

Brief Test

Citroën DS 21 Pallas EFI 139

New 5-speed Gearbox Improvement

Top speed increased to 118 mph by new 5-speed gearbox. Bosch fuel injection option and Pallas equipment largely unchanged, but car now has air horns as standard, and detail improvements.

ALTHOUGH the general appearance of the Citroën big car range has altered little over the years, there have been many improvements under the skin. The ultra-functional, wind-cheating styling still looks up to date today, and mechanical improvements have kept it in the forefront, so that no one could justifiably say it has become dated in any way. When we tested it last, in March 1970, the newly introduced EFI 139 engine, with Bosch fuel injection, raised the maximum speed to 112 mph. Now, the car has gained an extra gear, giving it true 100 mph cruising, and extending the maximum to 118 mph.

The new five-speed gearbox is offered as a "no cost" option on the DS 21, the alternative being the four-speed gearbox with semi-automatic control. As before, the manual change control is mounted on the column — if one may call it that, with the unusual single-spoke steering wheel shape and column surround of the Citroën; and the change is easy to use. The normal four-speed layout is retained, with first and second gears nearest the driver, and appropriate spring-loading to make it a natural movement from second across the gate into third. Fifth gear is located alongside third, and the movement from fourth to fifth goes through easily. We found no tendency to snick reverse by mistake when changing down from fifth to fourth, as the



The DS 21 comes in standard form with the 106 bhp carburettor engine; but the EFI 139 engine with Bosch fuel injection, giving 125 bhp DIN (139 gross) is optionally available

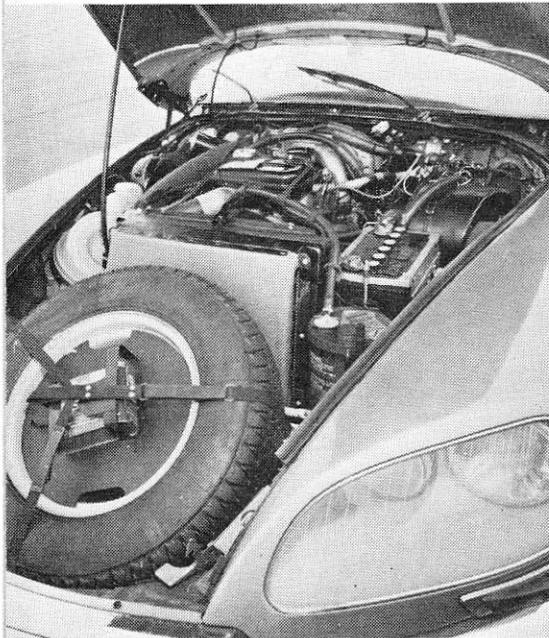
reverse gate is considerably farther along, involving full travel of the gear lever away from the driver.

On the standard four-speed gearbox, top is indirect; with the five-speed, both fourth and fifth are also indirect gears, and occasionally a subdued gear whine is audible in fifth. First and second gears are the same as for the four-speed gearbox; third and fourth are lower and the fifth gear is higher than the four-speed top gear. Car speed per 1,000 rpm goes up from 20.5 to 22.5 mph. When cruising at 100 mph, engine speed is reduced from 4,900 to 4,440; and much better use is made of the engine

power curve, resulting in a useful 6 mph gain on top speed. Where the four-speed car is running out of revs in top, the five-speed one is sitting nicely on peak power.

Flexibility has never been a great feature of the 4-cylinder 2,175 c.c. short-stroke engine, but it is helped by the closer spacing of the gears, and the car pulls strongly from reasonably low speeds in the slightly lower fourth gear. There is still quite a lot of engine noise as speed builds up, but speeds in the upper 80s now bring much less roar and commotion than in the 4-speed version, and the Citroën qualifies as a three-figure cruiser

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The engine compartment can only be regarded as a mechanic's nightmare; but in fact access to many components is not too bad. Right: The luxurious seating in the Pallas option includes provision for vertical adjustment of the driving seat. The padded steering wheel is a new feature



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much more than before. At the lower end of the scale, acceleration in fifth is quite vigorous from at least 40 mph, so there is no excessive need for gear changing.

Fuel consumption has not shown the expected improvement, the overall figure of 20.2 mpg being near enough the same as that returned by the four-speed car. However, a small benefit should show itself in long journeys at sustained high speeds. The Bosch fuel injection works extremely well, ensuring immediate starting with automatic compensation for cold starts, and ensuring that full power is available at once. The idling speed seemed high on the test car, at 1,000 rpm.

We were also a little less happy than usual about the steering. It always takes a while to get used to the ultra-sensitivity of Citroën steering, but in this DS there was a tendency to wander slightly off-course which was difficult to check without over-correcting and diverting the car slightly the other way. However, the lightness of the steering, its accuracy at speed, and the stability of the car at speed in cross winds are all as impressive as ever.

The Citroën is primarily a journey car, covering long distances in minimum time and with a relaxed feeling of effortlessness, helped by the low level of wind noise and the excellent comfort of the self-levelling ride and seating. In contrast, it seems a little fussy in traffic and at town speeds, when the fall-away styling makes it difficult to judge the extremities of the car to take advantage of narrow gaps; and the occasional cutting-in of the hydraulic pump and periodic adjustments in the ride height become a little tedious.

In traffic work the clutch takes up smoothly with a long but progressive travel; but it proved difficult getting the maximum performance out of the car for acceleration testing. High revs and abrupt clutch engagement brought wheelspin and engine shake so violent that it invariably shook the plug leads off. A more gentle getaway had to be adopted giving a rather slower 0 to 60 mph time of 12.3 sec; but in acceleration to 100 mph the more suitable third and fourth gear ratios paid off, reducing the previous car's 44.2 sec to 35.3.

The brakes, discs at all wheels, with strong servo assistance controlled by a diminutive round pedal button on the floor, are unchanged. They give really good efficiency with no significant fade in repeated use at high speed. The only weakness is over-sensitivity, making it difficult to stop quickly without a jerk. The handbrake works on the front wheels and is unusually efficient.

One gets used to the somewhat untidy facia appearance, but it is to be hoped that future improvements will include a major cleaning-up and restyling exercise here. The speedometer includes rather meaningless braking distances, changing according to speed; but the instrument itself is clear and proved accurate above 90 mph. There is a matching rev counter on the right, and the third dial groups a dozen warning lights together. A column lever near the gear change controls the lamps, and with the Pallas package the DS 21 has headlamps with brilliant halogen main beams which turn with the steering; the outer halogen lamps are adjusted vertically by suspension action.



The front seats have adjustable backrests controlled by a large hand wheel at the side, and can be wound back to the horizontal. The luggage compartment is deceptively big because it is so deep. Heated rear window is standard on the Pallas

Brilliant illumination for night driving results, which really has to be experienced to appreciate how superb it is.

A small lever on the right is moved towards the driver to sound the horn, and a new feature is that after a gentle "beep", further travel of the lever brings strident air horns into action. Reversing lamps are now standard, and other improvements include the much neater-looking padded steering wheel, with a cover in unit with the solitary "spoke"; a lock for the facia compartment; and revised door locks and interior catches which those unfamiliar with the car will find much easier to use.

In this latest form, what we may affectionately call the "good old Citroën" becomes better still, and tax and duty reductions have helped to maintain its total price within £50 of what it was when we last had the pleasure of testing the car. □

MANUFACTURER

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UK CONCESSIONAIRES

Citroën Cars Ltd., Trading Estate, Slough, Buckinghamshire.

PRICES

Basic	£1,667.00
Purchase Tax	£348.85
Seat belts (inertia)	£19.33
Total (in G.B.)	£2,035.18

EXTRAS (inc. P.T.)

EFI 139 Electronic Fuel Injection	£253.74
Pallas finish and de-luxe equipment	£274.28

PRICE AS TESTED

£2,563.20

PERFORMANCE SUMMARY

Mean maximum speed	118mph
Standing start ¼-mile	18.9sec
0-60 mph	12.3sec
Typical fuel consumption	24 mpg
Miles per tankful	336

PERFORMANCE CHECK

Maximum speeds

Gear	mph		kph		rpm	
	5-speed	4-speed	5-speed	4-speed	5-speed	4-speed
Top (mean)	118	112	190	180	5,250	5,460
(best)	119	114	192	184	5,300	5,560
4th	106	—	171	—	5,850	—
3rd	80	91	129	146	6,000	6,000
2nd	54	54	87	87	6,000	6,000
1st	32	32	52	52	6,000	6,000

Standing ¼-mile,	5-spd	18.9 sec	75 mph				
	4-spd	18.5 sec	74 mph				
Standing kilometre	5-spd	34.0 sec	99 mph				
	4-spd	34.3 sec	94 mph				

Acceleration,	5-spd	4.5	6.7	9.0	12.3	16.1	20.4	27.1	35.3
	4-spd	4.0	6.0	8.5	11.8	16.6	21.6	30.7	44.2

Time in seconds	0									
True speed mph		30	40	50	60	70	80	90	100	110
Ind. speed MPH	5-spd	30	41	51	61	71	81	91	100	110
Ind. speed MPH	4-spd	32	41	51	62	72	82	92	103	114

Speed range, Gear Ratios and Time in seconds

Mph	Top		4th		3rd		2nd	
	5-spd	4-spd	5-spd	4-spd	5-spd	4-spd	5-spd	4-spd
	3.42	3.73	4.25	—	5.78	5.28	8.5	8.5
10-30	—	—	—	—	8.0	8.9	4.9	5.2
20-40	—	13.0	10.5	—	6.5	7.7	3.9	4.6
30-50	13.8	12.5	9.2	—	6.5	7.5	4.5	4.9
40-60	12.9	12.2	9.0	—	6.4	7.8	—	6.2
50-70	13.2	13.9	10.3	—	6.7	8.5	—	—
60-80	16.2	16.2	11.3	—	9.0	10.0	—	—
70-90	19.9	18.1	12.7	—	—	15.8	—	—
80-100	24.6	23.1	15.9	—	—	—	—	—

Fuel Consumption

Overall mpg, 5-spd	20.2 mpg (14.0 litres/100km)
4-spd	20.9 mpg (13.5 litres/100km)

NOTE: "4-spd" denotes performance figures for original DS21 Pallas EFI 139 manual change, tested in *Autocar* of 19 March 1970.