

## **XANTIA CRASH TEST 1997**

Citröen Xantia 1.8i Dimension RHD | 5-door hatchback | built april 1996 | 1997 model year | 1259 kg



Xantia has standard-fit driver airbag, door protection beams and belt pre-tensioners



Airbag cushioned driver's head, but steering was pushed back by 145mm (5.7in), up by 111mm (4.4in)

front and side impact rating



pedestrian test rating

☆ ★☆☆☆

Test Scores: Front 3 (19%) Side 6 (33%) Overall 9 (26)%

The Xantia scored two stars, mainly as a result of the poor protection offered to the driver's head and chest in the side impact, and passenger compartment structural instability in the frontal impact. The two-star rating also resulted from the poor protection offered to the driver's chest, knees, thighs and pelvis in the frontal test. In this test, only the lower legs had good protection. There was excessive intrusion of the footwell, and stiff structures designed into the lower facia increased the risk of injury to the driver's knees, thighs and pelvis. In the side-impact test, the driver's head struck the pillar between the front and rear doors, and protection for this body region and for the chest was rated as poor. The Citroen Xantia has a standard-fit airbag that provided adequate head protection during the frontal impact.

how the tests are done

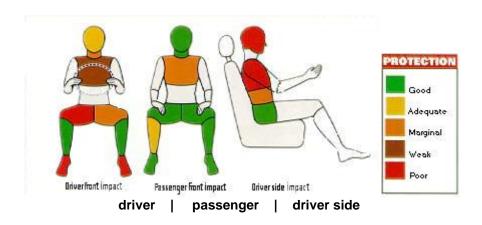
## **Frontal Impact**

In this test, the Xantia suffered excessive movement of the screen pillar. The impact also severely damaged the driver's door and separated the beam supporting the facia from the car's side. After the crash, the Citroen's driver's door could be opened only by using tools, though the car's passenger's door opened normally. The steering wheel moved rearwards by 145 mm (5.7in) and upwards by 111 mm (4.4in), the brake pedal was pushed back by 208 mm (8.2in), indicating excessive intrusion into the driver's footwell.



Although dummy head results were good, the movement of the steering wheel would have created a greater hazard for different-sized drivers, so the results were down-graded. The airbag worked well in cushioning the driver's head, but neck protection was not so good. The restraint system kept the driver's chest away from the steering wheel. The driver's left knee hit the cladding above the column adjustment lever. However, if the knee had struck in a slightly different position horizontally it might have hit the steering adjuster bracket, resulting in serious injury. The driver's right knee struck the fuse box, which was supported on a structure behind it. Again, if the knee had been in a slightly different horizontal position it would have struck the column mounting bracket and, if slightly higher, could have hit the steering lock and column adjuster mechanism. However, if this knee had penetrated slightly farther, it could have hit either the column mounting bracket, fuse box mounting plate or column support tube. More localised knee injury could have been caused by the column mounting bolts, the column adjuster mechanism or the fuse box plate. For these reasons, the readings given by the dummy were down-rated. Protection for both feet and ankles was rated as poor because of the excessive amount of intrusion into the footwell.

Protection was generally good, except for forces acting on the chest (from the seat belt) and for the right lower leg. The results obtained from the passenger dummy were not modified on the basis of any structural damage sustained by the car.



## **Side Impact**

The Xantia would have failed the sideimpact legislation due to take force from 1998. The dummy's head struck the pillar between the front and rear doors, and there was a risk of life-threatening injury to its chest, although its abdominal and pelvic regions fared better.

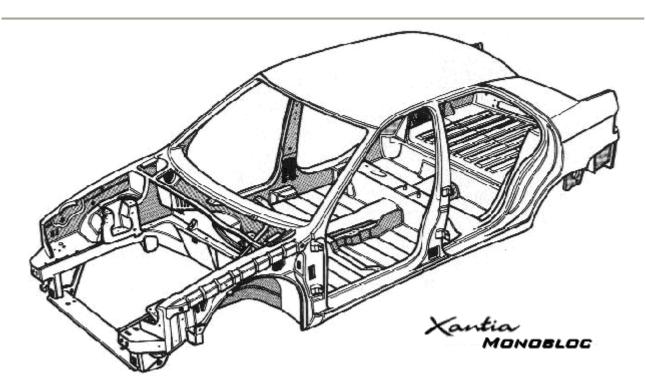


## **Child Restraint**

There are slight mis-matches between the child and adult seats, but these are not thought sufficient to jeopardise safety.

## Model history and safety equipment

Introduced March 1993. The 1997 model-year car as tested has door protection beams and height-adjustable front seatbelts with pre-tensioners. The driver airbag fitted to test car is standard in UK but is optional equipment in some other European countries. A front passenger airbag is available, but was not fitted to the test car.





Looking at the picture aboveyou should say that Citroën has designed the Xantia carefully, together with the high tensile steel bars in all four doors. This together with the



frontdoor energy-absorbing side impact system should give a good protection. Still the Xantia only got 2 stars.

### what Citroën (Australia) wrote:

# The Citroën Xantia: Safety & Security

The global safety approach for Citroën means doing everything to avert an accident under all circumstances, and then to provide occupants with maximum protection by means of a reinforced passenger compartment and a whole series of additional devices and equipment. Global safety also means being able to leave your vehicle on the public highway with peace of mind thanks to effective anti-theft protection.

### Dynamic safety

Following the traditions of the Marque, the running gear has been designed to give the Xantia improved steering, grip and drive as well as comfort due to the suspension design and the special attention to filtering axle-generated discomfort.

The hydraulic suspension guarantees coherent, homogeneous, and effective roadholding under all circumstances, adapted to the different types of engine. Right from the very first drive, the Xantia gives the impression of being easy to drive, efficient and safe.

The Xantia also has a rear self-steer axle to further improve the roadholding.

#### **Comfort combination**

The Xantia Exclusive offers computer controlled Hydractive suspension.

- \* All Xantia's have 4 disc brakes, ventilated at the front. ABS is standard throughout the whole of the range, from the SX level up.
  - \* All new Xantia's have a door open warning that operates even when the ignition is turned off.
- \* The Citroën Xantia's rear view mirrors enable safe overtaking and the mirrors are electrically adjustable on the whole range.
- \* All Xantias have rain sensor front windscreen wipers. This device self-regulates the screen wipe frequency (variable intermittence, continuous slow or fast).
- \* All Xantias are also fitted with an exterior temperature indicator with a warning as soon as the temperature drops to 3- and under.

### Passive safety

The structure of the Xantia is composed mainly of high yield strength body panels that provide the passenger compartment with rigidity without penalising vehicle weight.

The new Xantia is in advance of European side impact standards that are compulsory in the year 2003. Directive 96/27 imposes biomechanical criteria values for impacts against a deformable barrier, for a weight of 950 kg, at a speed of 50 km/h against the side of the vehicle.

The roof cross-member and centre pillars have been reinforced. This technique provides the vehicle with a roll bar.

This roll bar guarantees the optimum safety in case of side impact or rollover. It is completed by progressive distortion energy absorbing padding incorporated in the front door panels, and reinforming bars. In case of side impact, a large part of the energy is absorbed by the centre pillar/roof cross-member (roll bar). The padding at the occupants' hip-level gradually and gently transmits the residual energy. All new Xantias are equipped standard with twin front air bags. The passenger's cone-shaped air bag deploys as far as possible into the passenger compartment in order to absorb the movement of the passenger as soon as possible. The front seat belts are height adjustable and are fitted with pyrotechnic

pretensioners with belt locking devices or torsion bar load limiters. The load limiters, thanks to optimised settings, reduce pressure on the rib cage.

The one-touch electric window control (standard on driver's side) has a self-regulating antipinch system. Each time it is used, this new system "learns" the resistance due to the environment. Window glass movement resistance depends on the friction in the door frame (dust, ageing, ice, snow). The anti-pinch ECU continually measures the position and speed of the window glass, analyses it and compares it with the data recorded the previous times it was used. In case of anomaly, it reacts within a few milliseconds. On the petrol engine versions, the Citroën Xantia has an inertia operated fuel supply cut-off system and a fire safety procedure governed by the engine electronic control unit, in order to limit leaks in case of an accident.

### **Vehicle Security**

The new Xantia offers excellent protection against theft and break-ins. The whole of the range is fitted with central locking of the doors, hatch and fuel tank flap using a two button high frequency remote control (one button for opening, the other for closing). On opening, the hazard warning lights flash, on closing, they stay on for two seconds.

The remote control uses a rolling code in order to provide maximum security. Each transmission contains data that defines that the following transmissions are to be, preventing the reproduction of an "old" signal from unlocking the vehicle.

All Xantias are fitted standard with a transponder. A chip incorporated into the ignition key dialogues with the entire ECU that checks the code. The encrypted code guarantees system security: the ECU transmission contains variable parameters in a random signal; the chip uses these parameters to process the random signal and transmit the correct response.

The twin plug cylinder door locks are burglarproof. The number of combinations has been increased from 2,000 to 100,000. In addition, all lock barrels rotate freely if tampered with and the levers are protected from picking.

A buzzer sounds if a door is opened and the key is still in the ignition.