

Crash Tests

New Car Safety

Toyota Avalon

10/2001 on 07/2005 - Dual Frontal

Overall Evaluation



Overall Score

17.75 out of 37

Variant: Conquest 4 Dr Sedan

Engine: 3 Litre V6

Category: Large Car

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

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

The TOYOTA AVALON performed marginally in the offset crash test (score 6.45 out of 16). The passenger compartment held its shape well but there was a moderate risk of chest and lower leg injury for the driver.

The vehicle scored better in the side impact crash (score 11.31 out of 16) but there was a high risk of life threatening chest injury 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 towards the driver. 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 and injury measurements were good.

Side Impact Crash Test

Body region scores out of 4 points each: Head 4pts, chest zero pts, abdomen 3.91pts, pelvis 3.4pts.

The centre pillar and the side doors were pushed inwards substantially. The driver's seat was pushed sideways but the seat anchorages held. The driver's side window did not break. The driver's head hit the window 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.

Pedestrian rating (v4)

(0 stars)

A pedestrian protection test was not conducted on this model Toyota Avalon.

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 (v3.1)
	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			
- Acceleration (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 (kN)			
- Left	0.88	0.44	
- Right	0.89	1.41	
Knee Displacement (kN)			
- Left	0.98	0.32	
- Right	0.46	3.45	
Lower Legs Force (kN)			
- Left	3.24	2.22	
- Right	1.08	1.43	
Index (Upper Lower)			
- 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 - zero points

Seat Belt Reminders: None fitted - zero points

Modifiers for offset test scores

Head	str column movement	0.5 pt penalty
Chest		No deduction
Upper leg	Variable & conc. loading	Variable & conc. loading
Lower leg		No deduction
Foot score	Blocked pedal movement	Score 1.88 points
Structure		No deduction

Modifiers for side impact test scores

Head	Not assessed
Chest	Not assessed
Upper leg	Not assessed
Lower leg	Not assessed
Foot score	Not assessed
Structure	Not assessed



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