

# Crash Tests

## New Car Safety

### VOLVO S40 (LHD)

2004 on

Front+side+head airbags

#### Overall Evaluation



**Overall score** 34.15 out of 37

Variant: SEDAN

Eng: 2.4 litre.

Kerb weight: 1370 kg

Category: MEDIUM CAR

Vehicles built: 2004

Test by Euro NCAP

**Important note:** The *left-hand-drive* European model was tested by EuroNCAP. Australasian specifications may vary and therefore models sold in Australasia might provide different levels of protection to those described on this page.

#### Model History and Safety Features

The tested model of Volvo S40 was introduced in Australia during 2004. Dual front airbags, side airbags, head-protecting side curtains, whiplash protection systems and ABS brakes are standard equipment. Electronic stability control is standard on the 2.0T variant and optional on other 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. Pre-tensioners 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.

All seats have advanced seat belt reminders.

#### OVERALL EVALUATION : 5 Stars

The VOLVO S40(LHD) scored 13.15 out of 16 in the offset crash test. The passenger compartment held its shape well. There was a slight risk of serious chest and leg injury for both driver and passenger.

The vehicle scored 16 out of 16 in the side impact crash test. There was a high risk of serious chest injury for the driver. A further 2 points were scored in the optional pole test

#### FRONTAL OFFSET CRASH TEST

Body region scores out of 4 points each: Head/neck 4pts, chest 3.31pts, upper legs 3pts, lower legs 2.84pts.

The passenger compartment held its shape well in the offset crash test. The brake pedal moved rearwards by 27mm and upwards 11mm. The steering wheel hub moved rearwards 56mm, upwards 17mm and sideways 5mm. The front ("A") pillar moved 6mm rearwards. width of the driver's doorway shortened by 7mm. 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. Dash/fascia components were a potential source of injury for the driver's knees. The passenger's head was cushioned by the 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.



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	205	305	46.74
Acceleration (g for 3ms)	37.85	45.54	23
Neck - Shear (kN)	0.33	0.48	-
Tension (kN)	0.97	0.53	-
Extension (Nm)	5.39	3.51	-
Chest Accln (g for 3ms)			-
Compression (mm)	26.83	26.54	17.18
Viscous criterion (m/s)	0.1	0.09	0.09
Abdomen - Force (kN)	-	-	0.52
Pelvis - Force (kN)	-	-	1.39
Upper legs Force			
(kN) Left	0.21	0.96	
(kN) Right	0.34	0.12	
Knee displ (mm)			
Left	0	0	
Right	0	0	
Lower legs Force			
(kN) Left	1.78	2.29	
(kN) Right	2.88	2.16	
Index (Upper/Low)			
Left	0.43/0.19	0.61/0.37	
Right	0.66/0.32	0.47/0.24	

#### Bonus points (maximum 5)

Pole Test: 2 pts    Seat belt reminders: 3

#### Modifiers for offset test scores

Head	No deduction
Chest	No deduction
Upper leg	Variable loading    1 pt deduction L & R
Lower leg	No deduction
Foot score	Score 4 points

#### Pedestrian rating (v4)



17.8 points out of 36.

Child head impacts 8.71pts; adult head impacts 5pts; upper leg 3.73pts and lower leg impacts 0.36pts.



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