry t his month.* = grey import. Entries in italics are for cars no longer on sale. Issue no. is for our most recent major test of the car (D = Driven, R = Road test or group test, F = Feature). Call 0844 844 0039 to order a back issue. Price is on-the-road including VAT and delivery charges. Engine is the car's main motor only – additional hybrid tech isn't shown. Weight is the car's kerb weight as quoted by the manufacturer. bhp/ton is the power-to-weight ratio based on manufacturer's kerb weight. O-60mph and O-100mph figures in bold are independently recorded, all other performance figures are manufacturers' claims. CO2 g/km is the official EC figure and EC mpg is the official 'Combined' figure or equivalent.

MAKE & MODEL	ISSUE NO.	PRICE	ENGINE CYL/CC	BHP/RPM	LB FT/RPM	WEIGHT	BHP/TON	Hd W09-0	0-100MPH	MAX MPH	CO2 G/KM	EC MPG	EVO RATING	
Abarth 595 Competizione	196 D	£19,090	4/1368	158/5500	170/3000	1035kg	155	7.4	-	130	155	43.5	+ Spirited engine, still looks great - Favours fun over finesse	****
Abarth 695 Biposto	205 R	£33,055	4/1369	187/5500	184/3000	997kg	191	5.9	-	143	-	-	+ Engineered like a true Abarth product - Desirable extras make this a £50k city car	★★★ ☆
Alfa Romeo Giulietta QV	199 D	£28,330	4/1742	237/5750	251/2000	1320kg	182	6.0	-	151	162	40.3	+ Still looks good, and now it's got the 4C's engine - Pricey, and it has more rewarding rivals	*****
Alfa Romeo Giulietta Cloverleaf	144 D	'10-'14	4/1742	232/5500	251/1900	1320kg	179	6.8	-	150	177	37.2	+ Shows signs of deep talentbut should be more exciting	*****
Alfa Romeo 147 GTA	187 R	'03-'06	6/3179	247/6200	221/4800	1360kg	185	6.0	15.5	153	-	23.3	+ Mk1 Focus RS pace without the histrionics - Slightly nose-heavy	★★★★ ☆
Audi S1	211 R	£25,595	4/1984	228/6000	273/1600	1315kg	176	5.8	-	155	162	40.4	+ Compliant and engaging chassis; quick, too - Looks dull without options	*****
Audi Al quattro	181 R	'13	4/1984	253/6000	258/2500	1420kg	181	5.7	-	152	199	32.8	+ Polished 253bhp all-wheel-drive A1 - Just 19 for UK, Porsche Cayman price	****
Audi S3	188 R	£31,230	4/1984	296/5500	280/1800	1395kg	216	5.4	12.5	155	162	40.4	+ Lots of grip and one of the best-sounding four-pot turbos - Still a little too clinical	★★★★☆
Audi RS3 Sportback	220 R	£40,795	5/2480	362/5500	343/1625	1520kg	242	4.3	-	155	189	34.9	 Addictive five-cylinder noise; monster pace - Chassis not exactly playful 	*****
Audi S3	106 R	'06-'12	4/1984	261/6000	258/2500	1455kg	183	5.6	13.6	155	198	33.2	+ Very fast, very effective, very err, quality - A little too clinical	*****
Audi RS3 Sportback	156 R	'11-'12	5/2480	335/5400	332/1600	1575kg	216	4.5	-	155	212	31.0	+ Above, with added five-pot character - Again, see above	*****
BMW 125i M Sport	176 D	£27,060	4/1997	218/5000	228/1350	1420kg	156	6.4	-	155	154	42.8	+ Performance, price, running costs - Dull four-pot soundtrack	*****
BMW M135i	212 R	£32,010	6/2979	321/5800	332/1300	1430kg	228	5.1	-	155	188	35.3	+ Powertrain, noise, chassis, price - M235i looks nicer, and has an LSD on its options list	*****
BMW 130i M Sport	106 R	'05-'10	6/2996	261/6650	232/2750	1450kg	183	6.1	15.3	155	-	34.0	+ Fantastic engine - Suspension can still get a little boingy	*****
Citroën C1	126 R	£8345	3/998	68/6000	68/3600	790kg	87	14.2	-	98	103	61.4	+ Full of character and insurance-friendly - Insurance friendly power	*****
Citroën Saxo VTS	020 R	'97-'03	4/1587	120/6600	107/5200	935kg	130	7.6	22.6	127	-	34.9	+ Chunky, chuckable charger - Can catch out the unwary	*****
Citroën AX GT	195 R	'87-'92	4/1360	85/6400	86/4000	722kg	120	9.2	-	110	-	-	+ Makes terrific use of 85bhp - Feels like it's made from paper	*****
Citroën DS31.6 THP	142 R	'10-'15	4/1598	154/6000	177/1400	1240kg	126	7.2	-	133	155	42.2	+ A proper French hot hatch - Petrolheads might find it too 'designed'	*****
Citroën DS3 Racing	153 D	'11-'12	4/1598	204/6000	203/2000	1240kg	167	6.5	-	146	149	-	+ Faster, feistier version of above - Not as hardcore as its 'Racing' tag suggests	*****
Fiat Panda 100HP	132 R	'06-'11	4/1368	99/6000	97/4250	975kg	103	9.5	-	115	154	43.5	+ Most fun per pound on the market - Optional ESP can't be turned off	*****
Ford Fiesta ST	207 R	£17,545	4/1596	179/5700	214/1600	1088kg	167	7.4	18.4	137	138	47.9	+ Chassis, price, punchy performance - Not as powerful as key rivals	*****
Ford Fiesta ST Mountune	213 R	£18,144	4/1596	212/6000	236/2750	1088kg	198	6.4	-	140	138	-	+ One of the best mid-sized hatches made even better - Badge snobbery	*****
Ford Fiesta Zetec S	123 D	'08-'13	4/1596	118/6000	112/4050	1045kg	115	9.9	-	120	134	48.7	+ Genuinely entertaining supermini - Grown up compared to Twingo/Swift	*****
Ford Fiesta Zetec S Mountune	132 R	'08-'13	4/1596	138/6750	125/4250	1080kg	130	7.9	-	120	134	48.7	+ As above, with a fantastically loud exhaustif you're 12 years old	*****
Ford Fiesta ST	075 D	'05-'08	4/1999	148/6000	140/4500	1137kg	132	7.9	-	129	-	38.2	+ Great looks, decent brakes - Disappointing chassis, gutless engine	*****
Ford Focus ST TDCi Estate	219 D	£23.295	4/1997	182/3500	295/2000	1488kg	124	8.3	-	135	110	67.3	+ Performance not sacrificed at the alter of economy - Gets ragged when really pushed	*****
Ford Focus ST	207 R	£22,745	4/1999	247/5500	265/2000	1362kg	184	6.5	-	154	159	41.5	+ Excellent engine - Scrappy when pushed	*****
Ford Focus ST Mountune	187 D	£23,940	4/1999	271/5500	295/2750	1362kg	202	5.7	_	154+	169	-	+ Great value upgrade - Steering still not as feelsome as that of some rivals	*****
Ford Focus ST	119 R	'05-'10	5/2522	222/6000	236/1600	1392kg	162	6.7	16.8	150	224	30.4	+ Value, performance, integrity - Big engine compromises handling	*****
Ford Focus ST Mountune	137 R	'08-'11	5/2522	256/5500	295/2500	1392kg	187	5.8	14.3	155	224	-	+ ST takes extra power in its stride - You probably still want an RS	*****
Ford Focus RS (Mk3)	220 R	£29.995	4/2261	345/6000	347/2000	1524kg	230	4.7	-	165	175	36.7	+ Torque-vectoring 4WD brings new sensations to hot hatch sector - Engine isn't thrilling	*****
Ford Focus RS (Mk2)	195 R	'09-'11	5/2522	300/6500	324/2300	1467kg	208	5.9	14.2	163	225	30.5	+ Huge performance, highly capable FWD chassis - Body control is occasionally clumsy	*****
Ford Focus RS500 (Mk2)	195 R	10-11	5/2522	345/6000	339/2500	1467kg	239	5.6	12.7	165	225	-	+ More power and presence than regular Mk2 RS - Pricey	*****
Ford Focus RS (Mk1)	207 R	'02-'03	4/1998	212/5500	229/3500	1278kg	169	5.9	14.9	143	225	_	+ Some are great - Some are awful (so make sure you drive plenty)	*****
Ford Escort RS Cosworth	157 R	'92-'96	4/1990	212/ 5500	229/3300	1275kg	179	6.2	14.9	137			+ The ultimate Essex hot hatch - Unmodified ones are rare, and getting pricey	****
Ford Puma 1.7	095 R	'97-'02	4/1995	123/6300	116/4500	127 Jkg 1041kg	120	8.6		122		- 38.2	+ Revvy engine, sparkling chassis, bargain used prices - Rusty rear arches	*****
Ford Racing Puma	128 R	97-02 '00-'01	4/1679	153/7000	119/4500	1041kg 1174kg	120	7.8	23.2	122	-	36.2 34.7	+ Revy engine, sparking chassis, bargain used prices - Rusty rear arches + Exclusivity - The standard Puma does it so well	
Honda Civic Type R	216 R	£29.995	4/1996	306/6500	295/2500	1378kg	226	7.0 5.7	23.2	167	- 170	38.7		*****
	210 R 102 R	£29,995 '07-'11	4/1996	198/7800					17.5		215		+ Great on smooth roads - Turbo engine not as special as old NA units; styling a bit 'busy'	
Honda Civic Type R (FN2)		07-11 '09-'10	4/1998		142/5600	1267kg	158	6.8	17.5	146	215	31.0	+ Looks great, VTEC more accessible - Steering lacks feel, inert balance	*****
Honda Civic Type R Champ'ship White	126 D			198/7800	142/5600	1267kg	158	6.6	-	146 155	-	31.0	+ Limited-slip diff a welcome addition - It's not available on the standard car	*****
Honda Civic Type R Mugen	195 R	'09-'11	4/1998	237/8300	157/6250	1233kg	195	5.9	-		-	-	+ Fantastic on road and track - There's only 20, and they're a tad pricey	*****
Honda Civic Type R (EP3)	075 R	'01-'05	4/1998	197/7400	145/5900	1204kg	166	6.8		146	-	31.7	+ Potent and great value - 'Breadvan' looks divide opinion, duff steering	*****
Kia Proceed GT	217 D	£20,205	4/1591	201/6000	195/1500	1359kg	143	7.3	-	150	170	38.2	+ Fun and appealing package - Soft-edged compared to rivals	*****
Lancia Delta Integrale	194 R	'88-'93	4/1995	207/5750	220/3500	1300kg	162	5.7	-	137	-	23.9	+ One of the finest cars ever built - Demands love, LHD only	*****
Mazda 21.5 Sport	132 R	£15,995	4/1498	102/6000	101/4000	1030kg	107	10.4	-	117	135	48.7	+ Fun and funky - Feels tinny after a Mini	*****
Mazda 3 MPS	137 R	'06-'13	4/2261	256/5500	280/3000	1385kg	188	6.3		155	224	29.4	+ Quick, eager and very good value - The steering's iffy	*****
Mercedes-Benz A45 AMG	194 R	'12-'15	4/1991	355/6000	332/2250	1480kg	244	4.3	10.6	155	161	40.9	+ Blisteringly quick everywhere - Not as rewarding as some slower rivals	★★★★ ☆
MG3 Style	190 D	£10,499	4/1498	104/6000	101/4750	1155kg	91	10.4	-	108	136	48.7	+ Decent chassis, performance and price - Thrashy engine, cheap cabin	*****
Mini Cooper (F56)	194 D	£15,485	3/1499	134/4500	162/1250	1085kg	125	7.9	-	130	105	62.8	+ Punchy three-cylinder engine, good chassis - Tubby styling	★★★ ☆
Mini Cooper S (F56)	196 D	£18,840	4/1998	189/4700	206/1250	1160kg	166	6.8	-	146	133	49.6	+ Still has that Mini DNA - Expensive with options; naff dash displays	★★★★ ☆
Mini John Cooper Works (F56)	211 R	£23,050	4/1998	228/5200	236/1250	1200kg	193	6.3	-	153	155	42.2	+ Fast, agile, super-nimble - OE tyres lack outright grip	★★★ ☆
Mini John Cooper Works Coupe (R58)	164 R	'11-'15	4/1598	208/6000	206/2000	1175kg	180	6.3	-	149	165	39.8	+ The usual raucous Mini JCW experience - But with a questionable 'helmet' roof	*****
Mini Cooper (R56)	185 F	'09-'14	4/1598	120/6000	118/4250	1075kg	113	9.1	-	126	127	52.3	+ Brilliant ride and composure; could be all the Mini you need - You'll still buy the 'S'	*****
Mini Cooper S (R56)	149 R	'06-'14	4/1598	181/5500	177/1600	1140kg	161	7.0	-	142	136	48.7	+ New engine, Mini quality - Front end not quite as direct as the old car's	*****
Mini Cooper SD (R56)	158 D	'11-'14	4/1995	141/4000	225/1750	1150kg	125	8.0	-	134	114	65.7	+ A quick diesel Mini with impressive mpg - But no Cooper S alternative	*****
Mini John Cooper Works (R56)	184 R	'08-'14	4/1598	208/6000	206/2000	1160kg	182	7.2	16.7	148	165	39.8	+ A seriously rapid Mini - Occasionally just a little unruly	*****
Mini John Cooper Works GP (R56)	195 R	'13-'14	4/1598	215/6000	206/2000	1160kg	188	6.3	-	150	165	39.8	+ Brazenly hyperactive - Too much for some roads and some tastes	*****
Mini Cooper S (R53)	077 R	'02-'06	4/1598	168/6000	155/4000	1140kg	143	7.8	19.9	135	-	33.6	+ Strong performance, quality feel - Over-long gearing	*****
Mini Cooper S Works GP (R53)	144 R	'06	4/1598	215/7100	184/4600	1090kg	200	6.5	-	149	-	32.8	+ Storming engine, agility - Tacky styling 'enhancements'	*****
Nissan Juke Nismo RS	208 D	£21,995	4/1618	215/6000	206/3600	1315kg	166	7.0	-	137	165	39.2	+ Quirky character and bold styling - Not a match for a pukka hot hatch	*****
Peugeot 106 Rallye (Series 2)		'97-'98	4/1587	103/6200	97/3500	865kg	121	8.8	-	121	-	34.0	+ Bargain no-frills thrills - Not as much fizz as original 1.3	*****
Peugeot 106 Rallye (Series 1)	095 R	'94-'96	4/1294	100/7200	80/5400	826kg	123	10.6	-	118	-	35.6	+ Frantic, thrashy fun - Needs caning to extract full potential	*****
									17.9		125			*****
Peugeot 208 GTi	184 R	£18,895	4/1598	197/5800	203/1700	1160kg	173		17.9	143	125	47.9	+ Agile chassis works well on tough roads - Could be more involving	



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OUR CHOICE

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Renaultsport Mégane 275. This generation of Mégane has got better and better with every update, and the 275 is simply sublime. Optional Öhlins dampers and Michelin Pilot Sport Cup 2 rubber (taken from the Trophy-R) aren't essential, but improve things even further.

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BEST OF THE REST

The latest Ford Focus RS (left) is our favourite super-hatch, with the more grown-up Golf R close behind. The SEAT Leon Cupra 280 (recently updated to 290, with an extra 10bhp), is a real buzz, especially with the Sub8 pack and sticky tyres, while the Fiesta ST Mountune is our pick of the smaller hatches.

MAKE & MODEL	ISSUE NO	PRICE	ENGINE CYL/CC	BHP/RPM	LB FT/RP	WEIGHT	BHP/TON	Hd WO 9-0	0-100MPF	MAX MPH	CO2 G/KN	EC MPG	EVO RATING	
Peugeot 208 GTi by Peugeot Sport	219 R	£21,995	4/1598	205/5800	221/1750	1185kg	176	6.5	-	143	125	47.9	+ The most focused small hatch on sale - Nearly £4k more than a Fiesta ST Mountune	*****
Peugeot 308 GTi 270	215 D	£28,250	4/1598	266/6000	243/1900	1205kg	224	6.0	-	155	139	47.1	+ A very capable hot hatchthat lacks the sheer excitement of the best in class	*****
Peugeot 205 GTI 1.9	195 R	'88-'91	4/1905	130/6000	119/4750	910kg	145	7.9	-	124	-	36.7	+ Still scintillating after all these years - Brittle build quality	*****
Peugeot 306 GTI 6	020 R	'93-'01	4/1998	167/6500	142/5500	1215kg	139	7.2	20.1	140	-	30.1	+ One of the great GTIs - They don't make them like this any more	*****
Peugeot 306 Rallye	095 R	'98-'99	4/1998	167/6500	142/5500	1199kg	142	6.9	19.2	137	-	30.1	+ Essentially a GTI-6 for less dosh - Limited choice of colours	*****
Renaultsport Twingo 133	175 R	'08-'13	4/1598	131/6750	118/4400	1050kg	127	8.6	-	125	150	43.5	+ Renaultsport experience for pocket money - Optional Cup chassis gives bouncy ride	*****
Renaultsport Clio 200 Auto	184 R	£20,445	4/1618	197/6000	177/1750	1204kg	166	6.9	17.9	143	144	44.8	+ Faster, more refined, easier to drive - We miss the revvy nat-asp engine and manual 'box	*****
Renaultsport Clio 220 Trophy	213 R	£21,780	4/1618	217/6050	206/2000	1204kg	183	6.6	-	146	135	47.9	+ Improves on the 200 Auto - Still not a match for previous-generation Renaultsport Clios	*****
Renaultsport Clio 200 Cup	195 R	'09-'13	4/1998	197/7100	159/5400	1204kg	166	6.6	16.7	141	190	34.5	+ The hot Clio at its best - They don't make it anymore	*****
Renaultsport Clio 197 Cup	115 R	'07-'09	4/1998	194/7250	158/5550	1240kg	161	6.9	-	134	-	33.6	+ Quick, polished and capable - Not as much sheer fun as 182 Cup	*****
Renaultsport Clio 182	066 R	'04-'06	4/1998	180/6500	148/5250	1110kg	165	6.6	17.5	139	-	34.9	+ Took hot hatches to a new level - Flawed driving position	*****
Renaultsport Clio 182 Cup	187 R	'04-'06	4/1998	180/6500	148/5250	1090kg	168	6.5	-	139	-	34.9	+ Full of beans, fantastic value - Sunday-market upholstery	*****
Renaultsport Clio Trophy	200 R	'05-'06	4/1998	180/6500	148/5250	1090kg	168	6.6	17.3	140	-	34.9 -	+ The most fun you can have on three (sometimes two) wheels - Just 500 were built	*****
Renaultsport Clio 172 Cup Renaultsport Clio V6 255	048 R 057 R	'02-'04 '03-'05	4/1998 6/2946	170/6250 251/7150	147/5400 221/4650	1011kg 1400kg	171 182	6.5 5.8	17.7	138 153	-	- 23.0	+ Bargain old-school hot hatch - Nervous in the wet, no ABS	*****
Renaultsport Clio V6	029 R	'99-'02	6/2940	227/6000	221/3750	1335kg	102	5.8	17.0	135	-	23.0	+ Supercar drama without the original's edgy handling - Uninspired interior	*****
Renault Clio Williams	195 R	99-02 '93-'96	4/1988	148/6100	126/4500	981kg	1/3	7.6	20.8	145	-	25.0	+ Pocket supercar - Mid-engined handling can be tricky + One of the best hot hatches ever - Can be fragile	***** *****
Renault 5 GT Turbo	195 R 195 R	93-90 '87-'91	4/1988	148/0100	120/4500	961kg 855kg	155	7.3	- 20.0	134 120	-	20.0	+ Clio Williams' grand-daddy - Few unmodified ones left	*****
Renaultsport Mégane 275 Cup-S	190 K	£23.935	4/1998	271/5500	265/3000	1376kg	200	6.0	-	120	- 174	37.7	+ Cild Williams grand-baddy - Pew driftodined blies left + Cup chassis, LSD, the same engine as the Trophy-R, bargain price - A bit basic inside	*****
Renaultsport Mégane Nav 275	-	£25,935	4/1998	271/5500	265/3000	1376kg	200	6.0	-	158	174	37.7	+ A more luxurious 275 - Cup chassis is an option	
Renaultsport Mégane 265 Cup	- 195 R	12-115	4/1998	261/5500	265/3000	1370kg 1387kg	191	6.4	14.8	158	174	37.7	+ A hot hatch benchmark - Cupholder could be better positioned	*****
Renaultsport Mégane 205 Cup	212 R	12-15	4/1998	271/5500	265/3000	1376kg	200	5.8	14.0	150	174	37.7	+ Another cracking Trophy model - Stripped-out Trophy-R is even more thrilling	*****
Renaultsport Mégane 275 Trophy-R	212 R 215 R	'14-'15	4/1998	271/5500	265/3000	1297kg	200	5.8	-	158	174	37.7	+ Another cracking hopity model - scripped-out hopity-kis even note timiling + As absorbing as a 911 GT3 RS on the right road - Too uncompromising for some; pricey	*****
Renaultsport Mégane 250 Cup	139 R	'09-'12	4/1998	247/5500	251/3000	1297 kg 1387kg	181	5.0 6.1	14.6	156	190	34.4	+ Fantastic chassispartially obscured by new-found maturity	*****
Renaultsport Mégane 250 Cup Renaultsport Mégane dCi 175 Cup	119 R	09-12	4/1995	173/3750	265/2000	1470kg	119	8.3	23.5	130	-	43.5	+ A diesel with a genuinely sporty chassis - Could take more power	****
Renaultsport Mégane 230 F1 Team R26	195 R	07-09	4/1995	227/5500	229/3000	1345kg	171	6.2	16.0	147	-	43.3	+ The car the R26.R is based on - F1 Team stickers in dubious taste	*****
Renaultsport Mégane 250 r Tream R20	200 R	07-09	4/1998	227/5500	229/3000	1220kg	189	5.8	15.1	147	-	-	+ One of the true hot hatch heroes - Two seats, plastic rear windows	*****
SEAT Ibiza Cupra	218 D	£18.100	4/1798	189/4300	236/1450	1220kg	162	6.7	13.1	146	145	45.6	+ Quick, competent, refined, and manual only - Not exciting enough	*****
SEAT Ibiza Cupra	183 D	10-15	4/1390	178/6200	184/2000	1259kg	102	6.9	-	140	139	47.9	+ Punchy engine, unflappable DSG - Lacks engagement, DSG only	*****
SEAT Leon Cupra 290	-	£28,375	4/1984	286/5900	258/1700	1300kg	224	5.8	-	155	156	42.2	+ As below, but with another 10bhp - As below	*****
SEAT Leon Cupra 280	220 R	'14-'15	4/1984	276/5600	258/1750	1300kg	216	5.8	-	155	149	44.1	+ Serious pace and agility for Golf GTI money - The Mk7 Golf R	*****
SEAT Leon Cupra	105 R	'07-'11	4/1984	237/5700	221/2200	1375kg	175	6.3	-	153	190	34.0	+ Great engine, composure - Doesn't have adjustability of old Cupra R	*****
SEAT Leon Cupra R	139 R	10-12	4/1984	261/6000	258/2500	1375kg	193	6.1	14.0	155	190	34.9	+ Bold car, blinding engine - Lacks the character of its rival mega-hatches	*****
SEAT Leon Cupra R 225	067 R	'03-'06	4/1781	222/5900	206/2200	1376kg	164	6.9	-	150	-	32.1	+ Cross-country pace, practicality, value - Not as thrilling as some	*****
Skoda Fabia vRS (Mk2)	146 D	'10-'14	4/1390	178/6200	184/2000	1218kg	148	7.3	-	139	148	45.6	+ Well priced, well made, with great engine and DSG 'box - Dull steering	*****
Skoda Fabia vRS (Mk1)	077R	'04-'07	4/1896	130/4000	229/1900	1315kg	100	9.6	-	127	-	55.4	+ Fascinatingly fun and frugal hot hatch - A little short on steering feel	*****
Skoda Octavia vRS (Mk3)	187 D	£24.230	4/1984	217/4500	258/1500	1345kg	164	6.8	-	154	142	45.6	+ Quick, agile, roomier than a Golf - Ride is harsh for what could be a family car	*****
Skoda Octavia vRS 230 (Mk3)	215 D	£26,350	4/1984	227/4700	258/1500	1345kg	171	6.7	-	155	142	45.6	+ Limited-slip diff makes for a sharper steer - It could handle more than the extra 10bhp	*****
Skoda Octavia vRS (Mk2)	163 R	'05-'13	4/1998	197/5100	206/1700	1395kg	143	7.3	-	149	175	37.7	+ Drives like a GTI but costs much less - Green brake calipers?	*****
Subaru Impreza WRXS	125 D	'08-'10	4/2457	251/5400	288/3000	1395kg	180	5.5	-	130	270	-	+ An improvement over the basic WRX - Still not the WRX we wanted	*****
Subaru Impreza STI 330S	124 R	'08-'10	4/2457	325/5400	347/3400	1505kg	219	4.4	-	155	-	-	+ A bit guicker than the STIbut not better	*****
Suzuki Swift Sport (Mk2)	175 R	£13,999	4/1586	134/6900	118/4400	1045kg	130	8.7	-	121	147	44.1	+ The Swift's still a great pocket rocket - But it's lost a little adjustability	*****
Suzuki Swift Sport (Mk1)	132 R	'05-'11	4/1586	123/6800	109/4800	1030kg	121	8.9	-	124	165	39.8	+ Entertaining handling, well built - Lacking in steering feedback	*****
Vauxhall Corsa VXR	211 R	£18,125	4/1598	202/5800	206/1900	1278kg	161	6.5	-	143	174	37.7	+ Begs to be wrung out - You'll need the £2400 Performance Pack	*****
Vauxhall Corsa VXR	154 R	'07-'14	4/1598	189/5850	192/1980	1166kg	165	6.8	-	140	172	38.7	+ Looks snazzy, punchy engine - Lacks feel, uncouth compared with rivals	*****
Vauxhall Corsa VXR N'ring/Clubsport	164 R	'11-'13/'14	4/1598	202/5750	206/2250	1166kg	176	6.5	-	143	178	-	+ VXR gets more power and a limited-slip diff - But they come at a price	*****
Vauxhall Astra VXR (Mk2)	207 R	£27,850	4/1998	276/5500	295/2500	1475kg	190	5.9	-	155	184	34.9	+ Better than the car it replaces; loony turbo pace - Lacks RS Mégane's precision	*****
Vauxhall Astra VXR (Mk1)	102 R	'05-'11	4/1998	237/5600	236/2400	1393kg	173	6.7	16.7	152	221	30.7	+ Fast and furious - Lacks a little composure and precision	*****
VW Up/SEAT Mii/Skoda Citigo	171 R	£8275+	3/999	59/5000	70/3000	854kg	70	14.1	-	99	105	62.8	+ Accomplished city car is dynamically soundbut predictably slow	*****
VW Polo GTI	211 R	£18,900	4/1798	189/4200	236/1450	1280kg	150	6.7	-	146	139	47.1	+ Smooth and brawny - Fiesta ST is more engaging	*****
VW Polo GTI	154 R	'10-'14	4/1390	178/6200	184/2000	1184kg	153	6.8	-	142	139	47.9	+ Modern-day mk1 Golf GTI gets twin-clutch DSG - It's a little bit bland	*****
VW Golf GTD (Mk7)	200 D	£26,570	4/1968	181/3500	280/1750	1377kg	134	7.5	-	143	109	67.3	+ Pace, fuel economy, sounds good for a diesel - Lacks the extra edge of the GTI	*****
VW Golf GTI (Mk7)	207 R	£27,135	4/1984	217/4500	258/1500	1351kg	163	6.5	-	153	139	47.1	+ Brilliantly resolved - Mégane 265 beats it as a pure drivers' car	*****
VW Golf GTI Clubsport (Mk7)	218 D	c£29,000	4/1984	286/5350	280/1700	1375kg	211	6.0	-	160	155	40.9	+ A faster, sharper, more entertaning GTI - Some rivals are more exciting on track	*****
VW Golf R (Mk7)	220 R	£31,120	4/1984	296/5500	280/1800	1476kg	204	5.1	-	155	165	40.9	+ A VW 'R' model you can take seriously - Mégane 275 <i>just</i> edges it as a pure drivers' car	*****
VW Golf GTI (Mk6)	172 R	'09-'13	4/1984	207/5300	207/1700	1318kg	160	6.4	16.5	148	170	38.7	+ Still a very accomplished hot hatch - 207bhp isn't a lot any more	*****
VW Golf R (Mk6)	140 D	'10-'13	4/1984	266/6000	258/2500	1521kg	178	5.5	-	155	199	33.2	+ Great engine, tremendous pace and poise - High price, ACC only optional	*****
VW Golf GTI (Mk5)	195 R	'04-'09	4/1984	197/5100	207/1800	1336kg	150	6.7	17.9	145	-	-	+ Character and ability: the GTI's return to form - Lacking firepower?	*****
VW Golf R32 (Mk5)	087 R	'06-'09	6/3189	246/6300	236/2500	1510kg	165	5.8	15.2	155	-	26.4	+ Traction's great and you'll love the soundtrack - We'd still have a GTI	*****
VW Golf R32 (Mk4)	053 R	'02-'04	6/3189	237/6250	236/2800	1477kg	163	6.4	16.3	154	-	24.6	+ Charismatic - Boomy engine can be tiresome	*****
VW Golf GTI 16v (Mk2)	195 R	'88-'92	4/1781	139/6100	124/4600	960kg	147	7.9	-	129	-	26.6	+ Still feels everyday useable - Very hard to find a standard one	*****
VW Golf GTI (Mk1, 1.8)	095 R	'82-'84	4/1781	112/5800	109/3500	840kg	135	8.1	-	112	-	36.0	+ The car that started it all - Tricky to find an unmolested one	*****
Volvo C30 T5 R-Design	122 R	'08-'12	5/2521	227/5000	236/1500	1347kg	165	6.6	16.9	149	203	32.5	+ Good-looking, desirable Volvo - Lacks edge of best hatches. Avoid auto	*****

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OUR CHOICE

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BMW MS. The turbocharging of BMW's M-cars met with scepticism, but the current M5's 4.4-litre twin-turbo V8 feels a perfect fit. It's a brutally fast car, and there are clever (and useable) adjustable driving modes. The '30 Jahre' special edition, which has an extra 40bhp, is especially worth a look.

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BEST OF THE REST

Mercedes' E63 AMG offers intoxicating performance, especially with the S upgrade (pictured). BMW's M3 is an appealing all-round package, but its C63 AMG rival has more approachable limits. If you must have an SUV, take a look at BMW's X6 M or Porsche's Macan Turbo, Macan GTS or Cayenne GTS.

	ISSUE N	PRICE	ENGINE CYL/CC	BHP/RP	LB FT/R	WEIGHT	BHP/TO	0-60M P	0-100M	MAX MP	C02 G/H	EC MPG	evo rating	
Alpina D3 Biturbo (F30)	192 D	£46,950	6/2993	345/4000	516/1500	1585kg	221	4.6	-	173	139	53.3	+ 173mph from a 3-litre diesel! Brilliant chassis, too - Auto only	*****
Alpina B3 Biturbo (F30)	188 D	£54,950	6/2979	404/5500	442/3000	1610kg	255	4.2	-	190	177	37.2	+ Understated appearance, monster performance - E90 M3 is better on the limit	*****
Alpina D3 (E90)	120 R	'08-'12	4/1995	211/4000	332/2000	1495kg	143	6.9	-	152	-	52.3	+ Excellent chassis, turbodiesel oomph - Rather narrow powerband	*****
Alpina B5 Biturbo	149 D	£75,150	8/4395	533/5200	538/2800	1920kg	282	4.5	-	198	244	26.9	+ Big performance and top-line luxury - Driver not really involved	*****
Alpina B7 Biturbo	134 D	£98,800	8/4395	533/5200	538/2800	2040kg	265	4.6	-	194	230	28.5	+ Massive performance and top-line luxury - Feels its weight when hustled	*****
Aston Martin Rapide S	201 D	£147,950	12/5935	552/6650	465/5500	1990kg	282	4.2	-	203	300	21.9	+ Oozes star quality; gearbox on 2015MY cars a big improvement - It's cosy in the back	*****
Aston Martin Rapide	141 R	'10-'13	12/5935	470/6000	443/5000	1990kg	240	5.2	-	188	355	-	+ Better than its DB9 sibling - More a 2+2 than a proper four-seater	*****
Audi S3 Saloon	192 D	£33,540	4/1984	296/5500	280/1800	1430kg	210	5.3	-	155	162	26.4	+ On paper a match for the original S4 - In reality much less interesting	*****
Audi S4 (B8)	166 D	£39,610	6/2995	328/5500	324/2900	1685kg	198	4.9	-	155	190	34.9	+ Great powertrain, secure chassis - The RS4	★★★★ ☆
Audi S4 (B7)	073 D	'05-'08	8/4163	339/7000	302/3500	1700kg	206	5.4	-	155	-	-	+ Effortless V8, agile handling - Lacks ultimate finesse of class leaders	*****
Audi RS4 Avant (B8)	216 R	'12-'15	8/4163	444/8250	317/4000	1795kg	251	4.5	10.5	174	249	26.4	+ Looks and sounds the part, thunderously fast - Unnatural steering, dull dynamics	*****
Audi RS4 (B7)	088 R	'05-'08	8/4163	414/7800	317/5500	1650kg	255	4.5	10.9	155	-	-	+ 414bhp at 7800rpm! And there's an estate version too - Busy under braking	*****
Audi RS4 (B5)	192 R	'00-'02	6/2671	375/6100	325/2500	1620kg	236	4.8	12.1	170	-	17.0	+ Effortless pace - Not the last word in agility. Bends wheel rims	*****
Audi RS2	214 R	'94-'95	5/2226	315/6500	302/3000	1595kg	201	4.8	13.1	162	-	18.0	+ Storming performance (thanks to Porsche) - Try finding one	*****
Audi S6	091 D	'06-'11	10/5204	429/6800	398/3000	1910kg	228	5.2	-	155	299	22.4	+ Even faster, and discreet with it - Very muted V10	*****
Audi RS6 Avant (C7)	203 R	£77,995	8/3993	552/5700	516/1750	1935kg	290	3.6 4.3	8.2 9.7	155	229	28.8	+ Performance, foolproof powertrain, looks - Feels a bit one-dimensional	*****
Audi RS6 Avant (C6)	116 R 052 R	'08-'10 '02-'04	10/4991 8/4172	572/6250 444/5700	479/1500 413/1950	2025kg	287	4.3 4.8	9.7 11.6	155 155	333	20.2 19.3	+ The world's most powerful estate - Power isn't everything	*****
Audi RS6 Avant (C5) Audi RS7		02-04 £84,480	8/3993	552/5700	516/1750	1865kg	242 292	4.8 3.9	-	155	- 229	28.8	+ The ultimate estate car? - Numb steering	*****
Audi S7	208 R 171 D	£63,375	8/3993	414/5000		1920kg 1945kg	292	3.9 4.6	-	155	229	28.8	+ Stonking performance, great looks - Numb driving experience	*****
Audi S8 Plus	217 D	£03,375 £97.700	8/3993	597/6100	406/1400 553/2500	1945kg 1990kg	305	4.0 3.8	-	155	225	- 28.2	 + Looks and drives better than S6 it's based on - Costs £8000 more + Fantastic drivetrain, quality and refinement - Dynamic Steering feels artificial 	*****
Audi RS 03	206 D	£45,495	5/2480	335/5300	332/1600	1655kg	206	4.8	-	155	203	32.1	+ Surprisingly characterful; better than many RSs - High centre of gravity	*****
Bentley Flying Spur V8	200 D	£43,493 £142,800	8/3997	500/6000	487/1700	2342kg	200	4.0	-	183	203	25.9	+ Effortless performance with real top-end kick - Determinedly unsporting	*****
Bentley Flying Spur	185 D	£142,800 £153,300		616/6000	590/1600	2342kg 2400kg	207	4.9	-	200		19.0	+ More power than old Flying Spur Speed - Feels its weight; engine sounds dull	*****
Bentley Bentayga	217 D	£160.200		600/5000	664/1350	2347kg	260	4.0	-	187	296	21.6	+ Sublime quality, ridiculous pace, capable handling - Inert driving experience, SUV stigm	
Bentley Mulsanne	178 F	£229.360		505/4200	752/1750	2610kg	197	5.1		184	342	19.3	+ Drives like a modern Bentley should - Shame it doesn't look like one too	*****
Bentley Mulsanne Speed	210 D	£252,000		530/4200	811/1750	2610kg	206	4.8	-	190	342	19.3	+ Characterful; superb build quality - A bit pricey	*****
BMW 320d (F30)	168 R	£29.475	4/1995	181/4000	280/1750	1495kg	123	7.4		146	120	61.4	+ Fleet-friendly new Three is economical yet entertaining - It's a tad noisy	*****
BMW 328i (F30)	165 D	£30,470	4/1997	242/5000	258/1250	1430kg	172	5.8	-	155	149	44.8	+ New-age four-pot 328i is great all-rounder - We miss the six-cylinder soundtrack	*****
BMW 330d M Sport (F30)	180 D	£36.975	6/2993	254/4000	413/2000	1540kg	168	5.6	-	155	129	57.6	+ Great engine, fine handling, good value - Steering confuses weight with feel	*****
BMW 435i Gran Coupe	203 D	£41.865	6/2979	302/5800	295/1200	1585kg	194	5.5	-	155	174	34.9	+ Superb straight-six, fine ride/handling balance - 335i saloon weighs and costs less	*****
BMW M3 (F80)	211 R	£56,590	6/2979	425/5500	406/1850	1520kg	284	4.1	8.6	155	204	32.1	+ Looks, performance, practicality - Body control on rough roads; engine lacks character	
BMW M3 (E90)	123 R	'08-'11	8/3999	414/8300	295/3900	1605kg	262	4.9	10.7	165	290	22.8	+ Every bit as good as the E92 M3 coupe - No carbon roof	*****
BMW M3 CRT (E90)	179 R	'11-'12	8/4361	444/8300	324/3750	1580kg	285	4.4	-	180	295	-	+ Saloon chassis + weight savings + GTS engine = best E90 M3 - Just 67 were made	*****
BMW 535i (F10)	141 D	£44,560	6/2979	302/5800	295/1200	1685kg	182	6.1	-	155	185	34.9	+ New 5-series impresses But only with all the chassis options ticked	*****
BMW M5 (F10M)	208 R	£73,960	8/4395	552/6000	501/1500	1870kg	300	4.3	-	155	232	28.5	+ Twin-turbocharging suits all-new M5 well - Can feel heavy at times	*****
BMW M5 (E60)	129 R	'04-'10	10/4999	500/7750	384/6100	1755kg	289	4.7	10.4	155	-	19.6	+ Close to being the ultimate supersaloon - SMG gearbox feels old-tech	*****
BMW M5 (E39)	110 R	'99-'03	8/4941	394/6600	369/3800	1795kg	223	4.9	11.5	155	-	-	+ Magnificent V8-engined supersaloon - We'd be nit-picking	*****
BMW M5 (E34)	110 R	'92-'96	6/3795	340/6900	295/4750	1653kg	209	5.9	13.6	155	-	-	+ The Godfather of supersaloons - The family can come too	*****
BMW M5 (E28)	182 R	'86-'88	6/3453	282/6500	251/4500	1431kg	200	6.2	-	151	-	-	+ The original storming saloon - Understated looks	*****
BMW M6 Gran Coupe	190 D	£98,145	8/4395	552/6000	501/1500	1875kg	299	4.2	-	155	232	28.5	+ Enormous performance, stylish looks - Price tag looks silly next to rivals, M5 included	*****
BMW X5 M50d	191 D	£64,525	6/2993	376/4000	546/2000	2190kg	155	5.3	-	155	173	42.8	+ Straight-line pace - Driving experience identical to standard X5, despite the M badge	*****
BMW X6 M	212 D	£93,080	8/4395	567/6000	553/2200	2265kg	245	4.2	-	155	258	25.4	 Big improvement on its predecessor - Coupe roofline still of questionable taste 	★★★★☆
BMW X6 M	134 D	'09-'15	8/4395	547/6000	502/1500	2305kg	241	4.7	-	171	325	20.3	+ Fast, refined and comfortable - But it definitely lacks the M factor	*****
BMW 750i	174 D	£71,575	8/4395	449/5500	480/2000	2020kg	226	4.7	-	155	199	-	+ Well specced, impressively refined - Lags far behind the Mercedes S-class	*****
Brabus Bullit	119 R	c£330,00		720/5100	811/2100	1850kg	395	3.8	-	217	-	-	+ Seven hundred and twenty bhp - Three hundred thousand pounds	*****
Cadillac CTS-V	148 R	£67,030	8/6162	556/6100	551/3800	1928kg	293	3.9	-	191	365	18.1	+ It'll stand out among M-cars and AMGs - But the novelty might wear off	*****
Ford Sierra RS Cosworth 4x4	141 R	'90-'93	4/1993	220/6250	214/3500	1305kg	159	6.6	-	144	-	24.4	+ Fast and furious - Try finding a straight one	*****
Ford Sierra RS Cosworth	-	'86-'90	4/1993	204/6000	204/4500	1220kg	169	6.2	-	143	-	-	+ Road-going Group A racecar - Don't shout about the power output!	*****
Honda Accord Type R	012 R	'98-'03	4/2157	209/7200	158/6700	1306kg	163	6.1	17.4	142	-	29.4	+ One of the finest front-drivers of all time - Lack of image	*****
Infiniti Q50S Hybrid	195 D	£39,995	6/3498	359/6800	402/5000	1750kg	208	5.1	-	155	144	45.6	+ Good powertrain, promising chassis - Lacklustre steering, strong rivals	*****
Jaguar XE S	213 D	£44,865	6/2995	335/6500	332/4500	1590kg	214	4.9	-	155	194	34.9	+ Great chassis; neat design - V6 loses appeal in the real world	*****
Jaguar XF S	214 D	£49,945	6/2995	375/6500	332/4500	1635kg	233	5.0	-	155	198	34.0	+ Outstanding ride and handling balance - Engine lacks appeal	*****
Jaguar XF S Diesel	219 D	£49,945	6/2993	296/4000	516/2000	1675kg	180	5.8	-	155	144	51.4	+ Great chassis, good looks, better engine than V6 petrol - It's still a diesel	*****
Jaguar XFR	181 D	'09-'15 '12 '15	8/5000	503/6000	461/2500	1800kg	284	4.8	10.2	155	270	24.4	+ Brilliant blend of pace and refinement - Doesn't sound as special as it is	*****
Jaguar XFR-S	208 R	'13-'15	8/5000	542/6500	501/2500	1800kg	306	4.4	-	186	270	24.4	+ XF gets turned up to 12 - Tyres aren't cheap	*****
Jaguar XFR-S Sportbrake	203 R	'14-'15	8/5000	542/6500	501/2500	1892kg	291	4.6	-	186	297	22.2	+ Looks fantastic, huge performance, nice balance - Not as sharp as the saloon	*****
Jaguar XJ 3.0 V6 Diesel	148 D	£58,690	6/2993	271/4000	442/2000	1700kg	162	6.0	-	155	167	46.3	+ A great Jaguar - But not as great as the XJR	*****
Jaguar XJR	191 D 205 D	£91,755 £32.395	8/5000 4/2179	542/6500 187/3500	502/2500 310/1750	1805kg	302 100	4.4 9.8	-	174 117	270 159	24.4 46.3	+ Hot-rod vibe, fine cabin - Opinion-dividing looks	*****
Land Rover Discovery Sport	205 D	F35'2A2	4/21/9	101/3300	310/1/30	1863kg	100	9.8	-	117	IDA	40.3	+ Style, packaging, refinement - Will need to prove Sport tag in UK	*****

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	ISSUE NO.	PRICE	ENGINE CYL/CC	BHP/RPM	LB FT/RPM	WEIGHT	BHP/TON	H4 W09-0	0-100M PH	MAX MPH	C02 G/KM	EC MPG	evo rating	
	-								_	_				
Lexus IS F Lotus Carlton	151 R 170 R	'07-'12 '91-'93	8/4969 6/3615	417/6600 377/5200	372/5200 419/4200	1714kg 1658kg	247 231	4.7 4.8	10.9 10.6	173 176	270	24.4 17.0	+ Shockingly good Lexus - The M3's available as a (second hand) four-door too + The Millennium Falcon of saloon cars - Every drive a work-out	*****
Maserati Ghibli	186 D	£52,615	6/2979	325/5000	406/1750	1810kg	182	4.0 5.6	-	163	- 223	29.4	+ Bursting with character; good value compared to Quattroporte - It's still a big car	*****
Maserati Ghibli S	198 D	£63,760	6/2979	404/5500	406/4500	1810kg	227	5.0	-	177	242	27.2	+ Stands out from the crowd; sounds good too - Chassis lacks finesse, engine lacks reach	
Maserati Quattroporte S	184 D	£80,115	6/2979	404/5500	406/1750	1860kg	221	5.1	-	177	242	27.2	+ Tempting alternative to V8 - Feel-free steering, secondary ride lacks decorum	*****
Maserati Quattroporte GTS	179 D	£108,185	8/3798	523/6800	479/2250	1900kg	280	4.7	-	190	274	23.9	+ Performance, sense of occasion - Lacks the charisma and edge of its predecessor	*****
Maserati Quattroporte S	137 R	'08-'12	8/4691	425/7000	361/4750	1990kg	216	5.1	12.1	174	365	18.0	+ A QP with the bhp it deserves - Grille is a bit Hannibal Lecter	*****
Maserati Quattroporte Sport GTS	141 R	'08-'12	8/4691	433/7000	361/4750	1990kg	221	5.1	-	177	365	18.0	+ The most stylish supersaloon - Slightly wooden brakes, unforgiving ride	*****
Maserati Quattroporte	085 R	'04-'08 '07.'08	8/4244	394/7000	333/4500	1930kg	207	5.1	-	171 167	-	17.9 -	+ Redefines big-car dynamics - Don't use auto mode	****
Maserati Quattroporte Sport GTS Mercedes-Benz 190E 2.5-16	113 D 185 F	'07-'08 '89-'92	8/4244 4/2498	396/7000 201/6750	339/4250 177/5500	1930kg 1360kg	208 147	5.5 7.2	-	167	-	- 24.4	+ Best Quattroporte chassis so far - More power wouldn't go amiss + M-B's M3 alternative - Not as nimble as the Beemer	***** *****
Mercedes-Benz CLA45 AMG	186 D	£42,270	4/1991	355/6000	332/2250	1510kg	239	4.6	-	155	161	31.0	+ Strong performance, classy cabin - Pricey compared to A45 AMG hatchback	*****
Mercedes-Benz GLA45 AMG	205 R	£44,595	4/1991	355/6000	332/2250	1510kg	239	4.8	-	155	175	37.7	+ An aggressive and focused sports crossover - Low on driver interaction	*****
Mercedes-AMG C63	209 D	£59,800	8/3982	469/5500	479/1750	1640kg	291	4.1	-	155	192	34.5	+ Fast and feelsome - Lacks the ultimate finesse and response of the C63 S	*****
Mercedes-AMG C63 Estate	216 R	£61,260	8/3982	469/5500	479/1750	1710kg	279	4.2	-	155	196	33.6	+ Much more fun than it looks - Gearbox dim-witted at low speeds	*****
Mercedes-AMG C63 S	211 R	£66,545	8/3982	503/5500	516/1750	1655kg	309	4.0	-	155	192	34.5	+ Tremendous twin-turbo V8 power - Not quite as focused as an M division car	*****
Mercedes-Benz C63 AMG	151 R	'07-'14	8/6208	451/6800	442/5000	1655kg	277	4.4	9.7	160	280	23.5	+ Monstrous pace and extremely engaging - Same-era M3 is just a little better	*****
Mercedes-Benz C55 AMG Mercedes-AMG E63	088 R 187 D	'04-'08 £74.115	8/5439 8/5461	367/5250 549/5500	<i>376/4000</i> 531/1750	<i>1635kg</i> 1770kg	228 315	5.2 4.2	-	<i>155</i> 155	- 230	23.7 28.8	+ Furiously fast, commendably discreet - Overshadowed by M3 and RS4	*****
Mercedes-AMG E63 S	208 R	£74,115 £84,710	8/5461	577/5500	590/1750	1795kg	315	4.2	-	155	230	28.8	+ Power, response and accuracy in spades - A little lacking in originality + Effortless power; intuitive and approachable - Dim-witted auto 'box	*****
Mercedes-AMG LOS 3 Mercedes-Benz E63 AMG (W212)	165 R	11-113	8/5461	518/5250	516/1750	1765kg	298	4.1	-	155	230	28.8	+ Turbo engine doesn't dilute E63 experience - Sometimes struggles for traction	*****
Mercedes-Benz E63 AMG (W212)	134 D	'09-'11	8/6208	518/6800	465/5200	1765kg	298	4.5	-	155	295	22.4	+ As below, but with an extra 11bhp and squarer headlights - Steering still vague	*****
Mercedes-Benz E63 AMG (W211)	096 D	'06-'09	8/6208	507/6800	465/5200	1765kg	292	4.5	-	155	-	19.8	+ Brilliant engine, indulgent chassis - Vague steering, speed limits	*****
Mercedes-Benz E55 AMG	052 R	'03-'06	8/5439	476/6100	516/2650	1760kg	271	4.8	10.2	155	-	21.9	+ M5-humbling grunt, cosseting ride - Speed limits	*****
Mercedes-Benz S63 AMG L	191 D	£119,835	8/5461	577/5500	664/2250	1995kg	294	4.4	-	155	237	27.9	+ Monster pace - Average steering feel	*****
Mercedes-Benz CLS63 AMG S	199 D	£86,500	8/5461	577/5500	590/1750	1795kg	327	4.1	-	155	231	28.5	+ Remains quick and characterful - Dated gearbox, no four-wheel drive option in the UK	★★★★ ☆
Mercedes-Benz CLS63 AMG	178 R	'11-'14	8/5461	518/5250	516/1700	1795kg	293	4.2	-	155	231	28.5	+ Monster performance, 549bhp an option - Not as desirable as a Bentley or Aston	*****
Mercedes-Benz CLS63 AMG	099 R	'06-'11	8/6208	507/6100	464/2650	1905kg	270	4.5	-	155	345	19.5	+ Beauty, comfort, awesome performance - M5 has the edge on B-roads	*****
Mercedes-Benz GLE63 AMG S	218 D	£94,405	8/5461	577/5500	560/1750	2270kg	258	4.2	-	155	276	23.9	+ Stonking pace, extreme refinement - Feels remote	*****
Mercedes-Benz GLE63 AMG S Coupe Mercedes-Benz MI 63 AMG	213 D 176 R	£96,555 £87.005	8/5461 8/5461	577/5500 518/5250	560/1750 516/1750	2275kg 2270kg	258 232	4.2 4.7	-	155 155	278 276	23.7 23.9	+ Subtler than an X6 M - More force than finesse	★★★★☆ ★★★★☆
Mercedes-Benz G63 AMG	170 R	£124,000	8/5461	537/5500	560/2000	2475kg	232	4./ 5.4	-	130	322	-	 + Great engine, surprisingly good dynamics - £85K buys a Boxster and an ML350 + It exists; epic soundtrack - Ancient chassis, silly price 	*****
Mitsubishi Evo X FQ-300 SST	118 R	108-113	4/1998	290/6500	300/3500	1590kg	185	5.2	13.9	155	256	26.2	+ Evo gets twin-clutch transmission - Not as exciting as it used to be	*****
Mitsubishi Evo X FQ-360	122 D	'08-'13	4/1998	354/6500	363/3500	1560kg	231	4.1	-	155	328	19.9	+ Ridiculously rapid new Evo - A five-speed gearbox?!	*****
Mitsubishi Evo X FQ-330 SST	134 R	'08-'12	4/1998	324/6500	322/3500	1590kg	207	4.4	-	155	256	-	+ Great engine and gearbox combo - It still lives in the shadow of the Evo IX	*****
Mitsubishi Evo X FQ-400	181 R	'09-'10	4/1998	403/6500	387/3500	1560kg	262	3.8	-	155	328	-	+ Most powerful factory Evo everabout X grand too much when new	*****
Mitsubishi Evo IX FQ-340	088 R	'05-'07	4/1997	345/6800	321/4600	1400kg	250	4.3	10.9	157	-	-	+ Gives Porsche drivers nightmares - Points. Lots of	*****
Mitsubishi Evo IX MR FQ-360	181 R	'05-'07	4/1997	366/6887	363/3200	1400kg	266	3.9	-	157	-	-	+ Well-executed engine upgrades - Prison food	*****
Mitsubishi Evo VIII	055 R	'03-'04	4/1997	276/6500	289/3500	1410kg	199	5.1	-	157	-	-	+ The Evo grows up - Brakes need beefing up	*****
Mitsubishi Evo VIII MR FQ-300	057 R 031 R	'03-'05 '02-'03	4/1997	305/6800	289/3500	1400kg	221	4.8	-	157	-	20.5 20.4	+ Extra pace, extra attitude - Extra money	*****
Mitsubishi Evo VII Mitsubishi Evo VI Mäkinen Edition	200 R	02-03	4/1997 4/1997	276/6500 276/6500	282/3500 275/2750	1360kg 1365kg	206 205	5.0 4.6	13.0	140 150	-	20.4	+ Terrific all-rounder - You tell us + Our favourite Evo - Subtle it is not	*****
Porsche Panamera 4S	186 D	£86,080	6/2997	414/6000	383/1750	1870kg	205	4.8	-	177	208	31.7	+ Strong performance and typically fine Porsche chassis - Misses characterful V8 of old 'S'	*****
Porsche Panamera GTS	208 R	£93,391	8/4806	434/6700	383/3500	1925kg	229	4.4	-	178	249	26.4	 Vivacious V8, entertaining balance - Can feel light on performance next to turbo'd rivals 	
Porsche Panamera Turbo	137 R	£108,006		493/6000	516/2250	1970kg	254	3.6	8.9	188	270	24.6	+ Fast, refined and dynamically sound - It still leaves us cold	*****
Porsche Panamera Turbo S	159 D	'11-'13	8/4806	542/6000	590/2250	1995kg	276	3.7	-	190	270	24.6	+ Pace, excellent ergonomics - Steering feel, ride	*****
Porsche Macan S	205 R	£43,648	6/2997	335/5500	339/1450	1865kg	183	5.4	-	157	204	31.4	+ No less compelling than the Turbo - Although lacks its ultimate speed and agility	★★★★☆
Porsche Macan GTS	217 D	£55,188	6/2997	355/6000	369/1650	1895kg	190	5.2	-	159	212	30.7	+ Handles like an SUV shouldn't - Still looks like an SUV	*****
Porsche Macan Turbo	207 D	£59,648	6/3604	394/6000	406/1350	1925kg	208	4.5	11.1	165	208	30.7	+ Doesn't feel like an SUV - Not a match for a proper sports saloon	*****
Porsche Cayenne GTS (Mk2, V6)	211 D	£72,523	6/3604	434/6000	442/1600	2110kg	209	5.2	-	163	228	28.3	+ The driver's Cayennebut why would a driver want an SUV?	*****
Porsche Cayenne GTS (Mk2, V8)	173 D 212 D	'12-'15 £93,574	<i>8/4806</i> 8/4806	414/6500 513/6000	380/3500	2085kg	202 239	5.6 4.5	-	<i>162</i> 173	251 261	26.4 25.2	+ Dynamically the best SUV of its era - At two tons, it's still no sports car	****
Porsche Cayenne Turbo (Mk2) Porsche Cayenne Turbo S (Mk2)	212 D 184 D	£93,574 £118,455	8/4806	562/6000	533/2250 590/2500	2185kg 2235kg	259	4.5	-	175	267	23.2	 Remarkable performance, handling, completeness - Vague steering, dated engine More power and torque than a Zonda S 7.3 - In an SUV 	★★★★☆ ★★★★☆
Range Rover Evoque Coupe Si4	160 D	£46,660	4/1999	237/6000	251/1900	1670kg	144	7.0	-	135	199	-	+ Striking looks, sporting dynamics - Hefty price, and petrol version is auto-only	*****
Range Rover Sport SDV8	-	£84,350	8/4367	334/3500	546/1750	2359kg	144	6.5	-	140	219	33.6	+ A brilliant long-distance machine - Doesn't live up to the 'Sport' branding	*****
Range Rover Sport V8 Supercharged	186 D	£84,350	8/5000	503/6000	460/2500	2335kg	219	5.0	-	155	298	21.7	+ Deceptively quick and capable sports SUV - It's still got a weight problem	*****
Range Rover Sport SVR	212 D	£95,150	8/5000	542/6000	501/3500	2335kg	236	4.5	-	162	298	21.7	+ Characterful drivetrain; genuine off-road ability - Not a match for its rivals on the road	*****
Range Rover SDV8	180 D	£80,850	8/4367	334/3500	516/1750	2360kg	144	6.5	-	140	229	32.5	+ Lighter, more capable, even more luxurious - Diesel V6 model feels more alert	★★★★ ☆
Rolls-Royce Ghost	186 D	£216,864	12/6592	563/5250	575/1500	2360kg	242	4.7	-	155	317	20.8	+ It's quicker than you think - It's more enjoyable driven slowly	*****
Rolls-Royce Phantom	054 R	£310,200	12/6749	453/5350	531/3500	2560kg	180	5.7	-	149	377	18.0	+ Rolls reinvented for the 21st Century - The roads are barely big enough	*****
Subaru WRX STI	201 R	£28,995	4/2457	296/6000	300/4000	1534kg	196	5.2	-	158	242	27.2	+ Fast Subaru saloon returns (again) - Without a power increase	*****
Subaru WRX STI Subaru Impreza WRX GB270	151 D 109 D	'10-'13 '07	4/2457 4/2457	296/6000 266/5700	300/4000 310/3000	1505kg 1410kg	200 192	5.1 5.2	-	158 143	243 -	26.9 -	 + Fast Subaru saloon returns - Without the blue paint and gold wheels + Fitting final fling for 'classic' Impreza - End of an era 	*****
Subaru Impreza WKX GB270 Subaru Impreza STI	090 R	07	4/2457	276/6000	289/4000	1410kg 1495kg	192	5.2 5.3	-	143 158	-	- 25.9	+ Stunning to drive - Not so stunning to look at	*****
Subaru Impreza B320	105 R	05 07	4/2457	316/6000	332/3750	1495kg	215	4.8	-	155	-	-	+ Fitting tribute to a rallying legend - Too hardcore for some?	****
Subaru Impreza WRX STI PPP	073 R	'03-'05	4/1994	300/6000	299/4000	1470kg	207	5.2	12.9	148	-	-	+ A Subaru with real edge - Bit too edgy in the wet	*****
Subaru Impreza Turbo	011 R	'98-'00	4/1994	215/5600	214/4000	1235kg	177	5.4	14.6	144	-	27.2	+ Destined for classic status - Thirsty	****
Subaru Impreza P1	200 R	'00-'01	4/1994	276/6500	260/4000	1283kg	219	4.9	13.3	150	-	25.0	+ Ultimate old-shape Impreza - Prices reflect this	*****
Subaru Impreza RB5 (PPP)	187 R	'99	4/1994	237/6000	258/3500	1235kg	195	5.0	14.1	143	-	-	+ Perfect blend of poise and power - Limited numbers	*****
Subaru Impreza 22B	188 R	'98-'99	4/2212	276/6000	265/3200	1270kg	220	5.0	13.1	150	-	-	+ The ultimate Impreza - Doesn't come cheap	*****
Tesla Model S P85D	208 D	£79,080	515kW	691	687	2239kg	314	3.2	-	155	0	n/a	+ Dual motors and 4WD equals extraordinary acceleration - Lack of charging points	*****
Tesla Model S Performance	196 R	'14 520.827	310kW	416	44 <u>2</u>	2100kg	201	4.2	-	130	0	n/a	+ Intoxicating performance, soothing refinement - Generic styling, charging limitations	*****
Vauxhall Insignia VXR SuperSport Vauxhall Vectra VXR	189 D 102 D	£29,824 '06-'09	6/2792 6/2792	321/5250 276/5500	321/5250 262/1800	1825kg <i>1580kg</i>	179 <i>177</i>	5.6 <i>6.1</i>	-	170 <i>161</i>	249 -	26.6 27.4	+ A 170mph Vauxhall - Should be a more engaging steer + Great engine, effortless pace, good value - Numb steering, lumpy ride	****** *****
Vauxhall VXR8 GTS	215 D	£54,499	8/6162	576/6150	545/3850	1834kg	319	4.2	-	155	- 363	18.5	+ Monster engine; engaging driving experience - Woeful interior	*****
Volvo V60 Polestar	197 D	£49,775	6/2953	345/5250	369/3000	1759kg	199	5.0	-	155	237	27.7	 First Volvo to get a full Polestar makeover - Still a close relative of the standard V60 	*****



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Why would you?

Because it has rear-wheel drive, a gutsy V6 engine and a reputation for reliability. It may not be the last word in finesse, but it has a unique character and, above all else, is bloody good fun. What to pay Early, high-mileage examples start around £13k.£15k-20k gets a lowmileage 2010/2011 car. Coupes are worth more than convertibles with the same provenence. Nismo versions are available from £25k. What to look out for

Ensure the servicing schedule has been followed, as oil that's in poor condition can lead to SPECIFICATION

overheating. On manual cars,

check the Synchro Rev system

works on every downshift. Listen

for suspension clonks or knocks -

it could be a worn drop link. Early

cars had weak hatch springs, so

check they're strong enough to

pop the hatch clear of the latch.

(Full guide, evo 215.)

Years 2009-present Engine V6, 3696cc Power 326bhp @ 7000rpm Torque 269lb ft @ 5200rpm 0-62mph 5.4sec (claimed) Top speed 155mph (limited) Rating ★★★★☆

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OUR CHOICE

Porsche Boxster Spyder. If you want six cylinders in your Boxster, best grab a 981-generation version before they're all gone, as the four-cylinder 781 Boxster will be along any minute. Of the 981s, the Spyder would be our pick, but the 3.4-litre GTS and S, and even the basic 2.7, are all true five-star cars, too.



BEST OF THE REST

Lotus's Exige S Roadster counters the Boxster with a more focused driving experience, while the more-affordable Elise continues to defy its age. Jaguar's F-type also impresses in both V6 (left) and V8 forms, but for the ultimate thrills, get a Caterham 620R, Ariel Atom or Radical.

	ISSUE NO.	PRICE	ENGINE CYL/CC	BHP/RPM	LB FT/RPM	WEIGHT	BHP/TON	Hd W09-0	0-100MPH	MAX MPH	C02 G/KM	EC MPG	evo rating	
Alfa Romeo 4C Spider	211 D	£59,500	4/1742	237/6000	258/2200	940kg	256	4.5	-	160	161	40.9	+ Stunningly beautiful; better steering than coupe - Still has the coupe's other foibles	*****
Alfa Romeo 8C Spider	161 R	'09-'11	8/4691	450/7000	354/4750	1675kg	273	4.5	-	181	-	-	+ Beauty meets beast. They hit it off - Boot is useless for touring	****
Alpina D4 Biturbo Convertible	212 D	£54,950	6/2993	345/4000	516/1500	1815kg	193	5.0	-	171	156	47.9	+ As much torque as a 997 Turbo - A diesel convertible wouldn't be our choice of Alpina	*****
Ariel Atom 3.5 Supercharged	180 D	£38,000	4/1998	310/8400	169/7200	550kg	573	2.7	-	155	-	-	+ As mad as ever - Rain	*****
Ariel Atom 3.5R	198 R	£64,800	4/1998	350/8400	243/6100	550kg	647	2.6	-	155	-	-	+ Remarkable balance, poise and pace - Pricey	*****
Ariel Atom 3 245	113 D	'08-'12	4/1998	245/8200	155/5200	500kg	498	3.2	-	150	-	33.0	+ The Atom just got a little bit better - Can still be a bit draughty	*****
Ariel Atom 3 Supercharged	138 R	'09-'12	4/1998	300/8200	162/7200	550kg	554	3.3	-	155	-	-	+ It's brilliant - It's mental	*****
Ariel Atom Mugen	165 R	'12-'13	4/1998	270/8300	188/6000	550kg	499	2.9	-	150	-	-	+ Perfect engine for the Atom's chassis - Only ten were made	*****
Ariel Atom V8 500	165 R	'10-'12	8/3000	475/10,500	284/7750	550kg	877	3.0	5.8	170	-	-	+ An experience unlike anything else on Planet Car - £150K for an Atom	*****
Ariel Nomad	210 R	£33,000	4/2354	235/7200	221/4300	670kg	365	3.4	-	134	-	-	+ Off-road capabilities make for a super plaything - No Bluetooth	*****
Aston Martin V8 Vantage Roadster	130 R	£89,994	8/4735	420/7000	346/5750	1710kg	250	4.7	-	180	328	20.4	+ Sportiest, coolest drop-top Aston in years - Starting to feel its age	*****
Aston Martin V8 Vantage S Roadster	161 R	£108,995	8/4735	430/7300	361/5000	1690kg	258	4.6	-	189	299	21.9	+ Sounds amazing, looks even better - Still not the best drop-top in its class	*****
Aston Martin V12 Vantage S Roadster	212 R	£147,000	12/5935	565/6750	457/5750	1745kg	329	4.1	-	201	343	19.2	+ A brilliant two-seat roadsterlet down by a frustrating gearbox	*****
Aston Martin V12 Vantage Roadster	175 R	'12-'14	12/5935	510/6500	420/5750	1760kg	294	4.4	-	190	-	-	+ As good as the coupe, with amplified V12 rumble - Just a smidgen shakier	*****
Aston Martin DB9 Volante	150 D	£141.995	12/5935	470/6000	443/5000	1815kg	263	4.6	-	190	368	18.2	+ Consummate cruiser and capable when pushed - Roof-up wind noise	*****
Aston Martin DBS Volante	133 D	'09-'12	12/5935	510/6500	420/5750	1810kg	286	4.3	-	191	388	17.3	+ A feelgood car par excellence - It's a bit of a heavyweight	****
Audi TTS Roadster	207 D	£41,085	4/1984	306/5800	280/1800	1450kg	214	5.2	-	155	169	38.7	+ A serious proposition, ranking close behind a Boxster S - Coupe still looks better	****
Audi TTS Roadster	122 D	'08-'14	4/1984	268/6000	258/2500	1455kg	187	5.6	-	155	189	34.9	+ Effortlessly quick - Long-term appeal open to question	*****
Audi TT RS Roadster	133 D	'09-'14	5/2480	335/5400	332/1600	1510kg	225	4.7	-	155	212	31.0	+ Terrific engineis the best thing about it	*****
Audi S5 Cabriolet	130 D	£46,770	6/2995	328/5500	325/2900	1875kg	178	5.6	-	155	199	33.2	+ Gets the S4's trick supercharged engine - Bordering on dull	****
Audi RS5 Cabriolet	179 D	£69,505	8/4163	444/8250	317/4000	1920kg	235	4.9	-	155	249	26.4	+ Pace, looks, interior, naturally aspirated V8 - Not the last word in fun or involvement	*****
Audi RS4 Cabriolet	094 D	'06-'08	8/4163	414/7800	317/5500	1845kg	228	4.9	_	155	-	-	+ That engine - Wibble wobble, wibble wobble, jelly on a plate	*****
Audi R8 V8 Spyder	186 D	'11-'15	8/4163	424/7900	317/6000	1660kg	259	4.8	-	187	337	19.6	+ More delicate and subtle than the V10 - The V10 sounds even better	*****
BAC Mono	189 R	£124.255	4/2261	280/7700	206/6000	540kg	527	2.8		170	337	-	+ The most single-minded track car available - That means no passengers	*****
Bentley Continental GT V8 Convertible	168 R	£150,200	8/3993	500/6000	487/1700	2395kg	212	4.7	-	187	254	25.9	+ One of the world's best topless GTs - Still no sports car	****
Bentley Continental GT V8 Convertible	194 D			521/6000	502/1700	2395kg	212	4.7	-	191	258	25.4	+ A true drivers' Bentley - Excessively heavy; feels like it could give more	
	194 D 187 D		12/5998			2393kg 2420kg	263	4.5		203	347	25.4 19.0		*****
Bentley Conti GT Speed Convertible				626/6000	605/1700				-		388		+ Effortless performance, style - Running costs a tad on the high side	*****
Bentley Continental Supersports	147D	'10-'12	12/5998	621/6000	590/2000	2395kg	263	3.9	-	202		17.3	+ Fast, capable and refined - Coupe does the Supersports thing better	
BMW M235i Convertible	207 D	£37,710	6/2979	321/5800	332/1300	1600kg	204	5.2	-	155	199	33.2	+ Neat styling; great drivetrain - Loss of dynamic ability compared with coupe	*****
BMW Z4 sDrive 35i M Sport (Mk2)	186 D	£43,005	6/2979	302/5800	295/1300	1505kg	204	5.2	-	155	219	30.1	+ Looks, hard-top versatility, drivetrain - Clumsy chassis is upset by ragged surfaces	*****
BMW Z4 3.0si (Mk1)	094 D	'06-'09 '06 '00	6/2996	265/6600	232/2750	1310kg	205	5.7	-	155	-	32.9 23.3	+ Terrific straight-six - Handling not as playful as we'd like	*****
BMW Z4 M Roadster	091 R	'06-'09	6/3246	338/7900	269/4900	1410kg	244	4.8	-	155	-		+ Exhilarating and characterful, that engine - Stiff suspension	*****
BMW M Roadster	002 R	'98-'02	6/3246	325/7400	258/4900	1375kg	240	5.3		155		25.4	+ Fresh-air M3, that motor, hunky looks - M Coupe drives better	*****
BMW 435i Convertible	194 D	£45,680	6/2979	302/5800	295/1200	1740kg	176	5.6	-	155	190	34.8	+ Impressive chassis, smart looks, neat roof - Extra weight, not as composed as coupe	*****
BMW M4 Convertible (F83)	202 D	£61,145	6/2979	425/5500	406/1850	1750kg	247	4.6	-	155	213	31.0	+ As good as fast four-seat drop-tops getbut still not as good as a coupe or saloon	*****
BMW M3 Convertible (E93)	119 D	'08-13	8/3999	414/8300	295/3900	1810kg	232	5.3	-	155	297	22.2	+ M DCT transmission, pace, slick roof - Extra weight blunts the edge	*****
BMW M3 Convertible (E46)	035 D	'01-'06	6/3246	338/7900	269/5000	1655kg	207	5.3	-	155	-	23.3	+ That engine - Gets the wobbles on British B-roads	****
BMW Z8	026 R	'00-'03	8/4941	400/6600	369/3800	1585kg	256	4.8	11.1	155	-	14.4	+ M5-powered super-sportster - M5's more fun to drive	*****
Caterham Seven 160	198 R	£19,710	4/660	80/7000	79/3400	490kg	166	6.5	-	100	-	-	+ The fabulous Seven formula at its most basic - Gets pricey with options	****
Caterham Seven 270	219 R	£23,795	4/1595	135/6800	122/4100	540kg	254	5.0	-	122	-	-	+ Feisty engine, sweetly balanced, manic and exciting - The temptation of more power	****
Caterham Seven 360	209 R	£27,795	4/1999	180/7300	143/6100	560kg	327	4.8	-	130	-	-	+ Extra power is welcome - You'll need the six-speed gearbox to make the most of it	*****
Caterham Seven 420	220 R	£30,795	4/1999	210/7600	150/6300	560kg	381	4.3	-	136	-	-	+ It's the one we built for ourselves - Trickier on the limit than lesser-powered Sevens	*****
Caterham Seven 620S	220 D	£44,995	4/1999	310/7700	219/7350	610kg	516	3.4	-	155	-	-	+ Ludicrous, near-620R pace, with added habitability - Well, 'habitable' for a Seven	*****
Caterham Seven 620R	187 R	£50,795	4/1999	310/7700	219/7350	572kg	551	2.8	-	155	-	-	+ Banzai on track, yet still relevant on the road - £50k for a Seven?	*****
Caterham Seven CSR	094 R	£47,295	4/2261	256/7500	200/6200	565kg	460	3.8	-	155	-	-	+ Brilliant for high days, holidays and trackdays - Wet Wednesdays	****
Caterham Seven Roadsport 125	105 R	'07-'14	4/1595	125/6100	120/5350	539kg	235	5.9	-	112	-	-	+ Great debut for new Ford-engined model - Bigger drivers need SV model	****
Caterham Seven Supersport	165 R	'11-'14	4/1595	140/6900	120/5790	520kg	273	4.9	-	120	-	-	+ One of the best Caterhams is also one of the cheapest of its era - It's quite minimalist	*****
Caterham Seven Supersport R	180 D	'13-'14	4/1999	180/7300	143/6100	535kg	342	4.8	-	130	-	-	+ One of the best road-and-track Sevens - Impractical, noisy, uncomfortable	****
Caterham Seven Superlight R300	150 R	'09-'12	4/1999	175/7000	139/6000	515kg	345	4.5	-	140	-	-	+ Possibly all the Caterham you need - They're not cheap	*****
Caterham Seven Superlight R500	123 R	'08-'14	4/1999	263/8500	177/7200	506kg	528	2.9	-	150	-	-	+ Better power-to-weight ratio than a Veyron - Until you add the driver	*****
Caterham Levante	131 R	'09-'10	8/2398	550/10000	300/8500	520kg	1074	4.8	8.2	150	-	-	+ Twice the power-to-weight ratio of a Veyron! - Not easy to drive slowly	****
Caterham Seven R300	068 R	'02-'06	4/1796	160/7000	130/5000	500kg	325	4.7	-	130	-	-	+ Our 2002 Trackday Car of the Year - Not for wimps	*****
Caterham Seven R500	200 R	'99-'06	4/1796	230/8600	155/7200	460kg	510	3.6	8.8	146	-	-	+ The K-series Seven at its very best - No cup holders	*****
Donkervoort D8 GTO Performance	185 R	£120,000	5/2480	375/5500	350/1750	695kg	548	2.8	-	168	-	-	+ There's nothing else like it - Pricey for a car with a five-cylinder engine	*****
Ferrari California T	212 D		8/3855	552/7500	557/4750	1729kg	324	3.6	-	196	250	26.9	+ Turbocharged engine is a triumph - Still places daily useability above outright thrills	*****
Ferrari California	171 D	'08-'14	8/4297	483/7750	372/5000	1735kg	283	3.8	-	193	299	-	+ Revised with sharper performance and dynamics - We'd still take a 458 Spider	*****
Honda S2000	118 D	'99-'09	4/1997	237/8300	153/7500	1260kg	191	6.2	-	150	-	28.2	+ An alternative and rev-happy roadster - The Boxster's better	*****
Jaguar F-type Convertible	186 R	£56,745	6/2995	335/6500	332/3500	1587kg	214	5.5	-	161	234	28.8	+ Beautiful, enjoyable, responsive - Noticeably junior to the V6 S	*****
Jaguar F-type Convertible	183 R	£50,745 £65,745	6/2995	375/6500	339/3500	1604kg	214	5.3	-	171	234	28.8	 Bedutiful, enjoyable, responsive - Noticeably junior to the Vo S Better-damped and more rounded than the V8 S - A Boxster S is £20k cheaper 	*****
	10.2 K								-					
Jaguar F-type R Convertible	-	£92,295	8/5000	542/6500	501/3500	1665kg	331	4.0	-	186	255	26.4	+ Pace, characterful V8 - Costs £25k more than the S	****
Jaguar F-type Project 7	212 R	'15 112 117	8/5000	567/6500	501/2500	1585kg	363	3.9		186	-	-	+ Noise, performance, adjustability - Expensive, and not the GT3 rival we would have like	
Jaguar F-type V8 S Convertible	183 R	'13-'14	8/5000	488/6500	461/2500	1665kg	298	4.3	-	186	259	25.5	+ Wilder than the V6 S - Could be too exuberant for some	*****
Jaguar XKR Convertible	130 R	'09-'14	8/5000	503/6000	461/2500	1725kg	296	4.6	-	155	292	23.0	+ Fantastic 5-litre V8 - Loses sporting ground to its main foes	*****
Jaguar XKR-S Convertible	167R	'11-'14	8/5000	542/6500	502/2500	1725kg	319	4.2	-	186	292	23.0	+ Loud and mad; most exciting Jag in years - It was also the most expensive in years	*****
KTM X-Bow GT	183 D	£95,880	4/1984	281/6400	310/3200	875kg	326	4.1	-	144	189	34.0	+ Extraordinary ability, now in a more road-friendly package - Price	*****
KTM X-Bow R	165 R	£87,480	4/1984	296/5500 237/5500	295/3300	818kg	368	3.6	-	144	-	-	+ Sharper handling, more power - Pity it's not even lighter, and cheaper	*****
KTM X-Bow	138 R	'08-'12	4/1984		229/2000	818kg	294	3.8	-	137	-	-	+ Mad looks; real quality feel - Heavier and pricier than you'd hope	****





AUDI RS4 (B5)

Spiritual successor to the RS2, this was Audi's second estate car that thought it was a supercar. This is what we said 'Not only does the RS4 easily exceed its nominal 155mph maximum speed on the Autobahn, but it also gets there like a stabbed rat. The power comes in early, stays on hard, and goes down solidly, punching the RS4 to 100kph (62mph) in a claimed 4-9sec, and 200kph (125mph) in 17 dead, with 100mph disappearing somewhere around 11.5. 'The suspension control is impeccable. The RS4 handles

impeccable. The RS4 handles ordinary roads like shooting fish in a barrel, to the extent that on the roads we drove, the car was simply too good for the corners

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we could throw it at – so grippy that you couldn't remotely take the mickey out of its limits without risking a very big hooley indeed. In virtually any public-road scenario the car is simply better than the opportunities.

'Not that it isn't enjoyable. The sheer performance is a joy.'

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		ISSUE NO.	PRICE	ENGINE CYL/CC	BH P/RP M	LB FT/RPM	WEIGHT	BHP/TON	Hd W09-0	HdW001-0	MAX MPH	C02 G/KM	EC MPG	evo rating	
	Lotus Elise 1.6	144 D	£30,900	4/1598	134/6800	118/4400	876kg	155	6.0	-	127	149	45.0	+ New 1.6 Elise is light and fant astic - Smaller engine could put some off	*****
	Lotus Elise 1.6 Club Racer	183 R	£30,900	4/1598	134/6800	118/4400	852kg	160	6.0	-	127	149	45.0	+ Even lighter, even more focused - A touch pricey for a stripped-out Elise	*****
	Lotus Elise S	172 R	£37,200	4/1798	217/6800	184/4600	924kg	239	4.2	-	145	175	37.5	+ New supercharged Elise boasts epic grip and pace - £37K before (pricey) options	*****
	Lotus Elise S Club Racer	189 D	£37,200	4/1798	217/6800	184/4600	905kg	244	4.2	-	145	175	37.5	+ Purist approach intensifies ability - Lightest, option-free spec requires commitment	*****
	Lotus Elise S Cup	207 D	£43,500	4/1798	217/6800	184/4600	932kg	237	4.2	-	140	175	37.5	+ Rewards precision like no other Elise - You can't remove the roof	*****
	Lotus Exige S Roadster	186 R	£55,500	6/3456	345/7000	295/4500	1166kg	301	3.8	-	145	235	28.0	+ Like the hard-top Exige S, but more road-friendly - Boxster S is a better all-rounder	*****
	Lotus Elise R	068 R	'04-'11	4/1796	189/7800	133/6800	860kg	223	5.6	13.9	150	196	34.4	+ Most thrillsome Elise yet - Blaring engine note	*****
	Lotus Elise SC	131 R	'08-'11	4/1794	218/8000	156/5000	870kg	254	4.5	11.4	148	199	33.2	+ All the usual Elise magic - Supercharged engine lacks sparkle	*****
	Lotus Elise S 1.8	104 R	'06-'10	4/1794	134/6200	127/4200	860kg	158	6.3	18.7	127	-	37.2	+ Brilliant entry-level Elise - Precious little	*****
	Lotus Elise 111S	049R	'02-'04	4/1796	156/7000	129/4650	860kg	197	5.1	-	131	-	40.9	+ A genuinely useable Elise - Air-con? In an Elise?	*****
	Lotus Elise Sport 135	040 D	'03	4/1796	135/6200	129/4850	726kg	189	5.4	-	129	-	-	+ One of our fave S2 Elises - Brakes need more bite and pedal feel	*****
	Lotus Elise Sport 190	044 R	'03	4/1796	190/7800	128/5000	710kg	272	4.7	12.1	135	-	-	+ Fabulous trackday tool - Pricey	*****
	Lotus Elise (S1)	126 R	'96-'01	4/1796	118/5500	122/3000	731kg	164	6.1	18.5	126	-	39.4	+ A modern classic - A tad impractical?	*****
0	Lotus 3-Eleven	220 R	£82,500	6/3456	410/7000	302/3000	925kg	450	3.3	-	174	-	-	+ A fantastically exciting Lotus - If not exactly a groundbreaking one	*****
ī.,	Lotus 2-Eleven	126 R	'07-'11	4/1796	189/7800	133/6800	720kg	267	4.3	-	140	-	-	+ Not far off supercharged car's pace - Pricey once it's made road-legal	*****
	Lotus 2-Eleven Supercharged	123 R	'07-'11	4/1796	252/8000	179/7000	670kg	382	3.8	-	150	-	-	+ Impressive on road and track - Not hardcore enough for some	*****
	Lotus 2-Eleven GT4	138 R	'09-'11	4/1796	266/8200	179/7200	670kg	403	3.7	-	155	-	-	+ evo Track Car of the Year 2009 - It's a 76-grand Lotus with no roof	*****
	Lotus 340R	126 R	'00'	4/1796	190/7800	146/5000	658kg	293	4.5	12.5	126	-	-	+ Hardcore road-racerthat looks like a dune buggy from Mars	*****
	Lotus Elan SE	095 R	'89-'95	4/1588	165/6600	148/4200	1022kg	164	6.7	-	137	-	21.0	+ Awesome front-drive chassis - Rather uninvolving	*****
	Maserati GranCabrio	142 D	£98.940	8/4691	434/7000	332/4750	1980kg	223	5.2	-	177	337	19.5	+ As good to drive as it is to look at - Lacks the grunt of some rivals	*****
	Maserati GranCabrio Sport	161 D	£104,535	8/4691	444/7000	376/4750	1980kg	228	5.0	-	177	377	19.5	+ Looks, performance, cruising ability - Brakes could be sharper	*****
	Maserati GranCabrio MC	185 D	£112,370	8/4691	454/7000	383/4750	1973kg	234	4.9	-	179	337	19.5	+ Most powerful GranCabrio yet - The GranCabrio is starting to show its age	*****
	Mazda MX-5 2.0i Sport (Mk4)	219 R	£22,505	4/1998	158/6000	147/4600	1000kg	161	7.3	-	133	161	40.9	+ Lightest MX-5 since the Mk1 - Lacks intensity	*****
	Mazda MX-5 2.0i Sport Tech (Mk3.5)	213 R	'09-'15	4/1999	158/7000	139/5000	1098kg	146	7.6	-	138	181	36.2	+ Handles brilliantly again; folding hard-top also available - Less than macho image	*****
	Mazda MX 52.015001 (WK3.5) Mazda MX-51.8i (Mk3)	091 R	05-'09	4/1798	124/6500	123/4500	1090kg 1080kg	108	9.3	_	122	-	- 50.2	+ Gearchange, interior - Lost some of the charm of old MX-5s; dubious handling	*****
	Mazda MX-51.8i (Mk3) Mazda MX-51.8i (Mk2)	017R	'98-'05	4/1/90	146/7000	123/4300	1065kg	140	9.5 8.6	-	122	-	32.5	+ Affordable ragtops don't get much better - Cheap cabin	*****
	Mazda MX-51.6 (Mk1)	131 R	'89-'97	4/1597	115/6500	100/5500	971kg	120	9.0	-	125		J2.J	+ The original and still (pretty much) the best - Less than rigid	*****
	Mazda MA-51.0 (MKI) Mercedes-Benz SLK 350 Sport	161 R	£44.605	6/3498	302/6500	273/3500	1465kg	209	9.0 5.5	-	155	- 167	-	+ Best non-AMG SLK yet - Still no Boxster-beater	*****
	Mercedes-Benz SLK 55 AMG	186 R	£55.345	8/5461	416/6800	398/4500		209	4.6	-	155	107	33.6		
		087 R	105-10	8/5439	355/5750	396/4300	1615kg <i>1575kg</i>	202	4.0	-	155	-	23.5	+ Quicker and more economical than ever - Needs to be sharper, too	*****
	Mercedes-Benz SLK 55 AMG		05-10					229			174	-	23.5	+ Superb engine, responsive chassis - No manual option, ESP spoils fun	*****
	Mercedes-Benz SLK 55 AMG Black Series	110 R		8/5439	394/5750	383/3750	1495kg		4.9	11.2				+ AMG gets serious - Dull-witted 7G-Tronic auto box, uneven dynamics	*****
	Mercedes-Benz SL500	169 D	£81,915	8/4663	429/5250	516/1800	1710kg	255	4.6	-	155	212	31.0	+ Wafty performance, beautifully engineered - Lacks ultimate sports car feel	*****
	Mercedes-Benz SL63 AMG	171 D	£112,510	8/5461	530/5500	590/2000	1770kg	304	4.3	-	155	231		+ Monster performance, lighter than before - Still heavy, steering lacks consistency	*****
	Mercedes-Benz SL65 AMG	183 D	£170,815	12/5980	621/4800	737/2300	1875kg	336	4.0	-	155	270	24.4	+ Chassis just about deals with the power - Speed limits	*****
	Mercedes-Benz SL63 AMG	117 D	'08-'13	8/6208	518/6800	464/5200	1970kg	278	4.6	-	155	328	20.0	+ More focused than old SL55 AMG - Lost some of its all-round appeal	*****
	Mercedes-Benz SL55 AMG	070 R	'02-'07	8/5439	493/6100	516/2650	1955kg	256	4.6	10.2	155	-	-	+ As fast as a Murciélago - Not as much fun	*****
	Mercedes-Benz SL65 AMG	071D	'04-'10	12/5980	604/4800	737/2000	2035kg	302	4.1	-	155	-	-	+ Gob-smacking performance - Gob-smackingly pricey	*****
	Mercedes-Benz SLS AMG Roadster	167 R	'12-'14	8/6208	563/6800	479/4750	1660kg	345	3.7	-	197	308	21.4	+ Loses none of the coupe's talents - But (understandably) loses the gullwing doors	*****
	Morgan 3 Wheeler	198 R	£25,950	2/1976	82/5250	103/3250	525kg	159	6.0	-	115	215	30.3	+ Quirky, characterful, brilliant - Can become a two-wheeler if you push too hard	*****
	Morgan Plus 8 Speedster	202 R	£71,140	8/4799	362/6300	370/3600	1000kg	368	4.2	-	148	282	23.3	+ Fantastic old-school roadster experience - Gets unsettled by big bumps	★★★ ★☆
	Morgan Plus 8	171 R	£86,345	8/4799	362/6300	370/3600	1100kg	334	4.4	-	155	256	25.7	+ Hilarious mix of old looks and new mechanicals - Refinement is definitely old-school	★★★★ ☆
	Morgan Aero SuperSports	145 R	£128,045	8/4799	362/6300	370/3600	1180kg	312	4.2	-	170	-	-	+ As above, with a V8 and targa top - It's proper supercar money	★★★★ ☆
	Morgan Aero 8	105 R	'02-'08	8/4799	362/6300	361/3400	1100kg	334	4.5	-	170	-	25.2	+ Glorious sound, view over bonnet, dynamics - Awkward-looking rear	★★★★ ☆
	Nissan 370Z Roadster	143 R	'10-'14	6/3696	326/7000	269/5200	1554kg	213	5.5	-	155	262	25.2	+ The Zed's old-school character remains intact - Its purposeful looks don't	★★★★ ☆
	Porsche Boxster (981)	172 R	£38,810	6/2706	261/6700	206/4500	1310kg	202	5.4	-	164	192	34.5	+ Goes and looks better; cleanest Boxster ever - Steering now electric to help cut CO2	*****
	Porsche Boxster S (981)	186 R	£47,035	6/3436	311/6700	265/4500	1320kg	239	5.1	-	173	206	32.1	+ Boxster steps out of 911's shadow - But gets 911's less appealing electric steering	*****
	Porsche Boxster GTS (981)	203 D	£52,879	6/3436	325/6700	273/4500	1345kg	246	5.0	-	174	211	31.4	+ Superb dynamics, fantastic engine, great looks - Sport suspension is very firm	*****
	Porsche Boxster Spyder (981)	215 F	£60,459	6/3800	370/6700	310/4750	1315kg	286	4.5	-	180	230	28.5	+ The fastest, most rewarding Boxster yet - Feedback trails the Cayman GT4's	*****
	Porsche Boxster (987)	219 R	'05-'12	6/2893	252/6400	214/4400	1335kg	192	5.9	-	163	221	30.0	+ Another brilliant Boxster - Lighter steering than before	*****
	Porsche Boxster S (987)	161 R	'05-'12	6/3436	306/6400	265/5500	1355kg	229	5.3	-	170	223	29.7	+ As above, but with more power - As above	*****
	Porsche Boxster Spyder (987)	188 R	'10-'12	6/3436	316/7200	273/4750	1275kg	252	5.0	-	166	221	29.1	+ Lighter, more driver-centric Boxster - Collapsed-brolly roof not the most practical	*****
	Porsche Boxster (986 2.7)	049R	'99-'04	6/2687	228/6300	192/4700	1275kg	182	6.3	-	155	-	29.1	+ Still an impeccable sports car - Very little	*****
	Porsche Boxster S (986)	070 R	'99-'04	6/3179	260/6200	228/4700	1320kg	200	5.5	-	164	-	26.9	+ Added power is seductive - As above	*****
	Porsche 911 Carrera S Cabriolet (991.1)	171 R	12-'15	6/3800	394/7400	324/5600	1485kg	270	4.7	-	187	228	29.1	+ Drives just like the coupe - Which means the same artificial steering	*****
	Radical SR3 SL	174 R	£69,840	4/2000	300/6000	265/4000	775kg	393	3.4	-	161	-	-	+ Our 2011 Track Car of the Year, and it's road-legal - You'll need to wrap up warm	*****
	Radical SR8LM	138 R	'09-'12	8/2800	460/10,500		680kg	687	3.2	-	168	-	-	+ Fastest car around the Nordschleife - Convincing people it's road legal	*****
	Renault Sport Spider	183 R	'96-'99	4/1998	148/6000	136/4500	930kg	157	6.5	-	131	-	-	+ Rarity, fabulous unassisted steering feel - Heavier than you'd hope	*****
	Toyota MR2	187 R	'00-'06	4/1794	138/6400	125/4400	975kg	141	7.2	21.2	130	-	38.2	+ Tight lines, taut dynamics - Minimal luggage space	*****
	TVR Tamora	070 R	'01-'07	6/3605	350/7200	290/5500	1050kg	338	4.5		160	-	-	+ Well-sorted soft-top TVR- Awkward styling	*****
	TVR Tuscan Convertible	091 R	'05-'07	6/3996	365/6800	315/6000	1100kg	337	4.J 3.8	8.1	195+	-	_	+ Spirit of the Griff reborn - Over 195mph? Really?	*****
	TVR Chimaera 5.0	007R	'93-'03	8/4988	320/5500	313/0000	1060kg	307	3.0 4.6	-	195+	-	- 26.4	+ Gorgeous noise, tarmac-rippling grunt - Details	*****
	TVR Griffith 4.3	068 R	93-03	8/4988	280/5500	320/3/30	1060kg	268	4.0 4.8	11.2	148	-	- 20.4	+ The car that made TVR. Cult status - Mere details	*****
	TVR Griffith 500	000 R	92-95	8/4988	320/5500	320/3750	1060kg	307	4.0	11.2	140	-	- 22.1	+ Gruff diamond - A few rough edges	*****
	Vauxhall VX220	009 R 023 R	93-01 '00-'04	8/4988 4/2198		320/3/50	1060kg 875kg	307 168	4.8 5.6	-	107 136	-	22.1 34.4	+ Grun diamond - A rew rough edges + Absurdly good Vauxhall - The badge?	*****
		023 R 066 R	00-04	4/2198	145/5800 197/5500	150/4000	875Kg 930kg	168 215	5.0 4.7	-	136 151	-	34.4 -		*****
				4/ 1990	191/ 3300	104/ 1930	93UKg	213	4./	-	IJI	-	-	+ Nothing comes close for the money - Marginal everyday usability	***
	<i>Vauxhall VX220 Turbo</i> Vuhl 05	220 R	£59,995	4/2000	285/5600	310/3000	725kg	405	3.7		152	-	-	+ Impressive pace and quality - You can get a more thrills from a Caterham at half the price	*****



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OUR CHOICE

Porsche Cayman GT4. Porsche's Motorsport department has finally been let loose on the Cayman and the result is exactly what we all hoped for. In fact it's so good it won our 2015 evo Car of the Year test – even despite the 991-generation 911 GT3 RS also being in attendance. Who saw that coming?



BEST OF THE REST

The 911 GT3 RS is still fabulous, of course (it came third at eCoty 2015). If you fancy something less hardcore, the 911 Carrera (left) and Carrera S haven't been ruined by the addition of turbos, Aston Martin's Vantages are thoroughly entertaining, and Jaguar's F-type R Coupe is a hoot.

	ISSUE NO.	PRICE	ENGINE Cyl/CC	BHP/RPM	LB FT/RPN	WEIGHT	BHP/TON	Hd W09-0	0-100MPH	MAX MPH	CO2 G/KM	EC MPG	EVO RATING	
Alfa Romeo 4C	209 R	£51,500	4/1742	237/6000	258/2200	895kg	269	4.5	-	160	157	41.5	+ Carbonfibre tub, mini-supercar looks - Hot hatch engine, clunky gearbox	*****
Alfa Romeo 8C Competizione	120 R	'07-'09	8/4691	450/7000	354/4750	1585kg	288	4.1	-	181	-	-	+ Looks, exclusivity, noise, balance - They're all sold	*****
Alpina D4 Biturbo Alpina B4 Biturbo	206 R 206 R	£50,950 £58,950	6/2993 6/2979	345/4000 404/5500	516/1500 442/3000	1585kg 1615kg	221 254	4.6 4.2	-	173 188	139 177	53.3 37.2		*****
Alpina B4 Bitti b0 Alpina B3 GT3 (E92)	200 R 176 D	12-113	6/2979	404/5500	398/4500	1535kg	254	4.4	-	186	224	-	+ Alpina's M3 GTS alternative - Auto gearbox frustrates when pressing on	*****
Aston Martin V8 Vantage	169 D	£84,995	8/4735	420/7000	346/5750	1630kg	262	4.7	-	180	328	20.4	+ 2012 upgrades keep the V8 Vantage on song - Starting to feel a little dated, though	*****
Aston Martin V8 Vantage N430	218 R	£89,995	8/4735	430/7300	361/5000	1610kg	271	4.5	-	189	321	20.5	+ Malleable, involving, can still hold its own - Never feels rampantly quick	*****
Aston Martin V8 Vantage S	168 R	£94,995	8/4735	430/7300	361/5000	1610kg	271	4.5	-	189	299	21.9	+ Keener engine, V12 Vantage looks - Slightly sluggish auto only	*****
Aston Martin V12 Vantage S Aston Martin Vantage GT12	190 R 214 R	£138,000 £250.000	12/5935 12/5935	565/6750 592/7000	457/5750 461/5500	1665kg 1565kg	345 384	3.7 3.5	-	205 185	343	19.2	+ Amongst the best Astons ever made - Old-school automated 'box + The GT3-style Vantage we've been waiting for - Only 100 being made	*****
Aston Martin V12 Vantage	146 R	'09-'13	12/5935	510/6500	420/5750	1680kg	304	4.4	9.7	190	388	17.3	+ The car we hoped the V8 Vantage would be - Erm, a tad thirsty?	*****
Aston Martin V12 Zagato	181 F	'13	12/5935	510/6500	420/5750	1680kg	308	4.2	-	190	388	17.3	+ The looks, the noise, the way it drives - It's several times the price of a V12 Vantage	*****
Aston Martin DB9	178 R	£133,495	12/5935	510/6500	457/5500	1785kg	290	4.6	-	183	368	18.2	+ Better than the old DB9 in every respect - Automatic gearbox could be quicker	*****
Aston Martin DB9 GT	214 D	£140,000	12/5935	540/6750	457/5500	1785kg	307	4.5	-	183	333	19.8	+ More power; still has bags of character - Needs eight-speed auto 'box	*****
Aston Martin DBS	142 R 204 R	'07-'12	12/5935 4/1984	<i>510/6500</i> 227/4500	420/5750 273/1650	1695kg	<i>306</i> 188	4.2	-	<i>191</i> 155	<i>388</i> 137	17.3 47.9	+ Stupendous engine, gearbox, brakes - Pricey. Can bite the unwary	*****
Audi TT 2.0 TFSI (Mk3) Audi TT 2.0 TFSI guattro (Mk3)	204 R 203 D	£29,915 £32,860	4/1984	227/4500	273/1650	1230kg 1335kg	188	6.0 5.3	-	155	137	44.1	+ Desirable, grippy and effortlessly quick - Still not the last word in interaction + Looks, interior, decent performance and handling - Lacks ultimate involvement	*****
Audi TTS (Mk3)	203 D 209 R	£38,790	4/1984	306/5800	280/1800	1365kg	228	4.9	-	155	-	-	+ The most dynamically interesting TT yet - Still not as interactive as a Cayman	*****
Audi TTS (Mk2)	193 R	'08-'14	4/1984	268/6000	258/2500	1395kg	195	5.4	-	155	184	35.8	+ Usefully quicker TT; great drivetrain - Still steers like a computer game	*****
Audi TT RS (Mk2)	158 R	'09-'14	5/2480	335/5400	332/1600	1450kg	235	4.4	11.1	155	209	31.4	+ Sublime 5-cylinder turbo engine - Rest of package can't quite match it	*** *
Audi TT RS Plus (Mk2)	185 D	'12-'14	5/2480	355/5500	343/1650	1450kg	249	4.3	-	174	209	31.4	+ Stonkingly fast cross-country - Shockingly expensive for a TT	*****
Audi TT Sport (Mk1)	081D	'05-'06	4/1781	237/5700	236/2300	1390kg	173	5.9	-	155	-	30.3	+ Deliciously purposeful interior, crisp chassis - Numb steering	*****
Audi S5 Audi RS5	189 D 206 R	£43,665 £59.870	6/2995 8/4163	328/5500 444/8250	325/2900 317/4000	1675kg 1715kg	199 263	4.9 4.5	-	155 155	190 246	34.9 26.9	 Supercharged V6 makes S5 cleaner and faster - Poor body control Brilliant engine and improved chassis - Lack of suspension travel; inconsistent steering 	******
Audi R35 Audi R8 V8	200 R 201 R	07-15	8/4163	444/0230	317/4500	1560kg	203	4.J	9.9	188	332	19.9	+ A true 911 alternative - Exclusivity comes at a price	*****
Bentley Continental GT V8	178 R	£140,300	8/3993	500/6000	487/1700	2220kg	229	4.6	-	188	246	27.0	+ A proper drivers' Bentley with decent economy - W12 suddenly seems pointless	*****
Bentley Continental GT V8 S	204 F	£149,800	8/3933	521/6000	502/1700	2220kg	238	4.3	-	192	250	26.4		*****
Bentley Continental GT	152 D	£150,500	12/5998	567/6000	516/1700	2245kg	257	4.3	-	197	338	19.5	+ 200mph in utter comfort - Weight, thirst	★★★ ★☆
Bentley Continental GT Speed	212 D	£168,300	12/5998	626/6000	605/1700	2245kg	283	4.0	-	206	338	19.5	+ Desirability meets exclusivity and performance - We'd still have the V8	*****
Bentley Continental GT3-R BMW 1-series M Coupe	203 D 188 R	£237,500 '11-'12	8/3993 <i>6/2979</i>	572/6000 335/5900	518/1700 369/1500	2120kg 1495kg	274 228	3.6 4.8	-	170 <i>155</i>	295 224	22.2	+ The best-handling Continental ever - Expensive; it still weighs 2120kg + Character, turbo pace and great looks - Came and went too quick	*****
BMW M235i Coupe	209 R	£34,535	6/2979	321/5800	332/1300	1495kg 1455kg	220	4.0 5.0	-	155	189	- 34.9	+ Powertrain, chassis, looks, size - Limited-slip diff is an option, not standard	*****
 BMW M2 	220 R	£44,070	6/2979	365/6500	369/1450	1495kg	248	4.5	-	155	199	33.2	+ More progressive chassis balance than M4 - Engine isn't inspirational	****
BMW 435i M Sport Coupe	189 D	£42,365	6/2979	302/5800	295/1200	1510kg	203	5.4	-	155	169	35.8	+ Better balance than 3-series saloon - Can feel characterless at lower speeds	*****
BMW M4	218 R	£57,055	6/2979	425/5500	406/1850	1497kg	288	4.3	-	155	204	32.1	+ Ferociously fast - A handful on less-than-perfect or less-than-bone-dry roads	****
BMW M3 (E92)	196 R	'07-13	8/3999	414/8300	295/3900	1580kg	266	4.3	10.3	155	290	22.8	+ Fends off all of its rivals except the cheaper 1-series M	*****
BMW M3 GTS (E92) BMW M3 (E46)	171 R 066 R	'10-'11 '00-'07	8/4361 6/3246	444/8300 338/7900	324/3750 269/5000	1530kg 1495kg	295 230	4.3 5.1	- 12.3	193 155	295 -	- 23.7	 + Highly exclusive, one of the most focused M-cars ever - Good luck trying to find one + One of the best BMWs ever. Runner-up in eCoty 2001 - Slightly artificial steering feel 	*****
BMW M3 CS (E46)	219 R	00-07	6/3240	338/7900	269/5000	1495kg 1495kg	230	5.1		155	-	23.7	+ CSL dynamics without CSL price - Looks like the standard car	*****
BMW M3 CSL (E46)	200 R	'03-'04	6/3246	355/7900	273/4900	1385kg	260	5.3	12.0	155	-	-		*****
BMW M3 (E36)	148 R	'93-'98	6/3201	321/7400	258/3250	1460kg	223	5.4	12.8	157	-	25.7	+ Performance, image - Never quite as good as the original	*****
ВМW МЗ (ЕЗО)	165 R	'86-'90	4/2302	212/6750	170/4600	1165kg	185	6.7	17.8	147	-	20.3	+ Best M-car ever! Race-car dynamics for the road - LHD only	*****
BMW Z4 M Coupe	097R	'06-'09	6/3246	338/7900	269/4900	1420kg	242	5.0	-	155	-	23.3	+ A real drivers' car - You've got to be prepared to get stuck in	*****
BMW M Coupe BMW 640d	005 R 165 D	'98-'02 £62.295	<i>6/3246</i> 6/2993	<i>321/7400</i> 309/4400	258/4900 465/1500	<i>1375kg</i> 1790kg	237 175	<i>5.3</i> 5.5	-	<i>155</i> 155	- 144	25.0 51.4	+ Quick and characterful - Lacks finesse + Great engine and economy, excellent build - Numb steering, unsettled B-road ride	*****
BMW M6 (Mk2)	218 R	£02,295 £93,150	8/4395	552/6000	501/1500	1850kg	303	4.2	-	155	231	28.5		*****
BMW M6 (Mk1)	106 R	'05-'10	10/4999	500/7750	384/6100	1635kg	311	4.8	10.0	155	342	19.8	+ Awesome GT, awesome sports car - SMG gearbox now off the pace	*****
BMW i8	210 R	£99,590	3/1499	357/5800	420/3700	1485kg	244	4.4	-	155	49	134.5	+ Brilliantly executed concept; sci-fi looks - Safe dynamic set-up	*****
Chevrolet Camaro Z/28 *	220 R	c£72,000	8/7008	505/6100	481/4800	1732kg	296	4.2	-	175	-	-	+ Scalpel-sharp engine, great chassis (really) - Feels very stiff on UK roads	****
Chevrolet Corvette Stingray (C7)	197 R	£62,450	8/6162	460/6000	465/4600	1539kg	304	4.4	9.4	180	279	23.5	+ Performance, chassis balance, supple ride - Body control could be better	*****
Chevrolet Corvette Z06 (C7) Ford Mustang 5.0 V8 GT	206 R 219 R	£87,860 £34,495	8/6156 8/4951	650/6400 410/6500	650/3600 391/4250	1598kg 1711kg	413 243	3.2 4.8	-	186 155	- 299	- 20.9	 + Mind-boggling raw speed; surprisingly sophisticated – Edgy when really pushed + Looks, noise, performance, value, right-hand drive – Comes undone on rougher roads 	*****
Ford Shelby GT500 *	178 R	12-115	8/5812	662/6500	631/4000	1747kg	243 385	4.0 3.5	-	202	- 299	- 20.9	+ Huge performance for the money - Putting it to use takes nerve	*****
Ginetta G40R	165 R	£35,940	4/1999	175/6700	140/5000	795kg	224	5.8	-	140	-	-	+ A race-compliant sports car for the road - Feels too soft to be a hardcore track toy	*****
Honda Integra Type R (DC2)	200 R	'96-'00	4/1797	187/8000	131/7300	1101kg	173	6.2	17.9	145	-	28.9	+ Arguably the greatest front-drive car ever - Too raw for some	*****
Honda NSX	188 R	'90-'05	6/3179	276/7300	224/5300	1410kg	196	5.5	-	168	-	22.8	+ 'The useable supercar' - 270bhp sounds a bit weedy today	*****
Honda NSX-R *	100 R	'02-'03	6/3179	276/7300	224/5300	1270kg	221	4.4	-	168	-	-	+ evo Car of the Year 2002- Honda never brought it to the UK	*****
Jaguar F-type Coupe	204 D 211 D	£51,260	6/2995 6/2995	335/6500	332/3500 339/3500	1567kg	217	5.5 5.3	-	161 171	234 234	28.8 28.8	+ Drop-dead looks, brilliant chassis, desirability - Engine lacks top-end fight	*****
Jaguar F-type S Coupe Jaguar F-type R Coupe	211 D 218 R	£60,260 £85,010	6/2995 8/5000	375/6500 542/6500	339/3500 501/3500	1584kg 1650kg	241 334	5.3 4.0	-	1/1	234	28.8 26.4	 + Exquisite style, more rewarding (and affordable) than roadster - Scrappy on the limit + Looks, presence, performance, soundtrack - Bumpy and boistrous 	*****
Jaguar F-type R Coupe AWD	210 R	£91.660	8/5000	542/0500	501/3500	1730kg	318	4.0	-	186	269	25.0	+ Better in the wet - Less involving in the dry	*****
Jaguar XKR	168 R	'09-'14	8/5000	503/6000	461/2500	1678kg	305	4.6	-	155	292	23.0		*****
Jaguar XKR-S	168 R	'11-'14	8/5000	542/6000	502/2500	1678kg	328	4.2	-	186	292	23.0	+ Faster and wilder than regular XKR - The F-type R Coupe	****
Jaguar XKR-S GT	193 R	'14	8/5000	542/6000	502/2500	1638kg	336	3.9	-	186	292	23.0	+ The most exciting XKR ever - Very limited numbers	*****
Lexus RC F	206 R	£59,995	8/4969	470/6400	391/4800	1765kg	271	4.5	-	168	-	-	+ Great steering, noise, sense of occasion - Too heavy to be truly exciting	*****
Lotus Exige Sport 350 Lotus Exige S (V6)	218 D 209 R	£55,900 '12-'15	6/3456 <i>6/3456</i>	345/7000 345/7000	295/4500 295/4500	1125kg <i>1176kg</i>	312 <i>298</i>	3.7 <i>3.8</i>	-	170 <i>170</i>	235 235	28.0 28.0	+ Further honed, and with a vastly improved gearshift - Still not easy to get into and out of + Breathtaking road-racer; our joint 2012 Car of the Year - Gearshift not the sweetest	*****
LULUS LAIGE S (VU)	209 K	12-13	0/ 5430	343/1000	293/4300	nnokg	290	5.0	-	110	233	20.0	· Disachtaning Ivau-racei, vurjuint zviz car Urtife tedi - dedisrint nut tresweelest	****



BMW M135i

Why would you?

Because while it isn't a full-blown M-car like the M3, 4, 5 or 6, this 'M Performance' 1-series still had more than enough M magic to win rave notices. With early examples now three years old, it's a good time to pick up this versatile and rapid hatch used.

What to pay

The cheapest examples are £18,500. Dealer cars start at around £20k, and £20k-23k gives a wide choice of 2012/13 cars. What to look out for The engine is proving bombproof, and both the six-speed manual gearbox and the eight-speed ZF seem to suffer from bent wheels, so any vibration is likely to be a slightly misshapen rim. Practically all MI35is were purchased new with BMW's five-year/60,000mile service package, which is transferrable, so that's worth checking for. (Full guide, evo 216.)

auto are robust. The M135i does

SPECIFICATION

Years 2012-present Engine In-line 6-cyl, 2979cc, turbo Power 316bh @ 5800rpm Torque 332lb ft @ 1400-4500rpm 0-62mph 5.1sec (claimed Top speed 155mph (limited) Rating ★ ★ ★ ★

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	ISSUE NO.	PRICE	ENGINE Cyl/CC	BHP/RPM	LB FT/RPM	WEIGHT	BHP/T ON	Hd WO 9-0	H4 W001-0	MAX MPH	CO2 G/KM	EC MPG	EVO RATING	
	_	_				-			-	_				
Lotus Exige S (S2) Lotus Exige (S2)	105 R 068 R	'06-'11 '04-'08	4/1796 4/1796	218/7800 189/7800	158/5500 133/6800	930kg 875kg	238 219	4.5 4.9	-	148 147	199	33.2 32.1	+ Lightweight with a hefty punch - Uninspiring soundtrack + Highly focused road and track tool - Lacks visual impact of S1	*****
Lotus Exige (S2) Lotus Exige (S1)	200 R	04-08	4/1796	192/7800	146/5000	780kg	219	4.9	-	136	-	32.1	+ Highly Tocused Toda and track tool - Lacks visual impact of St + Looks and goes like Elise racer - A tad lacking in refinement	*****
Lotus Evora	138 R	£52.500	6/3456	276/6400	258/4700	1382kg	203	5.6	13.6	162	217	30.3	+ Sublime ride and handling. Our 2009 car of the year - Pricey options	**** *
Lotus Evora S	168 R	£63,950	6/3456	345/7000	295/4500	1430kg	245	4.6	-	172	229	28.7	+ A faster and better Evora - But one which spars with the Porsche 911	*****
Lotus Evora 400	216 R	£72,000	6/3456	400/7000	302/3500	1395kg	291	4.1	-	186	225	29.1	+ Evora excitement levels take a leap - Gearbox still not perfect; punchy pricing	*****
Maserati GranTurismo	114 R	£82,890	8/4244	399/7100	339/4750	1880kg	216	5.5	12.7	177	330	19.8	+ Striking, accomplished GT - Doesn't spike the pulse like an Aston or 911	*****
Maserati GranTurismo Sport	188 R	£91,420	8/4691	454/7000	383/4750	1880kg	245	4.8	-	185	331	19.7	+ The best everyday GranTurismo yet - Starting to get long in the tooth	*****
Maserati GranTurismo MC Stradale	193 R	£110,740	8/4691	454/7000	383/4750	1800kg	256	4.5	-	188	360	18.2	+ Brilliant blend of road racer and GT - Gearbox takes a little getting used to	*****
Maserati Coupe	064 R	'03-'07	8/4244	390/7000	333/4500	1680kg	237	4.8	-	177	-	17.6	+ Glorious engine, improved chassis - Overly sharp steering	★★★★ ☆
Maserati GranSport	073 R	'04-'07	8/4244	400/7000	333/4500	1680kg	239	4.8	-	180	-	-	+ Maser Coupe realises its full potential - Very little	*****
Mazda RX-8	122 R	'03-'11	2R/1308	228/8200	156/5500	1429kg	162	6.5	16.4	146	299	24.6	+ Never mind the quirkiness, it's a great drive - Wafer-thin torque output	*****
Mercedes-AMG C63 S Coupe	217 D	£68,070	8/3982	503/5500	516/1750	1725kg	296	3.9	-	155	200	24.8	+ Mouth-watering mechanical package - Might be too firm for UK roads	*****
Mercedes-Benz C63 AMG Coupe	162 R 171 R	'11-'14 '12-'13	8/6208	451/6800	442/5000	1655kg	277	4.4	10.3	186 186	280	23.5	+ A proper two-door M3 rival - C63 saloon looks better	*****
Mercedes-Benz C63 AMG Black Series Mercedes-Benz CLK63 AMG	092 D	12-13 '06-'09	8/6208 8/6208	510/6800 481/6800	457/5200 464/5000	1635kg 1755kg	317 278	4.2 4.6	-	180	286 -	- 19.9	 + The C63 turned up to 11 - Too heavy, not as fiery as Black Series cars of old + Power, control, build quality - Lacks ultimate involvement 	*****
Mercedes-Benz CLK63 AMG Black Series	106 R	00-09	8/6208	500/6800	464/5250	1755kg 1760kg	270	4.0	-	186	-	-	+ AMG goes Porsche-hunting - Dull-witted gearshift spoils the party	*****
Mercedes-AMG S63 Coupe	205 D	£125,595	8/5461	577/5500	664/2250	1995kg	209	4.2	-	155	237	28.0	+ Thunderously fast S-class built for drivers - Lacks badge appeal of a Continental GT	*****
Mercedes-AMG S65 Coupe	209 D	£183.075	12/5980	621/4800	737/2300	2110kg	299	4.1	_	186	279	23.7	+ Almighty power, fabulous luxury - Nearly £60k more than the S63!	*****
Mercedes-AMG GT S	216 R	£110,495	8/3982	503/6250	479/1750	1570kg	326	3.8	-	193	219	30.1	+ Fantastic chassis, huge grip - Artificial steering feel; downshifts could be quicker	*****
Morgan AeroMax	120 R	'08-'09	8/4799	362/6300	370/3600	1180kg	312	4.1	-	170	-	-	+ Weird and utterly wonderful - Only 100 were made	*****
Nissan 370Z	204 R	£27,445	6/3696	323/7000	268/5200	1496kg	219	5.3	-	155	248	26.7	+ Quicker, leaner, keener than 350Z - Not quite a Cayman-killer	*****
Nissan 370Z Nismo	209 R	£37,585	6/3696	339/7400	274/5200	1496kg	230	5.2	-	155	248	26.6	+ Sharper looks, improved ride, extra thrills - Engine lacks sparkle	*****
Nissan 350Z	107 R	'03-'09	6/3498	309/6800	264/4800	1532kg	205	5.5	13.0	155	-	24.1	+ Huge fun, and great value too - Honestly, we're struggling	*****
Nissan GT-R (2012MY onwards)	218 R	£78,020	6/3799	542/6400	466/3200	1740kg	316	3.2	7.5	196	275	24.0	+ GT-R is quicker and better than ever - But costs over £20K more than its launch price	*****
Nissan GT-R Track Edition	216 D	£88,560	6/3799	542/6400	466/3200	1740kg	316	2.7	-	196	275	24.0	+ Recreates much of the Nismo's ability, without the rock-hard ride - Interior feels dated	*****
Nissan GT-R Nismo	199 R	£125,000	6/3799	592/6800	481/3200	1720kg	350	2.6	-	196	275	24.0	+ Manages to make regular GT-R feel imprecise - Compromised by super-firm suspension	*****
Nissan Skyline GT-R (R34)	196R	'99-'02	6/2568	276/7000	289/4400	1560kg	180	4.7	12.5	165	-	20.1	+ Big, brutal, and great fun - Needs more than the standard 276bhp	*****
Nissan Skyline GT-R (R33)	196 R	'97-'99	6/2568	276/6800	271/4400	1540kg	182	5.4	14.3	155	-	22.0	+ Proof that Japanese hi-tech can work (superbly) - Limited supply	*****
Noble M12 GTO-3R	200 R	'03-'06	6/2968	352/6200	350/3500	1080kg	332	3.8	-	170	-	-	+ The ability to humble exotica - Notchy gearchange can spoil the flow	*****
Peugeot RCZ 1.6 THP 200	155 R	£27,150 £32.250	4/1598	197/5500	202/1700	1421kg	141	7.3	18.1 -	147	155	42.1	Distinctive looks, highly capable handling - Could be a bit more exciting	*****
Peugeot RCZ R Porsche Cayman (981)	209 R 209 R	£32,250 £39,694	4/1598 6/2706	266/6000 271/7400	243/1900 214/4500	1280kg 1330kg	211 207	5.9 5.7	-	155 165	145 195	44.8 33.6	+ Rewarding and highly effective when fully lit - Dated cabin, steering lacks feel	*****
Porsche Cayman S (981)	209 R	£39,094 £48,783	6/3436	321/7400	273/4500	1320kg	207	4.5	- 10.5	175	206	32.1	 + Very enticing for the money in basic spec - You might still want the power of the 'S' + The Cayman comes of age - Erm 	*****
Porsche Cayman GTS (981)	202 K	£55,397	6/3436	335/7400	280/4750	1345kg	247	4.9	-	177	200	31.4	+ Tweaks improve an already sublime package - Slightly 'aftermarket' looks	*****
Porsche Cayman GT4 (981)	220 R	£64.451	6/3800	380/7400	310/4750	1340kg	288	4.4	-	183	238	27.4	+ evo Car of the Year 2015; the Cayman we've been waiting for - Waiting lists	*****
Porsche Cayman S (987)	132 R	'06-'13	6/3436	316/7200	273/4750	1350kg	237	5.2	-	172	223	29.7	+ Still want that 911? - Yeah, us too	*****
Porsche Cayman R (987)	158 R	'11-'13	6/3436	325/7400	273/4750	1295kg	255	4.7	-	175	228	29.1	+ Total handling excellence - Styling additions not to all tastes	*****
Porsche 911 Carrera (991.2)	218 R	£76,412	6/2981	365/6500	332/1700	1430kg	259	4.6	-	183	190	34.0	+ Forced induction hasn't ruined the Carrera - Purists won't be happy	*****
Porsche 911 Carrera S (991.2)	217 R	£85,857	6/2981	414/6500	369/1700	1440kg	292	4.3	-	191	199	32.5	+ As above, but blindingly fast - You'll want the sports exhaust	*****
Porsche 911 Carrera S (991.1)	201R	'12-'15	6/3800	394/7400	324/5600	1415kg	283	4.3	9.5	188	223	29.7	+ A Carrera with supercar pace - Electric steering robs it of some tactility	****
Porsche 911 Carrera 4S (991.1)	179 R	'13-'15	6/3800	394/7400	324/5600	1465kg	273	4.5	-	185	233	28.5	+ More satisfying than rear-drive 991.1 Carreras - Choose your spec carefully	*****
Porsche 911 Carrera 4 GTS (991.1)	208 D	£95,862	6/3800	424/7500	324/5750	1470kg	293	4.4	-	189	233	28.5	+ The highlight of the 991.1 Carrera line-up - Pricey for a Carrera	*****
Porsche 911 Carrera S (997.2)	121 R	'08-'11	6/3800	380/6500	310/4400	1425kg	271	4.7	-	188	242	27.4	+ Poise, precision, blinding pace - Feels a bit clinical	*****
Porsche 911 Carrera S (997.1)	070 R	'04-'08	6/3824	350/6600	295/4600	1420kg	246	4.6	10.9	182	-	24.5	+ evo Car of the Year 2004; like a junior GT3 - Tech overload?	*****
Porsche 911 Carrera (996 3.4)	008 R	'98-'01	6/3387	296/6800	258/4600	1320kg	228	5.2	-	174	- 289	28.0	+ evo Car of the Year 1998; beautifully polished - Some like a bit of rough	*****
Porsche 911 GT3 (991) Porsche 911 GT3 RS (991)	206 R 216 R	£100,540 £131,296	6/3799 6/3996	468/8250 493/8250	324/6250 339/6250	1430kg 1420kg	333 353	3.5 3.3	-	196 193	289 296	23.0 22.2	+ evo Car of the Year 2013 - At its best at licence-troubling speeds	*****
Porsche 911 GT3 (997.2)	182 R	209-'11	6/3797	493/8230	317/6250	1395kg	312	3.5 4.2	- 9.2	195 194	303	22.2	 + Sensationally good to drive - They won't all be painted Ultra Violet + Even better than the car it replaced - Give us a minute 	*****
Porsche 911 GT3 RS (3.8, 997.2)	200 R	10-11	6/3797	444/7900	317/6750	1393kg 1370kg	329	4.0	9.2 -	194	314	-	+ Our favourite car from the first 200 issues of evo - For people like us, nothing	*****
Porsche 911 GT3 RS 4.0 (997.2)	187 R	11-12	6/3996	493/8250	339/5750	1360kg	368	3.8	-	193	326	-	+ evo Car of the Year 2011 - Unforgiving on-road ride; crazy used prices	*****
Porsche 911 GT3 (997.1)	182 R	'07-'09	6/3600	409/7600	298/5500	1395kg	298	4.3	9.4	192	-	-	+ Runner-up evo Car of the Year 2006 - Ferrari 599 GTBs	*****
Porsche 911 GT3 RS (997.1)	105 R	'07-'09	6/3600	409/7600	298/5500	1375kg	302	4.2	-	193	-	-	+ evo Car of the Year 2007 - A chunk more money than the brilliant GT3	*****
Porsche 911 GT3 (996.2)	082 R	'03-'05	6/3600	375/7400	284/5000	1380kg	272	4.3	9.2	190	-	-	+ evo Car of the Year 2003 - Chassis is a bit too track-focused for some roads	*****
Porsche 911 GT3 RS (996.2)	068 R	'03-'05	6/3600	375/7400	284/5000	1330kg	286	4.2	9.2	190	-	-	+ Track-biased version of above - Limited supply	*****
Porsche 911 GT3 (996.1)	182 R	'99	6/3600	360/7200	273/5000	1350kg	271	4.5	10.3	187	-	21.9	+ evo Car of the Year 1999 - Porsche didn't build enough	*****
Radical RXC	189 R	£94,500	6/3700	350/6750	320/4250	900kg	395	2.8	-	175	-	-	+ A real trackday weapon - Can't match the insanity of a Caterham 620R	****
Radical RXC Turbo	205 R	£129,000	6/3496	454/6000	500/3600	940kg	491	2.6	-	185	-	-	+ Eats GT3s for breakfast - Might not feel special enough at this price	*****
Radical RXC Turbo 500	209 D	£143,400		530/6100	481/5000	1100kg	490	2.6	6.8	185	-	-	+ Huge performance, intuitive adjustability, track ability - Compromised for road use	*****
Rolls-Royce Wraith	205 D	£229,128	12/6592	624/5600	590/1500	2360kg	260	4.6	-	155	327	20.2	+ Refinement, chassis, drivetrain - Shared componentry lets cabin down	*****
Subaru BRZ	204 R	£22,495	4/1998	197/7000	151/6400	1230kg	163	7.6	-	140	181	36.2	+ Fine chassis, great steering - Weak engine, not the slide-happy car they promised	*****
Toyota GT86	219 R	£22,495	4/1998	197/7000	151/6400	1240kg	161	7.6	-	140	181	36.2	+ More fun than its cousin (above) - Same lack of torque, poor interior quality	*****
TVR Sagaris	097 R	'05-'07 '05-'07	6/3996	406/7500	349/5000	1078kg	383	3.7	-	185	-	-	+ Looks outrageous - 406bhp feels a touch optimistic	*****
TVR Tuscan S (Mk2)	076 R	'05-'07	6/3996	400/7000	315/5250	1100kg	369	4.0	-	185	-	- /71	+ Possibly TVR's best ever car - Aerodynamic 'enhancements'	*****
VW Scirocco GT 2.0 TSI	155 R	£26,125 £32,580	4/1984 4/1984	217/4500	258/1500	1369kg	158 187	6.5	-	153 155	139 187	47.1 35.3	+ Golf GTI price and performance - Interior lacks flair	*****
VW Scirocco R	200 D	£32,38U	4/ 1904	276/6000	258/2500	1426kg	101	5.7	-	ICCI	101	JJ.3	+ Great engine, grown-up dynamics - Perhaps a little too grown-up for some	*****



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OUR CHOICE

McLaren 675LT. The 'long-tail' is the step forward we've been hoping for from McLaren's super-series cars, adding a real sense of involvement to the incredible pace that's been building since the 12C. In fact, the 675LT is so intense it might even make you question if you need a P1.



BEST OF THE REST

The Ferrari 488 GTB (left) has a stunning turbocharged engine and the chassis to exploit it. Lamborghini's Aventador offers true supercar drama, especially in Superveloce form, while the Pagani Huayra rivals it for theatre (albeit at four times the price) and was our joint 2012 Car of the Year.

	ISSUE NO.	PRICE	ENGINE CYL/CC	BHP/RPM	LB FT/RPM	WEIGHT	BHP/T ON	Hd W09-0	H4 W001-0	MAX MPH	C02 G/KM	EC MPG	evo rating	
ston Martin Vanquish (Mk2)	203 R	£192,995	12/5935	568/6650	465/5500	1739kg	332	3.6	-	201	298	22.1	+ Much better than the DBS it succeeds, especially in 2015MY form - It's no Ferrari F12	**7
ston Martin Vanquish S (Mk1)	110 R	'05-'07	12/5935	520/7000	425/5800	1875kg	282	4.9	10.1	200	-	-	+ Vanquish joins supercar greats - A tad intimidating at the limit	**7
ston Martin One-77	179 R	'10-'12	12/7312	750/6000	553/7600	1740kg	438	3.7	-	220+	-	-	+ The engine, the looks, the drama - Gearbox hates manoeuvring; only 77 were made	**
ıdi R8 V10 Plus	217 R	£134,500	10/5204	602/8250	413/6500	1555kg	393	3.2	-	205	287	23.0	+ Timeless drivetrain, huge performance - Needs to be driven hard to really engage	**
di R8 V10	181 D	'10-'15	10/5204	518/8000	391/6500	1620kg	325	3.9	8.4	194	346	19.0	+ Real supercar feel - The V8 is cheaper, and still superb	**
ıdi R8 V10 Plus	190 R	'13-'15	10/5204	542/8000	398/6500	1570kg	351	3.8	-	198	346	19.0	+ An R8 fit to take on the 458 and 12C - Firm ride may be too much for some	**
ıdi R8 GT	169 F	'10-'12	10/5204	552/8000	398/6500	1520kg	369	3.6	-	199	-	-	+ Everything we love about the R8 - Not as hardcore as we wanted	**
di R8 LMX	208 R	'15	10/5204	562/8000	398/6500	1595kg	358	3.4	_	198	299	21.9	+ More of everything that makes the R8 great - S-tronic transmission not perfect	**
gatti Veyron 16.4	134 R	'05-'11	16/7993	1000/6000	922/2200	1950kg	521	2.8	5.8	253	596	11.4	+ Superbly engineered 4WD quad-turbo rocket - Er, lacks luggage space?	**
igatti Veyron Super Sport	151 R	10-14	16/7993	1183/6400	1106/3000	1838kg	654	2.5	-	268	539	12.2	+ The world's fastest supercar - Limited to 258mph for us mere mortals	÷÷
		10-14 '91-'95												
gatti EB110	078 R		12/3500	552/8000	451/3750	1566kg	358	3.4	-	212	-	-	+ Superbly engineered 4WD quad-turbo rocket - It just fizzled out	**
evrolet Corvette ZR1	133 R	'09-'13	8/6162	638/6500	603/3800	1528kg	424	3.8	7.6	205	355	18.8	+ Huge pace and character - Take plenty of brave pills if there's rain	**
rrari 488 GTB	216 R	£183,964	8/3902	661/6500	561/3000	1475kg	455	3.0	-	205+		24.8	+ Staggeringly capable - Lacks a little of the 458's heart and excitement	**
rari 488 Spider	216 D	£204,400	8/3902	661/6500	561/3000	1525kg	440	3.0	-	203+	260	24.8	+ As above, but with the wind in your hair - See left	**
rrari 458 Italia	183 R	'09-'15	8/4497	562/9000	398/6000	1485kg	384	3.2	6.8	202	307	20.6	+ An astounding achievement - Paddleshift only	**
rari 458 Speciale	203 R	'14-'15	8/4497	597/9000	398/6000	1395kg	435	3.0	-	202+	275	23.9	+ evo Car of the Year 2014 - If you don't own a regular 458, nothing	**
rari F430	163 R	'04-'10	8/4308	483/8500	343/5250	1449kg	339	4.0	-	196	-	18.6	+ Just brilliant - Didn't you read the plus point?	**
rrari 430 Scuderia	121 R	'07-'10	8/4308	503/8500	347/5250	1350kg	378	3.5	7.7	198	-	15.7	+ Successful F1 technology transplant - Likes to shout about it	**
rari 360 Modena	163 R	'99-'04	8/3586	394/8500	275/4750	1390kg	288	4.5	9.0	183	-	17.0	+ Worthy successor to 355 - Not quite as involving as it should be	**
rari 360 Challenge Stradale	068 R	'03-'04	8/3586	420/8500	275/4750	1280kg	333	4.1	-	186	_	-	+ Totally exhilarating road-racer. It's loud - It's very, very loud	**
rari F355 F1 Berlinetta	163 R	'97-'99	8/3496	374/8250	268/6000	1350kg	281	4.7	-	183	-	16.7	+ Looks terrific, sounds even better - Are you kidding?	÷÷
rari F12 Berlinetta	190 R	£241,053	12/6262	730/8250	509/6000	1630kg	455	3.1	-	211	350	18.8	+ 730bhp <i>isn't</i> too much power for the road - Super-quick steering is an acquired taste	**
rari F12tdf	217 R		12/6262	769/8500	520/6250	1520kg	455 514	2.9	-	211	360	18.3	+ Alarmingly fast - Doesn't flow like a 458 Speciale	**
rrari 599 GTB Fiorano	101 R	'06-'12	12/5999	611/7600	448/5600	1688kg	368	3.5	7.4	205	415	15.8	+ evo Car of the Year 2006- Banks are getting harder to rob	**
rari 599 GTO	161 R	'11-'12	12/5999	661/8250	457/6500	1605kg	418	3.4	-	208	-	-	+ One of the truly great Ferraris- Erm, the air con isn't very good	**
rari 575M Fiorano Handling Pack	200 R	'02-'06	12/5748	508/7250	434/5250	1730kg	298	4.2	9.6	202	-	12.3	+ Fiorano pack makes 575 truly great - It should have been standard	**
rari 550 Maranello	169 R	'97-'02	12/5474	485/7000	415/5000	1716kg	287	4.3	10.0	199	-	12.3	+ Everything - Nothing	**
rari FF	194 R	£238,697	12/6262	651/8000	504/6000	1880kg	347	3.7	-	208	360	15.4	+ Four seats and 4WD, but a proper Ferrari - Looks divide opinion	**
rari 612 Scaglietti F1	090 R	'04-'11	12/5748	533/7250	434/5250	1840kg	294	4.3	9.8	199	470	13.8	+ Awesomely capable grand tourer - See above	**
rari LaFerrari	203 R	'13-'15	12/6262	950/9000	664/6750	1255kg	769	3.0	-	217+	330	-	+ Perhaps the greatest Ferrari ever - Brakes lack a touch of precision on track	**
rari Enzo	203 R	'02-'04	12/5999	651/7800	485/5500	1365kg	485	3.5	6.7	217+	545	-	+ Intoxicating, exploitable - Cabin detailing falls short of a Zonda or F1 's	**
rari F50	186 R	'96-'97	12/4699	513/8500	347/6500	1230kg	424	3.9	-	202	-	-	+ A better drivers' Ferrari than the 288, F40 or Enzo - Not better looking, though	**
rari F40	199 R	'87-'92	8/2936	471/7000	426/4000	1100kg	437	4.1	-	201	_	_	+ Brutally fast - It's in the dictionary under 'turbo lag'	**
d GT	200 R	'04-'06	8/5409	550/6500	500/3750	1583kg	353	3.7	-	205	-	-	+ Our 2005 Car of the Year - Don't scalp yourself getting in	**
	180 R	£900,000		1244/6500	1155/4000	1244kg	1016	2.5	-	200	-	-	+ 0-200mph in 14.5sec, and it handles too - Looks like an Exige	÷÷
nnessey Venom GT									-		-	-		
nda NSX	217 R	c£140,000		565	476	1725kg	333	2.9		191			+ Like a baby Porsche 918 - Lacks typical Japanese character	**
guar XJ220	157R	'92-'94	6/3498	542/7200	475/4500	1470kg	375	3.7	-	213	-	-	+ Britain's greatest supercaruntil McLaren built the F1	**
enigsegg Agera R	180 R	c£1.09m	8/5032	1124/7100	885/2700	1435kg	796	2.8	-	273	-	-	+ As fast and exciting as your body can handle - It's Veyron money	**
enigsegg One:1	202 R	c£2.0m	8/5065	1341/7500	1011/6000	1360kg	1002	2.9	-	273	-	-	+ The most powerful car we've ever tested - It's sold out; we couldn't afford one anyway	
enigsegg CCXR Edition	118 R	'08-'10	8/4800	1004/7000	796/5600	1280kg	797	2.8	-	250+		-	+ One of the world's fastest cars - Spikey power delivery	**
nborghini Huracán LP580-2	218 R	c£160,000		572/8000	397/6500	1389kg	418	3.4	-	199	278	23.7	 More seductive than the 4WD Huracán - Feels like there's more to come 	**
nborghini Huracán LP610-4	209 D	£186,760	10/5204	602/8250	413/6500	1532kg	399	3.2	-	202+	290	22.6	+ Defies the numbers; incredible point-to-point pace - Takes work to find its sweet-spot	**
mborghini Gallardo LP560-4	180 D	'08-'13	10/5204	552/8000	398/6500	1410kg	398	3.7	-	202	325	16.0	+ Still a missile from A to B - Starting to show its age	**
mborghini LP570-4 Superleggera	152 R	'10-'13	10/5204	562/8000	398/6500	1340kg	426	3.5	-	202	325	20.6	+ Less weight and more power than original Superleggera - LP560-4 runs it very close	**
nborghini Gallardo	094 R	'06-'08	10/4961	513/8000	376/4250	1520kg	343	4.3	9.4	196	-	-	+ On a full-bore start it spins all four wheels. Cool - Slightly clunky e-gear	**
nborghini Gallardo Superleggera	104 R	'07-'08	10/4961	522/8000	376/4250	1420kg	373	3.8	-	196	-	-	+ Lighter, more agile - Grabby carbon brakes, clunky e-gear	**
nborghini Aventador LP700-4	194 R	£260,040	12/6498	690/8250	509/5500	1575kg	445	2.9	-	217	370	17.7	+ Most important new Lambo since the Countach - Erm expensive?	**
nborghini Aventador LP750-4 SV	216 R	£321,723	12/6498	740/8400	509/5500	1525kg	493	2.8	-	217+	370	17.7	+ More exciting than the standard Aventador - ISR gearbox inconsistent	**
mborghini Murciélago	089 D	'01-'06	12/6192	570/7500	479/5400	1650kg	351	4.0	_	205	-	-	+ Gorgeous, capable and incredibly friendly - V12 feels stressed	**
nborghini Murciélago LP640	003 D	06-11	12/6496	631/8000	487/6000	1665kg	385	3.3	_	203		21.3	+ Compelling old-school supercar - You'd better be on your toes	÷.
nborghini Murciélago LP670-4 SV	200 R	00-11	12/6496	661/8000			429	3.2	7.3	211 212	-	-		÷÷
					487/6500	1565kg			1.5				+ A supercar in its truest, wildest sense - Be prepared for stares	
mborghini Diablo 6.0	019 R	'00-'02	12/5992	550/7100	457/5500	1625kg	343	3.8	-	200+	-	-	+ Best-built, best-looking Diablo of all - People's perceptions	**
us LFA/LFA Nürburgring	200 R	'10-'12	10/4805	552/8700	354/6800	1480kg	379	3.7	-	202	-	-	+ Absurd and compelling supercar - Badge and price don't quite match	**
serati MC12	079 R	'04-'05	12/5998	621/7500	481/5500	1445kg	437	3.8	-	205	-	-	+ Rarer than an Enzo - The Ferrari's better	**
Laren 570S	217 R	£143,250	8/3799	562/7500	443/5000	1313kg	435	3.1	-	204	258	25.5	+ A truly fun and engaging sports car - McLaren doesn't call it a supercar(!)	**
Laren 650S	196 R	£195,250	8/3799	641/7250	500/6000	1428kg	456	3.0	-	207	275	24.2	+ Better brakes, balance and looks than 12C; more power too - Costs an extra £19k	**
Laren 675LT	216 R	£259,500	8/3799	666/7100	516/5500	1328kg	510	2.9	-	205	275	24.2	+ Runner-up at eCoty 2015; asks questions of the P1 - Aventador price tag	**
Laren 12C	187 R	'11-'14	8/3799	616/7500	442/3000	1434kg	435	3.1	-	207	279	24.2	+ Staggering performance, refinement - Engine noise can be grating	**
Laren P1	205 R	'13-'15	8/3799	903/7500	664/4000	1395kg	658	2.8	-	217	194	34.0	+ Freakish breadth of ability - At its mind-bending best on track	**
Laren F1	205 R	'94-'98	12/6064	627/7500	479/4000	1137kg	560	3.2	6.3	240+	-	19.0	+ Still the most single-minded supercar ever - There'll never be another	**
rcedes-Benz SLS AMG	159 R	'10-'15	8/6208	563/6800	479/4750	1620kg	335	4.1	8.4	197	308	21.4	+ Great engine and chassis (gullwing doors too!) - Slightly tardy gearbox	÷÷
rcedes-Benz SLS AMG Black Series	204 R	13-15	8/6208	622/7400	468/5500	1550kg	408	3.6	-	196	321	20.6	+ Stunning engine, superb body control - Be careful on less-than-smooth roads	÷÷
rcedes-Benz SLS Alvio Black Series									_	208	-	- 20.0		
	073 R	'04-'07	8/5439	617/6500	575/3250	1693kg	370	3.7	- 77		-		+ Zonda-pace, 575-style drivability - Dreadful brake feel	**
ble M600	186 R		12/5000	650/6800	604/3800	1198kg	551	3.8	7.7	225	-	-	+ Spiritual successor to the Ferrari F40 - It's a bit pricey	**
ani Huayra	185 R	c£1m	12/5980	720/5800	737/2250	1350kg	542	3.3	-	224	-	-	+ Our joint 2012 Car of the Year - Engine isn't as nape-prickling as the Zonda's	**
ani Zonda 760RS	170 R	£1.5m	12/7291	750/6300	575/4500	1210kg	630	3.3	-	217+	-	-	+ One of the most extreme Zondas ever - One of the last Zondas ever (probably)	**
ani Zonda S 7.3	096 R	'02-'05	12/7291	555/5900	553/4050	1250kg	451	3.6	-	197	-	-	+ evo Car of the Year 2001 (in earlier 7.0 form) - Values have gone up a fair bit since then	**
iani Zonda F	186 R	'05-'06	12/7291	602/6150	575/4000	1230kg	497	3.6	-	214	-	-	+ Everything an Italian supercar ought to be - Looks a bit blingy next to a Carrera GT	**
ani Zonda Cinque Roadster	147 D	'09-'10	12/7291	669/6200	575/4000	1400kg	485	3.4	-	217+	-	-	+ The best Zonda ever - Doesn't come up in the classifieds often	**
sche 911 Turbo S (991.2)	220 D	£145,773	6/3800	572/6750	553/2250	1600kg	363	2.9	-	205	212	31.0	+ Enormous performance - Not as thrilling as some rivals	**
sche 911 Turbo S (991.1)	217 R	'13-'15	6/3800	552/6500	553/2200	1605kg	349	3.1	-	197	227	29.1	+ Superb everyday supercar - At times disguises the thrills it can offer	**
sche 911 Turbo (997.2)	218 R	'09-'13	6/3800	493/6000	479/1950	1570kg	319	3.2	7.3	193	272	24.4	+ The Turbo at the very top of its game - Favours outright grip over adjustability	÷÷
sche 911 GT2 RS (997.2)	210 R	10-113	6/3600	611/6500	516/2250	1370kg	453	3.5	-	205	284	- 24.4	+ More powerful than a Carrera GT. Handles, too - Erm	
											∠04			**
rsche 911 Turbo (997.1)	094 R	'06-'09 '00 '06	6/3600	472/6000	457/1950	1585kg	303	4.0	8.7	193	-	22.1	+ Monster cornering ability - A bit woolly on its standard settings	**
rsche 911 Turbo (996)	017R	'00-'06	6/3600	414/6000	413/2700	1540kg	273	4.1	10.0	190	309	21.8	+ evo Car of the year 2000; the 911 for all seasons - We can't find any reasons	**
rsche 911 GT2 (996.2)	072 R	'04-'06	6/3600	475/5700	472/3500	1420kg	338	4.0	8.3	198	309	21.8	+ Revisions made it even more of a star than the 456bhp 996.1 GT2- Care still required	**
rsche 911 Turbo (993)	066 R	'95-'98	6/3600	402/5750	398/4500	1500kg	272	4.5	-	180	376	18.0	+ Stupendous all-weather supercar - It doesn't rain enough	**
rsche 911 GT2 (993)	003 R	'95-'98	6/3600	424/5750	398/4500	1295kg	333	4.4	-	183	368	18.3	+ Hairy-arsed homologation special; last 21 had 444bhp - Only 193 were made	**
rsche 918 Spyder	200 R	'13-'15	8/4593	875/8500	944/6600	1674kg	531	2.6	-	211	79	85.6	+ Blistering performance; cohesive hybrid tech - Added weight and complexity	**
rsche Carrera GT	200 R	'04-'06	10/5733	604/8000	435/5750	1380kg	445	3.8	7.6	205	432	15.8	+ Felt ahead of its time - Needs modern tyres to tame its spikiness	÷÷
	126 R	c£357,000		691/7600	656/4000	1400kg	501	3.2	-	205	-	-	+ The best 911 that Porsche never made - But not the best looking	÷÷
fCTR3			01 3140	02010000	000/4000	1-TOOKS	JUI	J.2		200			me sees an mater or sene never made - but not the best looking	~ *

TRACK TIMES

enew this month. Red denotes the car is the fastest in its class on that track.

ANGLESEY COASTAL CIRCUIT DIOCATION Anglesey, UK GPS 53,188372, -4,496385

GPS 53.188372, -4.49 LENGTH 1.55 miles



Car	Lap time	issue no.	YouTube
Radical RXC Turbo 500 (fastest coupe)	1:10.5	-	Yes
McLaren P1 (on P Zero Trofeo R tyres) (fastest supercar)	1:11.2	200	Yes
Porsche 918 Spyder	1:12.4	200	Yes
McLaren P1	1:12.6	200	Yes
Porsche 911 GT3 RS (991)	1:13.6	-	Yes
Porsche 911 Turbo S (991)	1:13.6	-	Yes
Ferrari 458 Speciale	1:14.2	198	Yes
Porsche 911 Turbo (991)	1:15.2	210	Yes
Aston Martin Vantage GT12	1:16.0	214	Yes
Nissan GT-R (2014MY)	1:16.9	210	Yes
Mercedes-AMG GT S	1:17.0	210	Yes
Porsche 911 Carrera S Powerkit (991)	1:17.6	201	-
Porsche 911 Carrera (991)	1:17.8	199	Yes
Porsche Cayman (981)	1:18.9	209	-
Aston Martin N430	1:19.1	210	-
Lotus Exige S (V6)	1:19.1	209	-
SEAT Leon Cupra 280 Sub8 (fastest hot hatch)	1:19.1	212	-
BMW M4	1:19.2	199	Yes
BMW i8	1:19.4	210	-
Honda Civic Type R (FK2)	1:19.5	212	-
Renaultsport Mégane Trophy 275	1:19.6	212	-
BMW M5 Competition Pack (F10M) (fastest saloon)	1:19.7	-	Yes
Audi TTS (Mk3)	1:19.9	209	-
Audi R8 V8 (Mk1)	1:20.1	201	-
BMW M135i	1:20.4	212	-
Nissan 370Z Nismo	1:20.5	209	-
Alfa Romeo 4C	1:20.7	209	-
Mercedes-AMG S65 Coupe	1:21.4	-	Yes
VW Golf R (Mk7)	1:21.6	212	-
Peugeot RCZ R	1:22.0	209	-
Toyota GT86 TRD	1:23.7	193	-
Jota Mazda MX-5 GT (Mk3) (fastest sports car)	1:24.6	193	-

BEDFORD AUTODROME WEST CIRCUIT

LOCATION Bedfordshire, UK
 GPS 52,235133, -0.474321

B LENGTH 1.8 miles (track reconfigured May 2015; earlier times not comparable)

SEAT Leon Cupra 280 Ultimate Sub8 (fastest hot hatch)	1:23.1	215	-
BMW M3 (F80) (fastest saloon)	1:23.3	211	Yes
Renaultsport Mégane 275 Trophy-R	1:23.6	215	-
Mercedes-AMG C63 S Saloon	1:24.0	211	Yes
Honda Civic Type R (FK2)	1:24.9	215	-
VW Golf R (Mk7)	1:26.1	-	Yes
Audi RS3 Sportback (2015MY)	1:26.6	-	Yes
Ford Fiesta ST Mountune	1:29.5	213	-
Mazda MX-5 2.0i Sport (Mk4) (fastest sports car)	1:29.8	-	Yes
Toyota GT86 (fastest coupe)	1:29.9	-	Yes

BLYTON PARK OUTER CIRCUIT

E LENGTH 1.6 miles

Ariel Atom 3.5R (fastest sports car)	0:58.9	205	-
Radical RXC Turbo (fastest coupe)	1:00.4	205	Yes
BAC Mono	1:01.4	189	-
Porsche 911 GT2 RS (997.2) (fastest supercar)	1:01.8	204	Yes
Porsche 911 GT3 (991)	1:01.9	205	Yes
Caterham Seven 620R	1:02.1	189	-
Nissan GT-R Nismo	1:02.1	205	Yes
Mercedes SLS AMG Black Series	1:02.5	204	Yes
Pagani Huayra	1:02.5	177	-
McLaren 12C	1:02.7	187	-
Radical RXC	1:02.9	189	-
Ariel Atom 3.5 310	1:03.4	189	-
Audi R8 V10 Plus (Mk1)	1:03.4	-	Yes
Porsche Cayman GT4	1:03.8	220	Yes
Lotus Exige S (V6)	1:04.4	177	-
Porsche 911 Carrera (991)	1:05.1	177	-
Chevrolet Camaro Z/28	1:05.1	220	Yes
Porsche 911 GT3 (997)	1:05.2	-	Yes
Porsche Boxster S (981)	1:05.5	177	-
Porsche Cayman GTS (981)	1:05.5	-	Yes
Porsche Cayman S (981)	1:05.5	189	-
Caterham Seven 420R	1:05.7	220	Yes
Jaguar F-type S Convertible	1:06.5	-	Yes
Vuhl 05	1:06.5	220	Yes
Zenos E10 S	1:06.6	214	-
Mercedes-Benz C63 AMG Black Series	1:06.9	177	-
Renaultsport Mégane 275 Trophy-R (fastest hot hatch)	1:07.3	205	Yes
SEAT Leon Cupra 280 Sub8	1:07.6	220	Yes
BMW M135i	1:07.7	177	-
Porsche Cayman (981)	1:07.7	-	Yes
BMW M235i	1:08.7	-	Yes
Mini John Cooper Works GP (R56)	1:08.7	181	-
Renaultsport Mégane R26.R	1:08.9	181	-
Ford Focus RS500	1:09.4	181	-
VW Golf GTI Performance Pack (Mk7)	1:10.3	192	-
Toyota GT86	1:12.8	177	





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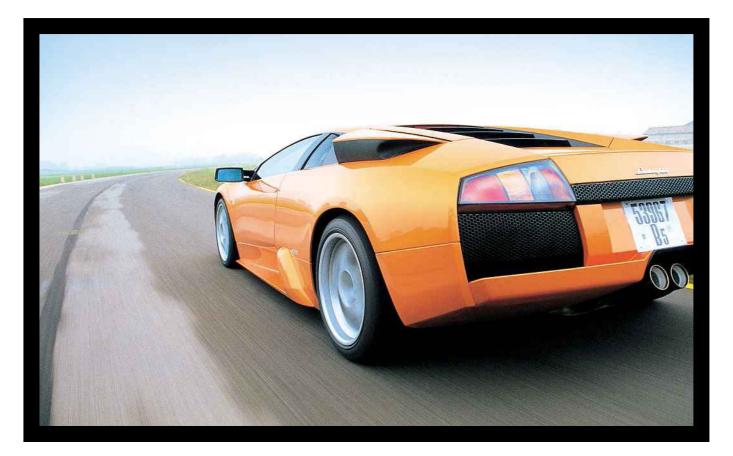
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Lamborghini Murciélago VACS intakes

by RICHARD LANE



LAMBORGHINI'S MURCIÉLAGO MIGHT BE NAMED

after a Spanish bull, but get it hot enough and it takes the likeness of an Australian lizard. The reptile in question is a species that frills out its neck when antagonised and spits viciously. And given that a Murciélago can react similarly

when goaded, the smaller creature seems a more suitable metaphor than a bull that didn't die on a particular day.

The Murciélago's frill comes in the form of its Variable Airflow Cooling System (VACS). These active intakes expand to feed and cool the 6.2-litre V12 at higher speeds but retain the car's elegantly robust lines by receding back into the bodywork when their work is done.

The carbonfibre flaps, which rise up out of the Murciélago's hulking form like something from a *Thunderbirds* set, open to 20 degrees automatically on the basis of engine coolant and external air temperatures, or on request at the touch of a button on the transmission tunnel. A warning sounds if they are obstructed for any reason.

VACS might seem an unnecessarily intricate solution, but consider that kerb appeal has always been a priority for Lamborghini, yet cooling is the one non-negotiable aspect of supercar design. Gaping fixed intakes would be ugly (and, Lamborghini calculated, only fully utilised for 15 per cent of the time). Small intakes, meanwhile, would be useless and, more than that, dangerous.

'We tried various designs until we hit upon a vent that didn't badly increase drag or compromise downforce,' designer Luc Donckerwolke told **evo** at the car's launch in 2001, but the idea didn't materialise from this process alone. In fact the vents were an extension of the hardware that engineering director Massimo Ceccarani and chief engineer Horacio Pagani (yes, that one) devised for the Countach Evoluzione concept more than a decade earlier.

So VACS kept the peace between Sant'Agata's designers and engineers, but it did little to improve the Murciélago's appeal as a practical device. At full spread the intakes were so big that the wing mirrors had to be mounted on conspicuously (and vulnerably) long arms just so the driver had a modicum of rearward visibility. And if the vents' flimsy metal supports snap, the flaps flail about in the wind – not a classy look.

When working as they should, however, the pop-up intakes are an artful compromise of form and function, oscillating like mechanical gills to keep the 570bhp star of the show in fighting form.

EVO NEXT MONTH **BMW M4 GTS driven. The ultimate M-car?**

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If your car goes wrong, you could be faced with wallet busting repair bills. Not to mention the hassle of dealing with the garage and being without your motor for days, or even weeks on end.

A used car repair plan from Warrantywise gives you total peace of mind when your car goes bang! All of our plans include car hire, hotel & onwards travel expenses as well as recovery as standard. You can also take your car to any VAT registered garage in the UK or Europe for repairs!

Prices start from just £19 per month. Best of all its been designed by motoring consumer champion, Quentin Willson.











Warrantywise work in partnership with global feedback engine Feefo and were awarded their Gold Trusted Merchant award for 2015.





QUENTIN VIDEO GUIDE

Watch as motoring expert, Quentin Willson, explains the benefits of a used car warranty.





THEO IS WARRANTY WISE

Warrantywise are delighted that Theo Paphitis has done the wise thing and protected his jaw-dropping Maybach with a Warrantywise warranty.

Read the full article at: www.warrantywise.co.uk/theo



or call us on Freephone 0800 030 4569



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Simply the Best in the Business



THE NEW LEON ST CUPRA 290 CAPABLE, WHICHEVER WAY YOU LOOK AT IT

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Model shown is a Leon ST CUPRA 290 with optional Sub8 Performance Pack, CUPRA Black-Line and Nevada white metallic paint.

2

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Official fuel consumption for the SEAT Leon ST CUPRA in mpg (litres per 100km); urban 31.7 (8.9) - 33.2 (8.5); extra urban 50.4 (5.6) - 51.4 (5.5); combined 41.5 (6.8) - 42.8 (6.6). CO_2 emissions 158 - 154 g/km. Standard EU test figures for comparative purposes and may not reflect real driving results.