

ANCAP Safety Rating

VOLVO XC60 (October 2017 - onwards)



Volvo XC60

This ANCAP safety rating applies to:

Make / Model	Volvo XC60
Year Range	October 2017 - onwards
Variant(s)*	D4, D5, T5 and T6 variants
Vehicle Type	Medium SUV

The tested model of Volvo XC60 was introduced in Australia and New Zealand in October 2017. This ANCAP safety rating applies to all-wheel-drive 4-cylinder petrol and diesel variants built from May 2017 and on sale from October 2017. The hybrid T8 is unrated.

Dual frontal, side chest, side head-protecting (curtain) and driver knee airbags are standard. Autonomous emergency braking (AEB), lane support systems (LSS) and speed assist systems (SAS) are standard. A full list of safety features and technologies can be viewed within the *Safety Features & Technologies* table on page 2 of this report.

Injury Outcomes.

Full Width Frontal
Driver Rear Passenger **Frontal Offset**
Driver Front Passenger



Side Impact
Driver



Pole
Driver



Whiplash Protection
Rear



Front



Test Results Summary.

Airbags	Dual Frontal, Side, Head, Knee
Adult Occupant Protection	98% (37.25 out of 38)
- Full Width Frontal Test [#]	7.58 (out of 8)
- Frontal Offset Test [#]	7.82 (out of 8)
- Side Impact Test [#]	8.00 (out of 8)
- Pole Test [#]	8.00 (out of 8)
- Whiplash Protection Test	2.85 (out of 3)
- AEB (City)	3.00 (out of 3)
Child Occupant Protection	87% (42.86 out of 49)
Safety Assist	95% (11.40 out of 12)
- Speed Assistance System	2.50 (out of 3)
- Seat Belt Reminders	3.00 (out of 3)
- Lane Support System	2.90 (out of 3)
- AEB (Interurban)	3.00 (out of 3)
Pedestrian Protection	76% (31.93 out of 42)
ANCAP Safety Rating	★★★★★
Rating Year[^]	2017

[#] Scaled scores. Total test score out of 16.00 points.

Adult Occupant Protection.

Full Width Frontal Test

Each body region is scored out of 4 points

Driver		Rear Passenger	
Head:	4.00 points	Head:	4.00 points
Neck:	4.00 points	Neck:	4.00 points
Chest:	4.00 points	Chest:	2.30 points
Upper legs:	4.00 points	Upper legs:	4.00 points

Good protection was offered to all critical body areas of both dummies in the full width frontal test with the exception of the chest of the rear passenger where protection was marginal.

Frontal Offset Test

Each body region is scored out of 4 points

Driver / Front Passenger (lesser of each)

Head / neck:	4.00 points
Chest:	4.00 points
Upper legs:	4.00 points
Lower legs:	3.65 points

The passenger compartment held its shape well in the frontal offset test. Protection of all body areas was good except for the driver lower legs where protection was acceptable. All doors remained closed during the test. After the test, all doors could be opened with normal effort.

Side Impact Test

Pole Test

Each body region is scored out of 4 points

Head:	4.00 points	Head:	4.00 points
Chest:	4.00 points	Chest:	4.00 points
Abdomen:	4.00 points	Abdomen:	4.00 points
Pelvis:	4.00 points	Pelvis:	4.00 points

Good protection was offered to all body regions of the driver in both the side impact test and the more severe pole test.

Whiplash Protection

Front / Rear:	1.85 points
Rear:	1.00 points
AEB (City):	3.00 points

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Child Occupant Protection.

Crash Test Performance

6 year old child:	11.95 points
10 year old child:	11.91 points

In the frontal offset test, protection of the neck of the 10 year old and chest of the 6 year old was acceptable. Good protection was offered to all other critical body regions. In the side impact test, protection was good for all critical body regions.

Child Safety Features & Child Seat Installation

Safety features:	7.00 points
Installation check:	12.00 points

NOTE: The child restraints tested by Euro NCAP are relevant to the European market. For Australasian consumers, this information should be used as a guide to vehicle features only. For more detailed information about Australian child restraints visit childcarseats.com.au.

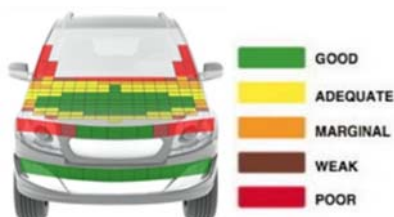
Pedestrian Protection.

Pedestrian Test

Scored out of 42 points

Adult & child head impacts:	17.28 points
Upper leg impacts:	2.65 points
Lower leg impacts:	6.00 points
AEB (VRU):	6.00 points

This vehicle scored 31.93 out of 42 points. The bonnet provided mostly good or acceptable protection to the head of a struck pedestrian, with some poor results recorded at the base of the windscreen and on the stiff windscreen pillars. Maximum points were scored on the bumper with good protection offered to pedestrian's legs, while the bonnet edge offered mixed results to the pelvis region. The autonomous emergency braking (AEB) system can react to pedestrians and scored well in tests of its effectiveness. (Tested by Euro NCAP v8.3)



Score Deductions.

Deductions from full width frontal test scores

Head:	No deductions
Neck:	No deductions
Chest:	No deductions
Upper legs:	No deductions
Overall:	No deductions

Deductions from frontal offset test scores

Head / neck:	No deductions
Chest:	No deductions
Upper legs:	No deductions
Lower legs:	No deductions
Overall:	No deductions

Deductions from side impact test score

Overall:	No deductions
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Deductions from pole test score

Overall:	No deductions
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Safety Features & Technologies.

Descriptions of each of these safety features and safety assist technologies (SAT) and detail on fitting requirements for each star rating level can be found at ancap.com.au.

Safety Feature / Safety Assist Technology	Availability
Seat belts (three-point, lap / sash) for all forward-facing seats	S
Seat belt pretensioners (front)	S
Seat belt pretensioners (rear outboard)	S
Intelligent seat belt reminder (driver)	S
Intelligent seat belt reminder (front passenger)	S
Intelligent seat belt reminder (2 nd row seats)	S
Airbag - Frontal (driver)	S
Airbag - Frontal (passenger)	S
Airbag - Side, chest protection (front seats)	S
Airbag - Side, chest protection (2 nd row seats)	X
Airbag - Side, head protection (front seats)	S
Airbag - Side, head protection (2 nd row seats)	S
Airbag - Knee (driver)	S
Airbag - Knee (front passenger)	X
Head restraints for all seats	S
Adaptive cruise control (ACC)	O
Adaptive front lighting systems	S
Antilock braking system (ABS)	S
Autonomous emergency braking (AEB)	
- City	S
- Interurban	S
- Vulnerable road user	S
Automatic headlights	S
Automatic high beam	S
Attention assist	S
Blind spot monitoring (BSM)	S
Electronic brakeforce distribution (EBD)	S
Electronic data recorder (EDR)	S
Electronic stability control (ESC)	S
Emergency brake assist (EBA)	S
Emergency stop signal (ESS)	S
Forward collision warning (FCW)	S
Lane departure warning (LDW)	S
Lane keep assist (LKA)	S
Daytime running lights (DRL)	S
Hill launch assist	S
Reversing collision avoidance	S
Smart Key	O
Speed assistance – automatic / intelligent speed limiting (ISA)	S
Speed assistance - manual speed limiting	S
Speed assistance - speed sign recognition & warning	S
Tyre pressure monitoring system (TPMS)	S

S = Standard on all variants.

O = Optional on base variant. May be standard on higher variants.

V = Not available on base variant but standard or optional on higher variants.

X = Not available on any variant.

E = Available in Europe but not available on any Australasian variant.

These specifications are subject to change. Please check with the manufacturer for the latest specifications.

Safety Assist.

Speed Assistance System (SAS)

Scored 2.50 out of 3 points

Speed information:	0.50
Speed assistance (manual):	1.00
Speed assistance (automatic / intelligent):	1.00

AEB (Interurban)

Scored 3.00 out of 3 points

Autonomous emergency braking (AEB):	1.50 out of 1.5
Forward collision warning (FCW):	1.00 out of 1.0
Human machine interface (HMI):	0.50 out of 0.5

Seat Belt Reminder (SBR)

Scored 3.00 out of 3 points

Driver and passenger:	2.00 out of 2.0
Rear:	1.00 out of 1.0

Lane Support Systems (LSS)

Scored 2.90 out of 3 points

Type:	Lane keep assist (LKA)
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A seat belt reminder is fitted as standard for front and rear seats. The speed assistance system (SAS) uses a camera to recognise the local speed limits and inform the driver, who can choose to set the limiter appropriately. A lane departure warning (LDW) system with lane keep assist (LKA) is also standard. The autonomous emergency braking (AEB) system operates at highway speeds and performed well in tests of its effectiveness.

Approaching a stationary vehicle:

18.00 out of 18.00 points for Forward Collision Warning (FCW)



Approaching a slow moving vehicle:

11.00 out of 11.00 points for Autonomous Emergency Braking (AEB)



Approaching a braking vehicle with short headway:

2.00 out of 2.00 points for AEB, 2.00 out of 2.00 points for FCW



Approaching a braking vehicle with long headway:

2.00 out of 2.00 points for AEB, 2.00 out of 2.00 points for FCW



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ANCAP

Safety ★★★★★



Injury Values & Measurements.

Body Region	Frontal offset test at 64km/h (v7.1)		Full width frontal test at 50km/h (v1.0)		Side impact test at 50km/h (v7.1)	Oblique pole test at 32km/h (v7.0)
	Driver	Front Passenger	Driver	Rear Passenger	Driver	Driver
Head						
HIC	186	158	373	212	36	305
Acceleration (g for 3ms)	45.40	41.50	60.30	47.02	24.10	58.59
Neck						
Shear (kN)	0.47	0.36	0.27	0.72	-	-
Tension (kN)	0.93	0.60	1.33	1.58	-	-
Extension (Nm)	4.10	12.10	15.33	12.62	-	-
Chest						
Acceleration (g for 3ms)	-	-	-	-	-	-
Compression (mm)	21.62	16.96	16.95	28.21	10.85	25.31
Viscous criterion (m/s)	0.06	0.04	0.06	0.15	0.07	0.19
Abdomen						
Compression (mm)	-	-	-	-	10.20	20.97
Pelvis						
Force (kN)	-	-	-	-	0.32	-
Upper legs						
Femur force left (kN)	0.78	0.02	1.35	0.35	-	-
Femur force right (kN)	1.13	0.10	0.00	0.00	-	-
Knee displacement left (mm)	0.21	0.17	1.58	1.67	-	-
Knee displacement right (mm)	1.24	1.76	2.02	0.40	-	-
Lower legs						
Force left (kN)	2.34	1.45	-	-	-	-
Force right (kN)	2.53	1.28	-	-	-	-
Index (upper / lower) left	0.32 / 0.13	0.23 / 0.14	-	-	-	-
Index (upper / lower) right	0.22 / 0.30	0.20 / 0.14	-	-	-	-
Intrusion Measurements						
Steering column						
Forward (mm)	75	-	0	-	-	-
Upward (mm)	-20	-	0	-	-	-
Sideways (mm)	3	-	0	-	-	-
Pedals						
Accelerator - rearward (mm)	-6	-	-	-	-	-
Accelerator - upward (mm)	-3	-	-	-	-	-
A-Pillar						
Rearward (mm)	0	-	-	-	-	-

* **Model Variants:** ANCAP safety ratings do not automatically extend to variants that have different body styles, engine configurations, driven wheels or occupant restraint systems (e.g. fewer airbags). In these cases, ANCAP considers technical evidence submitted by manufacturers before deciding on extending a rating to additional variants of a model. For further information about the application of ANCAP safety ratings to model variants, see the ANCAP Variant Policy.

^ **Rating Year:** The Rating Year denotes the year requirements against which a vehicle has been assessed. The Rating Year is determined by ANCAP and may be based on the year in which a new vehicle model is first launched into the Australian and/or New Zealand markets; the year in which the vehicle was tested (if tested by Euro NCAP); or, for vehicles which hold an existing ANCAP safety rating, the year in which the rating was updated (or earlier applicable year).

Assessment Details.

Tested Make / Model	Volvo XC60 Momentum D4 AWD
Tested Vehicle(s) Built	2017
Tested Body Type	SUV
Tested Vehicle Kerb Weight	1873 kg
Tested Vehicle Engine	2.0 litre 4cyl diesel
Tested By	Euro NCAP
Assessed By	Euro NCAP
Document Reference	XC6017
Document Created / Revised	7 November 2017
Rating Published	November 2017
Rating Updated	n/a



Frontal offset test at 64km/h