

# Crash Tests

## New Car Safety

### Mahindra Pik-Up

07/2007 on 06/2009 - None

#### Overall Evaluation



#### Overall Score

Variant: Dual Cab 4X4

16.49 out of 37

Engine: 2.5 Turbo Diesel

Category: Utility

#### Model History and Safety Features

The tested model of Mahindra Pik-up was introduced in Australia during 2007. The Pik-up has minimal safety features. ABS brakes are optional. The Australian distributor advises that driver and passenger airbags will become available during 2008. There are no top tether anchorages for child restraints so this vehicle is unsuitable for transporting children under the age of four (it is recommended that these children be in an approved child seat or infant capsule - both of which need a top tether anchorage). The distributor advises that this will be addressed during 2009.

#### Overall Evaluation: 2

2 Stars. The Mahindra Pik-up scored 3.44 out of 16 in the offset crash test. The passenger compartment held its shape reasonably well, except for steering column, footwell and pedal intrusion. Protection from serious leg injury was poor for the driver. Chest protection was weak for the driver and passenger. Driver head protection was also weak.

The vehicle was awarded a default score of 16 out of 16 in the side impact crash test. However, the low offset score meant that the vehicle was limited to a 2 star rating and an overall score of 16.49 (the maximum available for a 2 star rating).

#### Frontal Offset Crash Test

Body region scores out of 4 points each: Head/neck 1 pts, chest 0.44 pts, upper legs 2 pts, lower legs zero pts.

The passenger compartment held its shape reasonably well in the offset crash test. However, the brake pedal moved rearwards by 223 mm and upwards 107 mm. The steering wheel hub moved 53 mm rearward, 141 mm upward and 23 mm sideways. The front ("A") pillar moved 84 mm rearwards. All doors remained closed during the crash. After the crash the driver's door could be opened with high manual effort. The driver's head hit the hub of the steering wheel. Steering column and dash components were a potential source of injury for the driver's knees. The dash was a hazard for the passenger's right knee.

#### Side Impact Crash Test

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

The side impact test normally used by ANCAP simulates a 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 Pik-up. Experience shows that such vehicles can be expected to perform well in this test so ANCAP has decided to award full score for these vehicles instead of conducting a crash test.

#### Pedestrian rating (v4.1)



Like many vehicles of this type, a poor result for the Pik-up. The child zones scored particularly poorly, and the leg results were uniformly poor. The adult zones scored well in the middle of the bonnet but the top edge of the bonnet received partial points only.

|                    |      |
|--------------------|------|
| Child head impacts | 0.32 |
| Adult head impacts | 6.57 |
| Upper leg impacts  | Zero |
| Lower leg impacts  | Zero |
| Total (out of 36)  | 6.89 |

Offset crash test at 64km/hr



#### Injury Measurements

| Refer to the information sheet 'How the tests are done' | Offset Crash Test at 64km/h (v4.1) |             | Side Impact Crash Test aa 50km/h (v4.1) |  |
|---------------------------------------------------------|------------------------------------|-------------|-----------------------------------------|--|
|                                                         | Driver                             | Passn       | Driver                                  |  |
| Head                                                    |                                    |             |                                         |  |
| - HIC                                                   | 477                                | 285         |                                         |  |
| - Acceleration (g for 3ms)                              | 69.4                               | 40.7        |                                         |  |
| Neck                                                    |                                    |             |                                         |  |
| - Shear (kN)                                            | 0.92                               | 0.95        |                                         |  |
| - Tension (kN)                                          | 2.07                               | 1.63        |                                         |  |
| - Extension (Nm)                                        | 6.9                                | 10          |                                         |  |
| Chest                                                   |                                    |             |                                         |  |
| - Acceleration (g for 3ms)                              | 36.5                               | 36.7        |                                         |  |
| - Compression (mm)                                      | 43                                 | 46.9        |                                         |  |
| - Viscous Criterion (m/s)                               | 0.24                               | 0.29        |                                         |  |
| Abdomen                                                 |                                    |             |                                         |  |
| - Force (kN)                                            |                                    |             |                                         |  |
| Pelvis                                                  |                                    |             |                                         |  |
| - Force (kN)                                            |                                    |             |                                         |  |
| Upper Legs Force (kN)                                   |                                    |             |                                         |  |
| - Left                                                  | 2.67                               | 0.64        |                                         |  |
| - Right                                                 | 3.27                               | 1.63        |                                         |  |
| Knee Displacement (kN)                                  |                                    |             |                                         |  |
| - Left                                                  | 1.46                               | 0.46        |                                         |  |
| - Right                                                 | 0.45                               | 0.87        |                                         |  |
| Lower Legs Force (kN)                                   |                                    |             |                                         |  |
| - Left                                                  | 3.73                               | 1.67        |                                         |  |
| - Right                                                 | 4.77                               | 2.45        |                                         |  |
| Index (Upper   Lower)                                   |                                    |             |                                         |  |
| - Left                                                  | 0.81   0.71                        | 0.28   0.12 |                                         |  |
| - Right                                                 | 0.77   1.51                        | 0.47   0.45 |                                         |  |

#### Bonus points (maximum 5)

Pole Test: Not eligible - no head protecting side airbags

Seat Belt Reminders: None

#### Modifiers for offset test scores

|            |                                             |                                         |
|------------|---------------------------------------------|-----------------------------------------|
| Head       | Steering column movement                    | 1 pt deduction                          |
| Chest      |                                             | No deduction                            |
| Upper leg  | Variable & Conc. loading Driver & Passenger | 2 pt deduction L&R; 1 pt deduction R    |
| Lower leg  | Pedal upward movement                       | 1 pt deduction                          |
| Foot score | Pedal rearward movement                     | Zero points                             |
| Structure  | Steering column and pedal movements are     | measured relative to the driver's seat. |

#### Modifiers for side impact test scores

|            |                       |
|------------|-----------------------|
| Head       | Default score awarded |
| Chest      |                       |
| Upper leg  |                       |
| Lower leg  |                       |
| Foot score |                       |
| Structure  |                       |



Version 1, Published on: 26/03/2008  
Published by  
New Car Assessment Program  
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