

CITROEN DS23 PALLAS EFF



FOR : good performance and relaxed high-speed cruising ; excellent ride and roadholding ; magnificent lights ; very comfortable

AGAINST : over-sensitive brakes ; pronounced dive and squat ; poor rear-view mirror ; noisy hydraulic pump ; engine harsh at low speeds.

Considering that the design of Citroen's luxurious DS range has survived almost 20 years without major change, there is remarkably little to date it. The car is still aerodynamically superior to nearly all its competitors, and with its new 2300 cc engine and five-speed gearbox it has exceptional performance for its capacity and it offers a degree of comfort that is not always evident in cars costing considerably more. Then there are the added refinements of load-sensitive brakes and the option of Citroen's unique self-levelling, swivelling headlight system which gives the DS probably the most effective lights fitted to any production car in the world.

Perhaps it is in terms of refinement that the car's relative lack of development is most evident. The engine for instance, is and always was harsh and fussy when extended and the hydropneumatic suspension which caused such a stir when it was introduced is now rivalled and in some aspects surpassed by the springing of more conventional cars.

To take full advantage of the car's remarkable long-distance cruising abilities one really requires the full "Pallas" trim (high-backed thickly-padded seats, special thick pile carpets with foam underlay, heated rear window, power steering and swivelling headlights) for optimum comfort, and the Bosch electronic injection for maximum performance. With these fitted the price of the DS at £2811 is nearing that of the faster Jaguar XJ6 and is considerably more than a Rover 3500s. In spite of this the Citroen's charms prevail and anybody who has the fortune to drive a DS for long distances will doubtless appreciate, as we do, the qualities which have kept it to the fore in its class for so long.

Since we last tested one, the engine has grown in capacity from 2175 cc to a still modest 2347 cc. The small but significant increases in power and torque are reflected in our performance figures; nearly a second shaved off the 0-60 mph time bringing it down to 10.4s and the top speed rising by a full 6 mph to a very commendable 119.5 mph. Even better standing start figures could undoubtedly be achieved but for the violent tramp that accompanies wheelspin starts.

However, the engine has tremendous reserves of torque, which make vicious use of the engine and transmission quite unnecessary. It will pull happily from as little as 1000 rpm and the 30-50 mph top gear acceleration (in fifth) is nearly as good as for the old smaller engined four-speed model, though in

taking 12.1s the DS will be left far behind by the Jaguar and the Rover.

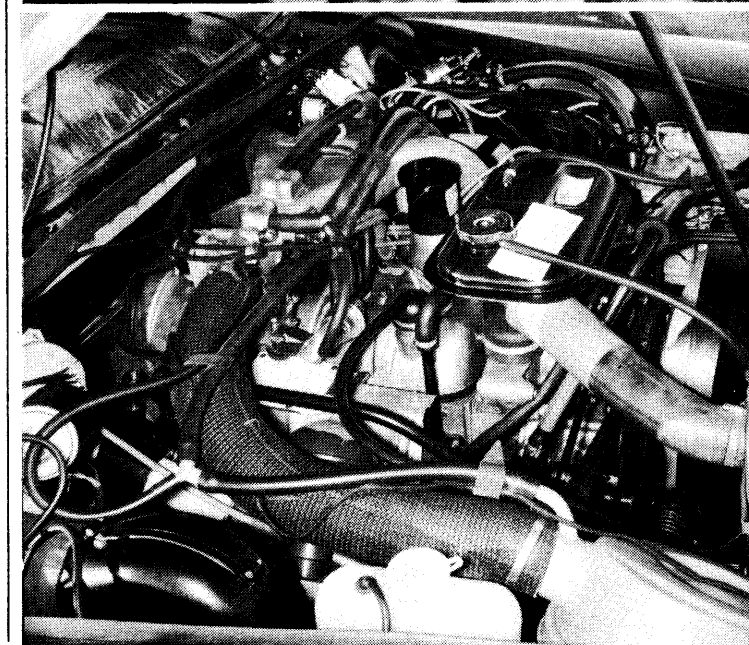
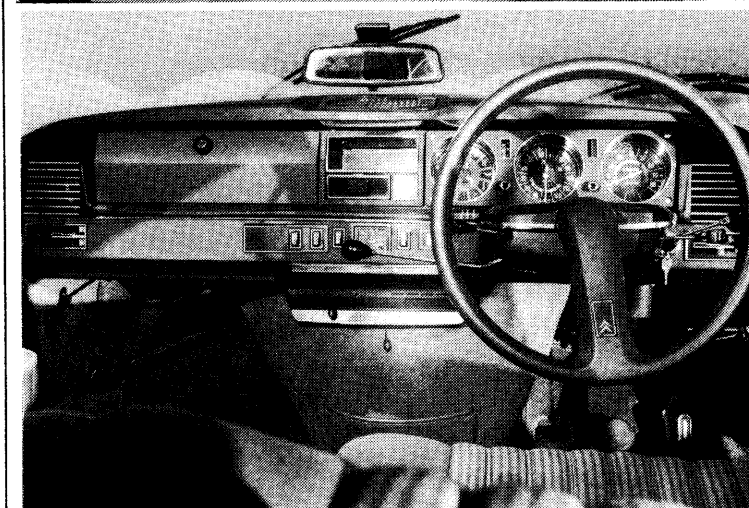
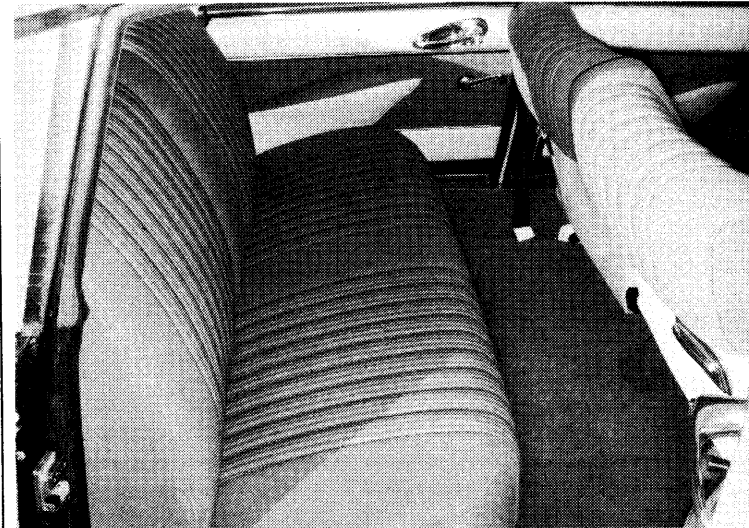
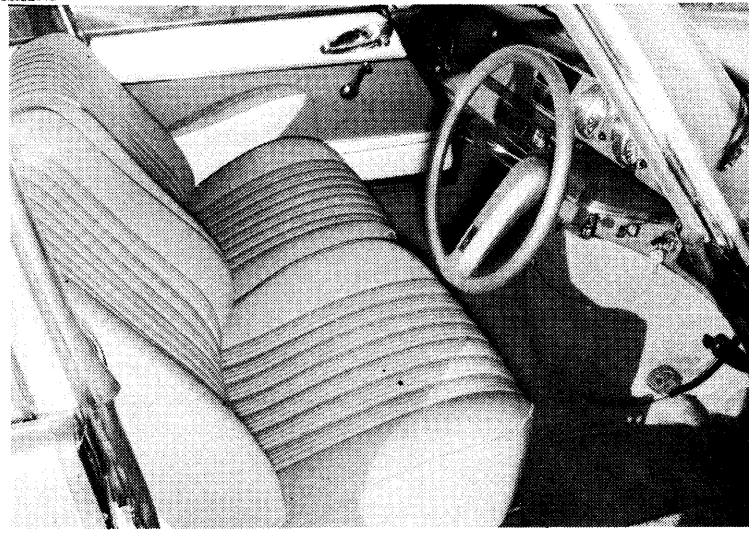
The Bosch electronic injection displayed no vices whatsoever during normal running, but a certain amount of churning was required to persuade the cold engine into life. Also with the extra performance comes a slight increase in fuel consumption. We recorded an overall figure of 18.6 mpg compared with the 20.5 for the old car.

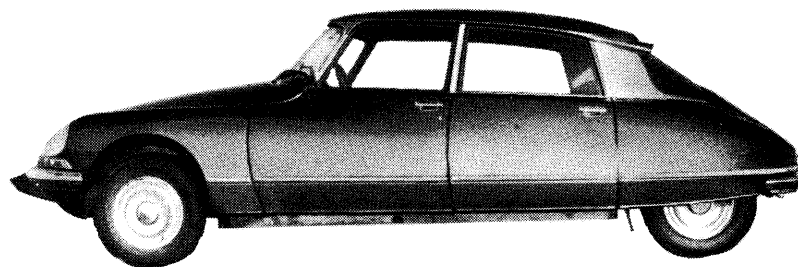
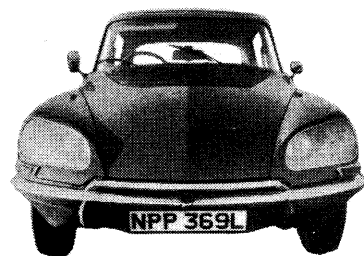
Five well-chosen ratios allow full use to be made of the available performance and good synchromesh gives clean swift changes. It does however take time to master the action of the column-mounted gearlever which with a strong spring-bias to third and fourth gears is sometimes difficult to position accurately, especially on downward changes from fifth where one can become momentarily confused by the lack of feel in the gate. Attempted fast changes from second to third can be troublesome too and will sometimes find you fifth by mistake. The clutch is smooth but has a long travel. That on our test car also suffered from stiction in the pedal pivot.

In the same way that one has to acclimatise to the soft ride and power brakes, the handling of the big Citroen is an acquired taste. Before one can extract the last ounce of performance it is necessary to learn how to set the car up for a bend by sensitive use of the brakes, followed by delicate use of the throttle, thus keeping the car balanced through the curve. If this technique is employed it will corner in a very stable manner with plenty of feel to the hands through the soft padded steering wheel. If violent acceleration follows clumsy harsh braking, the DS will revolt, by lurching off line and going slightly light at the wheel. The more sensitive approach really pays dividends in the wet, where the combination of good traction from the front-wheel drive and excellent adhesion of the Michelin tyres can be used to leave many more nimble cars behind.

The ride given by the hydropneumatic suspension has been the envy of other car designers since the day it was introduced

Sumptuously padded seats, front and back, are part of the Pallas specification. The driving position is slightly offset, and there's an almost baffling display of instruments and switches. Servicing is best left to an expert!





and certainly it still excels in its basic characteristics. Unfortunately, unlike its smaller and more heavily damped relative, the GS, the big car does suffer from big changes in pitch under hard acceleration and braking. This is barely noticeable when travelling at a reasonable pace on main roads and can be cut to a minimum by delicate use of the brakes. In heavy traffic, however, the continual change of attitude during stop-start manoeuvres becomes rather irritating.

The virtues of the ride are further heightened by the sumptuous, armchair-like seats, which are fully reclining and have a generous range of fore and aft adjustment as well as a tilting cushion which allows you to find the position of optimum support for the thighs. The attractive and functional brushed nylon covers fitted to our test car are standard equipment with the Pallas package. Intelligent overall design with a wheel at each corner of the car, and the lack of transmission tunnel leave a large and uncluttered leg space for the rear-seat passengers, who lounge in equal comfort to those riding in front.

Although basically a relaxing car, the DS does suffer from its own unique assortment of noises. Apart from the harsh engine note and the panels it excites into vibration, one notices an occasional sigh from the self-levelling system as the big car sinks or rises to its job. There is the faint rat-a-tat from the hydraulic pump which sounds like a very distant machine gun. Wind noise is very low up to around 80 mph, after which it becomes little more than a distant whine.

The car's minor controls are quite accessible, with two column-mounted stalks for the effective wash/wipe system and for the non-cancelling indicators horn on the right and a short multi-position one for the complex lighting system on the left. The latter takes a bit of learning and it is advisable to become fully conversant with it before setting off for a night drive. Other switches for the rear demister, heater blowers (one for each side of the car) and incredibly brilliant interior light system are laid out in rather bitty auxiliary panels across the dashboard.

A very effective heating and ventilating system is controlled by a separate panel mounted under the centre of the dashboard. Strong ram pressure feeds the well-designed face-level vents in each corner of the fascia, though the added noise discourages one from opening them fully.

A quick look under the bonnet is likely to prevent most owners attempting their own maintenance, for the engine is barely visible under the mass of pipes, hoses and leads. We certainly had considerable trouble tracking down the dipstick and would not like to have to search much deeper. The spare wheel and jack are very accessible, however, and are located ahead of the engine.

PERFORMANCE

CONDITIONS

Weather: Fine, overcast; wind 0-10 mph
 Temperature: 36-42°F
 Barometer: 29.3 in Hg
 Surface: Damp tarmac

0-40	5.2	0-80	7.4
0-50	7.4	0-100	11.2
0-60	10.4	0-120	16.0
0-70	13.8	0-140	22.6
0-80	18.3	0-160	33.0
0-90	24.5	Stand'g km	32.4
0-100	33.6		
Stand'g ¼	17.6		

FUEL CONSUMPTION

Overall	18.6 mpg
	15.2 litres/100 km
Fuel grade	98 octane (RM)
	4 star rating
Tank capacity	14.3 galls
	64.9 litres
Max range	266 miles
	428 km
Test distance	1020 miles
	1640 km

MAXIMUM SPEEDS

Mean*	119.5	kph	192.2
Best	119.7		192.5
* Mean of opposite runs			
Terminal speeds:			
at ¼ mile	78	125	
at kilometre	99	159	
Speed in gears (at 6000 rpm):			
1st	32	51	
2nd	54	87	
3rd	79	127	
4th	108	174	

ACCELERATION IN TOP

mph	sec	kph	sec
30-50	12.1	60-80	6.7
40-60	11.1	80-100	6.9
50-70	12.0	100-120	8.4
60-80	14.3	120-140	10.6
70-90	16.4		

SPEEDOMETER (mph)

Speedo	30	40	50	60	70	80	90	100
True mph	28	37	47	57	64	75	85	95
Distance recorder:	3 per cent fast.							

WEIGHT

Unladen weight*	26.8	cwt	1362
Weight as tested	30.5		1550
* With fuel for approx. 50 miles			

ACCELERATION FROM REST

mph	sec	kph	sec
0-30	3.5	0-60	4.7

Performance tests carried out by Motor's staff at the Motor Industry Research Association proving ground, Lindley.

GENERAL SPECIFICATION

ENGINE
 Cylinders 4 in line
 Capacity 2347 cc
 Bore/stroke 93.5 x 85.5 mm
 Cooling Water
 Block Cast iron
 Head Aluminium
 Valves OHV
 Valve timing inlet opens 1° bt/dc
 inlet closes 43° ab/dc
 ex opens 39° bb/dc
 ex closes 5° at/dc
 Compression 8.8:1
 Induction Bosch electronic injection
 Bearings 5 main
 Fuel pump Electric
 Max power 130 bhp (DIN) at 5250 rpm
 Max torque 144 lb ft (DIN) at 2500 rpm

TRANSMISSION
 Type Manual, 5-speed, column change
 Clutch Diaphragm
 Internal ratios and mph/1000 rpm Top 0.78/22.4

4th 0.97/18.0
 3rd 1.32/13.2
 2nd 1.94/9.0
 1st 3.25/5.4
 Rev 3.15
 Final drive Spiral bevel; 4.37:1

Toe-in 2-4 mm
 Camber 0-½° neg
 Castor 1° 42'
 Rear toe-in 0-2 mm

BODY/CHASSIS

Construction Unitary frame with bolt-on panels
 Protection Electrophoretic primer and paint

BRAKES

Type Disc/drum
 Servo Yes
 Circuit Divided front and rear
 Rear valve No
 Adjustment Self-adjusting on front only

SUSPENSION

Front Equal length parallel wishbones with self-levelling oleo-pneumatic struts and anti-roll bar
 Rear Trailing arms with self-levelling oleo-pneumatic struts and anti-roll bar

WHEELS

Type Steel, 5½ J
 Tyres 185 HR 380 Michelin XAS
 Pressures 29 f, 26 r

STEERING

Type Rack and pinion
 Assistance Yes

ELECTRICAL

Battery 12 v 60 ah
 Polarity Negative earth
 Generator Alternator
 Fuses 10
 Headlights 4 x 55 w halogen, self-levelling

COMPARISONS

	Capacity cc	Price £	Max mph	0-60 sec	30-50* sec	Overall mpg	Touring mpg	Length ft in	Width ft in	Weight cwt	Boot cu ft
Citroen DS 23 EFI	2347	2545	119.5	10.4	12.1	18.6	—	15 11.5	5 11	26.8	11.8†
BMW 2500†	2494	3518	113.5	11.9	4.2	17.5	23.5	15 5.5	5 8.75	26.5	12.3†
Ford Granada 3000 GXL†	2994	2229	108.1	11.3	4.2	19.0	23.5	15 3	5 10.5	27.3	13.0
Jaguar XJ6	4253	3071	124.0	8.8	6.5	15.3	19.0	15 9.5	5 9.25	33.2	10.5†
Mercedes 220	2197	2898	99.6	13.3	9.0	17.7	21.7	15 4.25	5 9.5	25.2	13.9†
NSU Ro80	1990	2949	112.6	14.2	9.7	15.3	20.2	15 8.25	5 9.75	23.5	—
Rover 3500S	3528	2207	119.0	9.3	8.1	19.3	23.6	15 0.5	5 7.25	26.1	9.3
Volvo 164 FI	2979	2957	112.5	8.8	7.5	17.7	—	15 6	5 8.5	26.9	13.5†

*in top (kickdown for BMW and Ford)
 †automatic transmission
 ‡measured with boxes, not suitcases

Make: Citroen
Model: DS23 Pallas EFI

Makers: S. A. Andre Citroen, 133 Quai Andre Citroen, Paris, 15e, France.
Concessionaires: Citroen Cars Ltd, Trading Estate, Slough, Bucks. Tel: Slough 23811.
Price: £1887 plus £394.69 P.T., equals £2281.69. Extras fitted to test car: electronic injection £263.41; Pallas finish £265.83; metallic paint finish £28.53. Total as tested £2839.46.