

Crash Tests

New Car Safety

TOYOTA AVALON

2001 on

Dual front airbags

Overall Evaluation*



Overall score*

17.75 out of 37

* High risk of life threatening chest injury in side impact test.

Variant: Conquest sedan Eng: V6 3 litre

Kerb weight: 1500 kg Category: LARGE/MEDIUM CAR

Vehicles built: 2/01 and 1/01

Model History and Safety Features

The tested model of TOYOTA AVALON was introduced in 2001.

Dual front airbags are standard equipment. Side airbags for the front seats are optional but were not on the tested vehicles. 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 front seat belts to reduce slack in the event of a severe crash. The centre rear seat has a 3-point seat belt.

OVERALL EVALUATION : 3 Stars

The TOYOTA AVALON scored 6.45 out of 16 in the offset crash test. The passenger compartment held its shape well but there was a marginal chest and lower leg injury for the driver.

The vehicle scored better in the side impact crash (score 11.31 out of 16) but protection from serious chest injury was poor for the driver.

FRONTAL OFFSET CRASH TEST

Body region scores out of 4 points each: Head/neck 3.5pts, chest 0.46pts, upper legs 2pts, lower legs 0.49pts.

The passenger compartment held its shape well in the offset crash test. The front part of the driver's floor was pushed rearwards 170mm. The brake pedal moved rearwards by 150mm. The dash moved 70mm and the steering column moved 100mm rearwards, relative to the rear of the vehicle. The width of the driver's doorway shortened by 30mm. All doors remained closed during the crash. After the crash high manual effort was required to open the driver's door.

The airbag cushioned the head of the driver and contact was stable. The passenger airbag also performed well. During rebound the back of the driver's head hit the centre pillar. The driver's knees hit the dash and steering column cover. Injury measurements were good but the ignition switch could be a hazard to the knees in slightly different crash circumstances. 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 zero pts, abdomen 3.91pts, pelvis 3.4pts.

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.



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 | 516 | 308 | 124 |
| Acceleration (g for 3ms) | 54.7 | 42 | 33.5 |
| Neck - Shear (kN) | 0.32 | 0.54 | - |
| Tension (kN) | 1.66 | 1.53 | - |
| Extension (Nm) | 30 | 15.2 | - |
| Chest Accn (g for 3ms) | 46.1 | 28.6 | - |
| Compression (mm) | 46.8 | 34.6 | 46.303 |
| Viscous criterion (m/s) | 0.32 | 0.12 | 1.11 |
| Abdomen - Force (kN) | - | - | 1.035 |
| Pelvis - Force (kN) | - | - | 3.45 |
| Upper legs Force Left | 0.88 | 0.44 | |
| (kN) Right | 0.89 | 1.41 | |
| Knee displ (mm) Left | 0.98 | 0.32 | |
| Right | 0.46 | 3.45 | |
| Lower legs Force Left | 3.24 | 2.22 | |
| (kN) Right | 1.08 | 1.43 | |
| Index (Upper/Low) Left | 0.98/1.19 | 0.25/0.36 | |
| Right | 0.37/0.77 | 0.28/0.43 | |

Bonus points (maximum 5)

Pole Test: Not eligible

Seat belt reminders: Not eligible

Modifiers for offset test scores (applicable in 2001)

| | | |
|------------|--------------------------|-------------------|
| Head | Steer col movement | 0.5 deduction |
| Chest | | No deduction |
| Upper leg | Variable & Conc. loading | 2 pt deduction R |
| Lower leg | | No deduction |
| Foot score | | Score 1.88 points |

Pedestrian rating - not tested to 2002 protocol

Pedestrian protection tests conducted prior to 2002 cannot be compared with tests from 2002.



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