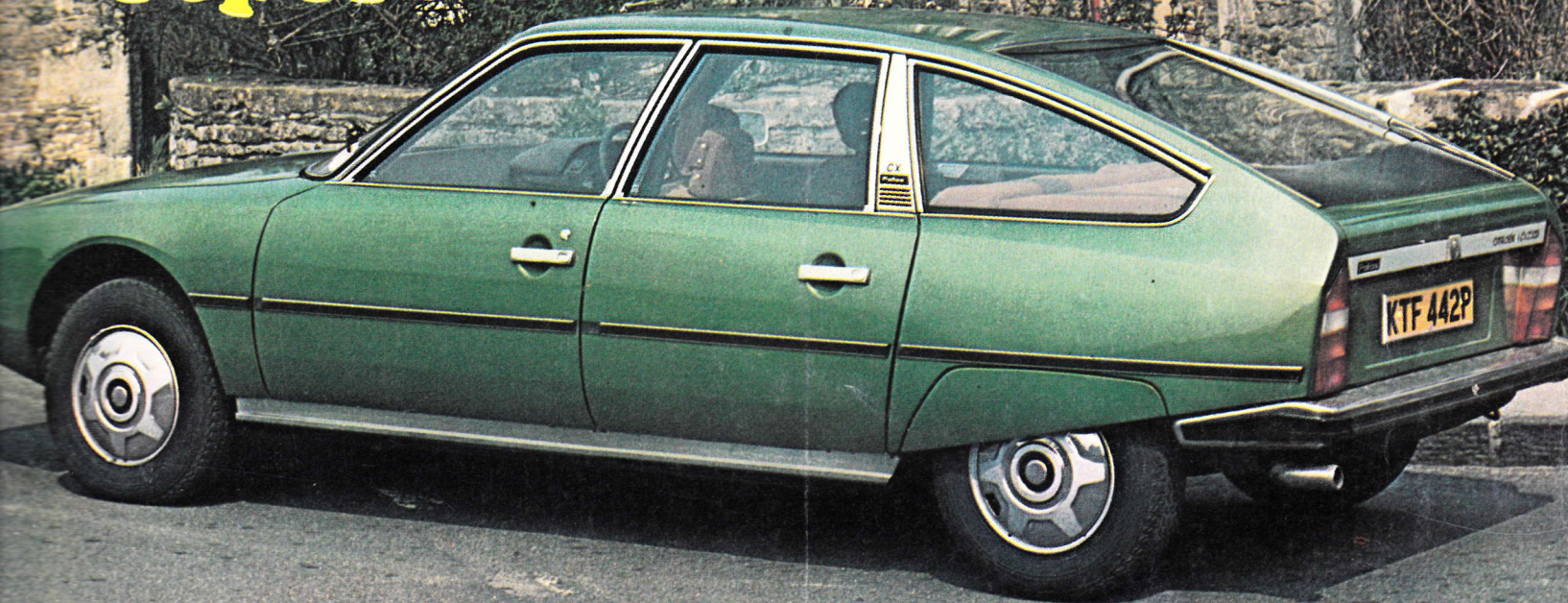


Motor

**Citroen
2200 CX
long-term
report**



**Shades of
Mini Cooper-
new Peugeot
104 ZS**

12,000 MILES ON • CITROEN 2200 CX PALLAS

**So far,
so so...**



No breakdowns but not fault-free either. Poor refinement early on improved by subsequent modifications—but still disappointing in certain other departments. Anthony Curtis reports on a car that some of us have grown to like, others haven't . . .

OF THE eight staff cars I have run during nearly 12 years with Motor, the Citroen CX is the only one which I actively campaigned to get—and I started almost as soon as it was introduced in August 1973. With its complex self-levelling hydro-pneumatic springing and its hydraulic braking and steering systems, it was, I remarked to Editor Bell, the perfect Technical Editor's car, as well as being an important new model which we should certainly subject to long-term test. And by choosing a basic 2000 model, I argued, the cost, though high, would not be too far beyond our usual limit for staff transport.

Constant repetition of these views eventually forced him to accede to my request—if only to put a stop to my interminable dronings on the subject. But when we came to consider the idea more seriously, we soon concluded that a significant proportion of CX models sold in Britain would not merely have the 2200 engine, but would also be fitted with the Vari Power steering system. So, by what I'm still half convinced was an administrative oversight, I ended up with a 2200 Pallas, incorporating both these features and costing £4361 at the time of purchase (£4535 now). It was thus one of the most expensive cars we have bought for many years.

Since the CX is handsome and imposing as well as expensive, I must confess that it is the first staff car about which I've had something almost approaching divided feelings. It keeps me up rather well with the neighbours, let's face it, and makes me feel quietly proud to use it.

Having said that, I must at once report that my view of the CX is not much less harsh than that expressed in our original road test, though it is gradually being softened by Citroen's programme of modifications—which in my view may make us think considerably more highly of the car in a year or so's time.

Basically, though, I still regard it as being rather disappointing in relation both to its technical complexity and to its price. It rides no better than several other cars with ordinary steel springs, for example, and its handling is spoilt by its twitchy, ergonomically unsound, steering and high roll angles, though its adhesion is quite good. What's more its performance—especially in top gear acceleration—is indifferent for the price, its engine is buzzy and noisy when extended and its ventilation maddeningly ineffective.

On the credit side, Citroen have virtually eliminated the excessive wind noise of the early examples—for my car at least—and have instituted modifications which greatly reduce engine

vibration as well as done something—if not enough—about the ventilation. They have also improved the car in other ways. The doors of the latest models now open to a more sensible and generous angle, for example, while the new 2400 has more torque at low revs.

Only a complete suspension redesign could do much for the ride/handling compromise, but with further detail improvements the CX would become an excellent car.

First impressions

My own CX, KTF 434P, arrived on January 8, painted in an attractive shade of metallic green. I liked its luxurious trim and cloth upholstery and discovered few delivery faults beyond an ill-fitting glovebox lid which was reluctant to shut properly (it still is, though I've never complained about it to the dealer). Getting the moveable maplight switched off and fitted back into its shoe on the side of the central console is also a fiddlesome business.

I found the seat too high at first, but as the front and the rear of the cushion are separately adjustable for height it was possible to reset it. As with most such adjustment systems, however, a bit of thought and wrestling is needed to obtain the

required position, and when the overall height of the cushion is low, it is not possible to set its rear edge lower than the front. Even so, I still find the seat pretty comfortable and have never encountered the lack of headroom occasionally complained of by other journalists despite being fairly tall.

Another first impression was of the excessive brightness of the two permanently illuminated "eyeball" instruments, the speedometer and rev-counter. This illumination is rheostat controlled and so easily adjustable but its permanence can cause one to forget to switch on the lights when darkness approaches. The rheostat, incidentally, lies under one of the two switchpoles which together make up the Citroen's unusual fingertip control system which I found easy to adapt to and pleasant to use.

Many drivers' strongest first impression will probably be the very direct and "twitchy" Vari Power steering which is now a standard fitting on all models except the basic 2000. But being prepared by previous experiences with the CX—and the similarly equipped SM—again found it easy to adapt. After long experience with it, however, I'm bound to say that I find it both unnecessarily complicated and ergonomically unsound, a view now shared by our test staff. Its complex

completely separate hydraulic systems, one which locks the front wheels in the position set by the steering wheel and the other which provides an artificial resistance which increases with speed. Thus there is no feel of the road to tell you when the front wheels have lost adhesion and the response of the system makes it difficult to take a fast corner in anything other than a series of swerves.

One of the difficulties lies in devising a conventional torsion bar/valve steering system which is compatible with the Citroen's high-pressure hydraulics, but Cam Gears have done just this (*Motor*, October 19, 1974) and I would dearly like to try their system fitted to my car. Equally, I would also like to try a CX fitted with AP's no-roll suspension system—to which the car is perfectly suited.

If I found the Vari Power steering acceptable, though, I was much less tolerant of the buzzy engine which transmitted vibrations through the accelerator, and even less so of the tepid flow from the facia vents which are supposed to dispense fresh air at ambient temperature.

Likes and dislikes

The poor ventilation is for me by far the biggest fault of the CX. To be fair, when the outside temperature is in the nineties, as it was during last summer's long heatwave, there is little that can

conditioning or drive with all the windows open. But at a more reasonable 75°F, say, it is perfectly possible in many cars to drive in comfort with all the windows shut with a pleasant breeze cooling your face from the air vents. This the Citroen's system lamentably fails to provide because the air delivered to the interior is at least 10-15°F above ambient temperature.

Part of the problem is that the air inlet duct does not always seal properly with the intake grille in the bonnet, thus allowing underbonnet rather than ambient air to be drawn into the interior. Citroen's answer, fitted without charge under the guarantee at 12,000 miles, was to glue strips of foam rubber to the underside of the bonnet to create a better seal. This does improve matters quite a bit, but the incoming air is still tepid. The probable cure for the second part of the problem—which I have yet to effect—is to insulate the inlet duct from the various hot pipes in close proximity to it.

The heating system has several faults, too, being very slow to warm up and providing negligible warm air under ram pressure alone. Even with the fan, there isn't much flow to the footwells: the eyeball vents on the central console were obviously added as an afterthought, for they alone provide a reasonably prompt and generous supply of warm air, though it can't reach your feet.

My second major complaint was of a general lack of refinement in which an unpleasant

top was a major factor. This was completely cured, however, at the 9000-mile service, by a modification which Citroen were prepared to fit under guarantee if a customer complained and the vibration was considered to be unacceptable. This consists of removing two of the 16 mountings holding the perimeter chassis to the body and modifying some others.

Unfortunately, as soon as my car was modified in this way, it unaccountably acquired a maddening under-facia buzz which was, if anything, more obtrusive than the vibration that had been eliminated. Happily this was traced to a loose spring in the rev-counter and cured at a later date—though the engine is still noisy at above 4500 rpm.

Citroen devised another modification, involving rubber engine mountings of a hardness more carefully controlled than originally, which I also had fitted to my car at just over the 12,000-mile mark. The purpose of this modification was to reduce a steering wheel/headrest shake at idle, but my car never suffered significantly from this—until modified, so now I wish that it had been left alone. Other faults of the engine are the ease with which the plugs foul, causing misfiring, the way it runs on and its tendency to pink at times, especially on marginally acceptable four-star fuel when I'm towing my Gravely Motors 2CV to a 2CV Cross event.

All this may seem a long catalogue of dislikes, but it is

the CX, for example, which quite clearly is an important factor in its success—ironically for a car built by a company renowned for its technological rather than stylistic skill. I also like the car's ability to cruise effortlessly at high speeds and its roomy interior which comfortably accommodates myself, my wife and our three large teenage children (my 15-year-old son is nearly 6ft tall).

The boot swallowed a prodigious amount of luggage on our holiday when the self-levelling hydropneumatic suspension really came into its own. Not only was the handling quite unaffected by the heavy load, but the ride was better than it has ever been, before or since. On several occasions, moreover, the ability to increase the ride height at will proved a very real asset when we had to negotiate rough tracks or clear protruding boulders.

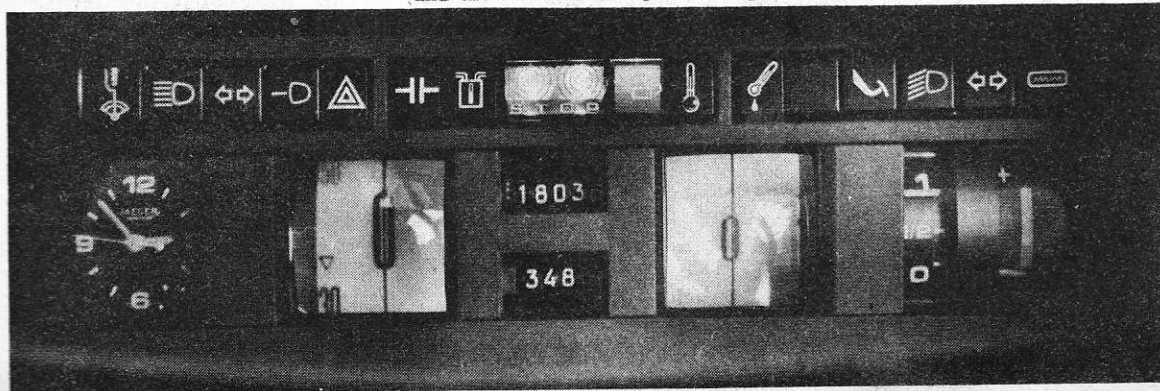
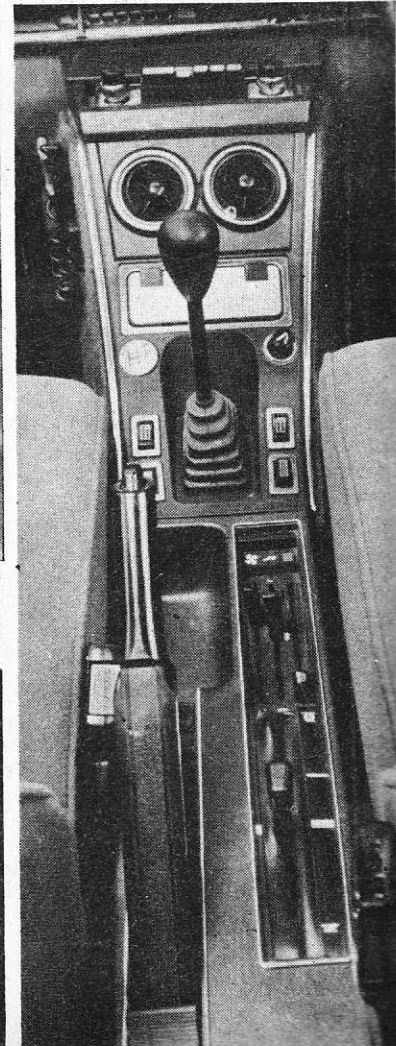
Reliability

To most people an unreliable car is one which either comes to an involuntary stop on more than one occasion or incurs expenses for repairs over and above those needed for routine servicing. By this definition my CX has been wholly reliable: it hasn't cost an extra penny to run and it has carried me to Geneva and back as well as to various far-flung parts of England—like Blackpool, Chester, Newcastle and the West

Continued over



Left: neatly detailed tail completes elegant shape; Above: door now opens wider on latest models; Right: behind the heavier controls lies the lever which regulates the useful variable ride height facility; Below: illustrated "eyeball" speedometer and rev-counter have no ergonomic advantages and are calibrated only at 20 mph intervals.



Country—without missing a beat.

It has experienced two significant failures, but both were repaired under warranty without much inconvenience to myself. The first concerned the clutch which at around 3500 miles began to develop a trace of judder. This gradually grew worse and worse until at 6000 miles the most careful engagement could not prevent every start from rest being accompanied by the most violent judder. So at 6559 miles my dealer replaced the clutch without argument, curing the trouble immediately. There were few signs of defect in the old clutch, merely a trace of grease on the plates, perhaps because a little too much had been placed on the splines during assembly.

The symptoms of the second failure came into existence long before I perceived them: as a faint wow-wow beat frequency noise sometimes audible at around 30 mph in top which I did not at first register. When I finally did register it, I realised that I had been subconsciously aware of it for some time. This noise grew louder and louder, finally becoming very worrying in its intensity during a run to Taunton and back at the end of May towing my 2CV. My dealer diagnosed this as a faulty front wheel bearing which was replaced—again without charge on warranty—at 10,801 miles.

The only other occasion on which the car required attention was when the brake pad warning light began to flicker at just over 12,000 miles, just before I was due to go to the West Country again, this time for a wedding. But I took the car to my dealer on the Saturday morning before setting off, and he fitted new pads at once.

There may have been an element of special treatment in this prompt attention, since my association with *Motor* was by then something of an open secret. My anonymity was not helped by the little identity card for the car (it looks like a credit card) which forms part of the Citroen servicing system with the words *Motor Magazine* clearly embossed on it. However, I don't attribute too much importance to this, having on previous occasions with other cars experienced complete indifference and incompetence, even when my cover has been blown.

Moreover, Citroen do seem genuinely to care about cars. At least that seems true of the people I've met at their Slough headquarters and of the two dealers I've been concerned with: Middleton Motors of Potters Bar who have serviced the car, and Graveley Motors of Stevenage who provide the 2CV I drive in 2CV Cross events. Stanley Middleton of the first firm has a collection of veteran and vintage cars which includes a Hispano Suiza, while the enthusiasm of Mike Creasey and his brother of the second shows in their involvement with 2CV Cross.

12,000 MILES ON ● CITROEN 2200 CX PALLAS

PERFORMANCE

Weather	Warm and dry; wind 0-10 mph
Temperature	70-60° F
Barometer	29.35 in Hg
Surface	Dry tarmacadam

MAXIMUM SPEEDS

	Our car mph	Test car mph
Banked circuit	109.1	110.2
Best ¼ mile	111.1	116.8
Terminal speeds:		
at ¼ mile	77	75
at kilometer	97	94
at mile	103	103
Speed in gears (at 6000 rpm):		
1st	29	29
2nd	51	51
3rd	82	82

ACCELERATION FROM REST

mph	sec	sec
0-30	3.6	3.5
0-40	5.7	5.7

0-50	8.2	8.3
0-60	11.7	11.9
0-70	15.5	15.8
0-80	19.9	20.4
0-90	26.8	29.2
Stand'g ¼	18.3	17.9
Stand'g km	33.6	33.2

ACCELERATION IN TOP

mph	sec	sec
20-40	12.0	11.3
30-50	10.6	10.6
40-60	10.5	10.5
50-70	10.6	11.0
60-80	11.4	12.2
70-90	14.1	15.3

FUEL CONSUMPTION

Touring*	25.7 mpg
	11 litres/100 km
Overall	23.2 mpg
	12.2 litres/100 kb
Fuel grade	98 octane
	5 star rating
Tank capacity	15 galls
	68 litres
Max range	386 miles
	620 km

Test distance 12,110 miles
19,480 km

* Consumption midway between 30 mph and maximum less 5 per cent for acceleration.

SPEEDOMETER (mph)

Speedo	30	40	50	60	70	80	90	100
True								
mph	26	35	45	55	65	75	85	95

Distance recorder: 2.6 per cent fast.

WEIGHT

Unladen weight*	cwt	kg
Weight as tested	25.2	1280
* With fuel for approx 50 miles	28.9	1470

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

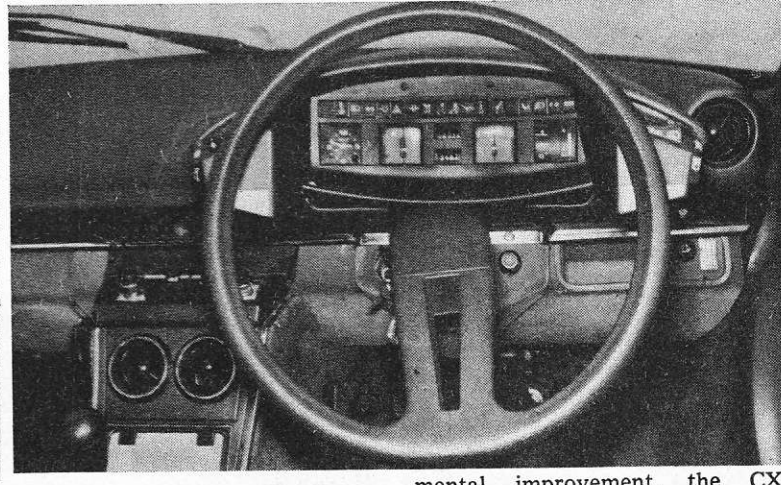
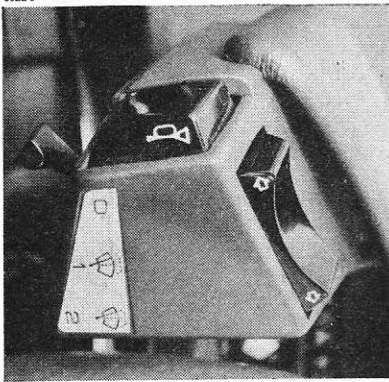
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COMPARISONS

	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 CX 2200 Pallas	2175	4535	109.9	11.7	10.6	23.2	25.7	15 1	5 8	25.2	10.2
Ford Granada 3000S	2994	3978	110.2	9.6	8.3	19.7	27.1	15 3	5 10.5	27.2	13.0
Mercedes 200	1987	4939	99.7	15.1	11.4	—	—	15 6	5 8.3	28.7†	11.2
Princess 2200 HLS	2227	3627	105.4	11.8	9.8	22.2	26.2	14 7.5	5 9	22.9	12.4
Renault 30TS	2664	4958	114.0	9.2	7.8	19.7	23.4	14 10	5 8.5	24.7	11.8
Rover 3500	3528	5130	122.3	8.9	7.9	22.5	23.6	15 5	5 9.8	25.9	12.7

*In 4th †Taken from 280E

Below: one of the two switchpods which make up the CX's effective fingertip control system; Below, right: fresh air vent puffs out warm air.



What went wrong?

Delivery: Ill-fitting glovebox lid.
6559: Clutch replaced on warranty after persistent judder.
10,801: Faulty wheelbearing replaced on warranty.
12,525: Front brake pads replaced.

Running costs

The 23.2 mpg overall fuel consumption I obtained from my CX is pretty reasonable for a large, roomy car. It goes up to 25-26 mpg on a long journey, even when driven hard, but down to about 22.5 mpg in town. Since the car has incurred no repair costs and used very little oil, it has not been expensive to run. But servicing is required too frequently: at 3000-mile intervals which come up with inconvenient rapidity so that I am often 1000 miles overdue. A change to more sensible 6000-mile intervals should not be difficult to arrange.

What it cost

Petrol bought ¹	£422
Oil	£2
Servicing ²	£107
Tyres ³	£38
Road fund licence	£40
	£609

- 1 509 gallons of five-star at an average price of 83p per gallon.
- 2 Including labour, replacement parts, materials and VAT.
- 3 Approximately 25 per cent worn; typical retail price of a 185-SR-14 Michelin XVS is £38.

Conclusions

Having grown accustomed to the elegance, comfort and roominess of the CX, I would be very happy to run it for another 12,000 or even 24,000 miles, despite its faults. Citroen seem to be eliminating them one by one, however, and I'd expect the new 2400 model—though I've yet to drive it myself—to be a very much better car than the original 2000.

I also believe that given still further but rather more funda-

mental improvement, the CX could become as outstanding for its time as was the DS when first introduced in 1955. But reaching this standard would involve three important changes, the first being to the engine which needs more torque at low revs and much better insulation. With careful carburetter and engine mounting development, this could probably be achieved with the existing power unit but obviously the Peugeot-Renault-Volvo V6 represents an attractive alternative.

Next, the car needs sensible and conventional power steering as a standard fitting on all models; such systems are not only better than the Vari Power one, but much cheaper too. Finally, with modern suspension geometry—using unequal-length, non-parallel wishbones at the front, for example, in place of the equal-length parallel type fitted—the ride/handling compromise could be greatly improved. This would still leave room for an AP-type hydraulic no-roll system to be fitted to the more expensive models, giving them a ride of space-age comfort.

How about it, Citroen?