

# Choice

Properly maintained, Citroën's D-Series cars are an attractive proposition, as James Taylor explains

**C**ITROËN's D-Series cars remain as idiosyncratic now as when they first saw the light of day in October 1955. The appearance that month at the Paris Motor Show of the first DS19 had an effect on the motoring world not unlike that of a bomb burst. For here was a car which attempted to do what no other even dared — to the front-wheel drive, wheel-at-each-corner approach pioneered in 1934 by the *Traction Avant*. Citroën had added a sleek and aerodynamic body, plus a complicated system of hydraulic power assistance for several of the major mechanical functions. Even the car's structure — an all-steel welded base unit with non-stressed skin panels — was a new departure. Most exciting of all, of course, was that all this high technology had come together not in a limited-volume, expensive luxury car, but in a mass-production saloon aimed squarely at the family motorist.

Not surprisingly, the DS was considerably more expensive than the *Traction Avant* which it was ultimately intended to replace, and the older car remained in production for two more years before giving way to the ID, a cheaper version of the DS with a less complex hydraulic system and a generally lower specification level. This now gave the D a very wide appeal: while the DS became France's favourite black 'official' car and was even made available as the Prestige model with a division and other luxury trimmings. At the other end of the scale the man in the street could scrape enough Francs together to buy himself an ID and feel he was somebody special. When production ceased in 1975, 1,330,755 D-Series cars had been built.

Yet the D was more than just a sophisticated, soft-riding, conveyance for the French middle classes. In the Fifties and Sixties it proved a formidable rally car, beginning with a first in class on the 1956 Monte, going on to take a first overall plus the Manufacturer's Cup in the same event three years later, and continuing with a series of high placings in all the major international rallies like the Coupe des Alpes and the Liege-Sofia-Liege.

Until October 1966, D-Series Citroëns for the UK market were assembled from CKD kits at the Company's Slough factory, but all subsequent UK vehicles were imported complete from France. They were relatively costly cars in the Rover Jaguar price bracket in this country, and so they sold in much smaller volumes than on their home ground, and then usually in the better-equipped versions. As with all Citroën models, the variants have however been legion, and the table which accompanies this guide attempts only to sort out the *major* model variations.

## Bodywork

Most of the Ds on the market in this country will be saloons, although a popular and spacious estate version of the lower-specification models (known as the Safari) was also available, and a magnificent Chapron-built two-door drophead was made and imported in very small numbers.

All Ds share the same base-unit structure on to which wings, doors, bonnet, bootlid and roof are bolted, and this base-unit was strong enough for all the skin panels to be unstressed. Weight-saving was also achieved by using aluminium for the boot lid and the huge bonnet panel, and fibreglass for the roof. What all this means to the

potential buyer today is that rusting of the outer panels is not a major problem. Door bottoms are particularly prone to the tinworm and front wings and the area around the front number plate will usually suffer.

However, when it comes to rusting of the body shell, the cost of repairs makes them uneconomical at present, while prices of used Ds remain fairly low. Serious rust may be found in the rear inner wing panels (visible if the wheel cover panel is removed), around the rear suspension mounting points which are just inboard of the rear door trailing edges, and along the bottoms of the body sills. This latter is often invisible without a careful inspection (underseal may conceal problems until they become really serious), and a D with very bad skills will be an MoT failure.

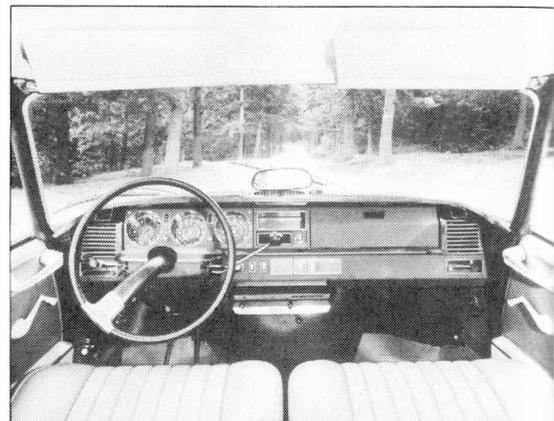
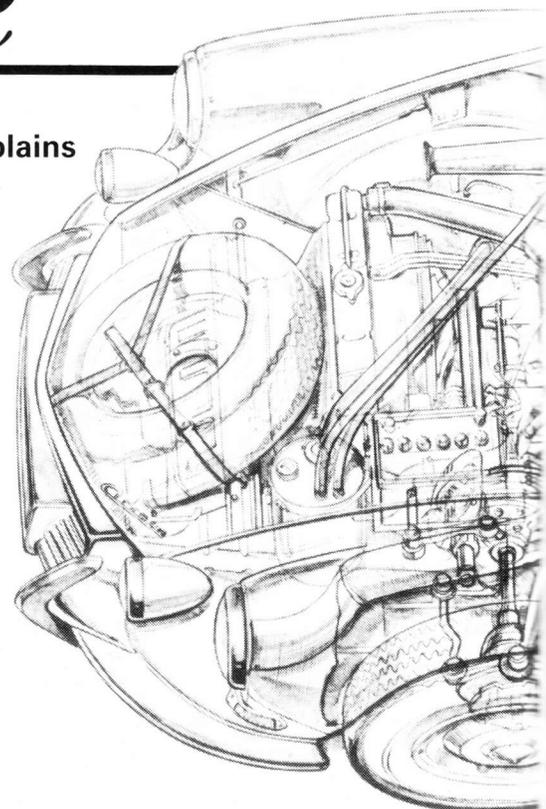
In styling, the D altered very little over the years, the only major change coming in October 1966 when the exposed headlights disappeared and restyled front wings with headlamps and driving lamps behind glass panels were specified. On the more expensive models the lamps were self-levelling and the inner pair turned with the front wheels to light the way around dark corners. However, there is really very little to choose from between early and late D styling features — and it is even possible to fit a late front end to an early car (so be careful when buying!) The main consideration should therefore be the *condition* of the bodywork.

## Steering, suspension, and brakes

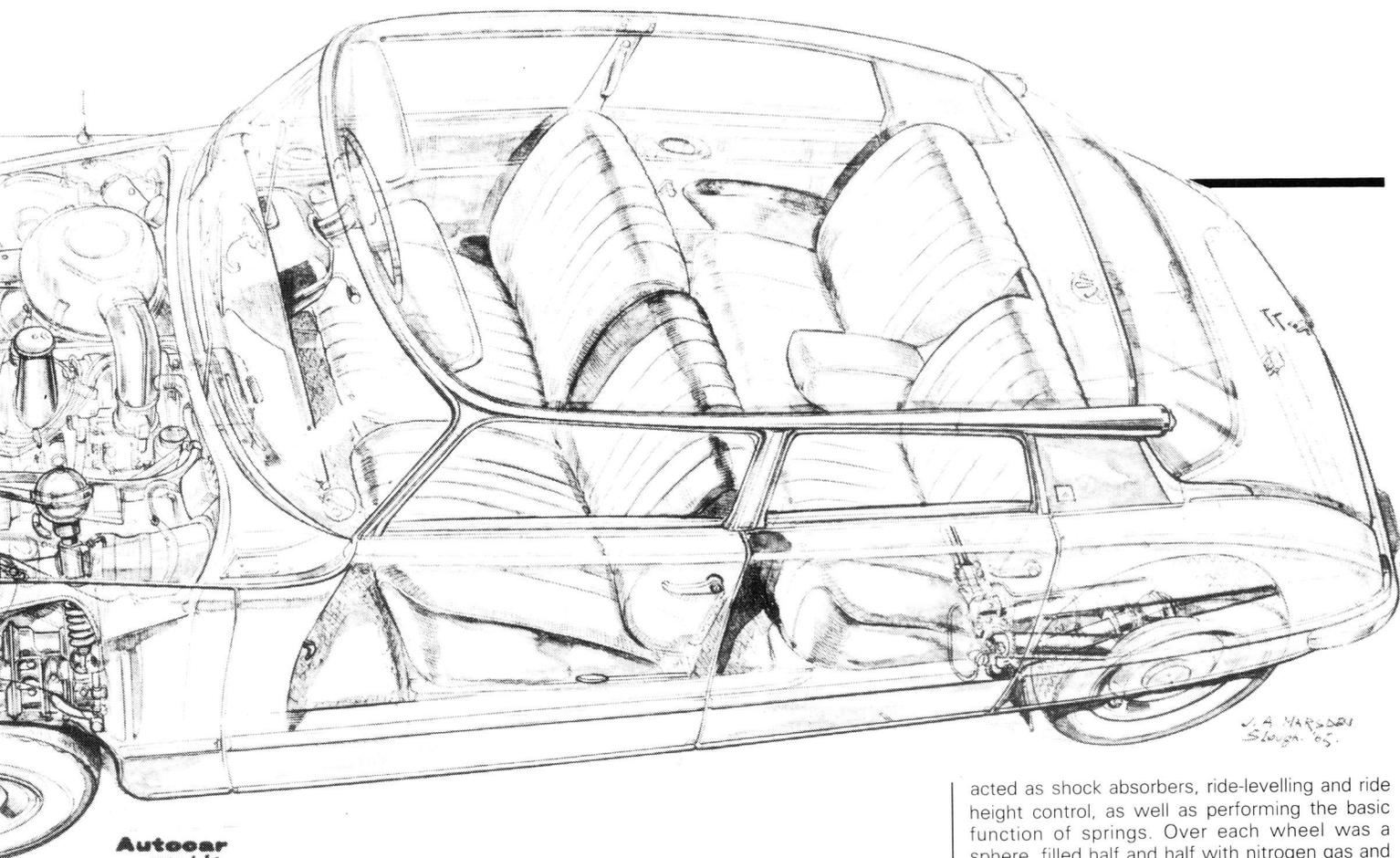
Basically, the D's underpinnings are a wishbone front suspension, trailing arm rear suspension, rack-and-pinion steering with power assistance on some models and a split-circuit braking system with front discs and rear drums which is also power-assisted on some models. Such a bald statement however omits the very essence of the D, which was its centralised high-pressure hydraulic system uniting not only steering, suspension and brakes, but also on some models the gear selection and clutch mechanisms.

The power for this hydraulic system came from an engine-driven pump, with an accumulator to maintain pressure at a constant level. The hydraulic medium was LHS synthetic red brake fluid until September 1966, and thereafter LHM fluid, green in colour, mineral-based and non-corrosive. Power assistance was provided for the steering when turning the wheel opened a valve to apply pressure appropriately, while a degree of artificial 'feel' was imparted by a spring-loaded cam in the system. The power brakes used neither master cylinder nor servo on the all-hydraulic D models, but were also activated by the opening of a valve controlled by the driver's 'pedal' (which was actually not a pedal at all but a mushroom-shaped button on the toeboard). First-class braking was available with the effort being proportioned automatically between front and rear according to load, but it was all too easy for novice drivers to stand the car on its nose before they had become accustomed to the gentle pressure required on the brake button! In response to public demand (or public outcry, depending on your viewpoint), several of the later D models had a conventional pedal, master-cylinder and servo.

All the Ds however had the fascinating hydraulic suspension system. Here, the hydraulics



Autocar cutaway, top, shows complexity of hydraulic system. The main base-unit was strong enough to allow all the (unstressed) body panels to be bolted directly to it. Boot and bonnet lids were of aluminium and further weight-saving was achieved with a glassfibre roof panel. Middle above, later dashboard style with three round dials. This model has conventional brake pedal. Above right, the Coltelloni/Desroisiers ID 19 which won the 1959 Monte Carlo rally. These early cars had centre-lock wheels and exposed headlamps. Above, rare two-door drophead coupé with body by Henri Chapron. Note complete hood concealment and indicator lights mounted on the rear three-quarter panel. Right, an early Slough-built Safari model, complete with fitted roof-rack



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acted as shock absorbers, ride-levelling and ride height control, as well as performing the basic function of springs. Over each wheel was a sphere, filled half and half with nitrogen gas and fluid under pressure from the central hydraulic system. A piston connected to the wheel compressed the fluid and gas within the spheres as the wheel went over a bump, and the reaction to this compression damped out further movement. A complex system of valves linked to the anti-roll bars fitted front and rear controlled the amount of fluid in the spheres and ensured a constant ride height regardless of load, while a manual control in the car permitted selection of different ride heights to cater for uneven ground. The same system allowed simple wheel changing by raising and lowering the car at will onto its own jacking stand. With the engine off and the hydraulic system not under pressure, the D would sigh and sink to its lowest position, while its first action with the engine on again would be to rise to the selected ride height.

Although the hydraulic systems are extremely robust and reliable, a very thorough check of a potential purchase should be carried out to ensure that the system really does operate correctly. The car's inability to cope with a hump-back bridge is a fault of the system, but a hard ride may indicate trouble. It may simply be that the suspension spheres need to be recharged (an operation which should be carried out every two years or so), but tell-tale dribbles of hydraulic fluid under the car will point to leaks, which will obviously have to be rectified. The hydraulic system is not too difficult for the average diy enthusiast to work on, but it does demand patience and non-one should attempt to repair it without first obtaining a full understanding from workshop manuals and the like of how it all works.

### Engine and transmission

All the D-Series had ohv four-cylinder engines of legendary reliability. The long-stroke 1911cc unit with which the DS was launched in 1955 was originally designed for the *Traction Avant* in the early Thirties, and was progressively uprated (although ID models were always lower-powered than their DS equivalents) until it was replaced in October 1965 by two new engines (again the ID lagged behind, keeping the 1911cc unit for a

further season). These new engines were of common design, and displaced 1985cc and 2175cc respectively. Electronic fuel injection became optional on the larger of them in October 1969, but the engine was replaced in October 1972 by an overbored 2347cc version, which remained available until the end of production in both carburettor and fuel-injected forms. This 2.3-litre unit is still available in the CX 2400 GTi.

From the point of view of sophistication, the D's engine was always rather a let-down, and all versions can be harsh and noisy when pressed; but equally, all versions seem to last forever. Mileages of 150,000 without major overhauls are not at all uncommon, and indeed an engine which has been the subject of major work before 100,000 miles or so should be viewed with some suspicion — it could indicate that the car has been mistreated!

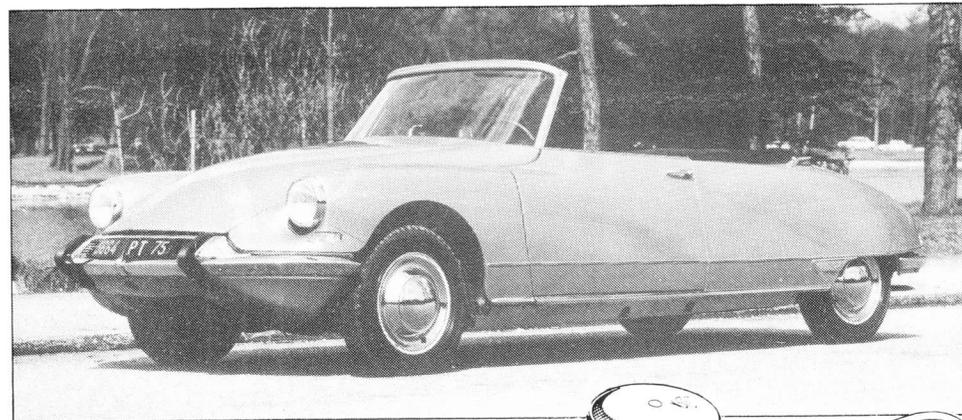
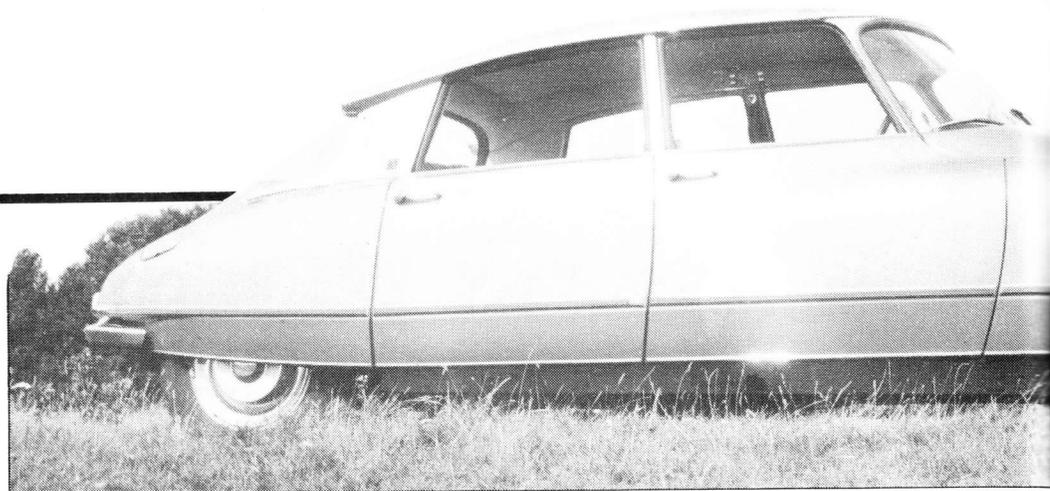
Gearboxes are mounted ahead of the engine and are as robust as the rest of the drivetrain. Three basic types were available — initially a four-speeder without synchromesh on bottom gear, then an all-synchromesh four-speeder from October 1962, and latterly an all-synchromesh five-speeder from October 1970. Depending on model, gear selection on the four-speeders could be performed either by conventional selector forks or by hydraulic cylinders. The five-speed boxes are not overdrive-gear and so do permit higher top speeds. They are also the best bet for fuel economy and for those who are likely to use a D for long-distance motorway driving — but be prepared for the characteristic top-gear whine. A Borg-Warner three-speed automatic transmission was also available in France after October 1971, but it was never offered in this country. Driveshafts last as long as the engines and clutches will survive for 50-60,000 miles. These were available in conventional form (especially on the cheaper models) or were hydraulically operated by the movement of the gearlever, thus giving, in effect, a semi-automatic transmission.

## Interior and controls

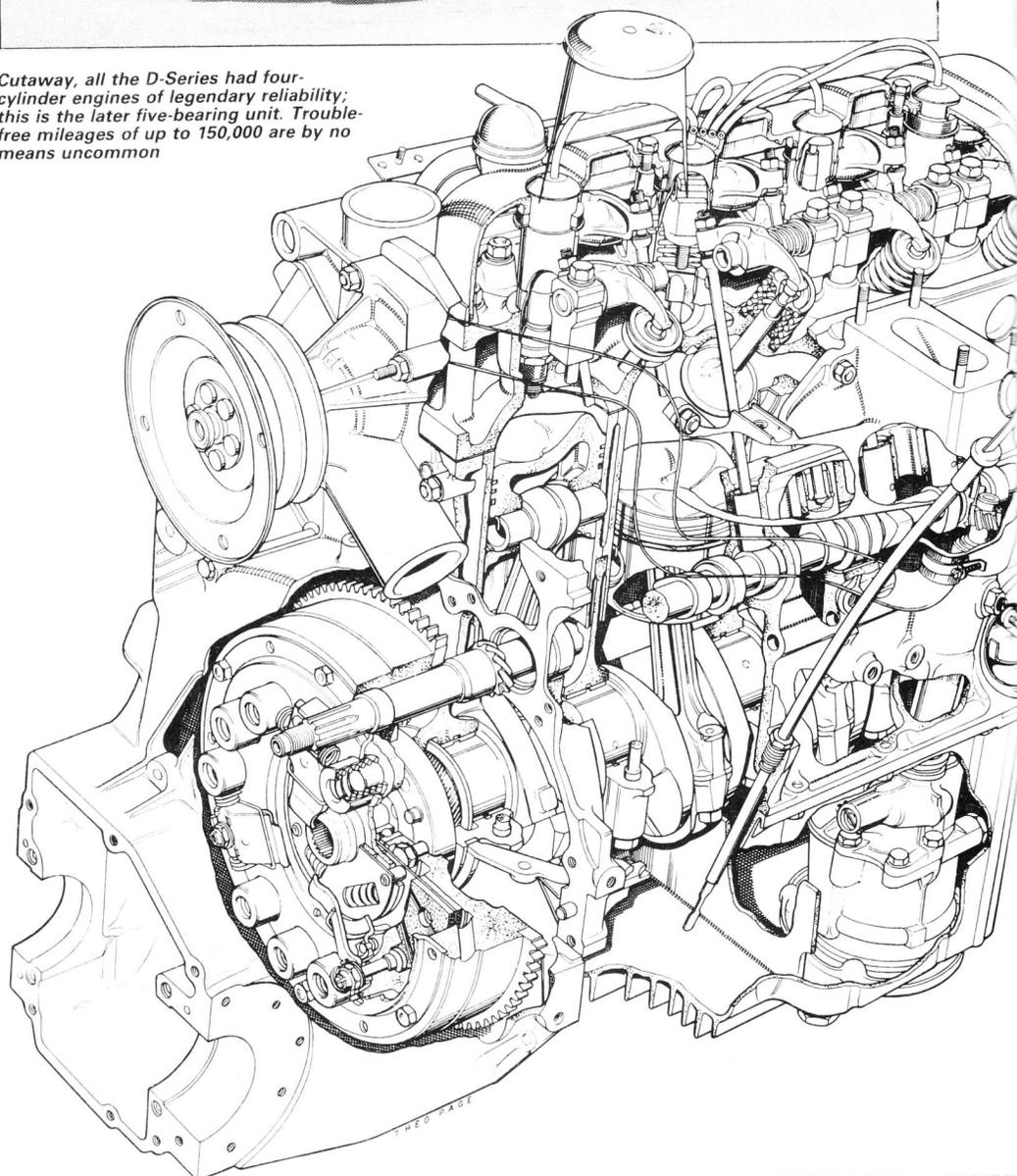
To be honest, the dashboard of a D is not its strongest suit. Early models may have seemed futuristic in the Fifties, but the curious facia with its profusion of levers protruding at strange angles did not date well. A more conventional dashboard with three round dials was introduced in October 1969, and was certainly an improvement if scarcely outstanding.

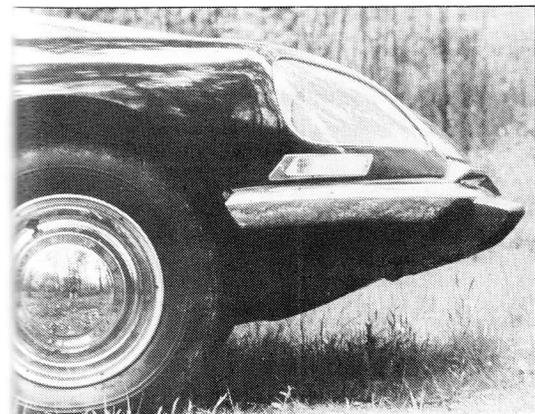
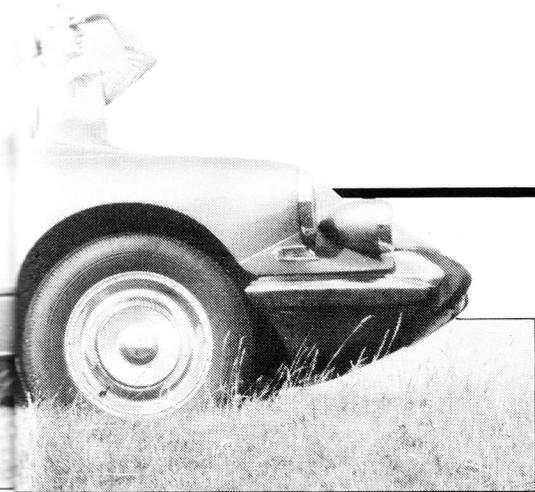
The best feature of a D's dashboard is really the distinctive single-spoke steering wheel, which was designed as a collision-safety feature and has the additional advantage of not obscuring the instruments. Otherwise, the controls of a D need acclimatisation. The infamous power-brake button has already been mentioned, and it takes some time to get the gearchanging right with the automatic clutch models. Ergonomically speaking, the later dashboards are also a disaster, and it takes some time to work out which switch does what!

On all but the most expensive Pallas models, interior trim is also rather disappointing. Jersey-cloth seat coverings on the cheaper models do not wear well, but leather was an option often specified on UK-market cars. In all cases, the seats are extremely comfortable and add greatly to the car's soft ride. The flat floor made possible by the fwd layout gives plenty of room in the rear and the boot is large and unobstructed because



*Cutaway, all the D-Series had four-cylinder engines of legendary reliability; this is the later five-bearing unit. Trouble-free mileages of up to 150,000 are by no means uncommon*





Top, 1966 model DS 21 Pallas with wheel trims, podded quartz-iodine driving lights and side rubbing strips unique to the model. Above left, the Chapron drophead, or Décapotable. Above, a close-up of the later 'shark-nose'. There was always a shaped undertray to help aerodynamics. Below, first of the line, the DS 19, had single exposed headlights and separate indicators



the petrol tank is tucked thoughtfully away over the rear axle, and the spare wheel sits over the gearbox underneath the bonnet. The carrying capacity of the Safari models — which were also available with folding seats in the rear as eight-seater 'Familiales', and were often used as ambulances in France — is truly enormous, and for that reason, many have unfortunately been badly abused.

## Spares and maintenance

Most mechanical spares can be obtained through Citroën dealers, although it is often necessary for the dealer to send for the less common items from Paris, and this inevitably creates delays. Obviously, the older cars are the least well-served in this respect. Body parts for all Ds are expensive and will have to be ordered specially, but the more common 'consumables' such as filters and brake pads, as well as a host of other

spares, are held in stock by A&D Service Spares of 15 Whitley Street, Reading (tel 0734 864818). The really keen D enthusiast will certainly join the spares scheme which the Citroën Car Club runs for its members, and will thus be entitled to certain discounts and to purchase rarely-available items. To join the CCC, which also published an excellent monthly magazine with its own column for D owners, write to the membership secretary, David Saville, at 49 Mungo Park Way, Orpington, Kent BR5 4EE.

For those who want specialist help in the maintenance and repair of a D, there are several sources. Nigel Wild, who could not have been more helpful in the preparation of this article, is the CCC's D specialist, and is always willing to give advice on 0532 737077. More active help can be sought from Chevron Motors of Court Road, Malvern, Worcestershire (tel 06845-3391); from Installation Services of Dudleston in Shropshire; or from Pleiades Enterprises of Green End House, Scotney Way, Sawtry, Huntingdon, Cambridgeshire (tel 0487 831239). Hydraulics specialists include Hypertronics Ltd of Finchley, London, who can be contacted seven days a week on 01-349 2260.

## Best buy

Without any doubt, the most desirable D is a drophead, although these were not imported after 1966 and are as rare as hen's teeth on the market. A good one will fetch £3000 or more. The majority of cars for sale will be saloons of 1970 or later, and prices will range from about £400 for a runner to £1500 for a really good car. The Safari estates tend to be snapped up quickly, and may be slightly more expensive than the equivalent saloons.

Choice of car of course depends a lot on individual taste: not everyone can live with an all-hydraulic car or fuel injection, and indeed the lower specification cars are certainly easier to maintain. The majority of DS models available in the UK will have Pallas trim, which is a definite plus, but anyone who has his heart set on an early 'exposed-headlight' model may have to search around quite hard. Leaving individual feelings aside for the moment, however, a very good buy will be a DS21 carburettor model with Pallas trim and five-speed gearbox, which will give 112mph and as much luxury and fuel economy as a D can offer. Can one ask for more? 

## Specification

Model	Dates	Engine	Remarks
DS19	10/1955 – 9/1968	1911cc to 9/1964 1985cc from 10/64	Manually-operated gearbox optional from October 1962. Prestige model available from 10/1958. Décapotable model available from 10/1960. Pallas model available from 10/1964. (NB the UK-only DW model was basically a Pallas with manually-operated gearbox).
ID 19	5/1957 – 9/1969	1911cc to 9/1966 1985cc from 10/66	Normale and Luxe models available. Confort model (with DS interior trim) available from summer 1957. Safari (estate) model available 10/1958 – 9/1968. Division available on Confort model from 10/1959. Pallas model available.
DS 20	10/1968 – 9/1975	1985cc, twin-choke carburettor	
ID 20	10/1968 – 9/1969	1985cc, twin-choke carburettor	Safari model available until 9/1975 (latterly paralleled D Super specification).
DS 21	10/1965 – 9/1972	2175cc, carburettor 2175cc, fuel-injection (EFI model)	DS 21 Injection available 10/1969 to 9/1972. Pallas model available. Prestige and Décapotable models available to 9/1971. Five-speed gearbox optional from 10/1970. Automatic transmission available from 10/1971.
ID 21	10/1965 – 9/1972	2175cc, carburettor	Safari model only.
DS 23	10/1972 – 9/1975	2347cc, carburettor 2347cc, fuel-injection (EFI model)	Pallas model available. Safari model available. DS 23 Injection Available only as saloon model.
D Spécial	10/69 – 9/1975	1985cc	Replaced ID 19 saloons.
D Super	10/1969 – 9/1975	1985cc, twin-choke carburettor.	Manually-operated gearbox.
D Super 5	10/72 – 1/1975	2175cc	Five-speed gearbox.