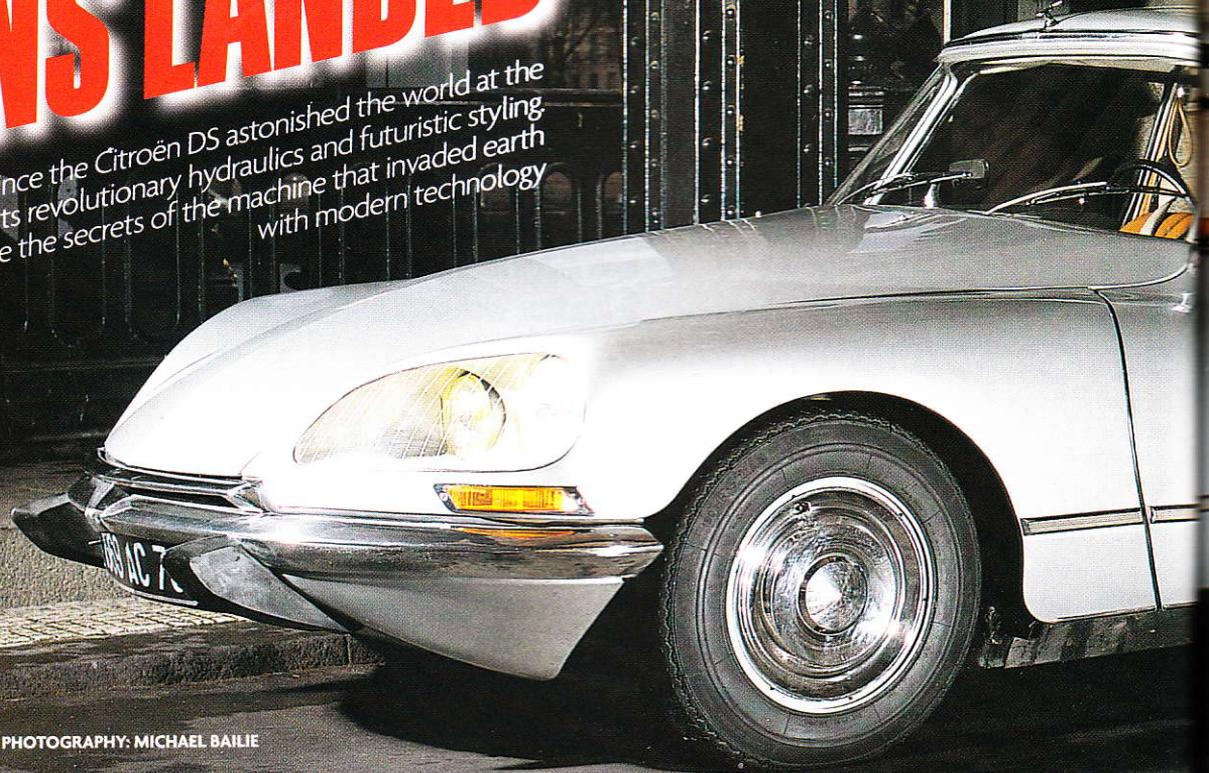


# THE DAY THE ALIENS LANDED

It's 50 years since the Citroën DS astonished the world at the Paris Salon with its revolutionary hydraulics and futuristic styling. These are the secrets of the machine that invaded earth with modern technology



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## THE PUNDIT

THERE'S FUTURISTIC, and then there's *really* futuristic. Charles Bulmer, the former editor of *Motor* magazine, says: 'Looking back over the history of motoring, there are very few cars that were really revolutionary.

There was the 1902/1903 Lanchester and the 1937 Lancia Aprilia – both 25 years ahead of their time. But the Citroën DS was 50 years ahead. People are just about catching up with the technology today. It might be more perfectly executed

nowadays, but the concepts are the same: semi-automatic gearing, low drag coefficients and the nature of suspension and steering.'

After his days at *Motor*, Bulmer was headhunted by Lord Stokes to run the future



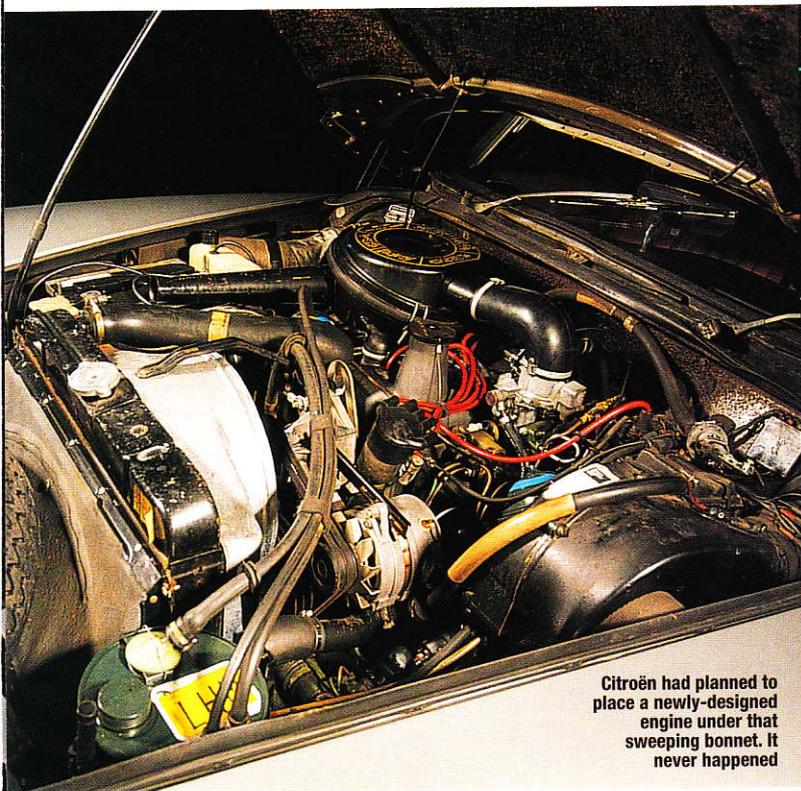
product planning department at British Leyland. But in the Fifties he was a scientific civil servant, writing technical-motoring pieces in his spare time.

I first drove a DS in 1957. Holly Birkett (of the 750 Motor Club) and I borrowed one to

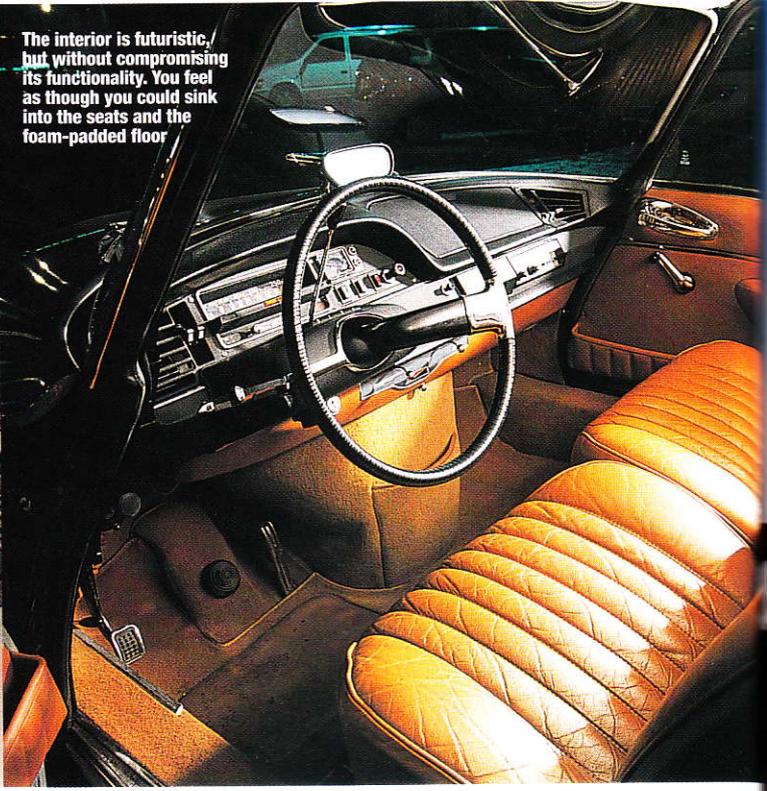
drive to Silverstone. We'd never experienced anything like it, not least that strange little button of a brake pedal. You'd lose track of it just when it was really needed and start waving your foot around in desperation. And then there was the semi-automatic

gearbox, with no clutch pedal. The clutch was hydraulically activated and the gears selected by hydraulic valves. There were a number of attempts by other manufacturers to do something similar; the Porsche Sportomatic, for example, and the NSU Ro80, ▶

Covered headlamps came with the 1967 facelift and rotated with the steering on high specification models. Earlier cars had bug-like circular lights



Citroën had planned to place a newly-designed engine under that sweeping bonnet. It never happened



The interior is futuristic, but without compromising its functionality. You feel as though you could sink into the seats and the foam-padded floor

but only now is semi-automatic gearing generally available.'

While many new cars boast one pioneering feature or another, the DS19 shouted wild innovation from top to toe. That Flaminio Bertoni-designed shape with its saucer-like, grille-less nose, curvaceous glasshouse and roof-mounted rear indicator trumpets were just the start of the car's unorthodox anatomy. Inside, the single-spoke steering wheel and sculpted plastic dashboard complemented squashy seats upholstered in man-made fabrics; seats that would recline and slide to form a flat 'bed'. Not forgetting those pedals – and all this before the engine even started.

Once on the move, in the excitement of swivelling headlights and hydraulically-powered steering, brakes, clutch and gearbox, such cutting-edge features as front disc brakes were hardly noticed. And we haven't yet mentioned the DS's greatest claim to fame. The world knew that Citroën was about to explode onto the market with something new and strange when, in 1954, the marque introduced hydropneumatic suspension on the rear of the 15-Six Traction Avant model. The DS took this quirk to a new level: hydropneumatic, self-levelling suspension on all four wheels.

For each wheel there was a sphere containing a compressible gas and a liquid, separated by a diaphragm. The liquid side of the sphere was connected to a hydraulic piston. The gas/liquid effect was later explained through the dramatic publicity image of a DS, with Spacehopper-like balloons in place of wheels, floating on water.

'The ride was totally different from any

other car of its day,' continues Bulmer. 'It was softer, in fact, than anything today – even in the USA. In terms of static deflection [a measure of suspension compliancy], which indicates the car's ability to cope with bumps, an earlier car might have around three inches of deflection and, by the mid-Fifties, there were cars with five or six inches. The Citroën DS had more than 30 inches. I remember thinking how marvellous this car would be, if only it didn't roll so much. Nowadays, that's what Citroën does offer with its Hydractive suspension. But it's 50 years later.'

Today, as in 1955, a car this revolutionary would probably be little more than a concept, dreamt up to test public reaction. But Citroën said production would start before the end of October. In the first 45 minutes at the Paris Salon, 749 orders were taken. By the end of the day, the figure had risen to 12,000. It was just the start of the success story. In its various guises, the DS remained in production for almost 20 years, with a total of 1,456,115 cars produced between October 1955 and April 1975.

'The cars weren't really bought by enthusiasts,' continues Bulmer. 'They were bought by people who liked comfort – the squashy seats, the suspension. Another advantage came home to me when driving abroad in British sports cars. The French roads were appalling: heavily cambered with frilly edges – all bumps and ripples. The difficulty of staying on the road limited your speed. At about 60mph you'd grit your teeth and start to sweat. Suddenly, a DS19 would sweep past, a gesticulating, heavily-smoking Frenchman at the wheel. If you experienced French roads in

those days, you'd realize the purpose of the DS. Our roads weren't as bad, but now it's the other way round. Someone needs to re-invent the DS19 for Britain today.'

He concludes: 'Citroën had the reputation of being a very unconventional company, it did things no one else even considered, but the DS was a huge surprise – even from them. If there was one thing that let the car down it was that grotty old engine. Citroën had ideas for a different engine but, as usually happens with revolutionary cars, there's only so much you can spend on research and development. Citroën was over-ambitious, financially and technically, and something had to give.'

## THE TECHNICIAN

Life-long Citroën employee Gerald Bastin confirms there were originally different plans for the engine. 'Before the car was launched, they talked about putting an air-cooled flat-six in it, but they never did.'

Bastin joined the Citroën factory in Slough on his de-mob from the RAF in 1946 and, between 1951 and 1965, divided his time between Britain and Uganda. In early 1956, the Citroën factory at Slough began to build its first DS models, though the unorthodox technology meant it took some months for DS production to get fully underway. 'The hydraulics shop in Slough was run by Cyril Smith,' recalls Bastin. 'Every hydraulic item was bench-tested personally by "Hydraulics" Smith, as he was known. His workshop was like an operating theatre. It was perfectly clean, with double doors so no dust could get in. Having seen what was happening in Slough, I set up a ▶



WHEN IT WAS  
LAUNCHED, THE  
CITROËN DS  
BROUGHT PARIS  
TO A STANDSTILL

**1969 CITROËN DS21**

**Engine** 2175cc, in-line four-cylinder, ohv, Weber carburettor  
**Power and torque** 115bhp @ 5500rpm; 126lb ft @ 4000rpm

**Transmission** Four-speed semi-automatic, front-wheel drive

**Steering** Rack and pinion, power-assisted

**Suspension** Front: independent, twin leading arms, self-levelling hydropneumatic spring/damper units. Rear: independent, trailing arms, self-levelling hydropneumatic spring/damper units

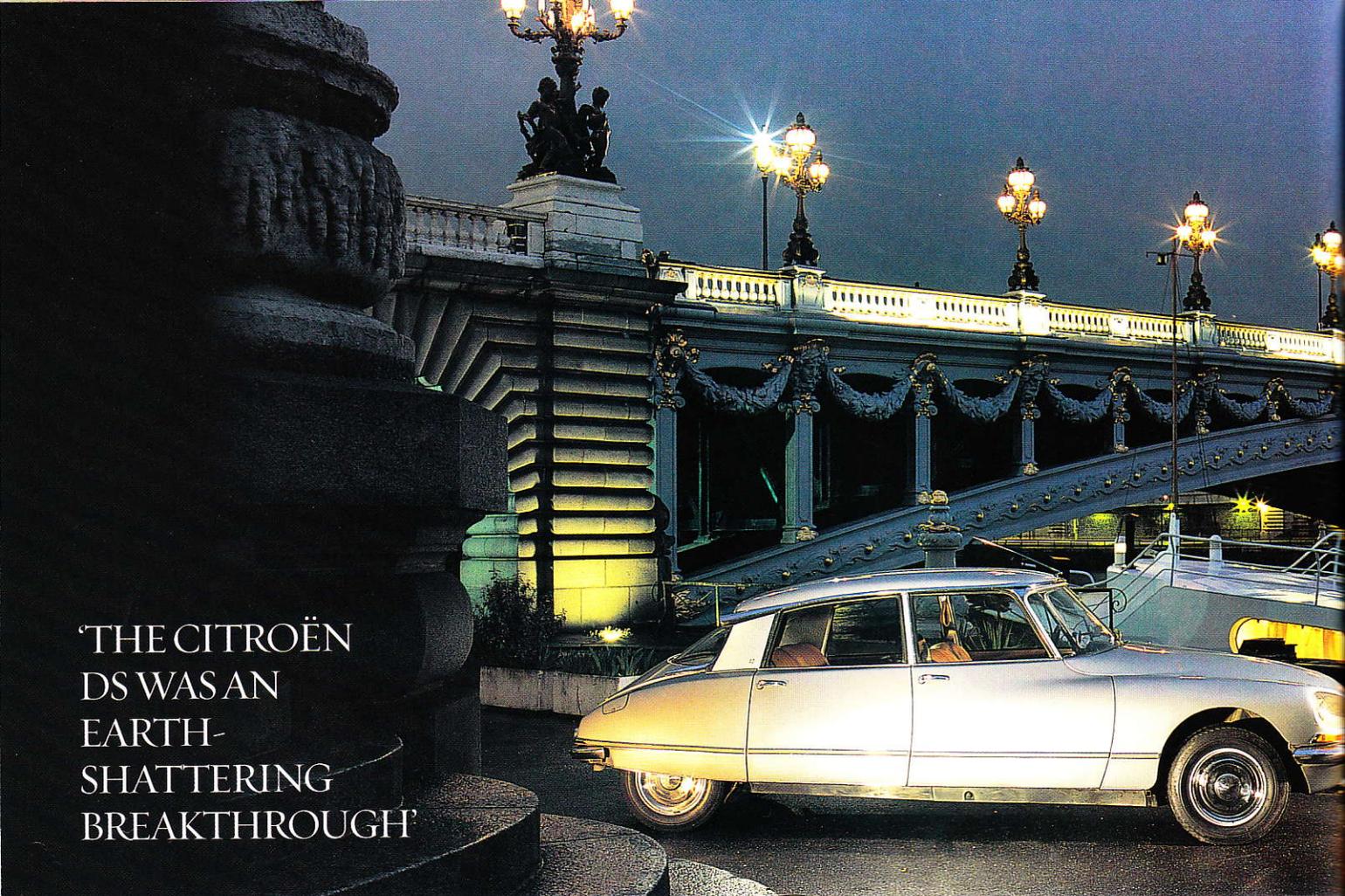
**Weight** 2878lb (1307kg)

**Performance**

Top speed: 103mph; 0-60mph:

14.5sec **Cost new** £2260

**Value now** £10,000



## 'THE CITROËN DS WAS AN EARTH-SHATTERING BREAKTHROUGH'

reconditioning unit in Uganda for the hydraulic suspension, dismantling the spheres to fit new diaphragms, and so on.

If the hydropneumatic technology was avant-garde in Europe, in Uganda it was extraterrestrial. 'I didn't like customers in the workshop,' says Bastin. 'One day a gentleman wandered in while I was teaching a technician to recondition a sphere. "What are you doing?" asked the customer, staring at the alien objects. "It's top secret," I told him. "They're bombs." At that time, the British Government's habit of taking land from one tribe and giving it to another had resulted in a local war. I said: "The spheres with yellow markings [actually the rear suspension] are for the Bunyoro, and the ones with blue markings [the front suspension] are for the Buganda. We make bombs for both sides.'" Then I flipped the waste-gas tap to create an explosion. He ran like the wind.'

When Bastin returned full-time to Britain, production at Citroën's Slough factory was coming to an end. 'The production costs had got too high compared with France.' Nor were there enough buyers for the UK-produced cars.

'A lot of people felt the same as my friend who saw the DS at the London Motor Show in 1955. "What an abortion that is," he thought. Later, he went back. "Maybe it's not so bad." He kept going back and gradually it got better.'

### THE OWNER

Not everyone makes up their mind so quickly. John O'Sullivan saw the Citroën DS at the 1955

Paris Show, but didn't buy one until 2003.

'The DS didn't strike me to any great extent the first time I saw it – to my shame, perhaps. The DS had been unveiled a few days before and the whole of France was talking about it, so there were crowds thronging the stand. I was far more interested in a cutaway of a VW engine and gearbox.'

As *Motor* magazine said at the time, Citroën had become 'overnight the focal point of an entire industry.' Despite five years of active testing prior to launch, the shape of the DS 'defeated the most effective espionage systems of the French press until the day of its announcement'. So there was bound to be media interest.

'It wasn't until later years that I was really struck by the DS,' says O'Sullivan, nowadays Irish liaison officer for the Citroën Car Club. 'I've been driving a Citroën since the Seventies, but the DS was always too expensive. Then, 18 months ago, I bought a DS21 for about five grand. I love the comfort. It's not just the ride: you sink into the seats. The roads in Ireland can be terrible, with potholes and bumps. I don't like a sloppy ride but I do like a ride that doesn't rattle you to pieces. Why can't they make cars like that today?'

'It's been very reliable, only letting me down with a big bang once. I was on the M4, tootling along at 65mph in the middle lane, when I came up behind someone doing 50mph. After a mile or two there was a gap in the traffic so I pulled out and accelerated.

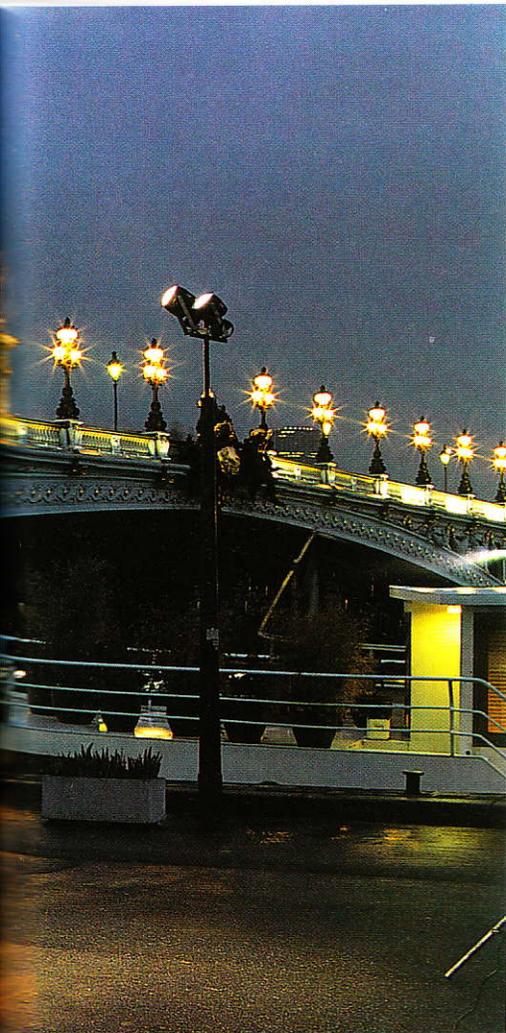
He started to accelerate too; one of those. I said a few nasty words and put my foot to the floor. The throttle pedal went slap-bang and slack. It wasn't a hydraulic seal or anything like that, just a simple mechanical break.

'Other problems? Well, the box section chassis tends to rust. I've had one side done at a cost of £500, and the other side will need doing this year. I don't take it out in the wet.'

### THE MANUFACTURER

Julian Leyton, PR manager at Citroën UK, claims the marque now takes a renewed pride in its heritage: 'The new Citroën C6, unveiled at Geneva, brings our tradition of style and innovation bang up to date. It pays homage to such classic Citroëns as DS, SM and CX, but in a contemporary way.'

'The DS, however, was an earth-shattering breakthrough. Our former chief engineer Ken Smith described its impact when telling me how the first right-hand drive DS prototypes were sent to Britain, supposedly in total secrecy. Two covered lorries were to meet the ferry at Dover and transport the prototypes to Slough. Under no circumstances were the cars to be driven on the public road. But stormy weather delayed the ferry by 12 hours and the lorries had disappeared, so Ken drove the 'secret' prototype to the Slough factory himself. He found the entire workforce gathered to meet him as his futuristic transport swept through the gates, emitting hitherto-unheard hydraulic hisses and clicks. They were bowled over.'



## THE DS: 50 YEARS ON

When it was launched, the DS brought Paris to a standstill. Little has changed today. Here, in the most elegant and forward-thinking of European cities, the most elegant and forward-thinking of any car designed in the Fifties causes ripples of interest, respect and admiration from passing Parisians. It's still the perfect car in which to take in the sights of the capital: it's as quintessentially French as the landmarks around it.

It's also the most refined way to travel. The comfort of its ride is legendary but the plushness extends beyond that. Don't expect wood and leather: instead, revel in broad, soft seats that cosset you as you sink into them and rest your feet on carpet that's padded with a couple of inches of foam. No other car manufacturer has copied that. They should.

Semi-automatic transmission takes the effort out of fighting traffic and there's plentiful torque from that old four-cylinder engine. Low-tech it may be, but at least it's quiet, accelerating with just a wheeze and a sigh.

Wherever you look, you're reminded of the DS's individualism. The delicate single-spoke steering wheel, formed by curving the end of the steering column, means you can see the dashboard clearly. The narrow pillar ensures your view of the Eiffel Tower is unobscured. The mushroom-like brake pedal brings you to an instant halt with the merest touch and steering is effortless. Every aspect feels superbly engineered to last. It really is time the world caught up. 

## THE RIVALS

Not everyone was swept away by the French flying saucer. For those left behind there were plenty of other four-door saloons; many of them cheaper than the £1403 DS19.

### JAGUAR 2.4: £1269

The choice of tweed-jacketed sportsmen, the 2.4 was the first in that renowned series of racy, rounded saloons. The new breed of unitary construction Jaguar was smaller and curvier than earlier models and, typically for the marque, offered superb value for money.

### ROVER 90: £1339

Meat and two veg to the bowler-hatted brigade of British businessmen, a Rover would be the safe choice for solid, professional types. Doctors and solicitors, too, would carefully weigh up the cost:performance ratio of the Rover 60, the 75 and, if finances allowed, the suburban flash of a Rover 90.

### FIAT 1900A: £1389

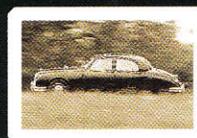
For those who fancied something freakish but not French, why not an Italian saloon? It's unlikely the neighbours would have seen a 1900A, let alone owned one. But it took courage to fork out £1389 for a Fiat. After all, Italy is even further away than France.

### HUMBER SUPER SNIPE: £1552

A prestige model for the bourgeois. Despite sound British credentials, the Super Snipe had a touch of the transatlantic – there was a definite American feel to the styling. From 1955, the Super Snipe was available in two-tone colours and power increased from 122bhp to 130bhp.

### MERCEDES-BENZ 190: £1694

To buy a 190 saloon, you needed two things. The first was wealth. The 190 cost £291 more than the DS19 and yet offered a paltry 52bhp. Secondly, you needed an immunity to the post-war rejection of all things German. But on the up-side, you acquired a (distant) association with the glorious 300SL Gullwing.



Thanks to Julian Leyton and Gro Hoeg of Citroën; Citroën Car Club ([www.citroencarclub.org.uk](http://www.citroencarclub.org.uk)); Eurotunnel (08705 353535; [www.eurotunnel.com](http://www.eurotunnel.com))