PRESS RELEASE

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ASEAN NCAP – SAFER CARS FOR ASEAN REGION

5 Stars for Honda CR-V under new ASEAN NCAP rating system and inaugural result for 2017

Kajang, 17 August 2017 – Beginning 2017, the New Car Assessment Programme for Southeast Asian Countries (ASEAN NCAP) has introduced a new rating system to assess vehicle safety levels. The new system, is a single rating system, which consists of three assessments, Adult Occupant Protection (AOP) (50%), Child Occupant Protection (COP) (25%), and Safety Assist Technologies (SATs) (25%), combined to an overall rating. The previous rating system, used from 2012 to 2016 was based on a dual rating comprising AOP and COP which produced two final scores. One of the drawbacks was that manufacturers tended to promote higher ratings compared to lower ones. The new combined score avoids this.

Honda has taken a proactive step of being the first manufacturer in the ASEAN region to undergo an ASEAN NCAP test using the new rating assessment system. The selected vehicle, the Honda CR-V, performed extremely well achieving **5-Star** rating with the overall score **of 88.80 points.** The breakdown of the score across each domain, was **47.25 points for AOP, 22.84 points for COP and 18.71 points for SAT**.

The new Honda CR-V was first marketed in the ASEAN region in April 2017 in Thailand. The model is equipped with dual frontal airbags, three-point seatbelts, Seatbelt Reminders (SBR) for both driver and front passenger, all as standard fitments. Other fitments such as side airbags, curtain airbags, blind spot technology, and driver attention monitor are also available to most of the ASEAN market. The seven-seater SUV is also fitted with standard Electronic Stability Control (ESC) and Anti-lock Braking System (ABS). For the child restraint method, ISOFIX and top tether are standard across variants.

As part of Honda's commitment to safety, Honda introduced Honda Sensing Technology in the 2017 model. The Honda Sensing comprising Lane Keeping Assist System (LKAS), Road Departure Mitigation (RDM), Adaptive Cruise Control (ACC) and Collision Mitigation Braking System (CMBS). The technologies are only available on the higher variant models.

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

"We are pleased that ASEAN NCAP's first result release under the new rating for Honda CR-V obtained a 5-Star result in the overall score. This shows that manufacturers are dedicated to produce safer cars for the ASEAN region in line with our new safety protocol. Furthermore, the Honda CR-V's result will be a catalyst for other vehicles to produce safer cars for this region. Although Honda Sensing is currently only available in the top range variant, we look forward to have it standard across all variants in the coming future."

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

"Honda CR-V's overall safety level is consistent with those produced for other regions. This is apparent when we make a comparison with other NCAP's results, i.e. Euro NCAP and Australasian NCAP. With the new CR-V's 5-Star rating, Honda is truly committed to its global safety concept of 'Safety for Everyone'."

The gist of ASEAN NCAP Q3 2017 results are as follows.

- The current tested **Honda CR-V**, a right-hand-drive model, obtained an overall score of **88.8 points**, which falls under the range of **5-Star** rating. Based on the score, the SUV scored 47.25 points for AOP category, 22.84 points for COP, and it obtained 18.71 points for SAT domain.

- ASEAN NCAP previously tested the same model in 2014 under the 2012-2016 protocol. The tested model is a left-hand-drive variant in which it scored **15.46 points** for the AOP category. From the score, the CR-V received **5-Star** for variant with both ESC and dual frontal SBR while **4-Star** rating for variant that has no ESC. For the COP category, the SUV received **4-Star** rating with **86%** compliance.

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).

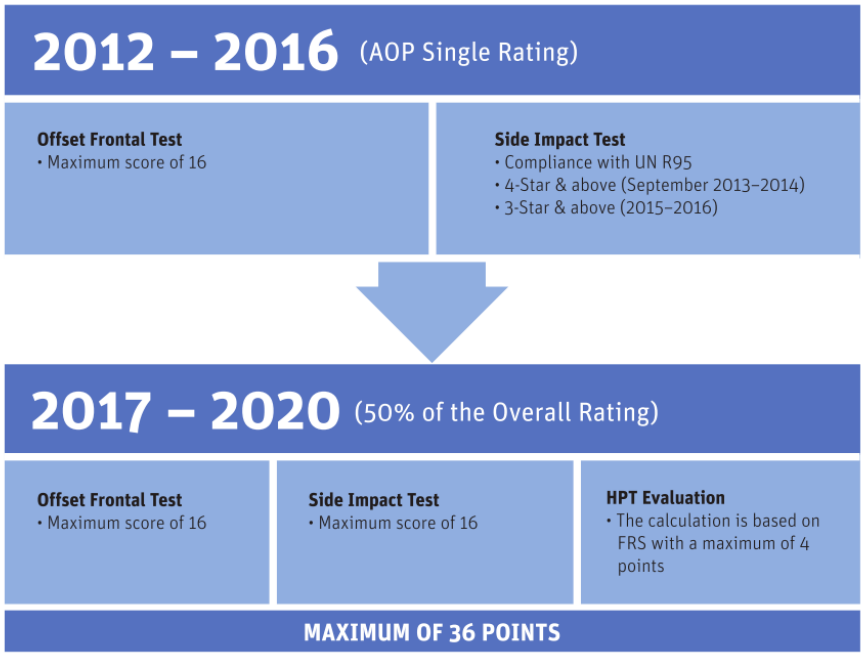
Currently, ASEAN NCAP Steering Committee (SC) is chaired by the Director-General of MIROS/ASEAN NCAP Chairman, Prof. Dr. Wong Shaw Voon and the Technical Committee (TC) is chaired by the ASEAN NCAP Secretary-General, Mr. Khairil Anwar Abu Kassim.

- ***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)
		P series dummy				Q series dummy	
		P1.5	P3			Q1.5	Q3
Frontal Impact	Head	3	6	Frontal Impact	Head	4	4
	Chest	6	6		Chest	2	2
	Neck	3	N/A		Neck	2	2
				Side Impact	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 reponse compared to P dummy. In addition, side impact test assessment has been added to the dynamic assessment criteria. CRS based assessment section has been repaced 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		

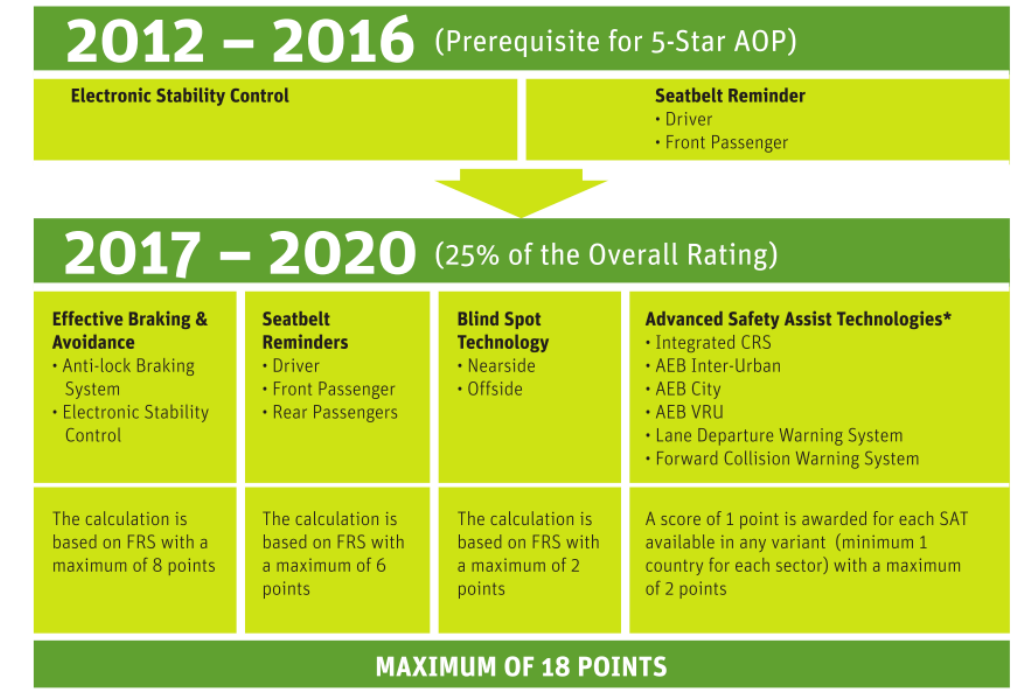
❖ ***Safety Assist Technology***

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.



❖ ***Fitment Rating System***

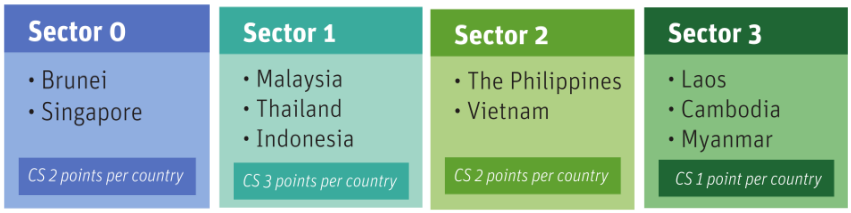
It is recognized that ASEAN NCAP has changed the landscape of automotive safety in the region. Apart from the increasing number of vehicles with higher ASEAN NCAP ratings, the demand for those vehicles among the consumers is gaining as well. Nevertheless, the positive impact is still imbalance as the 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.

$$CTFS = \frac{\sum_{i=1}^{i=n} \propto_i CS_i}{\sum_{i=1}^{i=n} CS_i} \; x \; TFS$$

CTFS – Car Technology Fitment Score
CS – Country Score
TFS – Technology Fitment Score
∝ – Fitment Rating Score

Each CS is determined based on the criteria and ∝ 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 intor 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.



Fitment Type	Details	Fitment Rating Score, ∝
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 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*		2017–2020 ASEAN NCAP RATING
	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	
Max.Score (1)		36		49		18	
Normalized Score (2)	actual score / (1)		actual score / (1)		actual score / (1)		
Weighing (3)	50%		25%		25%		Overall Score
Weighted Score	(2) x (3)		(2) x (3)		(2) x (3)		Total
Rating	***minimum: normalised (2) / actual score by box for the respective star rating***						Min. Overall Score
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.

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