

Crash Tests

New Car Safety

MAZDA BRAVO & FORD COURIER (2WD)

1999 on

No airbags

Overall Evaluation*



Overall score*

18.24 out of 34

* High risk of life threatening head injury in offset test.

Variant: Single cab, 2WD

Eng: 4cyl 1.6 litre.

Kerb weight: 1380 kg

Category: UTILITY

Vehicles built: July 2001

Model History and Safety features

This model MAZDA BRAVO UTILITY was introduced in 1999. The FORD COURIER UTILITY is based on the same design and was also introduced in 1999.

Airbags are not available for the Bravo but they are optional on the Courier (driver airbag about \$930, dual airbags about \$1400). The centre front seat only has a two point seat belt. Webbing grabbers are fitted to the outboard seat belts.

OVERALL EVALUATION : 3 Stars

The MAZDA BRAVO scored 3.15 out of 16 in the offset crash test. Protection from serious head injury was poor for the driver. Chest protection was weak and lower leg protection was poor. The vehicle scored 15.09 out of 16 in the side impact crash. There was a slight risk of serious abdomen injury.

FRONTAL OFFSET CRASH TEST

Body region scores out of 4 points each: Head/neck zero pts, chest 1.54pts, upper legs 2pts, lower legs zero pts.

The passenger compartment was held its shape reasonably well in the offset crash test, except for firewall and footwell movement. The front part of the driver's floor was pushed rearwards 207mm. It was severely folded and almost trapped the driver's foot. The brake pedal moved rearwards by 233mm and upwards 74mm. The dash moved 99mm towards the driver. The steering wheel hub moved upwards 79mm and sideways 35mm. There was no rearward movement. The A-pillar moved 123mm rearwards. The width of the driver's doorway shortened by 112mm. All doors remained closed during the crash. After the crash tools were required to open the driver's door.

The driver's head hit the steering wheel hub with a hard contact. The driver's knees hit the dash and steering column. The steering column adjuster bracket, ignition switch barrel and park brake lever are potential sources of knee injury. There was no passenger head contact. The passenger's knees hit the glove box and dash.

SIDE IMPACT CRASH TEST

Body region scores out of 4 points each: Head 4pts, chest 4pts, abdomen 3.09pts, pelvis 4pts.

This test simulates a fairly small car striking the driver's door of the vehicle under test. It is based on a regulation test but the regulation does not apply to vehicles with a high seat height like the Bravo. Such vehicles can be expected to perform relatively well in this particular side impact test. With the Bravo the lower part of the driver's door was pushed inwards substantially but intrusion was



Offset crash test at 64km/h

much less at seat height and above. The driver's head hit the unbroken side window

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.

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 | 916 | 294 | 170 |
| Acceleration (g for 3ms) | 95.5 | 41.8 | 63.5 |
| Neck - Shear (kN) | 0.74 | 0.96 | - |
| Tension (kN) | 2.39 | 1.69 | - |
| Extension (Nm) | 14 | 12 | - |
| Chest Accln (g for 3ms) | 35.2 | 29.7 | - |
| Compression (mm) | 38.7 | 39.3 | 21.6 |
| Viscous criterion (m/s) | 0.16 | 0.16 | 0.12 |
| Abdomen - Force (kN) | - | - | 1.342 |
| Pelvis - Force (kN) | - | - | 1.96 |
| Upper legs Force | 1.38 | 0.89 | |
| Left (kN) | | | |
| Right | 3.71 | 2.43 | |
| Knee displ (mm) Left | 3.55 | 1.14 | |
| Right | 1.71 | 3.69 | |
| Lower legs Force Left | 6.86 | 0.49 | |
| (kN) Right | 4.01 | 1.32 | |
| Index (Upper/Low) Left | 1.64/1.66 | 0.2/0.15 | |
| Right | 1.1/1.04 | 0.28/0.19 | |

Modifiers for offset test scores

| | | |
|------------|--------------------------|--------------------|
| Head | Steering col. movement | 0.44pt penalty |
| Chest | A-pillar movement | 0.46pt penalty |
| Upper leg | Variable & conc. loading | 2 pt penalty L & R |
| Lower leg | Brake pedal upward | 0.13pt penalty |
| Foot score | Brake pedal rearward | Zero score |

Pedestrian rating

12 points out of 36 (33.3%)



Child head impacts 6pts; adult head impacts 6pts; upper leg zero pts and lower leg impacts zero pts.

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