

Polestar

Polestar 2
Standard Safety Equipment

2021



Adult Occupant



93%

Child Occupant



89%

Vulnerable Road Users



80%

Safety Assist



83%

SPECIFICATION

Tested Model	Polestar 2 Long Range Dual Motor, LHD
Body Type	- Fastback 5 door
Year Of Publication	2021
Kerb Weight	2173kg
VIN From Which Rating Applies	- all Polestar 2
Class	Executive

General comments

A blind-spot information system (BLIS) was standard equipment on the Polestar 2 when it was originally launched. However, this feature is now included only in the optional Pilot Pack and should not contribute to the score in Euro NCAP's assessment. The change makes a small difference to the score in Safety Assist but the star rating is unaffected.

SAFETY EQUIPMENT

	Driver	Passenger	Rear
FRONTAL CRASH PROTECTION			
Frontal airbag	●	●	✘
Belt pretensioner	●	●	●
Belt loadlimiter	●	●	●
Knee airbag	✘	✘	✘
SIDE CRASH PROTECTION			
Side head airbag	●	●	●
Side chest airbag	●	●	✘
Side pelvis airbag	●	●	✘
Centre Airbag	●	●	✘
CHILD PROTECTION			
Isofix/i-Size	—	●	●
Integrated CRS	—	✘	✘
Airbag cut-off switch	—	●	—
SAFETY ASSIST			
Seat Belt Reminder	●	●	●

OTHER SYSTEMS	
Active Bonnet	●
AEB Vulnerable Road Users	●
AEB Pedestrian - Reverse	✘
AEB Car-to-Car	●
Speed Assistance	●
Lane Assist System	●

Note: Other equipment may be available on the vehicle but was not considered in the test year.

- Fitted to the vehicle as standard ○ Fitted to the vehicle as part of the safety pack
 ○ Not fitted to the test vehicle but available as option or as part of the safety pack ✘ Not available — Not applicable

ADULT OCCUPANT

Total 35.5 Pts / 93%

■ GOOD
 ■ ADEQUATE
 ■ MARGINAL
 ■ WEAK
 ■ POOR

Frontal Impact 13.9 / 16 Pts

Mobile Progressive Deformable Barrier Full Width Rigid Barrier

Lateral Impact 15.6 / 16 Pts

Side Mobile Barrier Side Pole Far-Side Excursion Occupant Interaction

Rear Impact 4.0 / 4 Pts

Rear Seat Front Seat

ADULT OCCUPANT

Total 35.5 Pts / 93%

■ GOOD
 ■ ADEQUATE
 ■ MARGINAL
 ■ WEAK
 ■ POOR

Rescue and Extrication		2.0 / 2 Pts
Rescue Sheet	Available, ISO compliant	
Advanced eCall	Available	
Multi Collision Brake	Available	

Comments

The passenger compartment remained stable in the frontal offset test. Dummy readings indicated good protection of the knees and femurs of both the driver and passenger. Polestar showed that a similar level of protection would be provided to occupants of different sizes and to those sitting in different positions. Analysis of the deformable barrier used in the test showed that the Polestar 2 was moderately aggressive towards other vehicles and a penalty was applied to the score for the offset test. In the full-width, rigid wall test, protection was good or adequate for all critical body regions for both the driver and the rear seat passenger. In the side barrier test, representing a collision by another vehicle, protection of all critical body areas was good for all critical body areas. Even in the more severe side pole impact, protection was at least adequate. In an assessment of protection in far-side impact, dummy excursion (its movement towards the other side of the vehicle) was rated as good. The Polestar 2 is equipped with a centre airbag to protect against occupant-to-occupant interaction in side impacts. This system worked well in Euro NCAP's test, with good protection of the head for both front seat occupants. Tests on the front seats and head restraints demonstrated good protection against whiplash injury in the event of a rear-end collision. A geometric assessment of the rear seats also indicated good whiplash protection. The car is equipped as standard with a multi-collision braking system, which applies the brakes immediately after an impact to prevent the vehicle from being involved in secondary impacts. The car also has an advanced e-Call system which, in the event of an accident, automatically sends a message to the emergency services, giving the car's location.

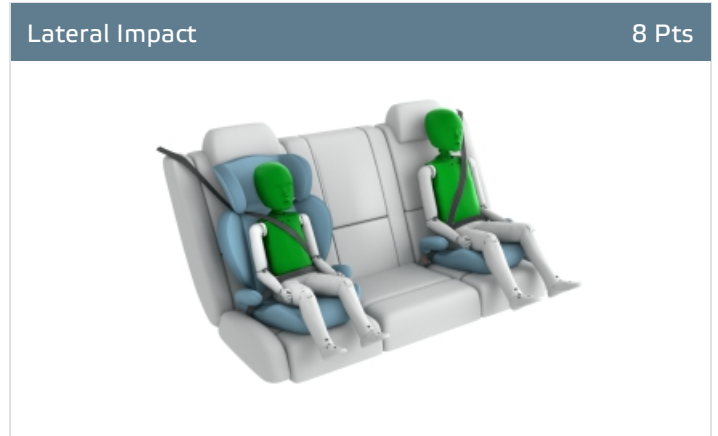
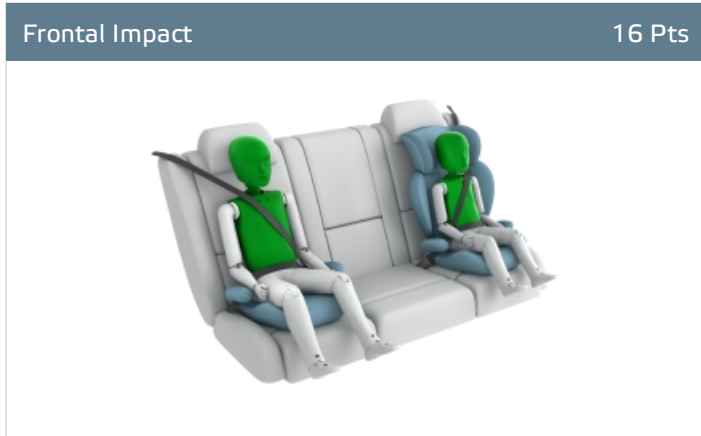
CHILD OCCUPANT

Total 44 Pts / 89%

GOOD
 ADEQUATE
 MARGINAL
 WEAK
 POOR

Crash Test Performance based on 6 & 10 year old children

24.0 / 24 Pts



Restraint for 6 year old child: *Volvo - Britax Römer Kidfix SL*
 Restraint for 10 year old child: *Osann junior booster cushion*

Safety Features

8.0 / 13 Pts

	Front Passenger	2nd row outboard	2nd row center
Isifix	●	●	✘
i-Size	●	●	✘
Integrated CRS	✘	✘	✘

Fitted to test car as standard
 Not on test car but available as option
 ✘ Not available

CRS Installation Check

12.0 / 12 Pts

- Install without problem
- Install with care
- Safety critical problem
- ✘ Installation not allowed

■ i-Size CRS

Maxi Cosi 2way Pearl & 2wayFix (i-Size)



Maxi Cosi 2way Pearl & 2wayFix (i-Size)



BeSafe iZi Kid X2 i-Size (i-Size)



Britax Römer TriFix2 i-Size (i-Size)



BeSafe iZi Flex FIX i-Size (i-Size)




■ ISOFIX CRS

BeSafe iZi Combi X4 ISOfix (ISOFIX)



Cybex Solution Z i-Fix (ISOFIX)



 CHILD OCCUPANT

Total 44 Pts / 89%

■ Universal Belted CRS

Maxi Cosi Cabriofix (Belt)



Maxi Cosi Cabriofix & EasyBase2 (Belt)



Britax Römer King II LS (Belt)



Britax Römer KidFix XP (Belt)



CHILD OCCUPANT

Total 44 Pts / 89%

	Seat Position			
	Front	2nd row		
	PASSENGER	LEFT	CENTER	RIGHT
Maxi Cosi 2way Pearl & 2wayFix (i-Size)	●	●	—	●
Maxi Cosi 2way Pearl & 2wayFix (i-Size)	●	●	—	●
BeSafe iZi Kid X2 i-Size (i-Size)	●	●	—	●
Britax Römer TriFix2 i-Size (i-Size)	●	●	—	●
BeSafe iZi Flex FIX i-Size (i-Size)	●	●	—	●
BeSafe iZi Combi X4 ISOfix (ISOFIX)	●	●	—	●
Cybex Solution Z i-Fix (ISOFIX)	●	●	—	●
Maxi Cosi Cabriofix (Belt)	●	●	●	●
Maxi Cosi Cabriofix & EasyBase2 (Belt)	●	●	✘	●
Britax Römer King II LS (Belt)	●	●	●	●
Britax Römer KidFix XP (Belt)	●	●	●	●

● Install without problem
 ● Install with care
 ● Safety critical problem
 ✘ Installation not allowed
 — Not available

Comments

In both the frontal offset test and the side barrier impact, protection of both child dummies was good for all critical body areas and the Polestar 2 scored maximum points in this part of the assessment. The front passenger airbag can be disabled to allow a rearward-facing child restraint to be used in that seating position. Clear information is provided to the driver regarding the status of the airbag and the system was rewarded. All of the restraints for which the Polestar 2 is designed could be properly installed and accommodated.

 **VULNERABLE ROAD USERS**

Total 43.5 Pts / 80%

GOOD
 ADEQUATE
 MARGINAL
 WEAK
 POOR

Pedestrian

30.0 / 36 Pts



Head Impact	19.9 Pts
Pelvis Impact	4.1 Pts
Leg Impact	6.0 Pts

Vulnerable Road Users


13.5 / 18 Pts

System Name	Collision Avoidance and Mitigation (IntelliSafe)
Type	Auto-Brake with Forward Collision Warning
Operational From	4 km/h

 VULNERABLE ROAD USERS

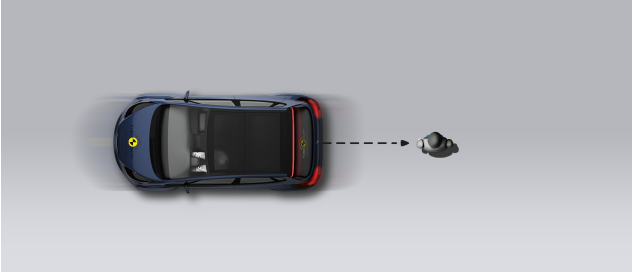
Total 43.5 Pts / 80%

AEB Pedestrian

 6.1 / 9 Pts

■ Day time

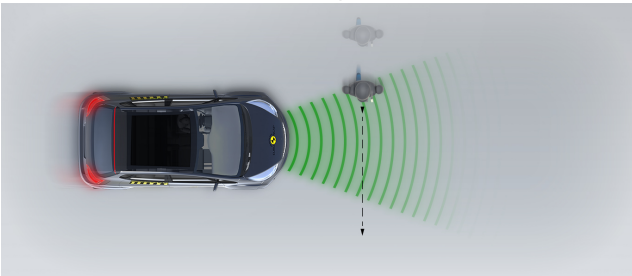
Vehicle reversing into standing pedestrian



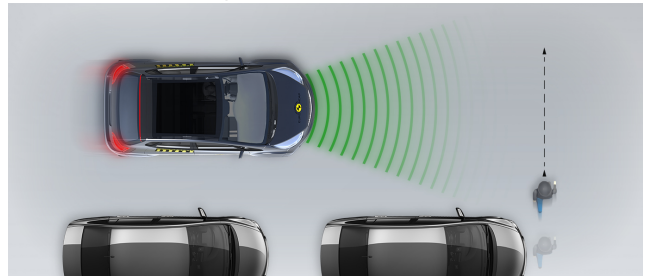
Pedestrian crossing a road into which a car is turning



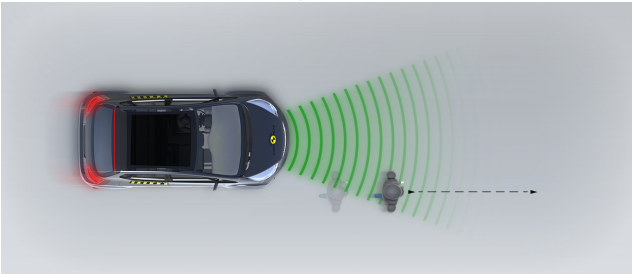
Adult crossing the road



Child running from behind parked vehicles



Adult along the roadside

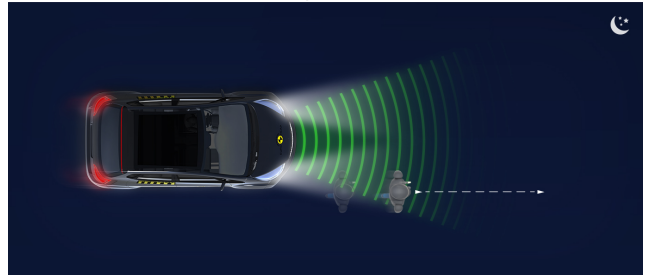


■ Night time

Adult crossing the road



Adult along the roadside





VULNERABLE ROAD USERS

Total 43.5 Pts / 80%

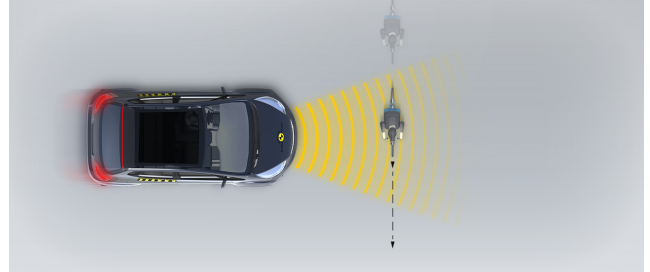
AEB Cyclist

7.5 / 9 Pts

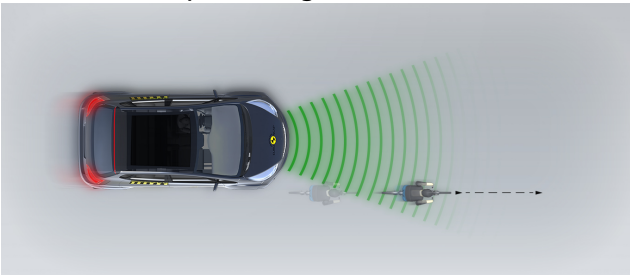
Cyclist from nearside, obstructed view



Approaching a crossing cyclist



Cyclist along the roadside



Comments

The Polestar 2 is equipped with an 'active' bonnet. Sensors in the bumper detect when a pedestrian has been hit and actuators raise the bonnet to provide greater clearance to the stiff structures underneath. Polestar showed that the system worked robustly for different pedestrian statures and over a range of speeds. Accordingly, the car was tested in bonnet deploying. The system worked well, the bonnet providing good or adequate protection over almost all of its surface. The bumper provided good protection to pedestrians' legs. Protection of the pelvis was predominantly good but poorer test results were recorded at some test positions. The Polestar's autonomous emergency braking (AEB) system can detect vulnerable road users like pedestrians and cyclists, as well as other vehicles. In tests, the system's response to cyclists was good and its response to pedestrians was adequate. The system does not detect pedestrians to the rear of the car, and reversing tests were not performed.

SAFETY ASSIST

Total 13.4 Pts / 83%

■ GOOD
 ■ ADEQUATE
 ■ MARGINAL
 ■ WEAK
 ■ POOR

Speed Assistance ■ 1.3 / 3 Pts

System Name	Speed Assist
Speed Limit Information Function	Camera & Map, subsigns supported
Speed Limitation Function	Manually set (accurate to 5km/h)

Occupant Status Monitoring ■ 2.7 / 3 Pts

> Seatbelt Reminder ■ 1.7 / 2 Pts

Applies To	Front and rear seats, including third row		
Warning	Driver Seat	Front Passenger(s)	Rear Passenger(s)
Visual	●	●	●
Audible	●	●	●
Occupant Detection	—	●	●

● Pass
 ● Fail
 — Not available

> Driver Monitoring ■ 1.0 / 1 Pts

System Name	Driver Alert
Type	Steering input
Operational From	65 km/h

SAFETY ASSIST

Total 13.4 Pts / 83%

Lane Support

3.5 / 4 Pts

System Name	Lane Keeping Aid (IntelliSafe)	
Type	LKA and ELK	
Operational From	65 km/h	
PERFORMANCE		
Emergency Lane Keeping		GOOD
Lane Keep Assist		GOOD
Human Machine Interface		POOR

AEB Car-to-Car

6.0 / 6 Pts

System Name	Collision Avoidance and Mitigation (IntelliSafe)	
Type	Autonomous emergency braking and forward collision warning	
Operational From	4 km/h	
Sensor Used	camera and radar	

 SAFETY ASSIST

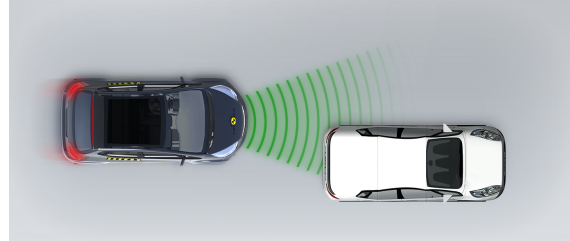
Total 13.4 Pts / 83%

■ Autobrake function only

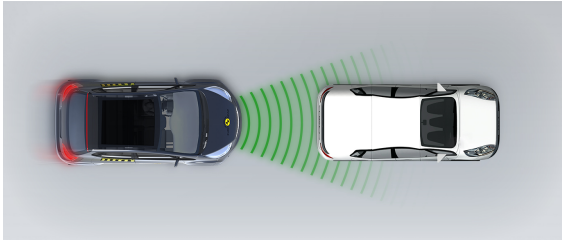
Car turning across the path of an oncoming car



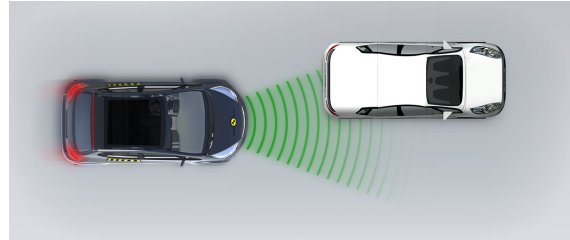
Approaching a stationary car



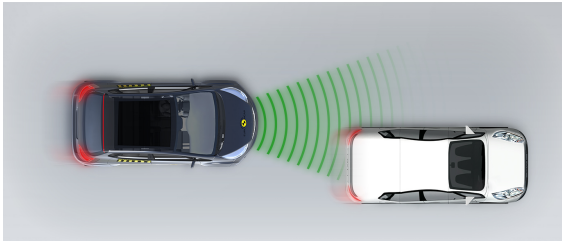
Approaching a stationary car



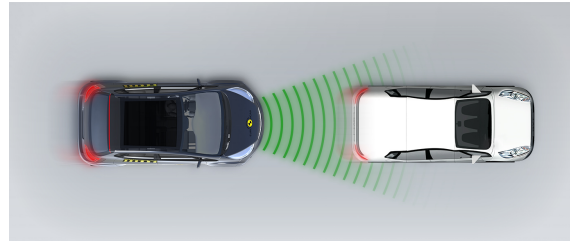
Approaching a stationary car



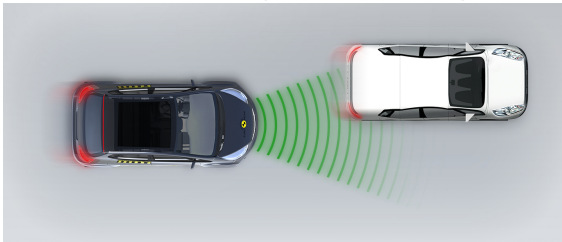
Approaching a slower moving car



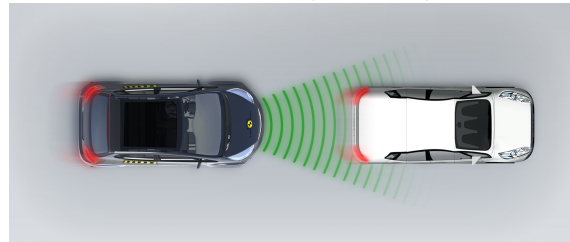
Approaching a slower moving car



Approaching a slower moving car



Approaching a braking car

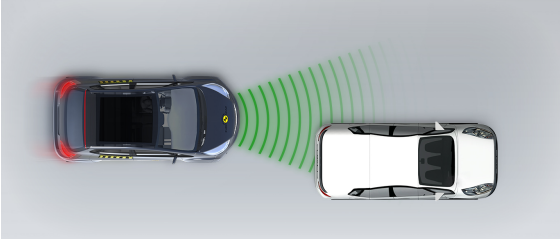


 SAFETY ASSIST

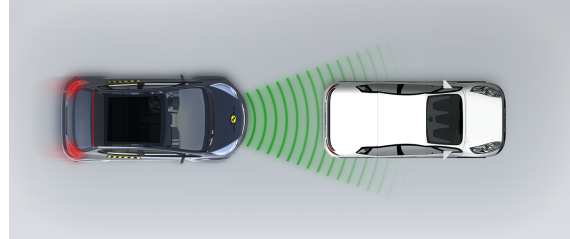
Total 13.4 Pts / 83%

■ Driver reacts to warning

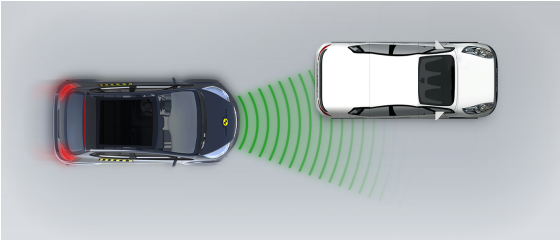
Approaching a stationary car



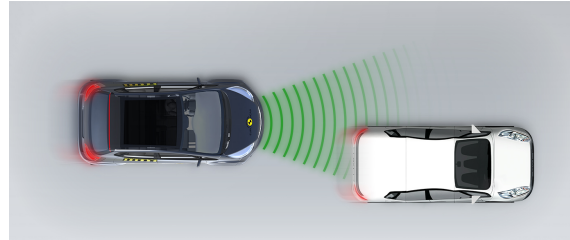
Approaching a stationary car



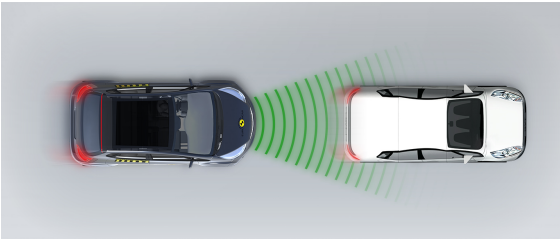
Approaching a stationary car



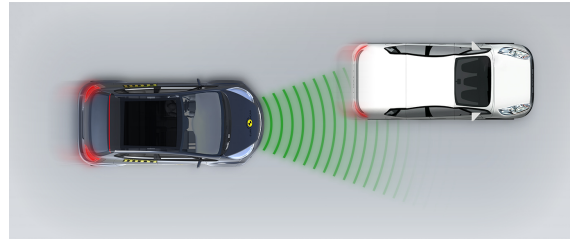
Approaching a slower moving car



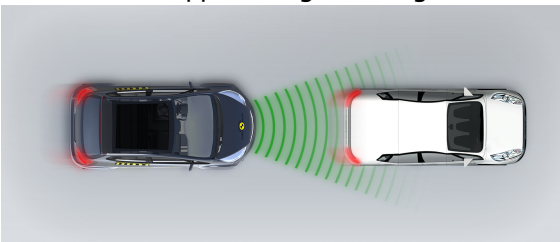
Approaching a slower moving car



Approaching a slower moving car



Approaching a braking car





SAFETY ASSIST

Total 13.4 Pts / 83%

Comments

A seatbelt reminder system is fitted as standard equipment to the front and rear seats. A driver-monitoring system monitors steering inputs and warns the driver if it detects those which are characteristic of drowsy driving. A speed assistance system is fitted as standard. The speed limitation information system did not meet Euro NCAP's requirements. The speed limiter can be set manually, and points were awarded for that part of the speed assistance system. A lane assistance system gently steers the car if it is drifting out of lane and also intervenes more aggressively in some critical situations. In tests of its reaction to other vehicles, the AEB system performed well, with collisions avoided in almost all test situations.

RATING VALIDITY

Variants of Model Range

Body Type	Engine	Drivetrain	Rating Applies	
			LHD	RHD
5 door hatchback	Long range dual electric motor*	4 x 4	✓	✓
5 door hatchback	Long range single electric motor	4 x 2	✓	✓
5 door hatchback	Standard range single electric motor	4 x 2	✓	✓

*Tested variant

Annual Reviews and Facelifts

Date	Event	Outcome
March 2021	Rating Published	2021 ★★★★★ ✓
February 2022	Addition of single motor variants	2021 ★★★★★ ✓
May 2023	Annual Review (including change from front wheel drive to rear wheel drive for single motor car)	2021 ★★★★★ ✓