

AVAILABILITY OF AUTONOMOUS EMERGENCY BRAKING (AEB) IN AUSTRALIA

JUNE 2020

PURPOSE

This document presents a status update on the availability of autonomous emergency braking (AEB) in the Australian new light vehicle market (passenger cars, sports utility vehicles and light commercial vehicles).

The status of AEB is determined through an analysis of the light vehicle market at a particular point in time. This report presents the status of AEB availability as at April 2020.

DATA SOURCES

The analysis is based on vehicle specification information collected by ANCAP as part of its safety rating program, as well as publicly available vehicle specification information published by vehicle brands.

Sales data is used to estimate the market penetration of AEB. This data is sourced from the VFACTS National New Vehicle Sales Report, prepared by the Federal Chamber of Automotive Industries (FCAI).

FINDINGS

In April 2020, sales of 348 light vehicle models totalling 36,407 light vehicle sales were reported by the VFACTS National New Vehicle Sales Report in Australia. The availability of AEB across all models was investigated:

- **186 models offered AEB available as STANDARD.**
These models represented 66 per cent of all light vehicle sales (24,130 vehicles).
- **22 models offered AEB on HIGHER GRADE VARIANTS. AEB was not available on the base variant.**
These models represented 10 per cent of all light vehicle sales (3,727 vehicles).
- **8 models offered AEB as OPTIONAL.**
These models represented 6 per cent of all light vehicle sales (2,361 vehicles).
- **77 models were NOT AVAILABLE with any form of AEB.**
These models represented 16 per cent of all light vehicle sales (5,951 vehicles).

Concentrating on the top 100 selling models, which accounted for 88% of total light vehicle sales (32,208 vehicles):

- **63 models offered AEB available as STANDARD.**
These models represented 58 per cent of all light vehicle sales and 66 per cent of the top 100 sellers (21,151 vehicles).
- **12 models offered AEB on HIGHER GRADE VARIANTS. AEB was not available on the base variant.**
These models represented 10 per cent of all light vehicle sales and 11 per cent of the top 100 sellers (3,589 vehicles).
- **4 models offered AEB as OPTIONAL.**
These models represented 6 per cent of all light vehicle sales and 7 per cent of the top 100 sellers (2,278 vehicles).
- **21 models were NOT AVAILABLE with any form of AEB.**
These models represented 14 per cent of all light vehicle sales and 16 per cent of the top 100 sellers (5,190 vehicles).

TABLE 1:
Availability of autonomous emergency braking (AEB)
in the Australian new light vehicle market
(April 2020)

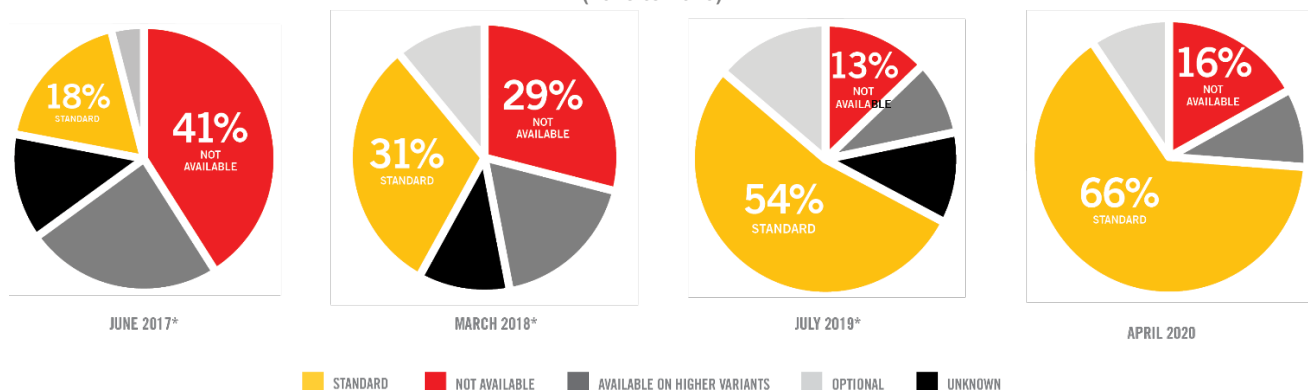
AEB STATUS	ALL SALES			TOP 100		
	NUMBER OF MODELS	SALES VOLUME	MARKET SHARE	NUMBER OF MODELS	SALES VOLUME	MARKET SHARE
S = Standard	186	24,130	66.28%	63	21,151	58.10%
V = On higher variants	22	3,727	10.24%	12	3,589	9.86%
O = Optional	8	2,361	6.49%	4	2,278	6.26%
X = Not available	77	5,951	16.35%	21	5,190	14.26%
U = Unknown	55	238	0.65%	0	0	0.00%
ALL MODELS	348	36,407	100.00%	100	32,208	88.47%

PREVIOUS MARKET SNAPSHOTS

ANCAP has conducted market snapshots investigating the availability of AEB since December 2015. Over time, the number of models offered with AEB has increased as market demand builds, coupled with increasing maturity of the technology.

The results from each market snapshot over the period December 2015 to April 2020 are included in **Figure 1** and **Table 2** below.

FIGURE 1:
Availability of autonomous emergency braking (AEB)
in the Australian new light vehicle market
(2015 to 2020)



* Analysis of top 100 selling models. Other models treated as 'unknown'.

TABLE 2:
Availability of autonomous emergency braking (AEB)
in the Australian new light vehicle market – Top 100 selling models
(2015 to 2020)

AEB STATUS	December 2015		June 2017		March 2018		July 2019		April 2020	
	NUMBER OF MODELS	MARKET SHARE	NUMBER OF MODELS	MARKET SHARE	NUMBER OF MODELS	MARKET SHARE	NUMBER OF MODELS	MARKET SHARE	NUMBER OF MODELS	MARKET SHARE
S = Standard	6	3%	21	18%	37	31%	60	54%	63	58%
V = On higher variants	16	16%	26	24%	19	18%	10	9%	12	10%
O = Optional	11	11%	8	4%	9	11%	9	14%	4	6%
X = Not available	67	55%	45	41%	35	29%	21	13%	21	14%
TOP 100 SELLING MODELS	-	85%	-	87%	-	89%	-	89%	-	88%

* AEB availability status not investigated for models outside the top 100 sellers prior to April 2020.

KEY OBSERVATIONS:

The number of new light vehicle models with AEB **available** increased to 83% of the market in April 2020:

- 216 models
- 30,218 vehicles sold

The number of light vehicle models sold with AEB as **standard** increased to 66% of the market in April 2020:

- 186 models
- 24,130 vehicles sold

The number of top 100 selling models with AEB **available** increased to 74% of the market in April 2020:

- 79 models
- 27,018 vehicles sold

The number of top 100 selling models sold with AEB as **standard** increased from 6 models (3% of the market) in December 2015 to 63 models (58% of the market) in April 2020:

- 21,151 vehicles sold

The number of top 100 models offered **without any form** of AEB decreased from 67 models (55% of the market) in December 2015 to 21 models (14% of the market) in April 2020.

The highest selling light vehicle models that **do not offer** any form of AEB are all **utilities**.

LIMITATIONS

The analysis serves to provide a snapshot of the market at a particular point in time based on model sales of a single month. Sales volumes of individual models will fluctuate between months for a variety of reasons which can influence the model's market share. In turn, such fluctuations can influence the market share of the relative status of AEB.

Vehicles investigated were new vehicles from manufacturers / importers whose sales are reported as part of the VFACTS National New Vehicle Sales Report for the relevant month. There are vehicle sales which are not reported by VFACTS. It is understood that such sales equate to a relatively small volume.

The availability status of AEB on models has been determined through the model information collected by ANCAP as part of its safety rating program, as well as specification information published by vehicle brands. It is possible that AEB may be available on a model, however the safety feature is not promoted by the brand. In such a case, the availability of AEB may have been classified as not available. It is expected that such cases are unlikely.

The requirements for a system being considered a form of AEB were based on a functional definition of the technology. No further assessments of the technologies have been made as part of this exercise.

The functional definition of AEB is as follows:

- **Autonomous:** the system acts independently of the driver.
- **Emergency:** the system will intervene only in a critical situation.
- **Braking:** the system applies braking to avoid or mitigate potential collisions.

Generally, where AEB is available on the lowest specification variant it is also offered on higher grade variants within the model range, however there are some scenarios where this is not the case.

DEFINITIONS

AEB STATUS:	The availability of autonomous emergency braking (AEB) within a model range.
NONE:	AEB is not available on any variant within the model range.
OPTIONAL:	AEB is available as an option on at least the lowest specification variant. It may be standard on higher specification variants.
HIGHER VARIANT:	AEB is not available on the lowest specification variant of a model range however it is available on higher specified variants either as an option or as standard equipment.
STANDARD:	AEB is available as standard on the lowest specification variant.

TABLE 3:
Availability of autonomous emergency braking (AEB)
in the Australian new light vehicle market - Top 100 selling models
(April 2020)

MAKE	MODEL	ANCAP SAFETY RATING (stars)	RATING YEAR (datestamp)	AEB STATUS
Toyota	Toyota RAV4	5	2019	STANDARD
Toyota	Toyota Hilux 4X4	5	2019	STANDARD
Ford	Ford Ranger 4X4	5	2015	STANDARD
Toyota	Toyota Corolla	5	2018	STANDARD
Toyota	Toyota Prado	5	2011	OPTIONAL
Toyota	Toyota Landcruiser Wagon	5	2011	ON HIGHER VARIANTS
Kia	Kia Cerato	5	2019	STANDARD
Holden	Holden Colorado 4X4	5	2016	NOT AVAILABLE
Hyundai	Hyundai i30	5	2017	OPTIONAL
Toyota	Toyota Landcruiser PU/CC	5	2016	NOT AVAILABLE
Toyota	Toyota Camry	5	2017	STANDARD
Mazda	Mazda CX-5	5	2017	STANDARD
Isuzu	Isuzu Ute D-Max 4X4	5	2013	NOT AVAILABLE
Subaru	Subaru Forester	5	2019	STANDARD
Hyundai	Hyundai Tucson	5	2015	OPTIONAL
Toyota	Toyota C-HR	5	2017	STANDARD
Nissan	Nissan X-Trail	5	2017	STANDARD
Mitsubishi	Mitsubishi Outlander	5	2014	ON HIGHER VARIANTS
Mazda	Mazda3	5	2019	STANDARD
Toyota	Toyota Hilux 4X2	5	2019	STANDARD
Mazda	Mazda CX-30	5	2019	STANDARD
Kia	Kia Sportage	5	2016	STANDARD
Nissan	Nissan Navara 4X4	5	2015	NOT AVAILABLE
Mazda	Mazda CX-3	5	2015	STANDARD
Hyundai	Hyundai Kona	5	2017	STANDARD
Kia	Kia Seltos	5	2019	STANDARD
Mitsubishi	Mitsubishi Triton 4X4	5	2015	ON HIGHER VARIANTS
Mitsubishi	Mitsubishi ASX	5	2014	STANDARD
Isuzu	Isuzu Ute MU-X	5	2013	NOT AVAILABLE
Honda	Civic	5	2017	ON HIGHER VARIANTS
Volkswagen	Volkswagen Golf	5	2013	STANDARD
Honda	Honda CR-V	5	2017	ON HIGHER VARIANTS
Mazda	Mazda BT-50 4X4	5	2011	NOT AVAILABLE
Toyota	Toyota Kluger	5	2014	STANDARD
Toyota	Toyota HiAce Van	5	2019	STANDARD
Subaru	Subaru XV	5	2017	ON HIGHER VARIANTS
Hyundai	Hyundai Santa Fe	5	2018	STANDARD
BMW	BMW X3	5	2017	STANDARD
BMW	BMW 3 Series	5	2019	STANDARD
Subaru	Subaru Outback	5	2015	STANDARD
Nissan	Nissan Qashqai	5	2017	STANDARD
Kia	Kia Rio	5	2017	ON HIGHER VARIANTS
Honda	Honda HR-V	5	2015	STANDARD
BMW	BMW X5	5	2018	STANDARD
Mitsubishi	Mitsubishi Eclipse Cross	5	2017	STANDARD
MG	MG MG3	Not Rated	N/A	NOT AVAILABLE
BMW	BMW X1	5	2015	STANDARD
Kia	Kia Carnival	5	2016	STANDARD
Volkswagen	Volkswagen Amarok 4X4	5	2011	NOT AVAILABLE
Mercedes-Benz	Mercedes-Benz A-Class	5	2018	STANDARD
Mazda	Mazda CX-9	5	2016	STANDARD
Isuzu	Isuzu Ute D-Max 4X2	4	2012	NOT AVAILABLE
Volkswagen	Volkswagen T-Cross	5	2019	STANDARD
Suzuki	Suzuki Swift	5	2017	ON HIGHER VARIANTS
Mazda	Mazda2	5	2015	STANDARD
Ford	Ford Everest	5	2015	STANDARD
Holden	Holden Trax	5	2013	NOT AVAILABLE
Volvo	Volvo XC40	5	2018	STANDARD
BMW	BMW X4	5	2017	STANDARD
Mercedes-Benz	Mercedes-Benz GLC-Class	5	2015	STANDARD
Mitsubishi	Mitsubishi Pajero Sport	5	2015	STANDARD
Volkswagen	Volkswagen Tiguan	5	2016	STANDARD
Hyundai	Hyundai iLOAD	4	2011	NOT AVAILABLE
Audi	Audi Q3	5	2019	STANDARD
Suzuki	Suzuki Vitara	5	2015	ON HIGHER VARIANTS
Nissan	Nissan Patrol Wagon	Not Rated	N/A	STANDARD

MAKE	MODEL	ANCAP SAFETY RATING (stars)	RATING YEAR (datestamp)	AEB STATUS
Mazda	Mazda BT-50 4X2	5	2011	NOT AVAILABLE
Ford	Ford Mustang	3	2017	STANDARD
Holden	Holden Equinox	5	2017	STANDARD
Toyota	Toyota Yaris	5	2017	OPTIONAL
Lexus	Lexus NX	5	2017	STANDARD
Kia	Kia Sorento	5	2017	STANDARD
Suzuki	Suzuki Baleno	Not Rated	N/A	NOT AVAILABLE
Hyundai	Hyundai Venue	4	2019	STANDARD
Volkswagen	Volkswagen Polo	5	2017	STANDARD
Toyota	Toyota Fortuner	5	2019	STANDARD
Subaru	Subaru Impreza	5	2016	ON HIGHER VARIANTS
Ford	Ford Ranger 4X2	5	2015	STANDARD
Mazda	Mazda CX-8	5	2018	STANDARD
Mercedes-Benz	Mercedes-Benz GLE-Class	5	2019	STANDARD
BMW	BMW 1 Series	5	2019	STANDARD
LDV	LDV T60 4X4	5	2017	NOT AVAILABLE
Porsche	Porsche Macan	Not Rated	N/A	NOT AVAILABLE
Mitsubishi	Mitsubishi Triton 4X2	5	2015	ON HIGHER VARIANTS
Suzuki	Suzuki Jimny	3	2018	STANDARD
Ford	Ford Focus	5	2019	STANDARD
Holden	Holden Astra	5	2015	STANDARD
MG	MG ZS	4	2017	NOT AVAILABLE
Lexus	Lexus RX	5	2015	STANDARD
RAM	RAM 1500 Express 4X4	Not Rated	N/A	NOT AVAILABLE
Ford	Ford Transit Custom	5	2012	STANDARD
Honda	Honda Jazz	5	2014	NOT AVAILABLE
Jeep	Jeep Grand Cherokee	5	2014	ON HIGHER VARIANTS
Kia	Kia Picanto	4	2017	STANDARD
Holden	Holden Trailblazer	5	2016	NOT AVAILABLE
Mercedes-Benz	Mercedes-Benz CLA-Class	5	2019	STANDARD
Mercedes-Benz	Mercedes-Benz Vito	5	2014	NOT AVAILABLE
Mercedes-Benz	Mercedes-Benz C-Class	5	2014	STANDARD
Nissan	Nissan Navara 4X2	5	2015	NOT AVAILABLE
Holden	Holden Acadia	5	2018	STANDARD