Polestar **Polestar 2**
Pilot Assist

2021

MODERATE

ASSISTANCE COMPETENCE	50%
SAFETY BACKUP	85%

SPECIFICATION

SYSTEM NAME	Pilot Assist
STANDARD ACTIVE SAFETY SYSTEMS	
AEB Car-to-Car	●
AEB Vulnerable Road User	●
Lane Support Systems	●
Speed Assistance Systems	●

Comments

Polestar's system name Pilot Assist accurately portrays system functionality. The promotional material and the handbook correctly indicate the limitations of the system capabilities. Status information is clear but the Polestar does not offer a head-up display showing the system status in the driver's direct line of sight. Polestar did not equip the vehicle with an internal camera and relies only on steering wheel input for Driver Monitoring. The system balances driver steering input with lane guidance, promoting co-operative driving.

Polestar combines map-based speed limit information with real time camera inputs to manage fixed, variable and temporary speed limit signs. The system cannot adapt speed for upcoming road features such as curves and junctions. The Polestar 2 avoids a collision with moving vehicles in the ACC test scenarios but fails to respond to stopped cars. AEB interventions provide limited additional support in critical situations. The driver is supported through the S-Bend but stays centred in the lane only at the lowest test speed. The vehicle has an Active Blindspot system designed to prevent lane changing into adjacent vehicles. A lane-change assist function is not available. In case of an unresponsive driver, the Polestar performs a controlled stop in lane. If the radar or camera are blocked the car provides a timely warning and prevents system activation.

The Polestar 2 provides a moderate level of Vehicle Assistance with a good level of Driver Engagement and a good Safety Back-up resulting in a Moderate but balanced system.

Version 191121

ASSISTANCE COMPETENCE

Total 50%

DRIVER ENGAGEMENT 70.0 / 100 PTS

CONSUMER INFORMATION 20.0 / 25 Pts

SYSTEM NAME	Pilot Assist
MARKETING MATERIAL	Pilot Assist | Polestar Viewed 12 November 2021
QUICK START GUIDE	✖
VEHICLE HANDBOOK	Viewed 12 November 2021

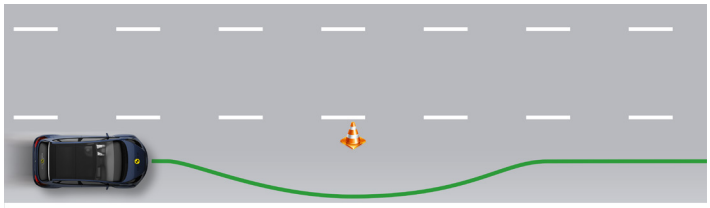
SYSTEM STATUS 15.0 / 25 Pts

Continuous System Status Indicator	
System Status Change Indicator	

DRIVER MONITORING 10.0 / 25 Pts

DRIVING COLLABORATION 25.0 / 25 Pts

Steering to avoid an obstacle



System continues to assist
while driver steers to avoid obstacle

GOOD ADEQUATE MARGINAL WEAK POOR

Version 191121

ASSISTANCE COMPETENCE

Total 50%

VEHICLE ASSISTANCE

50.3 / 100 PTS

SPEED ASSISTANCE

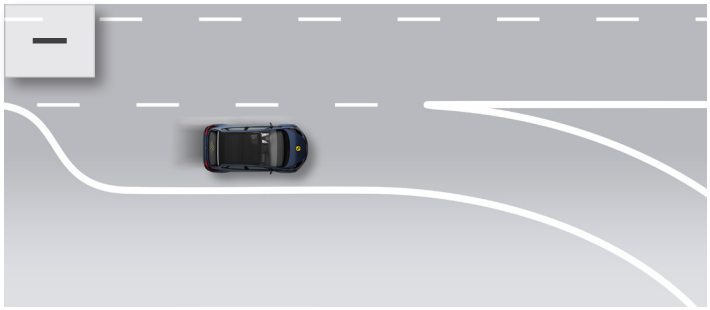
2.5 / 25 Pts

SPEED ASSIST SYSTEMS

Vehicle response to fixed Speed limits	No respons
Vehicle response to variable Speed limits	No respons

ROAD FEATURES

Speed adaptation for corners



Speed adaptation for round-abouts

Speed adaptation for junctions

● FITTED TO THE VECHILE — NOT AVAILABLE

Version 191121

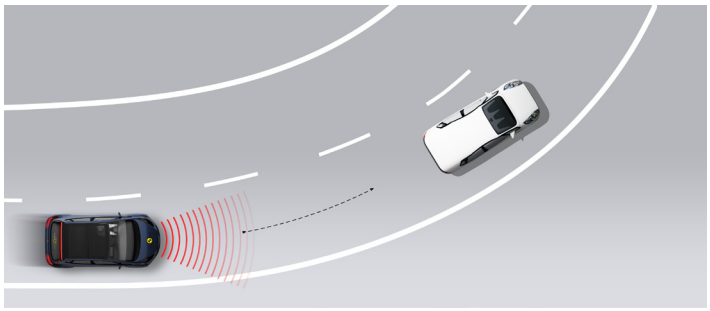
ASSISTANCE COMPETENCE

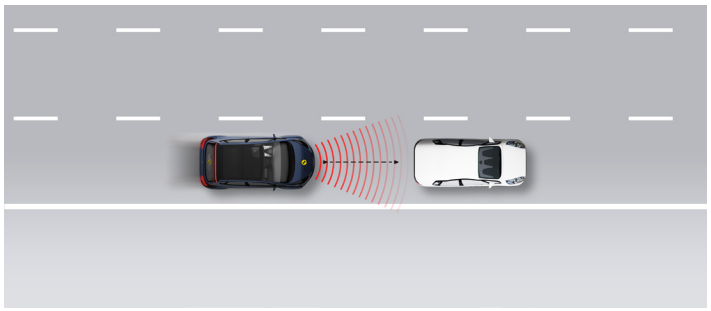
Total 50%

ADAPTIVE CRUISE CONTROL PERFORMANCE

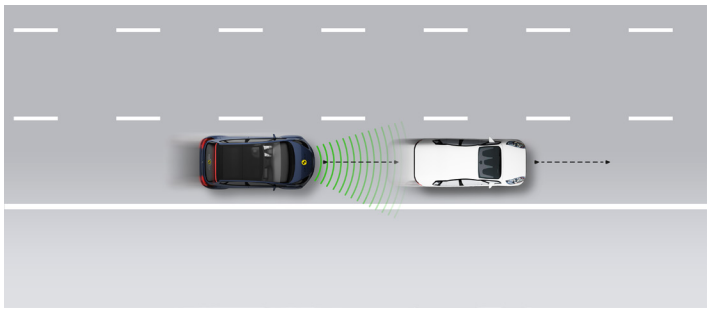
20.3 / 40 Pts

Approaching a stationary car

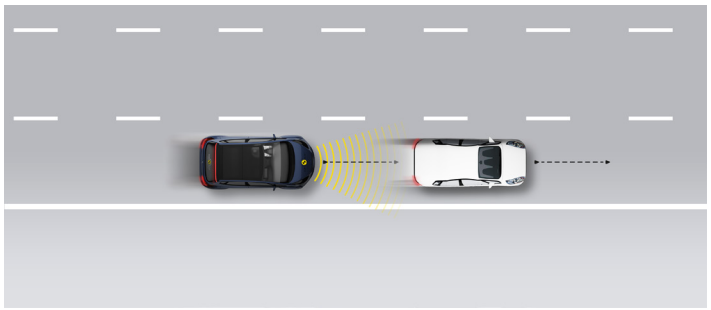




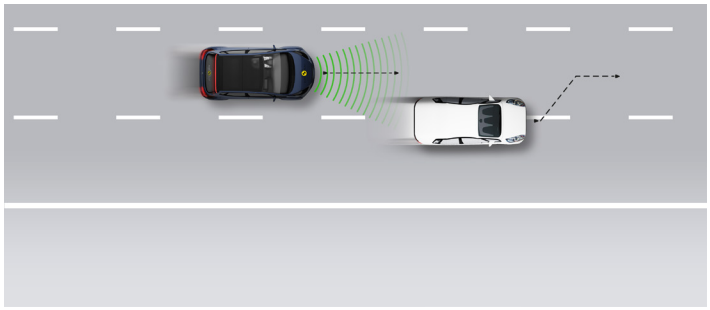
Approaching a slower moving car



Approaching a braking car



Car cutting-in in front



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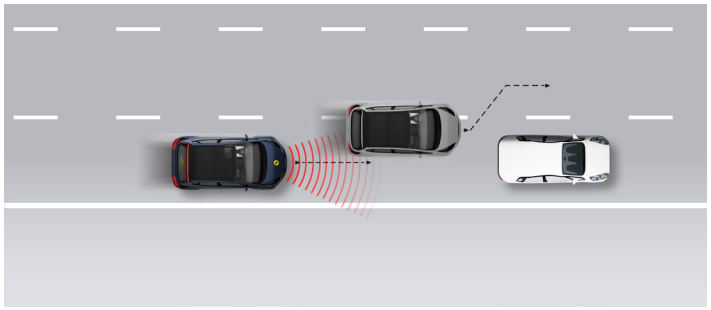


UNDERTAKE PREVENTION	
Undertake prevention at speeds over 90 km/h	✖

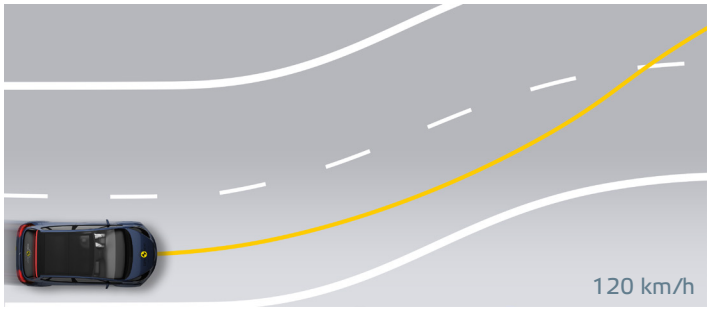
ADAPTIVE CRUISE CONTROL AUTO-RESUME	
Assistance maintained after coming to a full stop	●
System assistance maintained by	Automatic resume within 5s of stop and driver input required over 5s

ASSISTANCE COMPETENCE

Total 50%

STEERING ASSISTANCE 27.5 / 35 Pts

Steering in an S-curve



80 km/h	●
100 km/h	●
120 km/h	●

Lane Change Assist	✖

SAFETY BACKUP

Total 85%

SYSTEM FAILURE 25.0 / 25 Pts

	ENGAGEMENT	WARNING
SENSOR BLOCKED AT START-UP		
Camera	System can NOT be engaged after a 5 minute drive	Visual Warning within 5 minutes after sensor blocking
Radar	System can NOT be engaged after a 5 minute drive	Visual Warning within 5 minutes after sensor blocking
SENSOR BLOCKED WITH VEHICLE IN MOTION, SYSTEM INACTIVE		
Camera	System can NOT be engaged after a 5 minute drive	Visual Warning within 5 minutes after sensor blocking
Radar	after a 5 minute drive	after sensor blocking
SENSOR BLOCKED WITH VEHICLE IN MOTION, SYSTEM ACTIVE		
Camera	within 2 minutes after blocking	after sensor blocking
Radar	after sensor blocking	after sensor blocking

UNRESPONSIVE DRIVER INTERVENTION 20.0 / 25 Pts

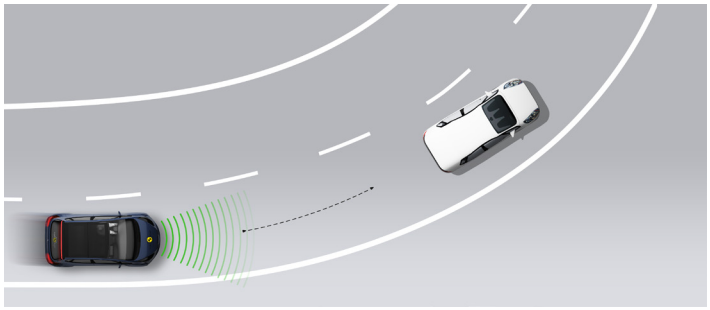
Hands Off Warning Timeline

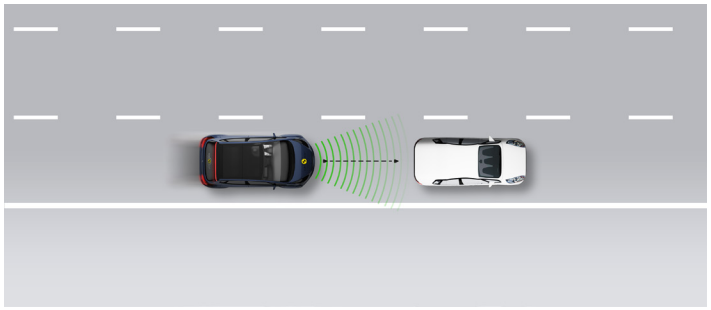
SAFETY BACKUP

Total 85%

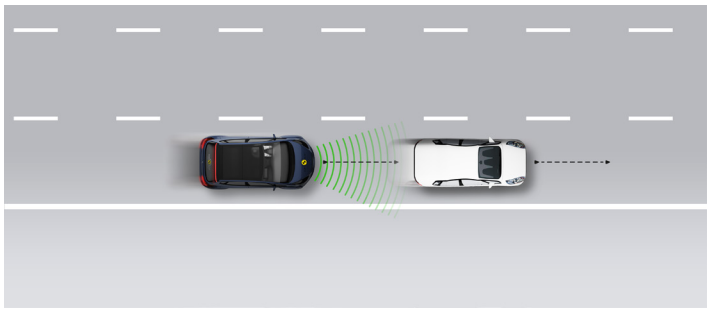
COLLISION AVOIDANCE 40.7 / 50 Pts

Approaching a stationary car

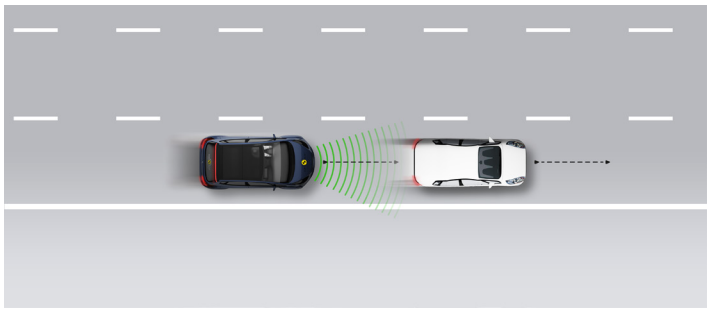




Approaching a slower moving car



Approaching a braking car



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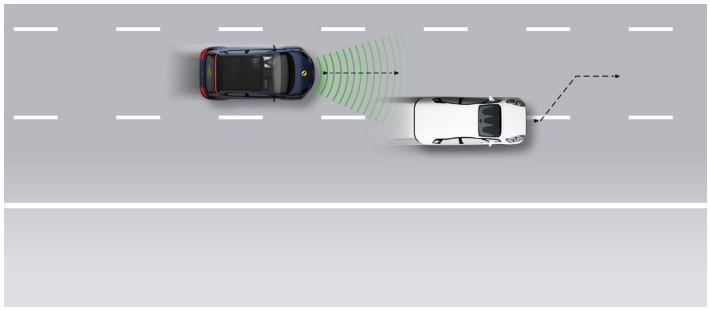

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