



## COMMERCIAL VAN SAFETY COMPARISON

DECEMBER 2022 v2.1

# Availability and Performance of Advanced Driver Assistance Systems in Commercial Vans.

As part of ANCAP's adoption of common test and rating protocols with Euro NCAP in 2018, performance testing of *Safety Assist*, or **Advanced Driver Assistance Systems (ADAS)**, was introduced. These active safety systems work automatically to assist a driver in avoiding or mitigating the effects of a crash.

ANCAP has tested and rated more than 140 passenger vehicles, SUVs and light commercial vehicles since ADAS performance testing was introduced in 2018. However, ADAS performance of many commercial vans is unknown due to longer product cycles and some vans not being eligible for testing under the current ANCAP safety rating system.

Commercial vans are an important market segment, operating with generally higher levels of exposure (vehicle kilometres travelled) due to their primary goods carrying and commercial use compared with passenger vehicles and people movers. As a result of the COVID-19 pandemic the use of commercial vans has also increased due to a rise in the home delivery of groceries and other online purchases.

To assist Australian and New Zealand fleet, business and private consumers make informed purchasing decisions, and to highlight any differences in safety performance across the commercial van market, ANCAP first joined with Euro NCAP in December 2020 to evaluate the availability and performance of ADAS systems of commercial vans available across Australasia.

This report reflects the ADAS specification and performance of new van models available in the Australasian market as at December 2022.

The commercial van safety comparison assessments are based on slightly modified versions of the following test and assessment protocols:

- Assessment Protocol Safety Assist v8.0.4
- Assessment Protocol Pedestrian Protection v9.0.3
- Testing Protocol AEB Car-to-Car v2.0.1
- Testing Protocol Lane Support Systems v2.0.2
- Testing Protocol Speed Assist Systems v8.0.4
- Testing Protocol AEB Vulnerable Road User v2.0.3

#### NOTE:

Except where indicated, the vans tested as part of this comparison were laden to half their gross load carrying capacity.

The results from this analysis do not replace or alter existing ANCAP safety (star) ratings or contributing scores.



## **Tested systems**



## AUTONOMOUS EMERGENCY BRAKING (Car-to-Car)

A driver assistance system that can detect stationary or slowing vehicles in front of the subject vehicle, and autonomously apply braking to avoid a collision, or reduce the speed of impact.



#### LANE SUPPORT SYSTEMS

#### Lane Departure Warning (LDW)

A driver assistance system that can detect lane markings on the road ahead and warn the driver if they are drifting out of the lane. Warnings may be audible or haptic (e.g. vibrations through the steering wheel or seat).

#### Lane Keep Assist (LKA)

A driver assistance system that can detect lane markings on the road ahead and provide active steering input to avoid the subject vehicle unintentionally leaving the lane.



#### INTELLIGENT SEATBELT REMINDERS

A warning device that informs and reminds the driver - through visual and audible warnings - if they, or a passenger, are not wearing a seatbelt.



## AUTONOMOUS EMERGENCY BRAKING (Vulnerable Road User)

A driver assistance system that can detect pedestrians and cyclists that are in the path of the subject vehicle, and autonomously apply braking to avoid a collision, or reduce the speed of impact.

This report makes specific reference to the presence and effectiveness of pedestrian and cyclist-detecting systems.



### SPEED ASSISTANCE SYSTEMS

A system that assists the driver to avoid excessive speed. This may be through a manual speed limiter set by the driver, or a Speed Limit Information Function (SLIF) which uses GPS map and/or camera information to determine the applicable speed limit, inform the driver and alert them if the speed is exceeded.



#### **DRIVER MONITORING SYSTEMS**

A warning device that informs the driver of driver fatigue or loss of attention. These systems can detect driver performance by measuring steering and other driver inputs, lane position and other driving events. Some more sophisticated systems monitor driver attention directly, using cameras to follow eye movements and signs of inattention.

# ADAS Specification / Fitment

- STANDARD
- NOT AVAILABLE ON BASE VARIANT but STANDARD or OPTIONAL on higher variants
- O OPTIONAL
- **★** NOT AVAILABLE
- D STANDARD FOR DRIVER ONLY

AEB (C2C) AEB (PED) AEB (CYC) LKA LDW BSM DMS SBR Autonomous Emergency Braking (Car-to-Car)
Autonomous Emergency Braking (Pedestrian-Detecting)
Autonomous Emergency Braking (Cyclist-Detecting)
Lane-Keep Assistance system (active)

Lane-Keep Assistance system (active Lane Departure Warning system Blind Spot Monitoring system Driver Monitoring System Seat Belt Reminder

LIGHT CO	MMERCIAL: Vans 2	500-3500kg (	GVM (Li	ght Go	ods Ve	ehicles	- Cat	egory	NA)				
	MAKE / MODEL	MARKET SEGMENT	SALES 2022*	AEB (C2C)	AEB (PED)	AEB (CYC)	LKA	LDW	BSM	DMS	SBR (DRIVER & PASS)	SPEED LIMITER	ANCAP SAFETY RATING
	Ford Transit Custom (July 2022 - onwards) All variants	Vans / CC 2500-3500kg GVM (NA)	1,190	•	•	•	•	•	•	•	•	•	UNRATED
	Hyundai Staria-Load (August 2021 - onwards) Automatic variants	Vans / CC 2500-3500kg GVM (NA)	2,844	•	•	•	•	•	•^	•	•	•	TESTED ★ ★ ★ ★ ★
	LDV G10 (June 2015 - onwards) All variants	Vans / CC 2500-3500kg GVM (NA)	2,375	*	×	×	×	×	×	×	D	×	UNRATED
0 0=	LDV V80 (October 2014 - onwards) All variants	Vans / CC 2500-3500kg GVM (NA)	341	×	×	*	×	×	×	×	D	×	UNRATED
	Mercedes-Benz Vito (February 2021 - onwards) <sup>~</sup> All variants	Vans / CC 2500-3500kg GVM (NA)	707	•	•	•	×	•	•	•	•	•	UNRATED
	Peugeot Expert (April 2022 - onwards) All variants	Vans / CC 2500-3500kg GVM (NA)	238	•	•	×	×	•	•	•	•	•	UNRATED
	Renault Trafic (September 2022 - onwards) All variants	Vans / CC 2500-3500kg GVM (NA)	1,049	•	*	×	×	•	•	0	•	•	UNRATED
0.0	Toyota HiAce (May 2019 - onwards) All van variants	Vans / CC 2500-3500kg GVM (NA)	6,594	•	•	•	•	•	•	•	•	•	TESTED ★ ★ ★ ★ ★



## ADAS Specification / Fitment continued

	MAKE / MODEL	MARKET SEGMENT	SALES 2022*	AEB (C2C)	AEB (PED)	AEB (CYC)	LKA	LDW	BSM	DMS	SBR (DRIVER & PASS)	SPEED LIMITER	ANCAP SAFETY RATING	
	Volkswagen Transporter (December 2020 - onwards) T6.1 van variants	Vans / CC 2500-3500kg GVM (NA)	1,035	•	×	×	0	•	•	•	•	•	UNRATED	
HEAVY CO	OMMERCIAL: Light I	Outy 3501-80	00kg G\	VM (M	edium	Goods	s Vehic	cles - C	Catego	ry NB)	)			
	Fiat Ducato (June 2022 - onwards) All variants	LD 3501-8000kg GVM (NB)	527	•	•	•	•	•	•	0	•	•	UNRATED	
	Ford Transit (August 2022 - onwards) MY23 variants	LD 3501-8000kg GVM (NB)	362	•	•	•	•	•	•	•	•	•	UNRATED	
	Iveco Daily (October 2022 - onwards)** MY22 van variants	LD 3501-8000kg GVM (NB)	241	•	×	×	•	•	×	×	•	•	UNRATED	
6	LDV Deliver 9 (September 2020 - onwards) All variants	LD 3501-8000kg GVM (NB)	2,160	•	*	×	*	•	0	*	•	*	UNRATED	
- j - v	Mercedes-Benz Sprinter (October 2019 - onwards) All variants	LD 3501-8000kg GVM (NB)	1,882	•	•	•	0	•	•	•	•	•	UNRATED	
A.	Peugeot Boxer (March 2020 - onwards) All variants	LD 3501-8000kg GVM (NB)	28	•	×	×	×	•	×	•	D	•	UNRATED	
	Renault Master (January 2023 - onwards) All variants	LD 3501-8000kg GVM (NB)	1,335	•	*	*	×	•	•	*	D	•	UNRATED	
	Volkswagen Crafter (July 2018 - onwards) All van variants	LD 3501-8000kg GVM (NB)	630	•	×	×	0	0	0	•	•	•	UNRATED	

<sup>\*</sup> VFACTS National Vehicle Sales, 1 January to 30 September 2022.

<sup>\*</sup> VFACTS National Vehicle Sales, 1 January to 30 September 2022.

\*Built from September 2022.

Due to global supply shortages the specification of Mercedes-Benz Vito models built from November 2021 (MY22 production) may differ. Individual model specification should be confirmed with the manufacturer/dealer.

Standard from October 2021 production. Optional on vehicles built prior.

+ Seat Belt Reminder available as Standard for driver and Optional for front passenger.

## **ADAS Performance Test Results**

The Safety Assist, or Advanced Driver Assistance Systems (ADAS), functions of 16 commercial vans have been tested, with each van carrying half of its permissible carrying capacity - a typical load for a commercial van in daily use<sup>^</sup>.

Test scores for each ADAS system have been weighted and combined to produce an overall performance ranking of either PLATINUM, GOLD, SILVER or BRONZE for each van. A number of vans have been classified as NOT RECOMMENDED.

The performance of ADAS systems were tested regardless of whether the system is available as Standard or Optional.

#### **OVERALL PERFORMANCE**

PLATINUM: Equal or better than 80%



Equal or better than 60%



SILVER:



Equal or better than 40%



BRONZE: Equal or better than 20%

NOT RECOMMENDED: Below 20%

#### LIGHT COMMERCIAL: Vans 2500-3500kg GVM (Light Goods Vehicles - Category NA)



#### Hyundai Staria-Load<sup>^</sup>

(August 2021 - onwards) Automatic variants



The Hyundai Staria-Load remains the benchmark for fitment and performance across the commercial van segment. This assessment was undertaken as part of the official Staria-Load ANCAP safety rating assessment conducted in 2021 and consequently it was tested in an unladen condition. The addition of a part load would potentially affect its braking performance, albeit only slightly.





#### Toyota HiAce<sup>^</sup>

(May 2019 - onwards) All van variants



The Toyota HiAce performed very well across all areas of ADAS assessment. This assessment was undertaken as part of the official HiAce ANCAP safety rating assessment conducted in 2019 and consequently it was tested in an unladen condition. The addition of a part load would potentially affect its braking performance, albeit only slightly. All ADAS features tested are fitted as standard across the range.





#### Ford **Transit Custom**

(July 2022 - onwards) All variants



The current model Ford Transit Custom is now fitted with a passenger seatbelt reminder which elevates its overall nce ranking from the previous SILVER (58%) to GOLD. All ADAS features are fitted as standard across the range.





#### Mercedes-Benz Vito

(February 2021 - onwards)~ All variants



Mercedes-Benz Vito models available from January 2021 have been updated to include additional active safety technologies including a standard AEB system capable of detecting and responding to other vehicles, pedestrians and cyclists. LDW is also standard. An active LKA system however is still not offered. This specification update brings the Australasian-supplied Vito in line with the specification offered in Europe and its overall score has been updated to reflect the improved safety performance.





#### Volkswagen **Transporter**

(December 2020 - onwards) T6.1 van variants

	N/A	N/A			
AEB	AEB	AEB	LANE	SPEED	OSM
(C2C)	(PED)	(CYC)	SUPPORT	ASSIST	

The Volkswagen Transporter T6.1 offers a fair range of active safety systems, yet lags those systems available across the Volkswagen passenger car range - including pedestrian and cyclist-detecting AEB.





#### Peugeot Expert

(April 2022 - onwards) All variants



The MY23 Peugeot Expert built from April 2022 is well equipped, with car-to-car and car-to-pedestrian-detecting AEB (available on some variants), lane departure warning, speed assist, and a seatbelt reminder system. Cyclist-detecting AEB is not available. The Peugeot Expert offers a mid-range choice for consumers.





#### Renault Trafic

(September 2022 - onwards)



Significant safety inclusions released with the recent Renault Trafic facelift have improved its overall ranking from NOT RECOMMENDED (11%) to SILVER. Of note is the now standard fitment of autonomous emergency braking (car-to-car) and a lane departure warning system.

45%



#### **LDV** G10

(June 2015 - onwards)



The LDV G10 van has been available in the Australasian market since mid-2015, and is one of the more outdated models when comparing its safety specification to that of its segment peers The G10 is not fitted with any active safety systems and is NOT RECOMMENDED.

1		
	5%	
	NOT RECOMMENDED	
		,



#### ADAS Performance Test Results continued



LDV V80

(October 2014 - onwards) All variants

N/A	N/A	N/A	N/A	N/A	
AEB	AEB	AEB	LANE	SPEED	OSM
(C2C)	(PED)	(CYC)	SUPPORT	ASSIST	

The LDV V80 van has been available in the Australasian market since 2014, and is one of the more outdated models when comparing its safety specification to that of its segment peers. The V80 is not fitted with any active safety systems and is NOT BECOMMENTED.

5% NOT RECOMMENDED

## HEAVY COMMERCIAL: Light Duty 3501-8000kg GVM (Medium Goods Vehicles - Category NB)



#### Fiat Ducato

(June 2022 - onwards) All variants



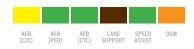
Updated Fiat Ducato vehicles built from February 2022 are now fitted with the most extensive active safety specification in its segment. The upgraded specification sees the Ducato shift from an overall performance ranking of BRONZE (28%) to PLATINUM. Testing of the Ducato's active safety systems showed a solid mix of Good and Acceptable performance for its ability to avoid or mitigate the severity of a crash through its AEB and LSS systems.





#### Ford Transit

(August 2022 - onwards) MY23 variants



The Ford Transit offers all assessed safety systems as standard, with most systems performing well resulting in an overall performance ranking of GOLD. The fitting of a default-on driver monitoring system would further improve its score.





#### Mercedes-Benz Sprinter

(October 2019 - onwards) All variants



The Mercedes-Benz Sprinter offers a broad range of safety equipment as standard for the Australasian market, with generally good performance. It is hoped further improvements to its systems, which are now commonplace on Mercedes-Benz passenger cars, will raise its performance level.





#### Volkswagen Crafter

(July 2018 - onwards) All van variants



The AEB system fitted to the Volkswagen Crafter lacks the more sophisticated elements of those vans that earned a GOLD ranking - such as recognition of vulnerable road users - however its lane departure warning and blind spot monitoring systems performed well.





#### Iveco Daily

(October 2022 - onwards)\*\* MY22 van variants



The Iveco Daily (MY22 35S) offers an updated ADAS system that allows for Lane Keep Assistance (LKA). It also offers an improved speed control function. With these updates, the Iveco Daily achieves a SILVER rating. The Iveco Daily has the opportunity to improve its score further if it was to offer an AEB system that could detect and respond to pedestrians and cyclists. This functionality is currently not offered.





#### Peugeot Boxer

(March 2020 - onwards) All variants

	N/A	N/A			
AEB	AEB	AEB	LANE	SPEED	OSM
(C2C)	(PED)	(CYC)	SUPPORT	ASSIST	

The Peugeot Boxer is fitted with a car-to-car AEB system which performed well, however it lacks the ability to detect and react to pedestrians and cyclists. Its other ADAS systems did not perform as well as other vans tested.





### LDV Deliver 9

(September 2020 - onwards) All variants

	N/A	N/A		N/A	
AEB	AEB	AEB	LANE	SPEED	OSM
(C2C)	(PED)	(CYC)	SUPPORT	ASSIST	

The LDV Deliver 9 offers a basic ADAS specification. Performance of its AEB Car-to-Car system was assessed as Marginal however pedestrian and cyclist-detecting AEB is not available. The LDV Deliver 9 is fitted with a lane departure warning (LDW) system however this system is not able to actively intervene to prevent the vehicle from deviating from its intended lane.

27% BRONZE



#### Renault Master

(January 2023 - onwards)



An ABB car-to-car system is now offered as standard on MY23 Renault Master vehicles built from January 2023 which sees its overall performance ranking increase from NOT RECOMMENDED (6%) to BRONZE. The Master is fitted with a manual speed limiter, lane departure warning (LDW) and blind spot monitoring (BSM) systems as standard.









MARGINAL







- \* Speed Limit Information Function (SLIF) performance based on European test results / European specified vehicles.
- \*\* Built from September 2022.
- ^ Unladen performance tests of Toyota HiAce conducted in 2019 and Hyundai Staria-Load conducted in 2021. All other vehicles tested laden to 50% of their cross load carrying capacity.