

# Crash Tests

## New Car Safety

### Subaru Liberty

07/2004 on 06/2008 - Frontal+Side+Head

#### Overall Evaluation



#### Overall Score

Variant: 4 Dr Wagon (Safety Pack)

**35.52 out of 37**

Engine: 2.5 Litre

Category: Medium Car

\* Note: ANCAP was provided with evidence that the results also apply to the Liberty sedan. Vehicles tested after 1 January 2008 will require Electronic Stability Control in order to achieve a 5 star rating. This vehicle was tested prior to this date and may or may not meet this new requirement.

#### Model History and Safety Features

The Subaru Liberty was released in 2003. These test results apply to models built from 2004 with side curtain airbags.

Dual front airbags are standard equipment on all models. ABS brakes are also standard. Side airbags with head protecting curtains are available as part of a safety pack option. Electronic stability control is available as an option on some variants. 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. Pretensioners are fitted to the front seat belts to reduce slack in the event of a crash. A three point seat belt is fitted to the centre rear seat. This provides better protection than a two point seat belt. Advanced seat belt reminders are fitted to all seating positions.

#### Overall Evaluation: 5

The Subaru Liberty scored 14.52 out of 16 in the offset crash test. The passenger compartment held its shape very well in the offset crash test. There was a slight risk of chest and lower leg injury for the driver and passenger.

The vehicle scored 16 out of 16 in the side impact crash test. A further 2 points were scored in the optional pole test and three points were awarded for advanced seat belt reminders. With these extra points the Liberty reached a total of 35.52 points - the highest scoring vehicle assessed by Australian NCAP.

#### Frontal Offset Crash Test

Body region scores out of 4 points each: Head/neck 4pts, chest 3.21pts, upper legs 4pts, lower legs 3.31pts.

The passenger compartment held its shape very well in the offset crash test. The brake pedal moved rearwards by 25mm and upwards 12mm. The steering wheel hub moved forwards 10mm and upwards 11mm. The front ("A") pillar moved 7mm rearwards. All doors remained closed during the crash. After the crash all doors could be opened with normal effort.

The airbag cushioned the head of the driver and contact was stable. The passenger's head was also cushioned by an airbag.

#### Side Impact Crash Test

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

The vehicle was eligible for an optional pole impact test, since it had head-protecting side airbags and scored four points for the head in the side impact test. The manufacturer decided to go ahead with the pole test and the vehicle earned a further two points.

#### Pedestrian rating (v4)



18.65 points out of 36.

Child head impacts 5.85pts;

Adult head impacts 5pts;

Upper leg 6pts and lower leg impacts 1.8pts.

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) |             | Side Impact Crash Test at 50km/h (v4) |
|---------------------------------------------------------|----------------------------------|-------------|---------------------------------------|
|                                                         | Driver                           | Passn       | Driver                                |
| Head                                                    |                                  |             |                                       |
| - HIC                                                   | 316                              | 278         | 42                                    |
| - Acceleration (g for 3ms)                              | 43.1                             | 40.2        | 21.9                                  |
| Neck                                                    |                                  |             |                                       |
| - Shear (kN)                                            | 0.61                             | 1.07        |                                       |
| - Tension (kN)                                          | 1.09                             | 1.23        |                                       |
| - Extension (Nm)                                        | 30.4                             | 15.4        |                                       |
| Chest                                                   |                                  |             |                                       |
| - Acceleration (g for 3ms)                              |                                  |             |                                       |
| - Compression (mm)                                      | 27.51                            | 25.86       | 11.67                                 |
| - Viscous Criterion (m/s)                               | 0.19                             | 0.15        | 0.06                                  |
| Abdomen                                                 |                                  |             |                                       |
| - Force (kN)                                            |                                  |             | 0.73                                  |
| Pelvis                                                  |                                  |             |                                       |
| - Force (kN)                                            |                                  |             | 0.95                                  |
| Upper Legs Force (kN)                                   |                                  |             |                                       |
| - Left                                                  | 0.61                             | 0.35        |                                       |
| - Right                                                 | 0.24                             | 0.29        |                                       |
| Knee Displacement (kN)                                  |                                  |             |                                       |
| - Left                                                  | 0.4                              | 0.5         |                                       |
| - Right                                                 | 0.5                              | 1.3         |                                       |
| Lower Legs Force (kN)                                   |                                  |             |                                       |
| - Left                                                  | 1.55                             | 1.95        |                                       |
| - Right                                                 | 1.52                             | 2.48        |                                       |
| Index (Upper   Lower)                                   |                                  |             |                                       |
| - Left                                                  | 0.27   0.37                      | 0.37   0.24 |                                       |
| - Right                                                 | 0.48   0.25                      | 0.48   0.55 |                                       |

#### Bonus points (maximum 5)

Pole Test: 2 points

Seat Belt Reminders: Fitted to all seats - 3 points

#### Modifiers for offset test scores

|            |                |
|------------|----------------|
| Head       | No deduction   |
| Chest      | No deduction   |
| Upper leg  | No deduction   |
| Lower leg  | No deduction   |
| Foot score | Score 4 points |
| Structure  | No deduction   |

#### Modifiers for side impact test scores

|            |              |
|------------|--------------|
| Head       | No deduction |
| Chest      | No deduction |
| Upper leg  | No deduction |
| Lower leg  | No deduction |
| Foot score | No deduction |
| Structure  | No deduction |



Version 1, Published on: 19/01/2008  
Published by  
New Car Assessment Program  
PO Box 1555  
Canberra ACT Australia 2601