

ANCAP Safety Rating

KIA OPTIMA (November 2015 - September 2020)



Kia Optima

This ANCAP safety rating applies to:

Make / Model	Kia Optima
Year Range	November 2015 - September 2020
Variant(s)*	All
Vehicle Type	Medium Car

The tested model of Kia Optima was introduced in Australia and New Zealand in November 2015. Slight upgrades were introduced to Optima models built from March 2018. This ANCAP safety rating applies to all variants.

Dual frontal, side chest and side head-protecting (curtain) airbags are standard. Adaptive cruise control (ACC), autonomous emergency braking (AEB) and lane support systems (LSS) are standard on all Optima variants. 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.

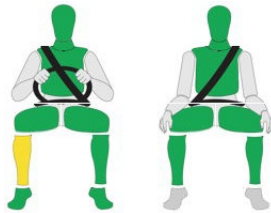
Full Width Frontal

Driver Rear Passenger



Frontal Offset

Driver Front Passenger



Side Impact

Driver



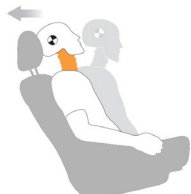
Pole

Driver



Whiplash Protection

Rear Front



Test Results Summary.

Airbags	Dual Frontal, Side, Head
Adult Occupant Protection	88% (33.47 out of 38)
- Full Width Frontal Test	7.42 (out of 8)
- Frontal Offset Test	7.96 (out of 8)
- Side Impact Test [#]	8.00 (out of 8)
- Pole Test [#]	8.00 (out of 8)
- Whiplash Protection Test	2.10 (out of 3)
- AEB (City)	0.00 (out of 3)
Child Occupant Protection	86% (42.52 out of 49)
Safety Assist	74% (9.63 out of 13)
- Speed Assistance System	0.00 (out of 3)
- ESC	3.00 (out of 3)
- Seat Belt Reminders	3.00 (out of 3)
- Lane Support System	1.00 (out of 1)
- AEB (Interurban)	2.63 (out of 3)
Pedestrian Protection	67% (24.29 out of 36)
ANCAP Safety Rating	★★★★★
Rating Year[^]	2015

[#] 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

Head:	4.00 points
Neck:	4.00 points
Chest:	4.00 points
Upper legs:	4.00 points

Rear Passenger

Head:	4.00 points
Neck:	4.00 points
Chest:	1.67 points
Upper legs:	4.00 points

The Australasian Optima lacks seat belt pretensioners for the rear outboard seat belts that were present on the vehicle tested by Euro NCAP.

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:	3.91 points

The passenger compartment held its shape well in the frontal offset test. Pedal and steering wheel displacements were well controlled. Driver and passenger contact with the airbags was stable. All doors remained closed during the crash.

Side Impact Test

Each body region is scored out of 4 points

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

Pole Test

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

Whiplash Protection

Front:	1.48 points
Rear:	0.63 points
AEB (City):	0.00 points

The Australasian Optima has AEB City as standard and performed well. However, the system was not rewarded because front-seat whiplash protection was marginal.

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Child Occupant Protection.

Crash Test Performance

18 month old child:	12.00 points
3 year old child:	11.52 points

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 36 points

Adult & child head impacts:	15.07 points
Upper leg impacts:	3.22 points
Lower leg impacts:	6.00 points

This vehicle scored 24.29 out of 36 points (Acceptable). The bumper provided good protection to pedestrians' legs. Protection of the pelvis was mixed, ranging from good at some test points to poor at others. The bonnet offered mostly good or adequate protection to the head of a struck pedestrian, with weak and poor results recorded along the base of the windscreen and on the stiff windscreen pillars.

The Optima's AEB system is designed to avoid collisions with pedestrians but was not assessed by Euro NCAP in 2015 and so the system cannot be rewarded here. (Tested by Euro NCAP v8.3)



Score Deductions.

Deductions from full width frontal test scores

Neck:	No deductions
Head:	No deductions
Chest:	-2 points (lacks rear seat belt pre-tensioners)
Upper legs:	No deductions

Deductions from frontal offset test scores

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

Deductions from side impact test score

Head / neck:	No deductions
Chest:	No deductions
Abdomen:	No deductions
Pelvis:	No deductions

Deductions from pole test score

Head:	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)	E
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)	X
Airbag - Knee (front passenger)	X
Head restraints for all seats	S
Adaptive cruise control (ACC)	S
Adaptive front lighting systems	V
Antilock braking system (ABS)	S
Autonomous emergency braking (AEB)	
- City	S
- Interurban	S
- Vulnerable road user	S
Automatic headlights	S
Automatic high beam	X (S*)
Blind spot monitoring (BSM)	V
Electronic brakeforce distribution (EBD)	S
Electronic stability control (ESC)	S
Emergency brake assist (EBA)	S
Emergency stop signal (ESS)	S
Fatigue detection	S (X*)
Following distance warning	S
Lane departure warning (LDW)	S
Lane keep assist (LKA)	S (X*)
Daytime running lights (DRL)	S
Hill launch assist	S
Rain-sensing windscreen wipers	S
Reversing collision avoidance	S
Speed assistance - automatic/intelligent speed limiting (ISA)	X
Speed assistance - manual speed limiting	E
Speed assistance - speed sign recognition & warning	E
Tyre pressure monitoring system (TPMS)	X (V*)

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 / USA but not available on any Australasian variant.

***** = Applicable to models built prior to March 2018.

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

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Safety Assist.

Speed Assistance System (SAS)

Scored 0.0 out of 3 points

Speed information:	Not available
Speed assistance (manual):	Not available
Speed assistance (automatic / intelligent):	Not available

Electronic Stability Control (ESC)

Scored 3.0 out of 3 points

AEB (Interurban)

Scored 2.63 out of 3 points

Autonomous emergency braking (AEB):	1.432 out of 1.5
Forward collision warning (FCW):	0.949 out of 1.0
Human machine interface (HMI):	0.250 out of 0.5

Seat Belt Reminder (SBR)

Scored 3.0 out of 3 points

Driver and passenger:	Pass
Rear:	Pass

Lane Support Systems (LSS)

Scored 1.0 out of 1 point

Type: Lane departure warning Pass

Safety Assist Comments

An autonomous emergency braking (AEB) system which operates at highway speeds (AEB Interurban) is standard on Australasian variants of the Optima. This system was tested by ANCAP and showed good performance in the tests. A lane support system (LSS) is also fitted as standard. A speed assistance system (SAS) is available on European variants, but is not available in Australasia.

Approaching a stationary vehicle:

17.02 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:

1.637 out of 2.00 points for AEB, 1.599 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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Injury Values & Measurements.

Body Region	Frontal offset test at 64km/h (v7)		Full width frontal test at 50km/h (v1)		Side impact test at 50km/h (v7)	Oblique pole test at 32km/h (v7)
	Driver	Front Passenger	Driver	Rear Passenger	Driver	Driver
Head						
HIC	132.00	103.00	171.00	86.00	52.00	233.03
Acceleration (g for 3ms)	39.30	36.50	47.80	35.50	27.00	50.97
Neck						
Shear (kN)	0.40	0.36	0.32	0.86	-	-
Tension (kN)	1.17	0.80	0.49	1.20	-	-
Extension (Nm)	10.10	13.20	16.70	11.60	-	-
Chest						
Acceleration (g for 3ms)	-	-	-	-	-	-
Compression (mm)	21.44	17.67	17.98	20.00	7.53	21.21
Viscous criterion (m/s)	0.06	0.04	0.07	0.12	0.06	0.22
Abdomen						
Compression (mm)	-	-	-	-	11.68	22.39
Pelvis						
Force (kN)	-	-	-	-	0.98	
Upper legs						
Femur force left (kN)	0.94	0.04	0.41	0.12		
Femur force right (kN)	1.08	0.15	0.90	0.06		
Knee displacement left (mm)	0.79	0.00	1.34	0.61		
Knee displacement right (mm)	2.18	0.01	1.14	0.74		
Lower legs						
Force left (kN)	1.94	1.74	-	-		
Force right (kN)	2.13	1.71	-	-		
Index (upper / lower) left	0.34 / 0.28	0.35 / 0.30	-	-		
Index (upper / lower) right	0.31 / 0.20	0.34 / 0.11	-	-		
Intrusion Measurements						
Steering column						
Forward (mm)	48	-	-70	-		
Downward (mm)	25	-	-26	-		
Sideways (mm)	3	-	0	-		
Pedals						
Brake - rearward (mm)	49	-	-	-		
Accelerator - upward (mm)	22	-	-	-		
A-Pillar						
Rearward (mm)	1	-	-	-		

* **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	Kia Optima 'EX' LHD
Tested Vehicle(s) Built	2015
Tested Body Type	Sedan
Tested Vehicle Kerb Weight	1500 kg
Tested Vehicle Engine	1.7 litre diesel
Tested By	Euro NCAP / ANCAP
Assessed By	Euro NCAP / ANCAP
Document Reference	OPTIMA15
Document Created / Revised	12 July 2016
Rating Published	July 2016
Rating Updated	24 July 2018



Frontal offset test at 64km/h