



PRESS RELEASE

**EMBARGOED UNTIL 19 DECEMBER 2017
(TUESDAY), 10:00 AM**

ASEAN NCAP – SAFER CARS FOR ASEAN REGION

ASEAN NCAP Q4 2017 Revealed - Two 5 Stars Achievers and Two Zero Stars Results

Kajang, 19 December 2017 – The New Car Assessment Programme for Southeast Asian Countries (ASEAN NCAP) has today announced four new crash test results for the 4th Quarter of 2017. These results are the second set to be released under a new protocol for 2017-2020 using a single rating system comprising Adult Occupant Protection (AOP) at 50% weightage, Child Occupant Protection (COP) at 25% and Safety Assist Technologies (SATs) at 25%. ASEAN NCAP's latest tested models for 2017 are the Perodua Myvi, Toyota Vios, Chery Transcub and Suzuki Carry.

The Perodua Myvi's test was the third ASEAN NCAP assessment for the model, which has shown significant improvements in each iteration. The Perodua Myvi was first tested in 2013 where it received 3-Stars for both AOP and COP. The second assessment was performed in 2014 and the result improved to a 4-Star AOP rating with similar result for its COP. Under the new ASEAN NCAP protocol, the All-New Perodua Myvi performed well in the test achieving **5-Star** rating with an overall score of **88.27 points**. The Myvi's breakdown of the score for each assessment was **45.43 points for AOP, 22.01 points for COP** and **20.83 points for SATs**. The Perodua Myvi has a standard fitment of four airbags and curtain airbag as an option. Additionally, the model is equipped with Seatbelt Reminder System (SBR) for both frontal and rear occupants, Electronic Stability Control (ESC) and Anti-lock Braking System (ABS) as standard in all its variants. The model also includes ISOFIX and top tether as standard. In addition, the All-New Perodua Myvi is also offering another Safety Assist Technology in its higher variant, Autonomous Emergency Braking (AEB City).

Toyota Vios was the first ASEAN NCAP official test performed back in 2012. In that assessment, the Vios received a 4-Star rating for AOP and 2-Star for the COP category. This year, the Toyota Vios was awarded with a **5-Star** rating under the 2017-2020 protocol obtaining an overall score of **81.63 points**. This score was accumulated from the following scores; **44.70 points for AOP, 21.66 points for the COP** and **15.28 points for its SATs** result. The Vios result is also extended to its twin model, Toyota Yaris Ativ, which is developed specifically for the Thai market. The Yaris Ativ has comparable occupant protection but comes with a smaller engine of 1.2 L in order to comply with Thailand's eco car policy. The 5-Star rated Toyota Vios and Yaris Ativ are fitted with seven airbags standard across all variants.



Both models have active safety features with standard SBR for frontal occupants, ESC and ABS. For the restraint method, ISOFIX and top tether are standard across variants.

This year for the first time ASEAN NCAP performed crash tests on two light commercial vehicles offered in several countries in the ASEAN region. The tested models were Chery Transcab and Suzuki Carry, both were assessed under the ASEAN NCAP 2017-2020 protocol.

Based on the ASEAN NCAP test, Chery Transcab was awarded with **0-Star** with an overall score of **17.04 points**. The model only obtained 17.04 points for its side impact assessment under the AOP category in which the COP was not tested because the vehicle has only a single cab with no rear passenger compartment. The Transcab also does not offer any active safety features hence, no points were given for that category.

The Suzuki Carry model received close to the same result as the Transcab. Suzuki Carry scored **17.14 points** for its overall score which makes it fall under the category of **0-Star** rating. The model also scored points only for its AOP domain but unlike Transcab, the Carry only received points for its frontal offside test. There was no assessment performed for the COP as the model has no rear passenger compartment. The model also did not score any points for the SATs category since it does not offer any active safety features.

Malaysian Institute of Road Safety Research (MIROS) Chairman, the Honorable Tan Sri Datuk Sri Lee Lam Thye said:

"I would like to take this opportunity to congratulate the OEMs as well as ASEAN NCAP who have worked hard to realize our aspiration to see 5-Star vehicles on 5-Star roads driven by 5-Star road users. I would also like to congratulate Perodua and Toyota for achieving excellent results in the ASEAN NCAP tests and wish to call on Chery and Suzuki to work harder to improve the safety level of their vehicles for the ASEAN region."

ASEAN NCAP Chairman, Prof. Dr. Wong Shaw Voon said:

"It has been a good year for vehicle owners in the Southeast Asian countries. Despite the slow response in the form of voluntary tests from car manufacturers, we are pleased that those who have been assessed by ASEAN NCAP this year have made outstanding improvement in their safety performance. However, we are disappointed knowing that there are still 0-Star cars being sold in the market especially for transporting goods. These types of vehicles spent the majority of their time on the road delivering goods hence, exposing the drivers and passengers to risk. On behalf of ASEAN NCAP I would like to strongly urge the involved manufacturers to improve the safety level of their respective vehicles for the betterment of road safety."

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

“We are proud that two of the most popular models in Malaysia and the ASEAN region achieved 5-Star rating in this assessment. Both models obtained excellent results with a good distribution of scores between AOP, COP and SATs. In addition to passenger cars, this year we focused on commercial vehicles that are also popularly used as a passenger vehicle in some of the ASEAN countries. By testing this type of model, ASEAN NCAP hopes to highlight the safety level of such vehicles and thus encourages companies purchasing these vehicles to demand better safety level as required by Global NCAP Fleet Safety Guide and Safer Car Purchasing Policy.”

The overview of ASEAN NCAP Q4 2017 results are as follows.

- ❖ The All-New **Perodua Myvi** has moved one level up by obtaining **5-Star** ASEAN NCAP rating with an overall score of **88.27 points**. From this score the Myvi scored 45.43 points for AOP, 22.01 points for COP and 20.83 points for SATs.
- ❖ The **Toyota Vios** overall score for this assessment was **81.63 points** which makes it fall within the category of **5-Star**. The overall score can be broken down according to each domain with 44.70 points for AOP, 21.66 points for the COP and 15.28 points for SATs category.
- ❖ The **Chery Transcab** was awarded with **0-Star** at an overall score of **17.04 points**. This light commercial vehicle's points were based from its AOP domain, specifically from its side impact score.
- ❖ The **Suzuki Carry**, a light commercial vehicle with a single cab, scored low under the ASEAN NCAP new protocol. The model received an overall score of **17.14 points**, which was based on its frontal offset assessment. This score placed the Carry with **0-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).

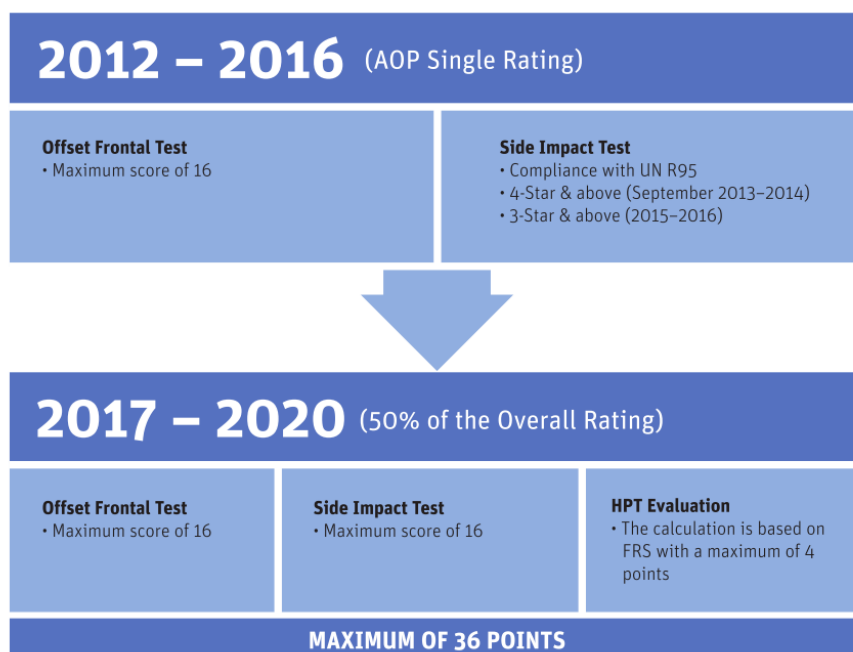
Currently, ASEAN NCAP Steering Committee (SC) is chaired by ASEAN NCAP Chairman, Prof. Dr. Wong Shaw Voon and the Technical Committee (TC) is chaired by ASEAN NCAP Secretary-General, Ir. Dr. Khairil Anwar Abu Kassim.

❖ 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. 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		Frontal Impact	Q series dummy	
		P1.5 P3			Q1.5 Q3
	Head	3 6		Head	4 4
	Chest	6 6		Chest	2 2
	Neck	3 N/A	Side Impact	Neck	2 2
				Head	4 4
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				
Reference List	Category	CRS	Direction	Interface
	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		

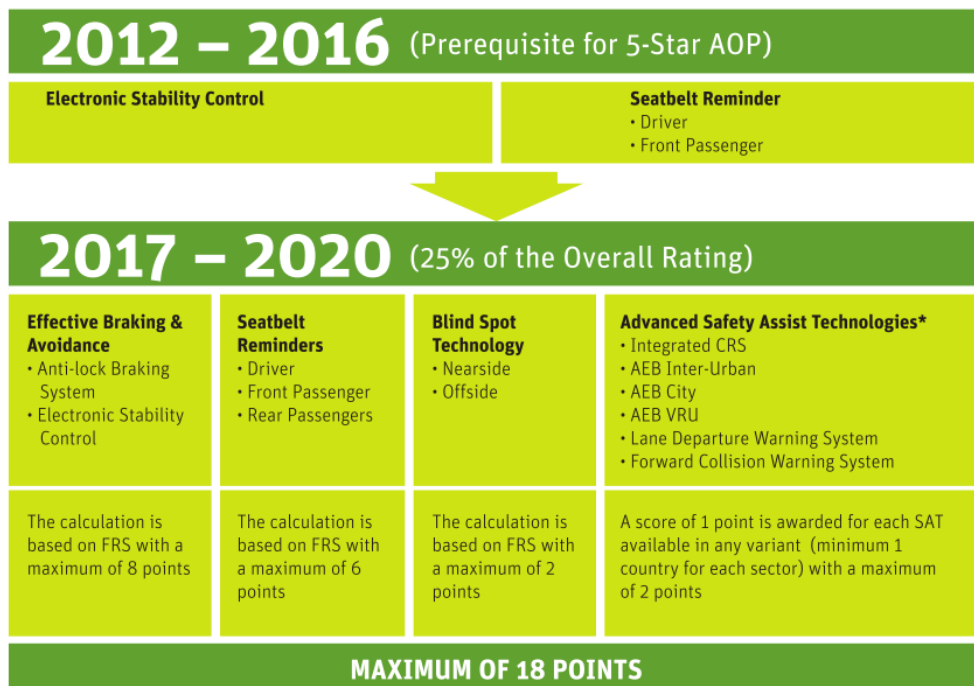
❖ **Safety Assist Technology**

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
 α – Fitment Rating Score

Each CS is determined based on the criteria and α 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"> • Brunei • Singapore 	<ul style="list-style-type: none"> • Malaysia • Thailand • Indonesia 	<ul style="list-style-type: none"> • The Philippines • Vietnam 	<ul style="list-style-type: none"> • Laos • Cambodia • Myanmar
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, α
Fitment Rating System for Head Protection Technology		
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
Fitment Rating System for Effective Braking and Avoidance		
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
Fitment Rating System for Seatbelt Reminders		
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
Fitment Rating System for Blind Spot Technology		
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 been 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	2017-2020 ASEAN NCAP RATING
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%		Overall Score
<i>Weighted Score</i>	(2) x (3)		(2) x (3)		(2) x (3)		Total
Rating	<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	75%
4-Star	65%	23.4	60%	29.40	40%	9.00	65%
3-Star	45%	16.2	30%	14.70	30%	7.20	50%
2-Star	30%	10.8	25%	12.25	20%	3.60	40%
1-Star	20%	7.20	15%	7.35	10%	1.80	30%

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.

Secretary-General: Mr. David Ward (d.ward@globalncap.org) (www.globalncap.org)

Other Contacts:

ASEAN NCAP Secretary-General: Ir. Dr. Khairil Anwar Abu Kassim (khairilanwar@miros.gov.my) - (aseanncap@gmail.com)

ASEAN NCAP Communications: Salina Mustaffa (salina@miros.gov.my)

MIROS Corporate & Media Relations: Tan Choon Yeap (cytan@miros.gov.my)