

# ANCAP Safety Rating: TESLA MODEL S (September 2014 onwards)



Frontal offset test at 64km/h

## This ANCAP safety rating applies to:

<b>Make / Model</b>	Tesla Model S
<b>Year Range</b>	September 2014 onwards
<b>Variant(s)*</b>	All variants
<b>Vehicle Type</b>	Large Car

The Tesla Model S was launched in Australia in late 2014. This ANCAP rating applies to vehicles built from 22nd September 2014 when several safety features were introduced.

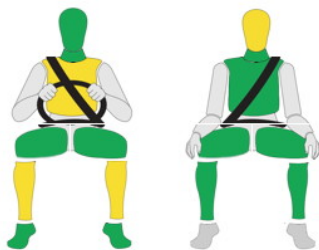
Dual frontal, side chest and side head airbags (curtains) are standard. Electronic Brake Distribution (EBD), Emergency Brake Assist (EBA), Autonomous Emergency Braking (AEB), Lane Support Systems and a Manual Speed Assist system are also standard. Advanced seat belt reminders are fitted to all seats.

In the offset crash test driver chest and leg protection was acceptable. Passenger head protection was acceptable due to the airbag bottoming out. Euro NCAP reports that Tesla has addressed this issue with a software update.

## Injury Outcomes.

### Frontal Offset

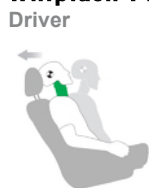
Driver Passenger



### Side Impact & Pole\*



### Whiplash Protection



\* Head protection only.

## Test Results Summary.

<b>Airbags</b>	Dual Frontal, Side, Head
<b>Frontal Offset Test</b>	14.45 (out of 16)
<b>Side Impact Test</b>	16.00 (out of 16)
<b>Pole Test</b>	2 (out of 2)
<b>Whiplash Protection</b>	Good
<b>Pedestrian Protection</b>	Acceptable
<b>ESC</b>	Standard
<b>Seat Belt Reminders</b>	3.0 (out of 3)
<b>Overall Score</b>	35.45 (out of 37)
<b>ANCAP Safety Rating</b>	★★★★★
<b>Rating Year<sup>^</sup></b>	2015

## Occupant Protection.

### Frontal Offset Test

Each body region is scored out of 4 points

Head / neck:	3.00 points
Chest:	3.59 points
Upper legs:	4.00 points
Lower legs:	3.86 points

The passenger compartment held its shape well in the offset test. Pedal and steering wheel displacements were well controlled. Driver contact with the airbag was stable. The passenger airbag bottomed out in the Euro NCAP test but this has been addressed with a software update.

### 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

Good protection was provided for the driver in the side impact test. The side airbags performed well.

### Pole Test

Scored out of 2 points

Score:	2.00 points
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The vehicle was eligible for a side pole test because it has side curtain airbags. The vehicle scored the maximum 2 points for head protection in this test.

### Whiplash Protection Test

Whiplash protection is assessed to the RCAR Protocol

Geometric test:	Good
Dynamic test:	Good
Overall whiplash rating:	Good

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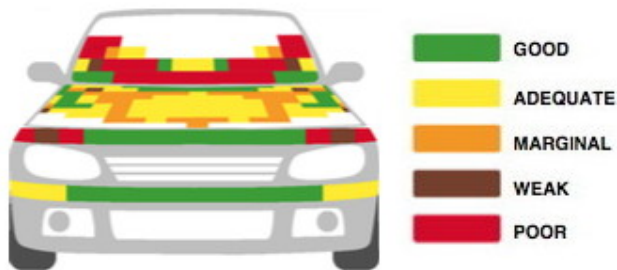
## Pedestrian Protection.

### Pedestrian Test

Scored out of 36 points

Adult & child head impacts: 13.92 points  
Upper leg impacts: 4.07 points  
Lower leg impacts: 5.82 points

This vehicle scored 23.80 points (Acceptable). The Tesla is equipped with an 'active' bonnet and the car was tested with the bonnet in the deployed position. Protection was adequate or marginal over most of the surface of the bonnet with some poor results. The bumper offered predominantly good protection to pedestrians' legs while the front edge of the bonnet gave good results towards the centre of the car but poor results at the outside edges. (Tested by Euro NCAP v7.0)



## Score Deductions.

### Deductions from frontal offset test scores

Head / neck: Unstable airbag contact for passenger: 1 point from head score.  
Chest: No deduction  
Upper legs: No deduction  
Lower legs: No deduction

### Deductions from side impact test score

Chest: No deductions for side impact test

### Deductions from pole test score

Head: No deductions for pole test

## 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](http://ancap.com.au).

Safety Feature / Safety Assist Technology	Availability
Seat belts (three-point) for all forward-facing seats	S
Seat belt pretensioners (front)	S
Seat belt pretensioners (rear outboard)	X
Intelligent seat belt reminder (driver)	S
Intelligent seat belt reminder (front passenger)	S
Intelligent seat belt reminder (2 <sup>nd</sup> row seats)	S
Airbag - Front (driver)	S
Airbag - Front (passenger)	S
Airbag - Side, chest protection (front seats)	S
Airbag - Side, chest protection (2 <sup>nd</sup> row seats)	X
Airbag - Side, head protection (front seats)	S
Airbag - Side, head protection (2 <sup>nd</sup> row seats)	S
Airbag - Knee (driver)	X
Airbag - Knee (front passenger)	X
Head restraints for all seats	S
Adaptive cruise control (ACC)	O
Antilock braking system (ABS)	S
Autonomous emergency braking (AEB)	S
Electronic brakeforce distribution (EBD)	S
Electronic stability control (ESC)	S
Emergency brake assist (EBA)	S
Lane support system (LSS)	S
Automatic headlights	S
Blind spot monitoring	S
Daytime running lights (DRL)	S
Hill launch assist	S
Reversing collision avoidance	S
Roll stability system	S
Rollover occupant protection system	S
Manual speed assist (alarm and limiter)	S
Speed limit information system	S
Traffic sign recognition	S
Tyre pressure monitoring system (TPMS)	S

These specifications are subject to change. *With the Model S some of these features need to be activated via a software update.* Please check with the manufacturer for details.

**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.

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## Injury Values & Measurements.

Body Region	Frontal offset test at 64 km/h (v6)		Side impact test at 50 km/h (v6)
	Driver	Passenger	Driver
<b>Head</b>			
HIC	163.00	585.00	70.00
Acceleration (g for 3ms)	38.60	67.90	33.30
<b>Neck</b>			
Shear (kN)	0.65	0.36	-
Tension (kN)	1.02	0.84	-
Extension (Nm)	5.20	26.00	-
<b>Chest</b>			
Acceleration (g for 3ms)	-	-	-
Compression (mm)	24.88	19.50	10.36
Viscous criterion (m/s)	0.00	0.00	0.03
<b>Abdomen</b>			
Force (kN)	-	-	0.40
<b>Pelvis</b>			
Force (kN)	-	-	1.07
<b>Upper legs</b>			
Femur force left (kN)	0.33	0.02	
Femur force right (kN)	0.27	0.29	
Knee displacement left (mm)	0.04	0.21	
Knee displacement right (mm)	0.74	0.25	
<b>Lower legs</b>			
Force left (kN)	1.52	1.51	
Force right (kN)	2.21	1.33	
Index (upper / lower) left	0.43 / 0.22	0.34 / 0.21	
Index (upper / lower) right	0.36 / 0.16	0.35 / 0.26	
<b>Intrusion Measurements*</b>			
<b>Steering column</b>			
Forward (mm)	73		
Downward (mm)	32		
Sideways (mm)	6		
<b>Pedals</b>			
Brake - rearward (mm)	6		
Brake - upward (mm)	13		
<b>A-Pillar</b>			
Rearward (mm)			

\* 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.

^ 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.

<b>Tested Make / Model</b>	Tesla Model S 85kWh LHD
<b>Tested Vehicle(s) Built</b>	2014
<b>Tested Body Type</b>	Sedan
<b>Tested Vehicle Kerb Weight</b>	2100 kg
<b>Tested Vehicle Engine</b>	Electric Vehicle
<b>Tested By</b>	Euro NCAP
<b>Assessed By</b>	ANCAP
<b>Document Reference</b>	TESLA-S14
<b>Rating Published</b>	April 2015
<b>Document created/revised</b>	2/4/2015

