



**PRESS RELEASE**

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## **ASEAN NCAP – SAFER CARS FOR ASEAN REGION**

### *Announcement of ASEAN NCAP Results for Q1 2019 and Launching of ASEAN NCAP Labelling Compliance Guideline for Malaysia*

**Putrajaya, 12 February 2019** – The New Car Assessment Program for Southeast Asian Countries (ASEAN NCAP) recently assessed two latest models available in the market. The models are the Perodua Aruz, the latest SUV model under the Perodua brand and Toyota Camry, the midsize sedan class of the Toyota brand. The results were released during the launching ceremony of ASEAN NCAP Labelling Compliance Guideline 2019 by YB Datuk Seri Saifuddin Nasution bin Ismail, Hon. Minister of the Ministry of Domestic Trade and Consumer Affairs (KPDNHEP).

The Perodua Aruz is the latest SUV model produced by Perodua. The Aruz shares the same platform of the Toyota Rush model in which the latter was awarded with 5-Star rating by ASEAN NCAP. Based on the documentation provided by Perodua with regards to the safety features of the model, ASEAN NCAP has extended the Toyota Rush rating to the Perodua Aruz. The Perodua Aruz received a total score of **86.49 points**, which comprised **43.25 points** for the Adult Occupant Protection (AOP) category, **21.01 points** for the Child Occupant Protection (COP) assessment and **22.22 points** for the Safety Assist (SAT) category. The Perodua Aruz has a standard fitment of six airbags, Electronic Stability Control (ESC), Seatbelt Reminder System (SBR) for driver, front and rear passengers, ISOFIX and top tether at rear seats. Perodua also equipped the model with other safety assist technologies namely Autonomous Emergency Braking (AEB) City and Forward Collision Warning System to be available in the model. Thus, the accumulated score from the three assessed categories has made the SUV to be eligible for **5-Star** ASEAN NCAP rating.

The Toyota Camry is the latest model under the Toyota brand assessed by ASEAN NCAP. The midsize sedan obtained an outstanding score for its AOP category with **49.04 points over 50.00**, **22.68/25.00 points** for the COP assessment and **19.75/25.00 points** for the SAT category. Under the COP assessment, the Camry scored full points in both frontal and side impact tests. The tested sedan was fitted with seven airbags, ESC, SBR for frontal occupants, ISOFIX and top tether as standard across all variants. A nine-airbag variant is also offered for its Thailand market. The Camry also has features equipped in the car either as standard or optional in all its available market across South East Asia namely AEB City and Inter-urban, Lane Departure Warning System, Forward Collision Warning System



and Lane Keep Assist. Toyota Camry achieved an impressive overall score of **91.47 points** for this test and thus, ASEAN NCAP has awarded it with **5-Star** rating.

ASEAN NCAP Chairperson, Dr. Siti Zaharah Ishak said:

“Congratulations to Perodua and Toyota for the positive collaboration that they formed in order to provide an alternative choice to vehicle consumers in Malaysia. As the first release of ASEAN NCAP result for 2019, we are proud to see these models and several other popular vehicles that were assessed before this, rated with 5-star rating. Therefore, we hope this will be impactful to other manufacturers that have yet to improve the safety performance of their cars.”

ASEAN NCAP Secretary-General, Ir. Dr. Khairil Anwar Abu Kassim said:

“Since we began ASEAN NCAP in 2011, we have seen impressive improvements in vehicles sold in the South East Asia market. Improvements not only in the crashworthiness aspect by providing good protection to the occupants but also the vehicles are fitted with equipment that could prevent a crash from occurring. Recently there is an increasing number of vehicles that are fitted with Blind Spot Technology and Autonomous Emergency Braking. We are proud of this advancement as they were based on our protocol for 2017-2020 that stipulates these technologies for advanced 5-Star requirement. It has been an amazing journey for me to be working with manufacturers who are committed in giving 5-star safety protection in to the road users through the development of their new cars.”

Prior to the ASEAN NCAP result announcement, the Ministry of Domestic Trade and Consumer Affairs (KPDNHEP) has launched the new ASEAN NCAP Labelling Compliance Guideline for Malaysia. The guideline aims to provide guidance to related parties who are involved in the sale of passenger vehicles in Malaysia by complying with the safety standards that were recommended by the Ministry. Malaysia is the second country in South East Asia after Brunei that implements safety labelling for vehicles displayed in showrooms or any promotional premises such as hypermarket. The safety labelling will provide information to vehicle consumers on the safety level of the car. For models that have been assessed by ASEAN NCAP, the label will contain its rating assessment from Zero to 5 star.

The following information listed why there is a need for ASEAN NCAP labelling.

- To avoid any misleading information to vehicle consumers.
- To prevent the misuse of NCAP logos from other regions or countries that might confuse consumers.
- To avoid double standard as the safety specifications offered for vehicles of the same model sold in other countries vary from the ones produced for the Malaysian market.
- To raise consumers awareness on the safety status of vehicles they would like to purchase.
- To facilitate information to the consumers regarding the vehicle’s star rating and safety specifications.

The following are the gist of the results.

- ❖ The **Perodua Aruz** is the latest SUV model that underwent ASEAN NCAP assessment. The SUV's rating was extended from the Toyota Rush model based on the documentation provided by Perodua. The Aruz was awarded with **5-Star** rating at an accumulated score of **86.49 points** in which the model obtained 43.25 points for AOP, 21.01 points for COP, and 22.22 points for the SATs category.
- ❖ The **Toyota Camry** achieved an impressive total score of **91.47 points**. From this score, the new Camry scored 49.04 points for AOP, 22.68 points for COP and 19.75 points for SATs category. With the overall score that it obtained, the Toyota Camry is awarded with **5-Star** rating.





### **ASEAN NCAP**

ASEAN NCAP is a new addition to the NCAP organizations around the world, which is targeted to enhance safety standards, raise consumer awareness and thus encourage a market for safer vehicles in the Southeast Asia region (ASEAN community). This is a collaborative effort by MIROS and Global NCAP, in which the latter funded the pilot phase of the project. ASEAN NCAP is also supported by the membership of Automobile Associations from Malaysia (AAM), the Philippines (AAP), Singapore (AA Singapore), Cambodia (AAC) and Thailand (RAAT).

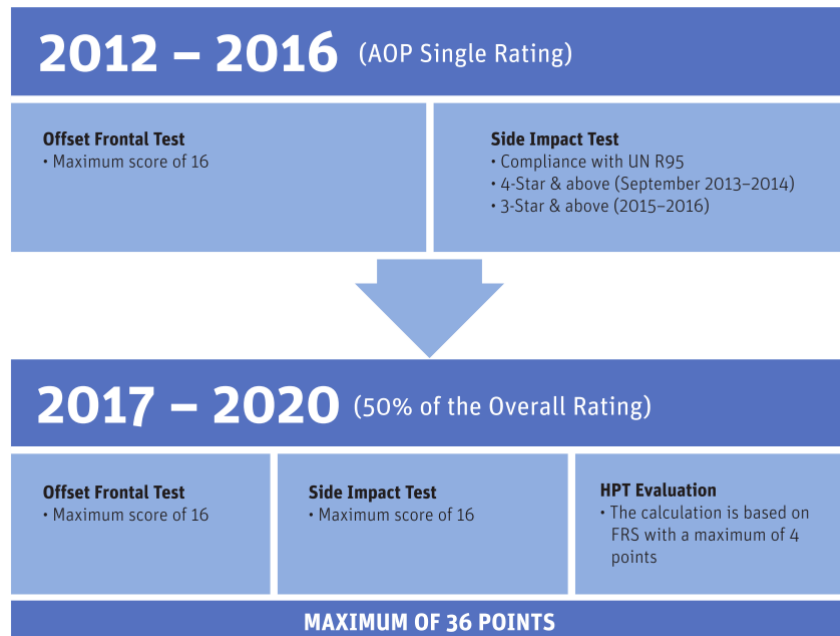
Currently, ASEAN NCAP Steering Committee (SC) is chaired by ASEAN NCAP Chairperson, Dr. Siti Zaharah binti Ishak and the Technical Committee (TC) is chaired by ASEAN NCAP Secretary-General, Ir. Dr. Khairil Anwar Abu Kassim.

#### **❖ Adult Occupant Protection**

Starting from 2017 until 2020 instead of a separate rating for AOP and COP, a single rating system is introduced in which AOP contributes to 50% of the overall rating with a maximum 36 points from three assessments; offset frontal, side impact and head protection technology (HPT) evaluation.

The test protocol for offset frontal test remains the same except for the inclusion of Q dummies replacing the existing P dummies for child occupant protection assessment. On the other hand, the requirement for side impact test has improved considerably from a legislation test (UN R95) to a more comprehensive test.

In addition, realizing the need to further improve the safety of occupants from side impacts, ASEAN NCAP has introduced additional requirement on the fitment of HPT in which the score is based on Fitment Rating System (FRS).



#### ❖ **Child Occupant Protection**

Protection for children in a vehicle is as important as adult protection. The new COP requirement for 2017–2020 comprising 25% of the overall safety rating. This step is taken to ensure a vehicle receives the highest star award and also provides the best protection for the child.

Child Occupant Protection					
2012–2016 (COP Single Rating)			2017–2020 (25% of the Overall Rating)		
Dynamic Assessment		(24 Points)	Dynamic Assessment		(24 Points)
Frontal Impact	P series dummy		Q series dummy		
		P1.5 P3	Q1.5 Q3		
	Head	3 6	4 4	Head	
	Chest	6 6	2 2	Chest	
	Neck	3 N/A	2 2	Neck	
			4 4	Head	
Side Impact					
CRS Based Assessment		(12 Points)	CRS Installation Assessment		(12 Points)
CRS Marking	8 points per CRS		References List Assessment	10 points	
CRS to Vehicle Interface	4 points per CRS		OEM Assessment	2 points	
Vehicle Based Assessment		(13 Points)	Vehicle Based Assessment		(13 Points)
Use of CRS on the Front Seats	5 points		Provision of Three-point Seatbelts	1 point	
Provision of Three-Points Seatbelts	1 point		Gabarit Installation	2 points	
Gabarit Assessment	2 points		2 Simultaneous Use Seating Positions	2 points	
ISOFIX	3 points		ISOFIX Usability	2 points	
Integrated CRS	2 points		Two or more Largest ISOFIX Positions	1 points	
			Passenger Airbag Warning Marking and Disabling	5 points	

The assessment method has also been improved in the new protocol for dynamic assessment by introducing Q dummies replacing P dummies. Q dummy provides better biofidelic response compared to P dummy. In addition, side impact test assessment has been added to the dynamic assessment criteria. CRS based assessment section has been replaced by CRS installation assessment. As for Vehicle Based Assessment, there will be apparent changes which includes additional requirement on passenger airbag warning, marking and disabling. The list of the CRS required for the assessment is as follows.

CRS Installation Assessment				
	Category	CRS	Direction	Interface
Reference List	Group 0+	Maxi Cosi Cabriofix	Rwd	B _ _ _
	Group 0+/I/II	Combi Malgot	Rwd	B _ _ _
	Group 0+/I/II	Combi Malgot	Fwd	B _ _ _
	Group II/III	Combi Buon Junior Air	Fwd	B _ _ _
	Group 0+	Britax Baby Safe Plus ISOfix Base	Rwd	_ I L _
	Group 0+/I	Maxi Cosi Milofix	Rwd	_ I _ S
	Group 0+/I	Maxi Cosi Milofix	Fwd	_ I _ S
	Group I	Britax Duo Plus	Fwd	_ I _ S
	Group II/III	Britax KidFix XP	Fwd	B I _ _
OEM	Q1.5	(Manufacturer Selection) Baby Safe Plus ISOFIX Base		
	Q3	(Manufacturer Selection) ISOFIX		

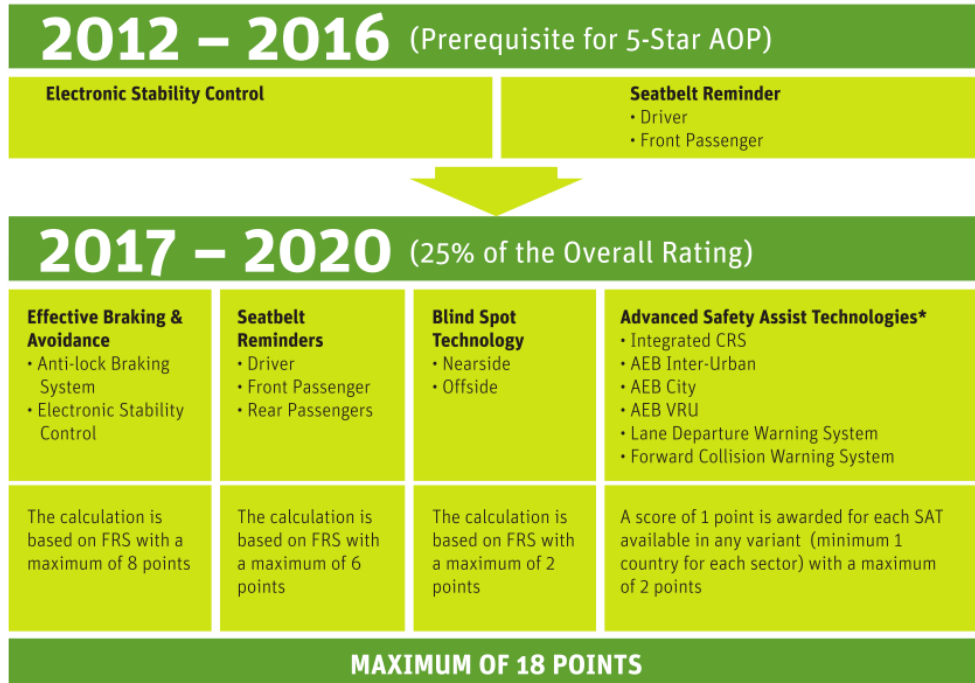


### ❖ ***Safety Assist Technology***

Promotion of Safety Assist Technologies (SATs) has become one of the main pillars in the new rating system for 2017–2020. It contributes 25% of the overall rating with a maximum of 18 points focusing on Effective Braking and Avoidance (EBA), Seatbelt Reminder (SBR), Blind Spot Technology (BST) and Advanced SATs. This differs significantly from previous requirement in which only ESC and frontal SBR systems are considered as prerequisite for 5-Star AOP rating. Furthermore, the score calculation for all four elements is based on FRS except for advanced SATs.

In addition to ESC, ABS is also considered in the new rating system under EBA. Based on ASEAN NCAP's observation, ABS fitment rate in certain ASEAN countries is still lacking and it is still being offered as optional rather than standard equipment. As an encouragement for vehicle manufacturers, incentive is given to those vehicles fitted with rear SBRs in addition to frontal SBR. This is also part of ASEAN NCAP's mission to increase wearing rates among rear passengers beyond legislation approach.

With the vision to reduce the number of lane-changing/merging crashes especially involving motorcycles, ASEAN NCAP introduces additional incentive for vehicle equipped with BST. This is part of ASEAN NCAP's strategic approaches in curbing the number of accidents and injuries involving motorcycles in the region. Furthermore, as a way forward for autonomous vehicle initiative around the world and harmonization with other NCAPs, advanced SATs such as AEB and several others are also included.



\*Manufacturers are encouraged to propose any Advanced SATs subject to ASEAN NCAP approval.

### ❖ **Fitment Rating System**

It is recognized that ASEAN NCAP has changed the landscape of automotive safety in the region. Apart from the increasing number of vehicles with higher ASEAN NCAP ratings, the demand for those vehicles among the consumers is gaining as well. Nevertheless, the positive impact is still imbalance as the safety features of specific models sold are not necessarily similar among the countries in the region and sometimes can be adversely different. Thus, ASEAN NCAP has formulated a Fitment Rating System (FRS) in order to minimize the substandard treatment.

The system applies for technologies i.e., HPT, EBA, SBR and BST. For FRS, ASEAN NCAP has developed a formula for car technology fitment score (CTFS) summarized as follows.

$$CTFS = \frac{\sum_{i=1}^{i=n} \alpha_i CS_i}{\sum_{i=1}^{i=n} CS_i} \times TFS$$

CTFS – Car Technology Fitment Score

CS – Country Score

TFS – Technology Fitment Score

$\alpha$  – Fitment Rating Score

Each CS is determined based on the criteria and  $\alpha$  is listed in the respective FRS tables. It is to be noted that the value of TFS has been set forth for HPT (4 points), EBA (8 points), SBR (6 points), and BST (2 points). As for the CS, the value is based on the sectors the countries represent. The philosophy behind the country score is the 3-5-2 concept that was introduced by ASEAN NCAP in 2013. Generally,



the 10 countries in the region are divided into three tiers (3 [Laos, Cambodia, Myanmar] - 5 [Malaysia, Thailand, Indonesia, the Philippines, Vietnam, 2 [Brunei, Singapore]) based on their similarities in terms of road safety situation and automotive industry. The concept is further refined and categorized into four sectors; Sector 0, Sector 1, Sector 2, and Sector 3. Each country in the same sector represents similar CS. For example, in Sector 0, both Brunei and Singapore carry similar CS of 2 points each.

Sector 0	Sector 1	Sector 2	Sector 3
<ul style="list-style-type: none"> <li>• Brunei</li> <li>• Singapore</li> </ul>	<ul style="list-style-type: none"> <li>• Malaysia</li> <li>• Thailand</li> <li>• Indonesia</li> </ul>	<ul style="list-style-type: none"> <li>• The Philippines</li> <li>• Vietnam</li> </ul>	<ul style="list-style-type: none"> <li>• Laos</li> <li>• Cambodia</li> <li>• Myanmar</li> </ul>
CS 2 points per country	CS 3 points per country	CS 2 points per country	CS 1 point per country


Fitment Type	Details	Fitment Rating Score, $\alpha$
<b>Fitment Rating System for Head Protection Technology</b>		
Option A	Vehicle model is equipped with HPT as standard equipment	1
Option B	Vehicle model is equipped with HPT as optional equipment	0.5
Option C	Vehicle model is not equipped with HPT	0
<b>Fitment Rating System for Effective Braking and Avoidance</b>		
Option A	Vehicle model is equipped with ESC as standard equipment	1
Option B	Vehicle model is equipped with ESC as optional equipment but ABS as standard equipment	0.5
Option C	Vehicle model is not equipped with ESC but equipped with ABS as standard equipment	0.375
Option D	Vehicle model is equipped with ESC and ABS as optional equipment	0.25
Option E	Vehicle model is not equipped with ESC but equipped with ABS as optional equipment	0.125
Option F	Vehicle model is not equipped with either ESC or ABS	0
<b>Fitment Rating System for Seatbelt Reminders</b>		
Option A	Vehicle model is equipped with SBR for driver, front passenger and rear passengers as standard equipment	1
Option B	Vehicle model is equipped with SBR for driver and front passenger as standard equipment but rear passengers as optional equipment	0.75
Option C	Vehicle model is equipped with SBR for driver and front passenger only as standard equipment	0.5
Option D	Vehicle model is equipped with SBR for driver only as standard equipment	0.25
Option E	Vehicle model is not equipped with SBR	0
<b>Fitment Rating System for Blind Spot Technology</b>		
Option A	Vehicle model is equipped with BST for both nearside and offside as standard equipment	1
Option B	Vehicle model is equipped with BST for both nearside and offside as optional equipment	0.5
Option C	Vehicle model is equipped with BST for one side only as standard equipment	0.5
Option D	Vehicle model is equipped with BST for one side only as optional equipment	0.25
Option E	Vehicle model is not equipped with BST	0

### From Dual Rating to Single Star Rating

From 2012, the dual rating system has able to increase the availability of safer cars in the market. ASEAN NCAP recorded almost 90% cars with 4-Star and above in its evaluation until August 2015. The result shows that the current system has benefited the market.

However, the weakness of the system was detected particularly in the promotion of safety. Most of the cars were promoted as country based not on regional based. Hence, manufacturers intend to promote higher ratings compared to the lower ones.

The new rating system emphasizes on current and future. The AOP (current) will be given the most allocation to strengthen the crashworthiness of the cars. The future COP and Safety Assist is resilient to produce and promote better ASEAN car specifications in the future. The basis of the division is equally important to current and future. As collision avoidance is essential, protecting the child in cars is an obligation. Both are equally important to future of safer cars and require similar attention.



	AOP	COP	Safety Assist*			
ODB	16	Dynamic Assessment Frontal	16	Effective Braking & Avoidance	8	
SIDE	16	Dynamic Assessment Side	8	Seatbelt Reminders	6	
HPT Evaluation*	4	Installation of CRS	12	Blind Spot Technology	2	
		Vehicle Based Assessment	13	Advanced SATs	2	
<i>Max. Score (1)</i>	36	49	18			
<i>Normalized Score (2)</i>	actual score / (1)	actual score / (1)	actual score / (1)			
<i>Weighing (3)</i>	50%	25%	25%			
<i>Weighted Score</i>	(2) x (3)	(2) x (3)	(2) x (3)			
<b>Rating</b>	<i>minimum: normalised (2) / actual score by box for the respective star rating</i>					
5-Star	75%	27.0	75%	36.75	60%	10.80
4-Star	65%	23.4	60%	29.40	40%	9.00
3-Star	45%	16.2	30%	14.70	30%	7.20
2-Star	30%	10.8	25%	12.25	20%	3.60
1-Star	20%	7.20	15%	7.35	10%	1.80
					<b>Overall Score</b>	<b>Total</b>
					<b>Min. Overall Score</b>	<b>75%</b>
						<b>65%</b>
						<b>50%</b>
						<b>40%</b>
						<b>30%</b>

**2017-2020  
ASEAN  
NCAP  
RATING**

### ASEAN NCAP Rating Plate – Results Simplified for Public Consumption

The result of the test is primarily for public consumption i.e. for consumers to consider the quality of safety protection offered by the car model based on NCAP assessment. As ASEAN NCAP has moved to a single rating scheme, consumers can simply refer to the star rating which comprises the accumulated score of the three main assessments on the safety aspects of the car model; AOP, COP and SAT.



**About MIROS** – The Malaysian Institute of Road Safety Research (MIROS) is an agency under the Ministry of Transport (MOT) Malaysia focusing on road safety R&D activities.

**About Global NCAP** – Global NCAP is a non-profit organization registered in the United Kingdom which aims to encourage the worldwide availability of independent consumer information about the safety of motor vehicles.

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