

ANALYSIS REPORT

Availability of Autonomous Emergency Braking (AEB) in Australia.

September 2019

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 July 2019.

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

FINDINGS

In July 2019, 363 vehicle models totalling 80,000 light vehicle sales were reported by the VFACTS National New Vehicle Sales Report in Australia. The availability of AEB in the top 100 selling light vehicle models was investigated. The top 100 selling models accounted for approximately 71,000 sales – representing 89 per cent of the light vehicle market.






Of the top 100 selling models in Australia at the end of July 2019:

- **60 included AEB as STANDARD equipment.**
These models represented 54 per cent of the light vehicle market (43,000 sales).
- **10 included AEB only on HIGHER GRADE variants.** AEB was not available on the base variant.
These models represented 9 per cent of the light vehicle market. (7,000 sales).
- **9 offered AEB as an OPTION on the base grade variant.**
These models represented 13 per cent of the light vehicle market (11,000 sales).
- **21 were NOT AVAILABLE with any form of AEB.**
These models represented 13 per cent of the light vehicle market (10,000 sales).

The remaining models that were not investigated (those outside the top 100 selling models) accounted for 9,000 sales, representing 11 per cent of the light vehicle market.

**60 of the top 100
selling vehicles
models now offer
AEB as standard.**

TABLE 1:
Availability of autonomous emergency braking (AEB)
in the Australian new light vehicle market
as at July 2019

AEB STATUS	NUMBER OF MODELS	SALES VOLUME	MARKET SHARE
 Not available	21	10,118	13%
 Optional	9	10,832	13%
 Available on higher variants	10	6,868	9%
 Standard	60	43,190	54%
TOP 100 SELLING MODELS	100	71,008	89%
 Unknown	266	8,982	11%
ALL MODELS	366	79,990	100%

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 a result of building market demand, non-regulatory (ANCAP) influence and increasing maturity of the technology.

The results from each market snapshot over the period December 2015 to July 2019 are included in **Figure 1** and **Table 2** below.

FIGURE 1:
AEB Availability - National
(2015 to 2019)

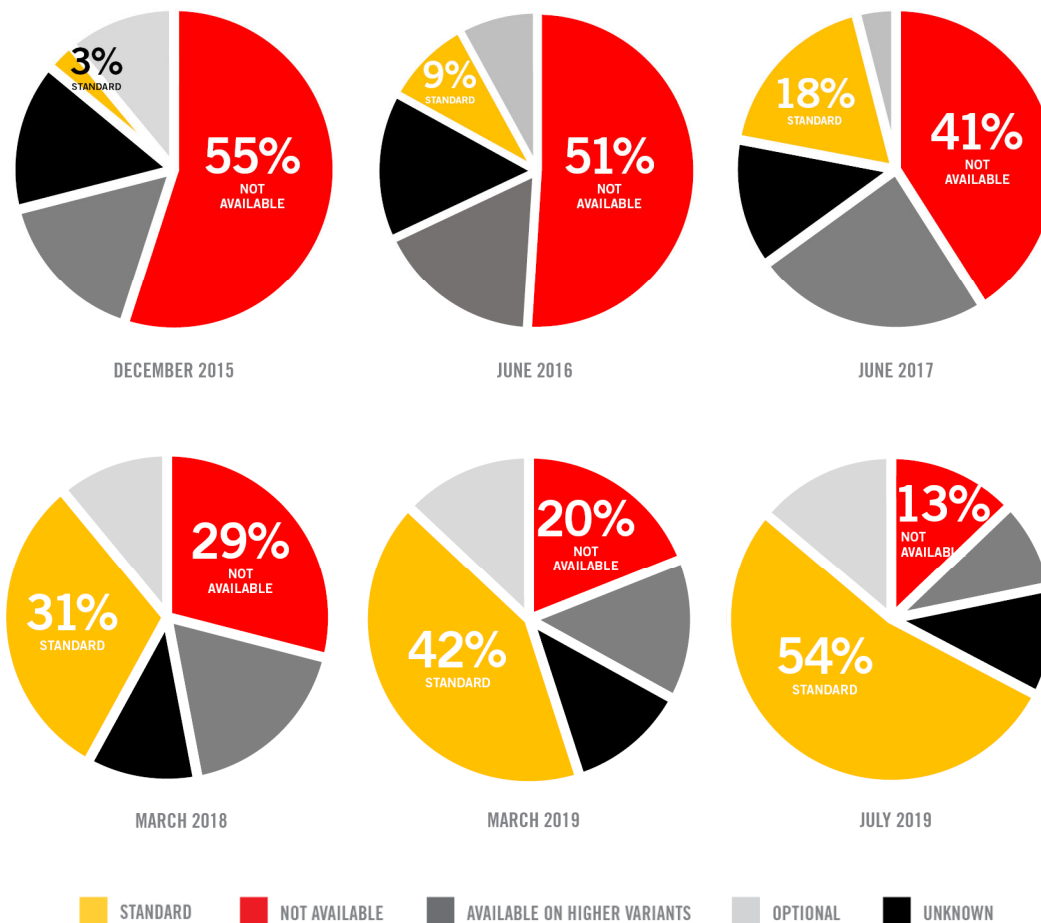


TABLE 2:
AEB Availability - National
(2015 to 2019)

STATUS	DECEMBER 2015		JUNE 2016		JUNE 2017		MARCH 2018		MARCH 2019		JULY 2019	
	MODELS	MARKET SHARE	MODELS	MARKET SHARE	MODELS	MARKET SHARE	MODELS	MARKET SHARE	MODELS	MARKET SHARE	MODELS	MARKET SHARE
Not Available	67	55%	57	51%	45	41%	35	29%	27	20%	21	13%
Optional	11	11%	11	8%	8	4%	9	11%	9	13%	9	13%
Higher Variants	16	16%	19	17%	26	24%	19	18%	13	14%	10	9%
Standard	6	3%	13	9%	21	18%	37	31%	51	42%	60	54%
TOP 100 SELLING MODELS	100	85%	100	85%	100	87%	100	89%	100	89%	100	89%
Unknown	295	15%	253	15%	290	13%	269	11%	252	11%	266	11%
ALL MODELS	395	100%	353	100%	390	100%	369	100%	352	100%	366	100%

KEY OBSERVATIONS

The number of top 100 models offered with AEB as standard has increased from 6 models (3% of the market) in December 2015 to 60 models (54% of the market) in July 2019.

The number of top 100 models offered without any form of AEB has decreased from 67 models (55% of the market) in December 2015 to 21 models (13% of the market) in July 2019.

The top 100 selling models and their AEB availability status is listed in **Table 3**.

TABLE 3:
AEB Availability Status of Top 100 Selling Models
(July 2019)

MAKE	MODEL	ANCAP SAFETY RATING (stars)	AEB STATUS
Toyota	Toyota Corolla	5	STANDARD
Ford	Ford Ranger 4X4	5	STANDARD
Toyota	Toyota Hilux 4X4	5	STANDARD
Toyota	Toyota RAV4	5	STANDARD
Hyundai	Hyundai i30	5	OPTIONAL
Mazda	Mazda CX-5	5	STANDARD
Mazda	Mazda3	5	STANDARD
Kia	Kia Cerato	5	STANDARD
Toyota	Toyota Prado	5	OPTIONAL
Toyota	Toyota Camry	5	STANDARD
Mitsubishi	Mitsubishi ASX	5	OPTIONAL
Nissan	Nissan X-Trail	5	STANDARD
Hyundai	Hyundai Tucson	5	OPTIONAL
Subaru	Subaru Forester	5	STANDARD
Mazda	Mazda CX-3	5	STANDARD
Mitsubishi	Mitsubishi Triton 4X4	5	ON HIGHER VARIANTS
Hyundai	Hyundai Kona	5	OPTIONAL
Mitsubishi	Mitsubishi Outlander	5	OPTIONAL
Holden	Holden Colorado 4X4	5	NOT AVAILABLE
Toyota	Toyota Landcruiser Wagon	5	ON HIGHER VARIANTS
Kia	Kia Sportage	5	STANDARD
Volkswagen	Volkswagen Golf	5	STANDARD
Honda	Honda CR-V	5	ON HIGHER VARIANTS
Toyota	Toyota Yaris	5	OPTIONAL
Subaru	Subaru XV	5	ON HIGHER VARIANTS

MAKE	MODEL	ANCAP SAFETY RATING (stars)	AEB STATUS
Hyundai	Hyundai Accent	5	NOT AVAILABLE
Toyota	Toyota Hilux 4X2	5	STANDARD
Isuzu	Isuzu Ute D-Max 4X4	5	NOT AVAILABLE
Toyota	Toyota Kluger	5	STANDARD
Nissan	Nissan Qashqai	5	STANDARD
Nissan	Nissan Navara 4X4	5	NOT AVAILABLE
Honda	Honda HR-V	5	STANDARD
Mazda	Mazda2	5	STANDARD
Toyota	Toyota C-HR	5	STANDARD
Toyota	Toyota Landcruiser PU/CC	5	NOT AVAILABLE
Honda	Honda Civic	5	ON HIGHER VARIANTS
Mazda	Mazda CX-9	5	STANDARD
Isuzu	Isuzu Ute MU-X	5	NOT AVAILABLE
Toyota	Toyota HiAce Van	5	STANDARD
Mazda	Mazda BT-50 4X4	5	NOT AVAILABLE
Mercedes-Benz	Mercedes-Benz GLC-Class	5	STANDARD
Mercedes-Benz	Mercedes-Benz C-Class	5	STANDARD
Subaru	Subaru Impreza	5	ON HIGHER VARIANTS
Volkswagen	Volkswagen Tiguan	5	STANDARD
Subaru	Subaru Outback	5	STANDARD
Ford	Ford Everest	5	STANDARD
Holden	Holden Commodore	5	STANDARD
Hyundai	Hyundai Santa Fe	5	STANDARD
Volkswagen	Volkswagen Polo	5	STANDARD
Kia	Kia Carnival	5	STANDARD
Holden	Holden Trax	5	NOT AVAILABLE
Holden	Holden Equinox	5	ON HIGHER VARIANTS
Volkswagen	Volkswagen Tiguan Allspace	5	STANDARD
Volkswagen	Volkswagen Amarok 4X4	5	NOT AVAILABLE
Kia	Kia Rio	5	ON HIGHER VARIANTS
Mitsubishi	Mitsubishi Eclipse Cross	5	STANDARD
Isuzu	Isuzu Ute D-Max 4X2	4	NOT AVAILABLE
Suzuki	Suzuki Swift	5	OPTIONAL
MG	MG MG3	Not Rated	NOT AVAILABLE
Honda	Honda Jazz	5	NOT AVAILABLE
Mercedes-Benz	Mercedes-Benz A-Class	5	STANDARD
Hyundai	Hyundai iLOAD	4	NOT AVAILABLE
Mitsubishi	Mitsubishi Pajero Sport	5	STANDARD
Kia	Kia Picanto	4	STANDARD
Suzuki	Suzuki Vitara	5	ON HIGHER VARIANTS
LDV	LDV T60 4X4	5	NOT AVAILABLE
Kia	Kia Sorento	5	STANDARD
Ford	Ford Ranger 4X2	5	STANDARD
BMW	BMW X3	5	STANDARD
Mazda	Mazda BT-50 4X2	5	NOT AVAILABLE
MG	MG ZS	4	NOT AVAILABLE
Mitsubishi	Mitsubishi Triton 4X2	5	NOT AVAILABLE
Audi	Audi Q5	5	STANDARD
Ford	Ford Mustang	3	STANDARD
Holden	Holden Acadia	5	STANDARD
Ford	Ford Focus	5	STANDARD
Mazda	Mazda6	5	STANDARD
BMW	BMW 3 Series	Not Rated	STANDARD
Lexus	Lexus NX	5	STANDARD
Mercedes-Benz	Mercedes-Benz CLA-Class	Not Rated	STANDARD

MAKE	MODEL	ANCAP SAFETY RATING (stars)	AEB STATUS
Jeep	Jeep Grand Cherokee	5	ON HIGHER VARIANTS
Toyota	Toyota Fortuner	5	NOT AVAILABLE
Volvo	Volvo XC40	5	STANDARD
Toyota	Toyota HiAce Bus	Not Rated	STANDARD
BMW	BMW 1 Series	5	STANDARD
BMW	BMW X1	5	STANDARD
Ford	Ford Escape	5	STANDARD
Holden	Holden Trailblazer	5	NOT AVAILABLE
Ford	Ford Endura	5	STANDARD
Volvo	Volvo XC60	5	STANDARD
Mazda	Mazda CX-8	5	STANDARD
Mercedes-Benz	Mercedes-Benz GLE-Class	5	STANDARD
Skoda	Skoda Kodiaq	5	STANDARD
BMW	BMW X5	5	STANDARD
Nissan	Nissan Navara 4X2	5	NOT AVAILABLE
Porsche	Porsche Macan	Not Rated	NOT AVAILABLE
Audi	Audi A3	5	STANDARD
Hyundai	Hyundai Elantra	5	OPTIONAL
Lexus	Lexus UX	5	STANDARD
Nissan	Nissan Pathfinder	5	STANDARD

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 as of July 2019. There are vehicle sales which are not reported by VFACTS. It is understood that such sales equate to a relatively small volume.

The analysis focusses on the top 100 selling models in Australia. There are 366 models reported by VFACTS. Sales data for those outside the top 100 selling models shows that these 266 models represent 11% of the market in terms of sales 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. It should be noted that as system effectiveness and reliability information is collected through ANCAP's performance testing, it will be possible for future analyses to report on system types in greater detail. 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.