

# Crash Tests

## New Car Safety

### MAZDA 323 PROTEGE

1999 on

Driver's airbag

#### Overall Evaluation



Overall score

17.24 out of 34

Variant: Mazda Protege.

Engine: 4 Cyl. 1.6 litre.

Kerb weight: 1120 kg

Category: SMALL CAR

Vehicles built: Nov-99 and Jan-00

A Ford Laser sedan with the same specifications can be expected to perform the same as the Mazda 323 Protege.

#### Safety features

A driver's airbag is standard equipment. A passenger airbag is available as an option on the Ford Laser for about \$990.

The front seat belt buckles are mounted on the seats and the upper anchorages are adjustable. These features improve the fit of the seat belt.

#### OVERALL EVALUATION : 3 Stars

The MAZDA 323 PROTEGE performance was marginal in the offset crash test (score 7.18 out of 16). The passenger compartment held its shape well except for the firewall, which was substantially deformed. The driver's contact with the airbag was unstable. Protection from serious leg injury was poor for the driver.

The vehicle performed better in the side impact crash (score 10.06 out of 16) but there was a moderate risk of life threatening chest injury for the driver.

#### FRONTAL OFFSET CRASH TEST

The passenger compartment held its shape well except for the firewall, which was substantially deformed. The front part of the driver's floor was pushed rearwards 26cm. The brake pedal moved rearwards by 42cm, ending up above the seat cushion, where it may have been struck by the driver's groin. The dash moved 12cm towards the driver. The width of the driver's doorway shortened by 14cm. All doors remained closed during the crash. After the crash the doors could be opened without tools.

The steering column moved up substantially and this affected airbag positioning. The airbag cushioned the head of the driver but the head then rolled off the side of the airbag. The side of the head then hit the window sill. The driver's knees hit the dash, steering column and steering column adjuster. The passenger's head hit the dash with a moderate impact. The passenger's knees hit the glove box and dash.

#### SIDE IMPACT CRASH TEST

The centre pillar and the side doors were pushed inwards substantially. The floor was folded in the region of the centre pillar. The back of the driver's head glanced the centre pillar then rebounded.

The vehicle was not eligible for a Pole Impact Test since it did not have head-protecting side airbags. This test can earn eligible vehicles an extra two points, giving a maximum possible overall score of 34 points.



Offset crash test at 64km/h

#### INJURY MEASUREMENTS

Refer to the information sheet "How the test are done"	Offset Crash Test at 64km/h		Side Impact Crash Test at 50km/h
	Driver	Passn	Driver
Head HIC	471	433	192
Acceleration (g for 3ms)	61.0	57.1	52.1
Neck - Shear (kN)	0.4	0.9	-
Tension (kN)	2.40	1.70	-
Extension (Nm)	43.53	17.43	-
Chest Accln (g for 3ms)	53.5	35.2	-
Compression (mm)	29.43	34.10	35.46
Viscous criterion (m/s)	0.2	0.1	0.35
Abdomen - Force (kN)	-	-	1.59
Pelvis - Force (kN)	-	-	4.26
Upper legs Force	0.93	0.65	
Left			
(kN) Right	5.19	1.38	
Knee displ (mm) Left	0.69	0.45	
Right	0.28	0.4	
Lower legs Force Left	2.02	1.19	
(kN) Right	1.72	0.87	
Index (Upper/Low) Left	0.66/0.54	0.30/0.17	
Right	0.64/1.69	0.32/0.16	

#### Offset test modifiers:

Head	Unstable airbag contact	1 pt penalty
	Steering col. movement	1 pt penalty
Chest	A-pillar movement	0.7 pt penalty
Upper leg	Variable contact, L	1 pt penalty
Foot score	Brake pedal movement	Zero score

#### PEDESTRIAN RATING:



20.6 pts (57% of 36)



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