

AutoTEST

Citroën CX GTi

Autocar

[Autocar](#) 15th October 1977

The fastest, most powerful CX yet.

Incorporating Bosch L-jetronic petrol injection and five-speed transmission.

Good, safe handling and excellent ride comfort.

A superb car, let down by rather poor ventilation.

EVER SINCE the appearance of the corrugated-iron 2CV immediately after the War, it would be fair to say that Citroën have never built a conventional car. Indeed, in many ways, Citroën have done everything that was, at the time, against all engineering tradition.

In 1955, they stood the motoring world on its head with the introduction of the ID/DS range, a car which was said to be 10 years ahead of its time. Now, some 22 years later, no other manufacturer has quite caught up with the French revolution. The CX, which appeared, in its 2-litre form, in 1974, was not perhaps such a surprise. Although its long, smooth shape continues in the DS tradition, it was nothing like as startling as the SM. With the new car, Citroën were able to pick the best of the bunch from their previous ideas. Naturally, front-wheel drive was retained, but the engine was transverse, canted forward, with the transmission behind it. The oleo-pneumatic, self-levelling suspension was retained, and the self-centering, power steering came from the SM.

In May of this year, the GTi was launched in continental Europe, and last month it became available in Britain. The engine, with bore and stroke dimensions of 93.5 X 85.5mm, is one of the largest four-cylinder units in use today, with a capacity of 2,347 c.c. The biggest change is the use of petrol injection in place of the twin-choke Weber used on the normal CX2400; the



system is Bosch's L-jetronic, electronically controlled. This, with a marginal increase in compression ratio from 8.75 to 9.10 to 1, brings about an 11.5 per cent increase in power, from 115 bhp (DIN) at 5,500 rpm to 128 bhp, developed at only 4,800 rpm. Torque too is up, by 10 per cent, to a useful 145 lb.ft. at 3,600 rpm. To maintain tune and to reduce servicing costs, the GTi is fitted with contactless electronic ignition.



There are major changes, too, in the transmission. The four-speed, manual gearbox of the carburettor-engined car is replaced by an all-indirect, five-speed one; the tyre size and sections are unchanged, using Michelin XVS 185HR14 covers, but mounted on lightweight alloy wheels.

First gear is marginally lower than on the carburettor car (3.17 compared to 3.1 5-to-1) but top is now a true overdrive, pulling 21.1mph per 1000 rpm on the same 4.77-to-1 final drive ratio. This high gearing means that the GTi tends to be far more comfortable when cruising really fast on motorways, but even so, at the mean maximum speed of 118 mph the revs are well past the peak of the power curve, at nearly 5.600 rpm.

Front-wheel-drive cars always tend to look and sound slightly "hooligan" when moving off under full power but, with its big section tyres, the GTi managed to retain some of its dignity, with just a few yards of wheelspin when the clutch was engaged at around 3,500 rpm.

The extra power and torque by comparison with the CX2400 show up immediately in terms of times taken in acceleration, with 40 coming up in 5.1sec against 5.8sec, 60 in 10.1 (11.8) and 80 mph in 18.2 sec, 2.8 sec better than the CX2400.

It took a certain amount of experimenting to get best times for with the power being developed low in the rev range, there was a tendency to hang on in the gears up to the 6,000 rpm red line. We eventually settled for changing at 5,500 rpm. The difference is shown by the times recorded - 10.1 sec to 60 mph changing at 5,500, against 10.6sec at 6,000 rpm. But the really remarkable feature about the GTi is the extraordinary flexibility of the engine especially when it is remembered that it has only four cylinders.

In top (fifth) gear it would pull away cleanly from 20mph - that is under 1,000 rpm - without any fuss. This is a real credit to the combination of engine design and the efficiency of the L-jetronic injection.

In the lower gears, the GTi will reach 29, 51, 74 and 99 mph at 6,000 rpm, these figures are rather academic, however, as it pays to change up 500 rpm earlier, no matter what the circumstances.



Ride and handling

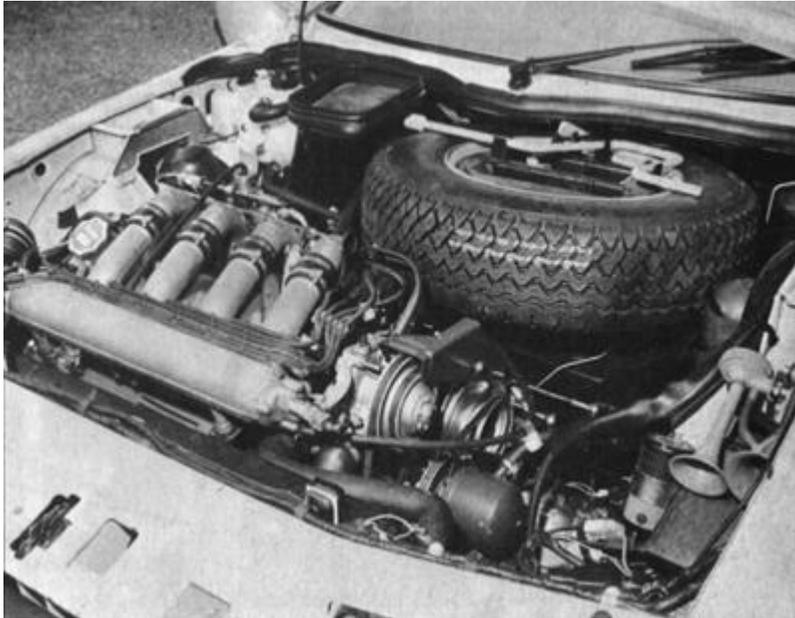
There can be little doubt that, for the first few days of ownership, the GTi can be a rather disconcerting car to drive. The VariPower steering seems to have a mind of its own, the brake pedal no apparent travel, and the drive line can snatch and jerk. It takes time to come to terms with it, but once you have altered your method of driving, the GTi becomes a thoroughly rewarding car to use.

There are just 2.5 turns from lock to lock on the steering, which has power self-centering. Newcomers will drive the car in a series of lurches, until they realize that it must be steered every inch of the way. Let the steering wheel run back of its own accord on the exit from a corner and it will snap back to the centre position. But if the wheel is fed back smoothly, the car responds in a similar manner and one soon learns the technique required for comfortable driving.

The GTi has very nearly 70 per cent of its 26,8 cwt over the front wheels, and this gives it inherent understeer characteristics. The power steering gives just the right amount of assistance, so that it feels heavier as more lock is applied. This in turn gives the driver a good sense of the understeer and prevents the car from being put into attitudes from which it cannot recover. The steering is also speed-sensitive, with less assistance being given the faster the car is travelling. On motorways, this means that it feels very heavy but, as you never want to turn at right angles at this sort of speed, it gives the car a very high degree of stability. We have found that all the CX range tend to wander very slightly at speed; left to their own devices, they are happy, but if the driver tries to correct, a weaving motion will set in.

The original oleo-pneumatic, self-levelling suspension system used on the DS has been considerably refined and is no longer, as we once described it, "heave and sigh for the open road " The ride comfort is good, with ample wheel and spring movement to absorb humps, undulations, and potholes with ease. Yet the damping effect is on the firm side, which cuts out

any tendency to wallow or pitch. It is only on coarsely-surfaced roads (concrete sections of motorway especially) that any harshness is transmitted into the passenger compartment. Running over cats' eyes will also produce a sharp bang. Between the front seats is a control to adjust ride height. There are two "on the move" positions: normal and high. The very high, wheel-changing position can be used at low speeds on very rough tracks.



Despite the apparently packed underbonnet area, access around the transverse engine is fairly good. The injection control equipment is behind the four induction pipes. The rectangular unit to the left of the spare wheel is the heater/ventilation air intake. The wheel changing equipment is stowed on top of the spare, with the central hydraulic reservoir tucked in the right-hand rear corner of the bonnet opening. The bonnet is propped open by an over-centre strut.

Fuel consumption

Our fuel measurement equipment does not yet allow us to tackle cars with petrol injection but, overall, the GTi returned 21.6 mpg, compared with the 23.5 mpg of the CX2400 carburettor car which we tested in July of this year. Our best figure, using the car for normal running about and keeping off motorways and high-speed driving, was 23.1mpg, while a really fast run dropped the brim-to-brim figure to 19.4mpg. So, with reasonable use, the 15 gallon tank should give a range of about 320 miles. A good feature is that the fuel filler has a big neck, so there is no blowing back.

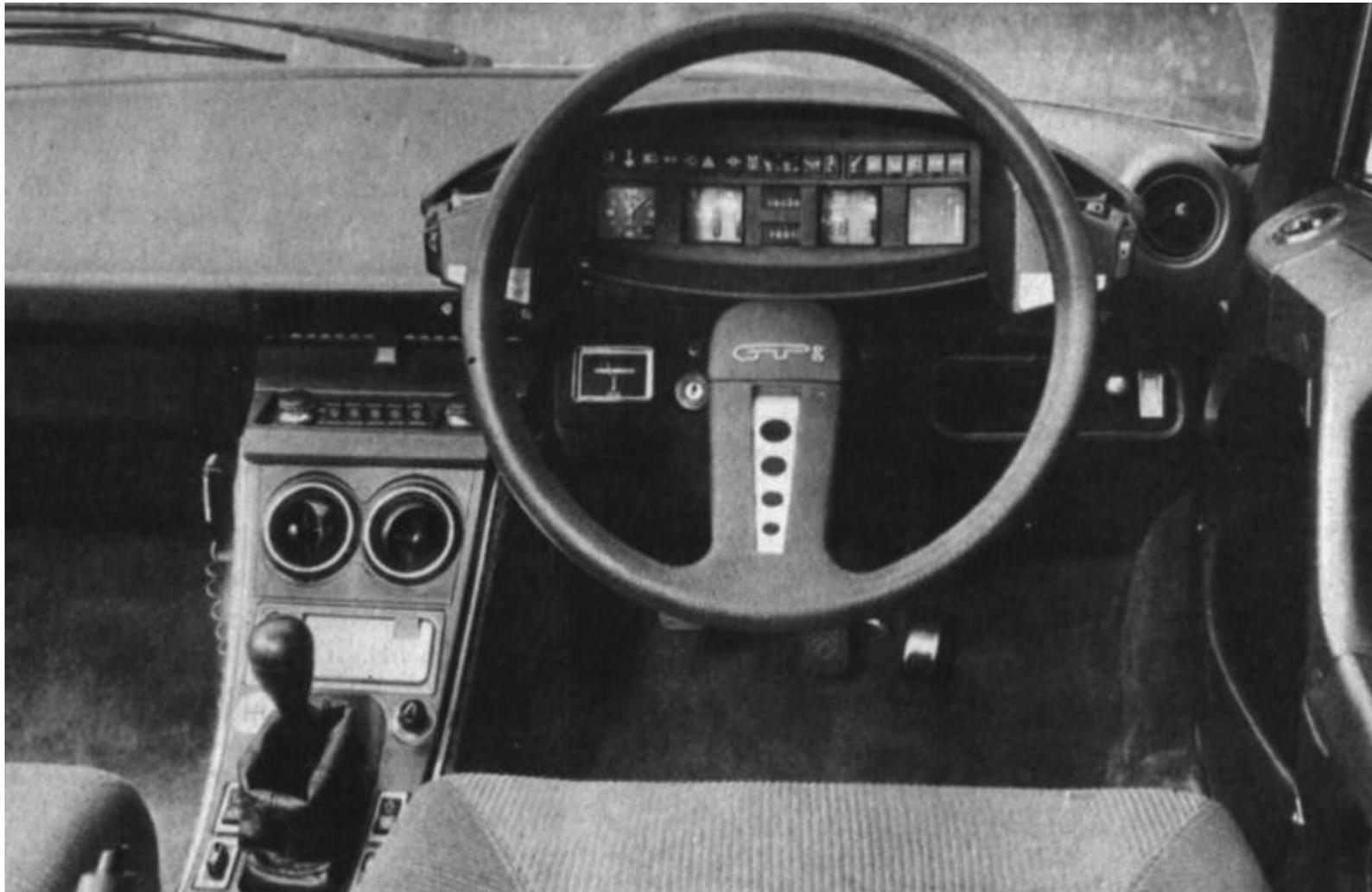
Brakes

Full power braking, using the high-pressure hydraulic system which also serves the suspension and steering, is used on the CX GTi. As we said earlier, this tends to be a bit disconcerting at first because the pedal has hardly any travel. A progressive spring bias is built in to give the feel. Pressures are light, with just 20lb needed for check braking and 50lb giving a maximum of 0.95g. Because the CX GTi has anti-dive suspension the nose does not dip, even under heavy braking, and this can give the impression that the brakes are not working properly.

From cold there is a tendency for some initial fade, but this stabilizes after five stops from 70mph at 0.5g

The parking brake works, unusually, on the front discs, using

its own separate pads. With so much weight over the front wheels it is highly effective, giving 0.45g, which means that it could be useful in an emergency. It held the car easily on the 1-in-3 hill, from which it was able to move off again with just a scrabble of front wheelspin.



Fittings and comfort

Like the rest of the car, Citroën like to be different from everyone else when it comes to the interior. They have managed to break away from the traditional layout; their fascia panel looks more like a piece of modern sculpture than the product of a car

factory.

In their own perverse way, they have also stuck to their rotating drum speedometer and rev counter. While these may fit the company's futuristic image, they cannot be read quickly; dials with needle pointers would be very much better. For the fuel gauges and voltmeter, vertical scale displays are used; the fuel gauge is not a hot wire type, and lurches up and down in corners or under acceleration. The GTi has the usual CX press-button oil level sight glass tucked away beneath the right-hand side of the facia, and only this model has the temperature gauge on the opposite side.

The main controls and switches are carried on two "horns" which flank the instruments and are within finger-tip reach when the hands are on the steering wheel. The group on the left include a rocking switch for the indicators which, as in all Citroëns, are not self-cancelling. A loud repeater and clear warning lamp ensure that the driver does not forget, and after a few miles one starts to appreciate this system. Beneath the indicators is the wiper switch with intermittent sweep position. All the CX range have a single, huge blade, pivoted centrally. This is effective enough up to about 70mph, but beyond that there is a tendency for it to lift off at the top of the blade, right in the driver's line of vision. A light pressure on the horn button produces a polite noise; more pressure and a pair of strident air horns join in. On the opposite side, matching switches control the headlamp dip/main beam, main lighting switch and the headlamp flasher.

The headlamps are not particularly good, producing a woolly pattern. On dip beam and a rather uncontrolled blast of light on main beam. On the GTi, a pair of very effective front foglamps are standard, as are the built-in rear foglamps, controlled by press-button switches hidden away under the control panel. Lighting for the speedometer and rev counter comes on with the ignition, the remainder of the instrument lighting being controlled by the main lighting switch. A dimmer controls the intensity.

A central console carries the radio (an extra), ashtray and cigarette lighter, controls for the electric front windows, and press button switches for the heated rear window and really good interior lamp. Tucked between the seats, alongside the suspension height control, are the group of three heater and ventilation controls.

For a car which started on a virtually clean sheet of paper, the ventilation is something of a disappointment. There is little ram effect, and the blower is needed virtually all the time. A water-valve heater control is used, and this takes a long time to respond, so that it tends to be difficult to achieve a comfortable climate within the cabin.

To complement the excellent ride, the seats in the GTi are very comfortable, trimmed in a wide-ribbed corduroy material. For the driver, the seat cushion can be adjusted for tilt, while both front seats have reclining backrests, although the lever controls do not give the same precise adjustment that can be achieved with a wheel control. If there is criticism, it is that there is not quite enough lateral support from the backrests. At the sort of speeds at which the GTi can be cornered the driver tends to have his body rolled off the seat. Head restraints are standard, with soft, clip-on cushions.

Rear-seat passengers have ample head and leg room, with a drop-down armrest to provide some extra location. The seating is again very comfortable. The rear windows are controlled by normal handles, and the doors are fitted with childproof catches.

Neither front door can be slam locked and a separate key is used for these and the boot.

Visibility is really superb and, despite the long, sloping bonnet line, which disappears from the driver's vision, the GTi is really a very easy car to place. The pillars are slim and the quarter window, behind the rear passengers, ensures that there are no serious blind spots. Noise levels too are low, with a gentle rush of wind over the smooth lines. Under full-throttle acceleration, the big four-cylinder engine tends to be a bit thunderous, yet even this noise is subdued once cruising speed has been reached and held.

Boot space is generous, and the almost-vertical rear panel lifts well clear to make loading easy. With the spare wheel and jacking equipment stowed away under the bonnet, the space is totally uncluttered. An interior lamp is provided and there is the additional light, with the parking lamps on, from the number plate lamps, which have a window in the rear of their housings.

Under the bonnet, the transverse engine and its neat layout of petrol injection equipment is fairly easy to work on, and the spare wheel, stowed flat at the rear of the compartment, does not need to be removed. But getting it out is quite a job, and care has to be taken not to knock off the various electrical connectors which surround the wheel.

The only slightly difficult item to check is the battery, buried in the left-hand front wing, ahead of the wheel. The "heart" of every CX is the high-pressure pump for the hydraulic supply, but this is located so that changing the drive belt is a very simple task.

SPECIFICATION		Maximum Speeds			
ENGINE	Front, front wheel drive	Gear	mph	kph	rpm
Cylinders	4, in-line transverse	Top (mean)	118	190	5,590
Main bearings	5	Top (best)	117	188	5,545
Cooling	Water	4th	99	159	6,000
Fan	Electric	3rd	74	119	6,000
Bore mm (in)	93.5 (3.68)	2nd	51	82	6,000
Stroke mm (in)	85.5 (3.37)	1st	29	47	6,000
Capacity cc (cu. in)	2,347 (143)	Acceleration			
Valve gear	ohv	True mph	Time (sec)	Speedo mph	
Camshaft drive	Chain	30	3.5	28	
Compression ratio	9.1 to 1	40	5.1	40	
Octane rating	98 RM	50	7.4	51	
Injection	Bosch L-jetronic	60	10.1	61	
Max power	128 bhp (DIN) at 4,800 rpm	70	13.7	72	

Max torque 145 lb. ft. at 3,600 rpm

TRANSMISSION

Type Five speed, all-synchromesh
Gear Ratio mph/1000rpm
Top 0.73 21.1
4th 0.94 16.5
3rd 1.25 12.4
2nd 1.83 8.5
1st 3.17 5.0

Final drive Helical spur
Ratio 4.77 to 1

SUSPENSION

Front Double wishbones
Springs - dampers Hydropneumatic units
Anti-roll bar Yes
Rear Trailing arms
Springs - dampers Hydropneumatic units
Anti-roll bar Yes

STEERING

Type Rack and pinion with power self-centering
Power assistance VariPower
Wheel diameter 15.0 in

BRAKES

Front 10.24 in dia. disc
Rear 9.20 in. dia. disc
Servo Hydraulic

WHEELS

Type Light alloy 5 studs

80 18.2 82
90 24.3 92
100 34.4 103
110 - 114

Standing 1/4 mile 17.4 sec, 75 mph

Standing kilometre 32.3 sec, 97 mph

mph	Top	4th	3rd	2nd
10-30	-	8.8	5.9	3.8
20-40	10.9	7.8	5.4	3.6
30-50	10.9	7.5	5.1	3.9
40-60	11.0	7.8	5.0	-
50-70	11.6	8.3	6.4	-
60-80	11.7	10.8	-	-
70-90	13.4	-	-	-
80-100	15.7	-	-	-

CONSUMPTION

Fuel

Overall mpg: 21.6

(13.1 l/100 km)

Calculated DIN mpg 21.2

(13.4 l/100 km)

Constant speed:

Measuring equipment not

compatible with petrol injection 28.1 mpg

Grade of fuel: Premium, four star (98 RM)

Mileage recorder: 3.0 per cent over-reading

Autocar formula

Hard driving, difficult conditions

19.6 mpg

Average driving, average conditions

23.8 mpg

Gentle driving, easy conditions

BRAKES

Fade (from 70 mph in neutral)

Rim width	5 1/2 in.
Tyres - make	Michelin XVS
Tyres - type	Radial ply tubeless
Tyres - size	185HR14
EQUIPMENT	
Battery	12 volt 60Ah
Alternator	80 amp
Headlamps	Halogen 90/190watts total
Reversing lamp	Standard
Hazard warning	Standard
Electric fuses	4
Screen wiper	2 speed, plus intermittent
Screen washer	Electric
Interior heater	Water valve
Interior trim	Cloth seats, PVC headlining
Floor covering	Carpet
Jack	Screw pillar
Jacking points	4 under sills
Windscreen	Laminated
Underbody protection	Paint and wax
MAINTENANCE	
Fuel tank	15.0 Imp gal (68 litres)
Cooling system	18.5 pints (inc heater)
Engine sump	8.2 pints SAE 20W/50
Gearbox and final drive	2.8 pints SAE 80EP
Greasing	No points
Valve clearance	Inlet 0.006 in (cold) Exhaust 0.008 in (cold)
Contact breaker	Electronic ignition

Pedal load for 0.5g stops (lb)

	start/end		start/end
1	25/25	6	40/50
2	30/35	7	40/50
3	35/40	8	40/55
4	35/40	9	40/55
5	40/50	10	40/55

Response from 30 mph in neutral

Load (lb)	g	Distance (ft)
20	0.35	86
30	0.55	55
40	0.72	42
50	0.95	32
Handbrake	0.45	67

Max gradient: 1 in 3

CLUTCH

Pedal 40lb and 5 1/2 in

TEST CONDITIONS

Wind	4 - 10 mph
Temperature	13 deg C (55 deg F)
Barometer	29.8 in Hg
Humidity	72 per cent
Surface	Damp asphalt and concrete
Test distance	1,137 miles

REGULAR SERVICE

	Interval (miles)		
Change	3,000	6,000	12,000
Engine oil	Yes	Yes	Yes
Oil filter	-	-	Yes

Ignition timing	25 deg BTDC (at 2,500 rpm)
Spark plug - type	Champion L87Y
Spark plug - gap	0.025 in
Tyre pressures	F 30 R 32 psi (normal driving)
Max payload	1,025 lb (466 kg)

Gearbox	-	-	Yes
Spark plugs	-	-	-
Air cleaner	-	-	Clean
Total cost	£5.62	£10.57	£31.95

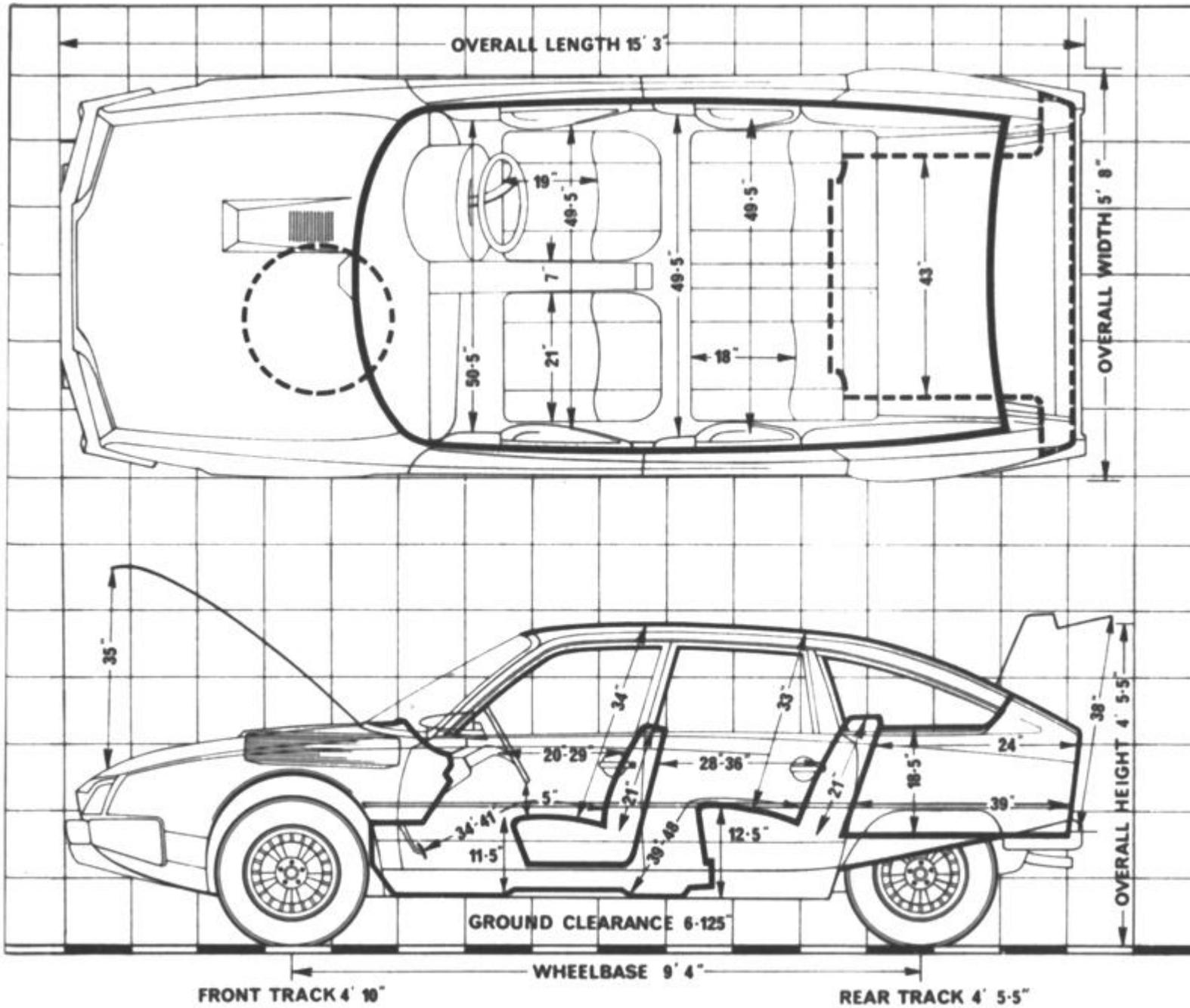
PARTS COST

(including VAT)

WEIGHT

Kerb.	26.8 cwt/3,000 lb/1,364 kg
Distribution F/R	69.5/30.5
As tested	30.0 cwt/3,361 lb/1,528 kg
Boot capacity	16.8 cu ft
Turning circles:	
Between kerbs	L 35 ft 9 in R 35 ft 4 in
Between walls	L 38 ft 8 in R 38 ft 4 in
Turns lock to lock	2.5

Brake pads (2 wheels) front	£16.90
Brake pads (2 wheels) rear	£11.55
Exhaust system	£83.58
Tyre - each (typical advertised)	£46.22
Windscreen	£136.48
Headlamp unit	£42.98
Front wing	£42.07
Rear bumper	£66.29



Comparisons	Price (£)	Max mph	0-60 (sec)	Overall mpg	Capacity (c.c.)	Power (bhp)	Wheelbase (in)	Length (in)	Width (in)	Kerb weight (cwt)	Fuel (gal)	Tyre size
Citroën CX GTi	6,530	117	10.1	21.6	2,347	128	112.0	181.0	68.0	26.8	15.0	185HR14
Audi 100-5E	5,599	109	11.8	23.3	2,144	136	105.5	184.5	69.5	23.5	13.2	185/70-14
Lancia Beta 2000	4,513	110	10.1	24.0	1,995	119	100.0	169.0	66.5	21.8	11.4	185/70-14
Princess 2200 HLS (A)	4,320	98	14.2	21.8	2,227	110	105.0	175.5	68.0	23.9	16.0	185/70-14
Renault 30TS (A)	6,185	111	11.7	20.2	2,664	131	105.0	178.0	68.0	25.5	14.7	175HR14

Test Scorecard

(average of scoring by Autocar Road test Team)

Ratings	<i>6 Excellent</i>	PERFORMANCE	4.67
	<i>5 Good</i>	STEERING AND HANDLING	4.92
	<i>4 Above average</i>	BRAKES	4.40
	<i>3 Average</i>	COMFORT IN FRONT	4.17
	<i>2 Poor</i>	COMFORT IN BACK	4.00
	<i>1 Bad</i>	DRIVERS AIDS	4.00
		<i>instruments, lights, wipers, visibility, etc.</i>	
		CONTROLS	3.75
		NOISE	4.17
		STOWAGE	3.67
		ROUTINE SERVICE	4.50
		<i>under-bonnet access, dipstick, etc</i>	
		EASE OF DRIVING	4.36
		OVERALL RATING	4.30

Where it fits in

At £6,350, the GTi is the second most expensive CX in the range, which starts with the 2000 Confort, at £4,461. The two 2400s are the Super and Pallas, at £4,991 and £5,498, while the Prestige, the top model in terms of trim, with metallic paint, tinted glass, air conditioning and Citroën's own C-matic three-speed, semi-automatic transmission all standard, runs out at

£7,770. C-matic is available as a £270 extra on all the 2400s, except the GTi.

Conclusion

This is the fastest of the Citroën CX range, a car perfectly capable of being cruised all day long flat out, carrying its passengers in near-perfect comfort. There can be little doubt that, as always, you either get on with the Citroën way of life, or you do not; there is no half-way house.

It takes time to learn your way about a CX, if you have never driven one before, do not be put off too quickly. In a world where convention and standardization have been imposed on practically everything we use, the GTi comes as a great gust of fresh air to blow away the cobwebs.



Above: The front seats are very comfortable, upholstered in a mixture of jersey and cord. The head restraint cushions are detachable



Above: In addition to the deep door pockets, there is a locker with a drop down lid in front of the passenger

Below right: The door mirror is electronically adjustable by means of the small control on the sill



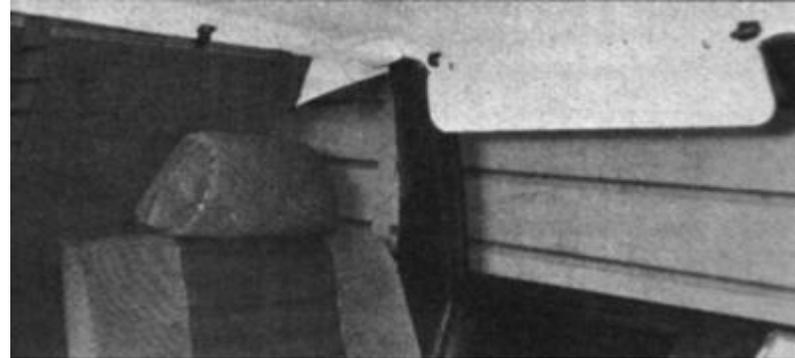
Above: This neat map-reading light with a flip up magnifier has a built in switch



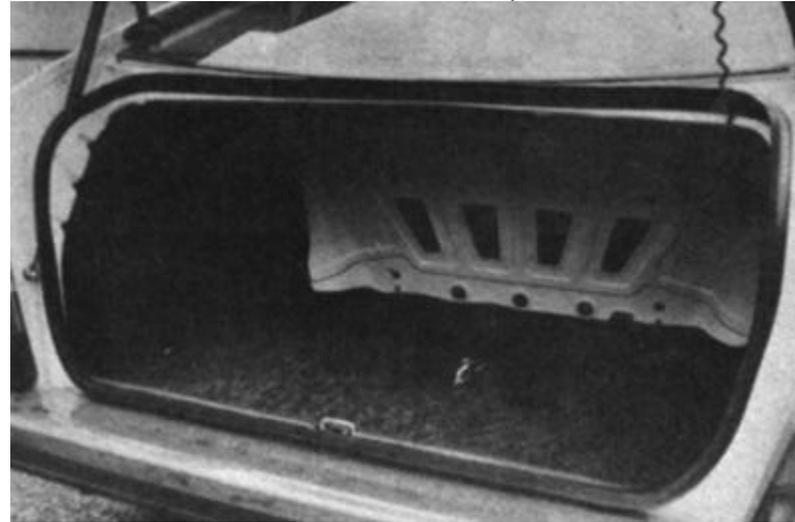


Above: The rear seats have ample head and leg room and the armrest gives good location

MANUFACTURER:
Automobiles Citroën
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Paris, France



Above: In bright sunshine or for modesty perhaps, there are 'net' blinds behind the seats and sideways mounted sun visors



Above: With the spare wheel and tools under the bonnet, the boot is free to take a great deal of luggage. It has its own lamp and the sides and floor are fully carpeted. The low sill makes it easy to load

Basic

£5,427.00

UK CONCESSIONAIRES

Citroen Cars Ltd
Mill Street, Slough
Buckinghamshire SL2 5DE

Special Car Tax	£452.25
VAT	£470.34
Total (in GB)	£6,349.59
Seat belts	Standard
Licence	£50.00
Delivery charges (London)	£59.40
Number plates	£7.00
Total on the road	£6,465.99
Insurance	Group 7
TOTAL AS TESTED ON THE ROAD	£6,465.99