



Safer Cars for ASEAN Region

Introduction to ASEAN NCAP & 2021-2025 Protocol

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Vehicle Safety Course 2024/007

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FIA Foundation
for the Automobile and Society

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NCAP



What is NCAP?

- NCAP stands for “**New Car Assessment Programme**”
- NCAP’s role is to provide consumer a **realistic** and **independent** assessment on the **safety performance** of vehicles **recently launched** in the markets.
- NCAP Family
 - IIHS
 - 5-Star Safety Ratings (NHTSA)
 - JNCAP
 - ANCAP
 - Euro NCAP
 - KNCAP
 - CNCAP
 - Latin NCAP
 - ASEAN NCAP
 - Bharat NCAP



- New Car Assessment Programme for Southeast Asian Countries was formed with the signing of MoU between MIROS and Global NCAP on 8th December 2011
- Objective: to promote a market for safety by raising awareness to the car buying public and encouraging manufacturers to build safer vehicles

Difference between NCAP and Regulation

Regulation	NCAP
Mandatory requirement	- Consumer information - Voluntary
Minimum safety level for all vehicles on the road	Not all the models and versions sold in the market are assessed
	- Always need to distinguish vehicles one from another in terms of safety performances, mainly on 2 aspects: crashworthiness and active safety ➤ Crashworthiness = how well the car protects its occupant in a crash ➤ Active safety = how the car avoids/mitigates the crash from occurring
	Requirement higher than regulation, for example: frontal impact test speed 56 km/h vs. 64 km/h

- ASEAN NCAP's mission is in line with UN's aspiration
 - To elevate the safety level of passenger cars sold in South East Asia
- Passive safety
 - To protect the occupants and mitigate the severity of injury in the event a crash occurred
- Active safety
 - The fitment function to prevent crashes from occurring or reduce the severity of injuries sustained by the occupants

ASEAN NCAP 2012-2016 Rating Plate

Prerequisite to
obtain 5-Star
rating



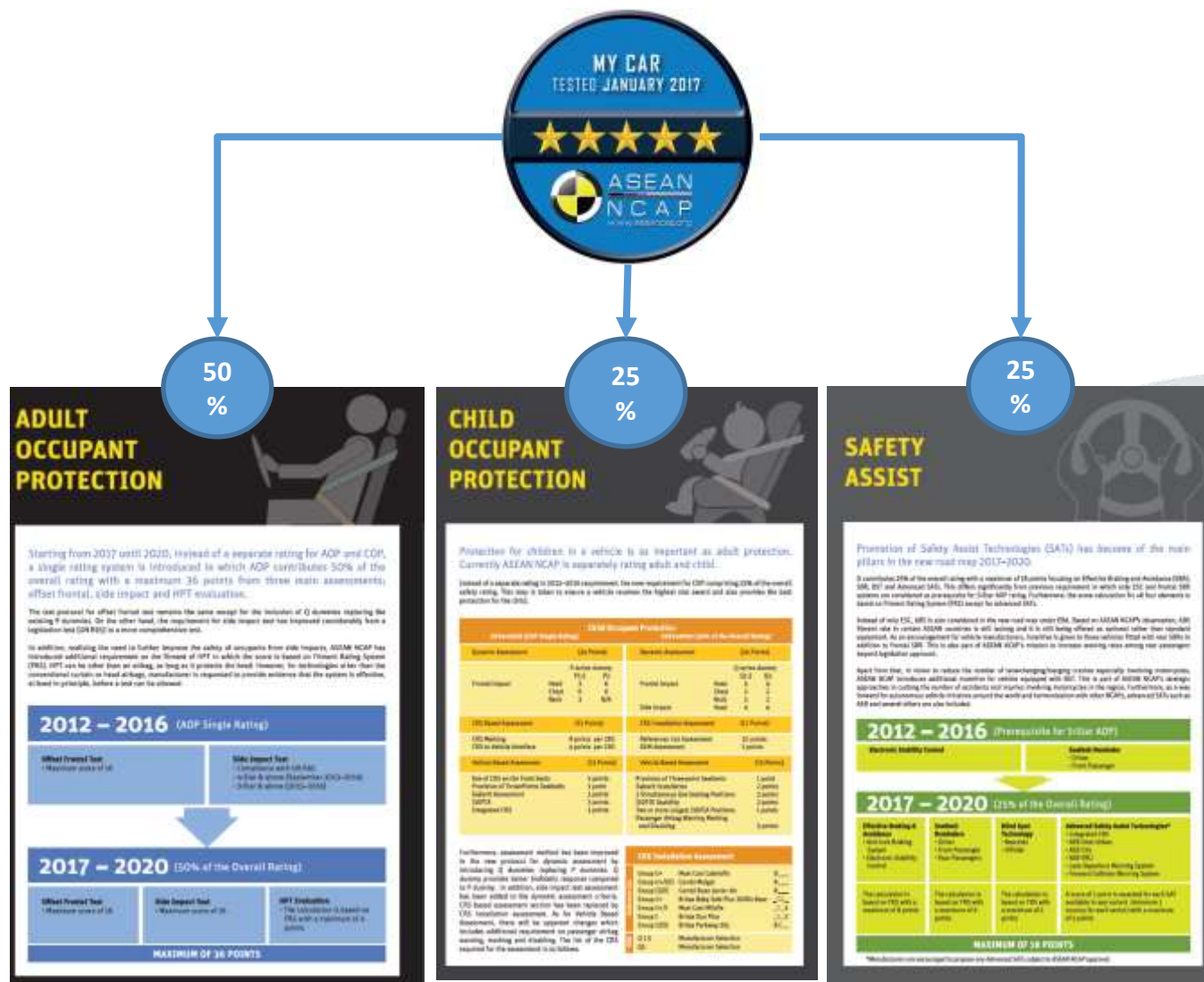
AOP Rating

COP Rating

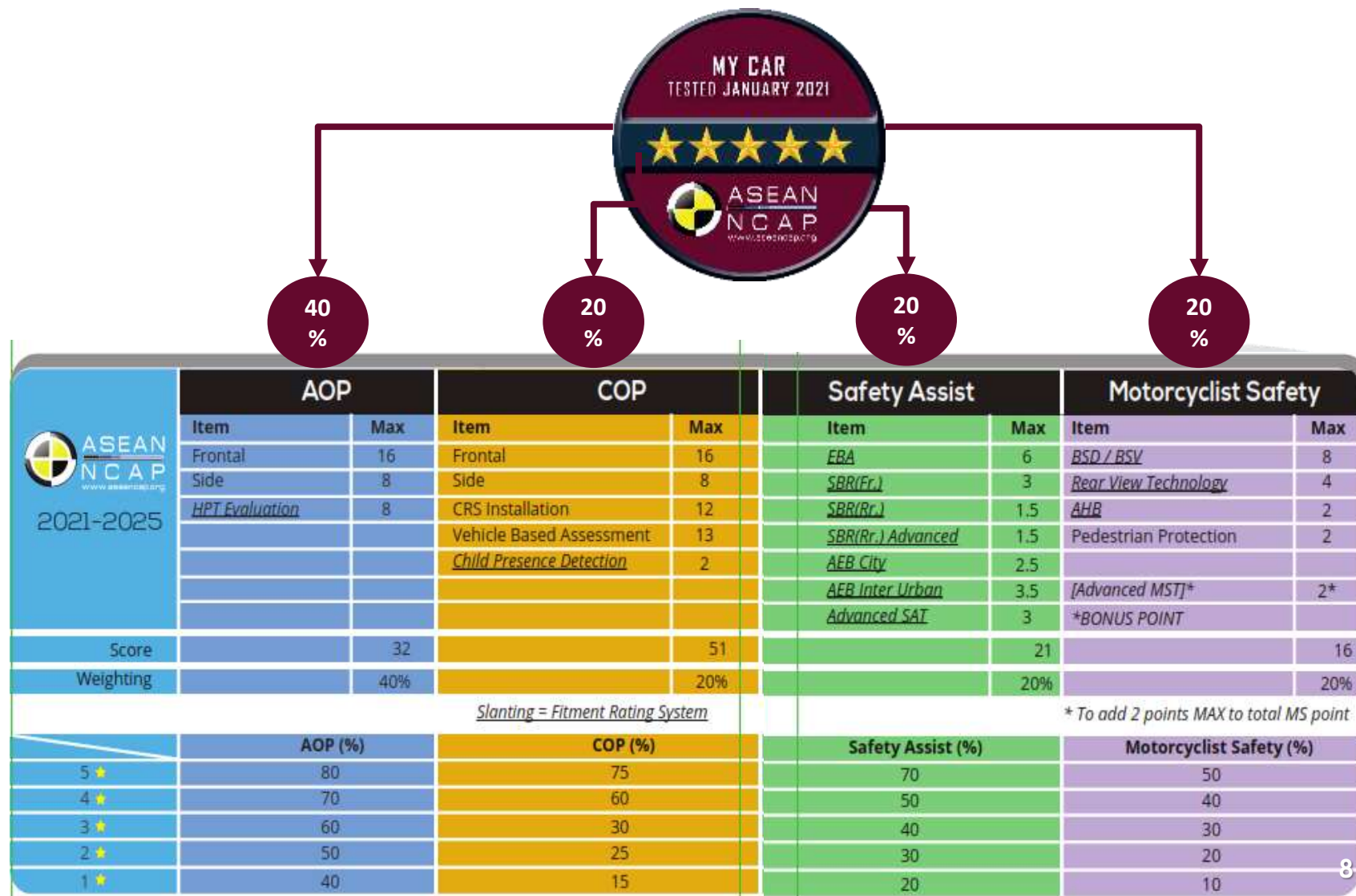
Side Impact
Result

Roadmap 2017-2020

Weightage Assessment



Roadmap 2021-2025 Weightage Assessment



ASEAN NCAP Result Report

TOYOTA VIOS (2023)

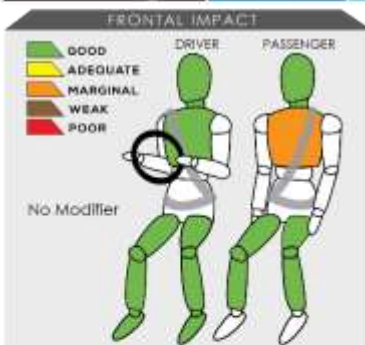


Variant G	Year Built 2023
Model Year 2023	Vehicle Category SEDAN
Engine Capacity 1.5 L	Kerb Mass 1035 kg
No. of Airbags 6	Test Lab PCB

TESTED VARIANT ORIGIN: MALAYSIA FOR MALAYSIA

OTHER ASEAN PRODUCTION (ALL VARIANTS): THAILAND FOR BRUNEI, INDONESIA, LAOS, CAMBODIA

ADULT OCCUPANT PROTECTION	FRONTAL IMPACT	SIDE IMPACT	HEAD PROTECTION TECHNOLOGY	TOTAL
	14.56	8.64	7.00	28.20



Data acquired from the test dummy showed there was marginal protection to the passenger's chest. Overall, the vehicle's frontal occupant compartment remained stable in the frontal offset test.



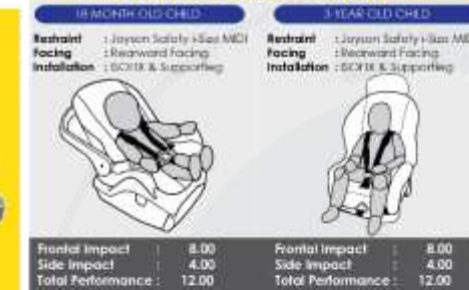
There was weak protection given to the driver's chest during the side impact test.

SAFETY ITEMS (PASSIVE)

ITEMS	REGION	ASEAN
Airbags	Driver	Standard on all variants
	Passenger	Standard on all variants
	Side (2)	Available as standard or optional
	Curtain (2)	Available as standard or optional
	Knee	Not available
Seatbelts	Retractor Pre-tensioner & Load Limiter for Driver	Standard on all variants
	Retractor Pre-tensioner & Load Limiter for Passenger	Standard on all variants

CHILD OCCUPANT PROTECTION	DYNAMIC TEST	VEHICLE BASED	INSTALLATION	CHILD DETECTION	TOTAL
	24.00	8.00	10.43	0.00	42.43

DYNAMIC TEST ASSESSMENT

18 MONTH OLD CHILD		3 YEAR OLD CHILD	
Restraint Facing	Forward Facing	Restraint Facing	Forward Facing
Installation	1. Jayson Safety Vios MDI 2. Rearward Facing 3. ISOFIX & Supporwing	Installation	1. Jayson Safety Vios MDI 2. Rearward Facing 3. ISOFIX & Supporwing
			
Frontal Impact	8.00	Frontal Impact	8.00
Side Impact	4.00	Side Impact	4.00
Total Performance	12.00	Total Performance	12.00

CRS INSTALLATION ASSESSMENT

CRS	DIRECTION	SEAT POSITION						
		FRONT			2ND ROW			
		PASSENGER	LEFT	RIGHT	LEFT	CENTER	RIGHT	
Peg-Pinette Pass. Viosge is	Front	EXEMPT	PASS	PASS	PASS	N/A	N/A	N/A
Jale Stages	Front	EXEMPT	PASS	PASS	PASS	N/A	N/A	N/A
Jale Stages	Front	PASS	PASS	PASS	PASS	N/A	N/A	N/A
Control Buss Junior Air	Front	PASS	PASS	PASS	PASS	N/A	N/A	N/A
Most Cool Cabriolet - Family Fix	Front	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A
Jale Every Stage Fix	Front	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A
Jale Every Stage Fix	Front	EXEMPT	PASS	PASS	PASS	N/A	N/A	N/A
Most Cool Titan Pro	Front	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A
Belux KidFix 2 P	Front	PASS	PASS	PASS	PASS	N/A	N/A	N/A
Jayson Safety Systems 1-Size MDI*	Front	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A
Jayson Safety Systems 1-Size MDI*	Front	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A

PASS: install without problem, FAIL: safety critical problem, EXEMPT: installation not allowed, N/A: Not available
Manufacturer's instruction

ASEAN NCAP Result Report (cont.)

SAFETY ASSIST	EFFECTIVE BRAKING & AVOIDANCE	SEATBELT REMINDERS	AUTONOMOUS EMERGENCY BRAKING	ADVANCED SATs	TOTAL
	4.00	4.30	3.94	2.42	16.88

ITEMS	ASEAN
Effective Braking & Avoidance	
Anti-lock Braking System	Standard on all variants
Electronic Stability Control	Standard on all variants
Seatbelt Reminders	
Driver	Standard on all variants
Front Passenger	Standard on all variants
Rear Passengers	Standard on all variants
Rear Seat Occupant Detection	Not available
Autonomous Emergency Braking	
City	Available as standard or optional
Inter-Urban	Available as standard or optional
Pedestrian	Available as standard or optional
Advanced Safety Assist Technologies	
Lane Departure Warning System	Available as standard or optional
Forward Collision Warning System	Available as standard or optional
Lane Keep Assist	Available as standard or optional

AUTONOMOUS EMERGENCY BRAKING ASSESSMENT



ASEAN NCAP is introducing the Autonomous Emergency Braking (AEB) system functionality assessment in its new 2021-2025 protocol. In the protocol, ASEAN NCAP assessed the functionality and effectiveness of AEB City (C2C: rear stationary) and AEB Inter-Urban (C2C: rear moving) systems fitted inside the vehicle in performing emergency braking at several speeds against another preceding vehicle. Both the AEB City and Inter-Urban systems are equipped either as standard or optional fitment in the Toyota Vios across all variants. In this assessment, ASEAN NCAP confirms the technologies have functioned according to the ASEAN NCAP requirements.

MOTORCYCLIST SAFETY	BLIND SPOT DETECTION	REAR VISUALIZATION	HEADLIGHT	PEDESTRIAN	ADVANCED MST	TOTAL
	3.33	0.00	1.25	2.00	0.00	8.58

ITEMS	ASEAN
Blind Spot Detection	
Nearside	Available as standard or optional
Offside	Available as standard or optional
Rear Visualization	
Advanced Rear Visualization	Not available
Headlight	
Auto High Beam	Available as standard or optional
Pedestrian	
Pedestrian Protection	Standard on all variants
Advanced Motorcyclist Safety Technology	
Nil	-

BLIND SPOT DETECTION ASSESSMENT



Starting from the 2017-2020 protocol, ASEAN NCAP had introduced assessment on the functionality of Blind Spot Technology fitted inside the assessed vehicle. ASEAN NCAP continues the assessment under the new Motorcyclist Safety pillar for the new 2021-2025 protocol. The new Toyota Vios is equipped with Blind Spot Detection (BSD) on both sides of the vehicle either as standard or optional fitment across all its variants. In this assessment, ASEAN NCAP confirms the technology has functioned according to the ASEAN NCAP requirements on both sides of the vehicle.

ASEAN NCAP Result Report (cont.)



OVERALL RATING

The Toyota Vios is one of the first few models that ASEAN NCAP assessed in the beginning of its establishment. The Vios obtained 4-Star rating for the Adult Occupant Protection (AOP) category in the first assessment and 48% compliance for the Child Occupant Protection (COP) category. The model was then assessed for the second time in 2017 in which it achieved 5-Star under the 2017-2020 protocol. The new Vios underwent ASEAN NCAP assessment for the third time under the current 2021-2025 protocol with the sedan is equipped with standard fitment of Electronic Stability Control (ESC), Anti-lock Braking System (ABS), Seatbelt Reminder System (SBR) for frontal and rear seats occupants and Pedestrian Protection technology across all its variants. Majority of the Vios market is fitted with standard 6 airbags however, one of the markets offers 2 airbags only. Additionally, the sedan offers safety assist technologies either as standard or optional fitment namely Autonomous Emergency Braking (AEB) City, AEB Inter-Urban, AEB Pedestrian, Lane Departure Warning (LDW), Forward Collision Warning (FCW), Lane Keep Assist (LKA), Blind Spot Detection (BSD) on both sides of the vehicle and Auto High Beam (AHB). The Toyota Vios performed well in the assessment where it successfully obtained an overall score of 76.70 points. The totalled score from the four categories—AOP, COP, Safety Assist (SA) and Motorcyclist Safety (MS)—have made the Vios eligible to be awarded with 5-Star ASEAN NCAP rating.

	AOP			COP			SAFETY ASSIST			MS			2021 - 2025 ASEAN NCAP RATING
	Item	Point	Max	Item	Point	Max	Item	Point	Max	Item	Point	Max	
	CEB	14.55	14.00	FRONTAL	14.00	14.00	ABS*	4.00	4.00	RDV/BSV	8.00	8.00	5
	NCB	8.44	8.00	SDE	8.00	8.00	SBR	4.50	4.00	ARV	-	4.00	
	NET Evaluation	7.50	8.00	Initiation	15.43	13.00	AEB City	1.43	2.00	AHB	1.25	2.00	
				Vehicle based COP†	8.00	13.00	AEB Inter-Urban	2.33	3.50	Ped. Protection	2.00	2.00	
							Advanced SAF†	2.40	3.00	Advanced MS†	-	2.00	
Score		39.30	33.00		42.43	31.00		16.00	21.00		8.58	16.00	OVERALL SCORE 76.70
Normalized Score		0.69			0.63			0.63			0.53648		
Weighting		40%			30%			20%			10%		
Weighted Score		15.72			12.73			4.20			0.86		
Maximum Star Rating		5			5			5			5		

*Bonus Point

Programs to Promote Vehicle Safety

- ASEAN Automobile Safety Forum
- ASEAN NCAP Grand Prix
- Vehicle Safety Course
- Stop the Crash Partnership



- Website – www.aseanncap.org
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SEARCH FOR SAFETY

New Car Assessment Programme for Southeast Asian Countries

LATEST RESULT

New Car Assessment Program for Southeast Asian Countries (ASEAN NCAP), a new addition to the NCAP family, is targeted to elevate vehicle safety standards, raise consumer awareness and thus encourage a market for safer vehicles in the region.

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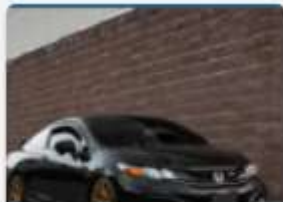
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OUR TEST



The Ratings Explained (20...



Vehicle Selection



Guidelines



2021-2025 Protocols (No. ...



2021-2025 Protocols (No. ...

OUR TEST

2021-2025 Protocols (No. 1-10)

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ASEAN NCAP Overall Assessment Protocol

Version 2.0 – From November 2019

Version 2.1 – From January 2020



ASEAN NCAP Vehicle Selection, Specification, Testing and Retesting

Version 1.0 – From November 2019



ASEAN NCAP Fitment Rating System

Version 1.1 – From November 2019



ASEAN NCAP Assessment Protocol - Adult Occupant Protection

RESULTS

On this page you will find the ratings of commercial cars tested by ASEAN NCAP on automated driving technologies. For its 2021 assessment of Commercial Car Safety, ASEAN NCAP has developed dedicated test and assessment protocols, looking into the Safety Assist Performance of these cars.

HOW SAFE IS YOUR CAR?

Search Your Vehicle & Model

Make

Model

Search

Reset

You Also May Choose Your Vehicle Class

Search Your Vehicle Class

Search

Reset



HONDA ACCORD (2024)

e:HEV RS

2023

Full Results



MITSUBISHI TRITON (2023)

DOUBLE CAB

2023

Full Results



PROTON S70

EXECUTIVE

Result Page - Model

HONDA ACCORD (2024)



2023

Large Family Car



Download Full Report



Adult Occupant



Child Occupant



Safety Assist



Motorcyclist Safety



Specifications: Adult Occupant Protection **Child Occupant Protection** Safety Assist Technology Variant Availability Motorcyclist Safety Value

DYNAMIC ASSESSMENT			
CHILD DUMMY	FRONTAL IMPACT	SIDE IMPACT	TOTAL
Q1.3	7.91	4.00	11.91
Q2	8.00	4.00	12.00

CRS INSTALLATION ASSESSMENT								
CRS	DIRECTION	FRONT	SEATING POSITION					
			PASSENGER	LEFT	CENTRE	RIGHT	LEFT	CENTRE
RESERVED FOR VARIOUS SE	RWD	EXEMPT	PASS	PASS	PASS	PASS	NA	NA
JOE STAGES	RWD	EXEMPT	PASS	PASS	PASS	PASS	NA	NA
JOE STAGES	RWD	PASS	PASS	NA	PASS	PASS	NA	NA
COMBI SUON JUNIOR AM	RWD	PASS	PASS	NA	PASS	PASS	NA	NA
MAXI COB CABRIOLE + FAMILY PK	RWD	EXEMPT	PASS	EXEMPT	PASS	PASS	NA	NA
JOE EVERY STAGE PK	RWD	EXEMPT	PASS	EXEMPT	PASS	PASS	NA	NA
JOE EVERY STAGE PK	RWD	EXEMPT	PASS	PASS	PASS	PASS	NA	NA
MAXI COB TITAN PRO	RWD	EXEMPT	PASS	EXEMPT	PASS	PASS	NA	NA
BRYAN MOOK S II	RWD	PASS	PASS	PASS	PASS	PASS	NA	NA
HONDA BABY & KIDS 1500	RWD	EXEMPT	PASS	EXEMPT	PASS	PASS	NA	NA
HONDA BABY & KIDS 1500	RWD	EXEMPT	PASS	EXEMPT	PASS	PASS	NA	NA

PASS - Install Without Problem, FAIL - Safety Critical Problem, EXEMPT - Installers Not Allowed, NA - Not Available
Manufacturer's Selection

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ASEAN NCAP Won Two Awards at Asia Automotive Award 2023

Categories: News

Kajang, Malaysia, 5 December 2023 – The New Car Assessment Program for Southeast Asian Countries (ASEAN NCAP) is proud to announce that we are one of the recipients of the Asia Automotive Award (AAA) 2023 organized by Motonation...

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The New Mitsubishi Triton Scored 5-Star in ASEAN NCAP 2021-2025 Assessment

Categories: News, Press

Kajang, Malaysia, 1 December 2023 – As we neared the end of 2023, the New Car Assessment Program for Southeast Asian Countries or ASEAN NCAP conducted its first test on a pickup truck under the 2021-2025 assessment protocol. The test...

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PROTON's Latest Sedan Achieved 5-Star ASEAN NCAP Rating

Categories: News, Press

Kajang, Malaysia, 28 November 2023 – PROTON, one of Malaysia's national car brands, released its latest

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FAQ

Why do we need another NCAP in ASEAN since most cars are tested in other NCAP programs around the world?	+
How ASEAN NCAP can help in making the decision to buy a car?	+
Will a large car and a small car perform the same in a collision if both scored the same stars in ASEAN NCAP?	+
What is the purpose of NCAP in ASEAN since each country has set standards for cars before they are allowed to enter the market?	+
What is the difference between ASEAN NCAP frontal test and UNECE regulation frontal test (R94)?	+
I read somewhere that 5-star requirement in ASEAN NCAP includes fitment of ESC and SBR technology? How do I differentiate 5-star cars that do not have those installed from solid 4-star cars?	+
What is the test speed implemented in the ASEAN NCAP test crash assessment?	+
What is the area of assessment for ASEAN NCAP rating?	+
The car that is used for crash test assessment in ASEAN NCAP is provided by the manufacturers or bought by ASEAN NCAP?	+

ASEAN NCAP 2021-2025

 2021 - 2025	AOP			COP			SAFETY ASSIST			MOTORCYCLIST		
	Item	Point	Max	Item	Point	Max	Item	Point	Max	Item	Point	Max
	ODB	-	16.00	Frontal	14.83	16.00	EBA	3.00	6.00	BSD/BSV	0.40	8.00
	SIDE	-	8.00	Side	6.75	8.00	SBR	-	6.00	ARV	2.00	4.00
	HPT Evaluation	7.40	8.00	Installation	11.11	12.00	AEB City	2.39	2.50	AHB	0.95	2.00
				Vehicle Based	13.00	13.00	AEB Inter-Urban	2.54	3.50	Ped. Protection	-	2.00
				CPD	0.25	2.00	Advance SATs	2.00	3.00	Advance MST*		2.00
Score		7.40	32.00		45.94	51.00		9.93	21.00		3.35	16.00
Normalized Score		0.23			0.90			0.47			0.209375	
Weighting		40%			20%			20%			20%	
Weighted Score		9.25			18.01			9.45			4.19	
Maximum Star Rating		0			5			3			2	

Adult Occupant Safety (AOP) Assessment



Frontal
ODB



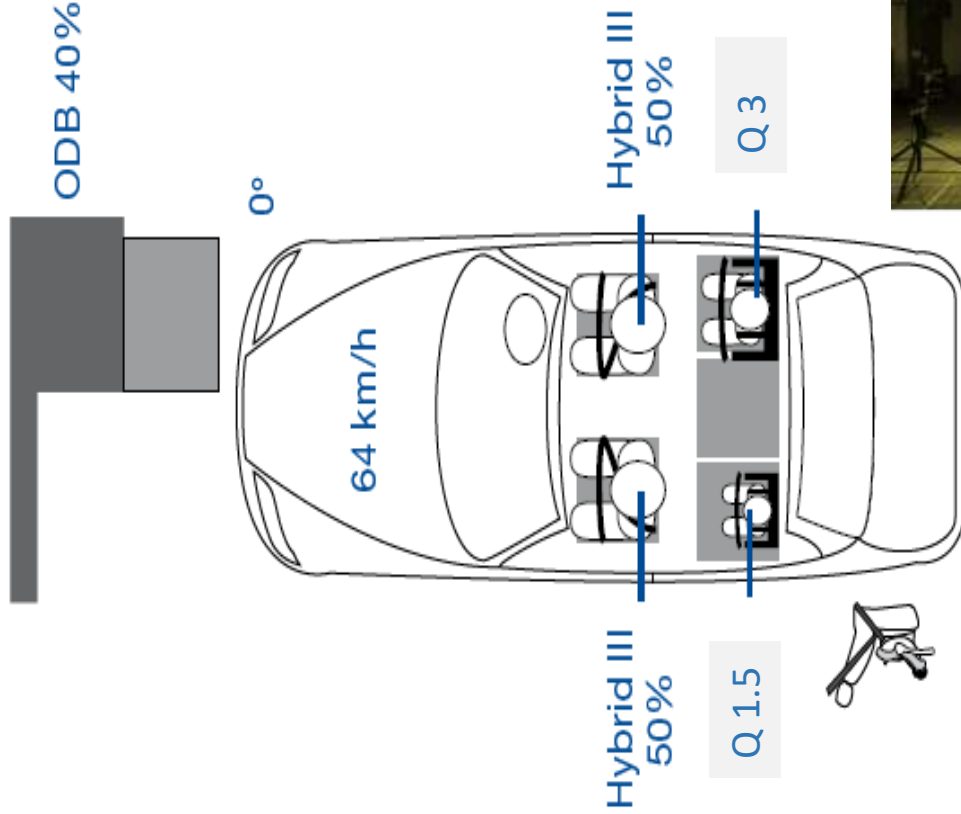
Side
Impact

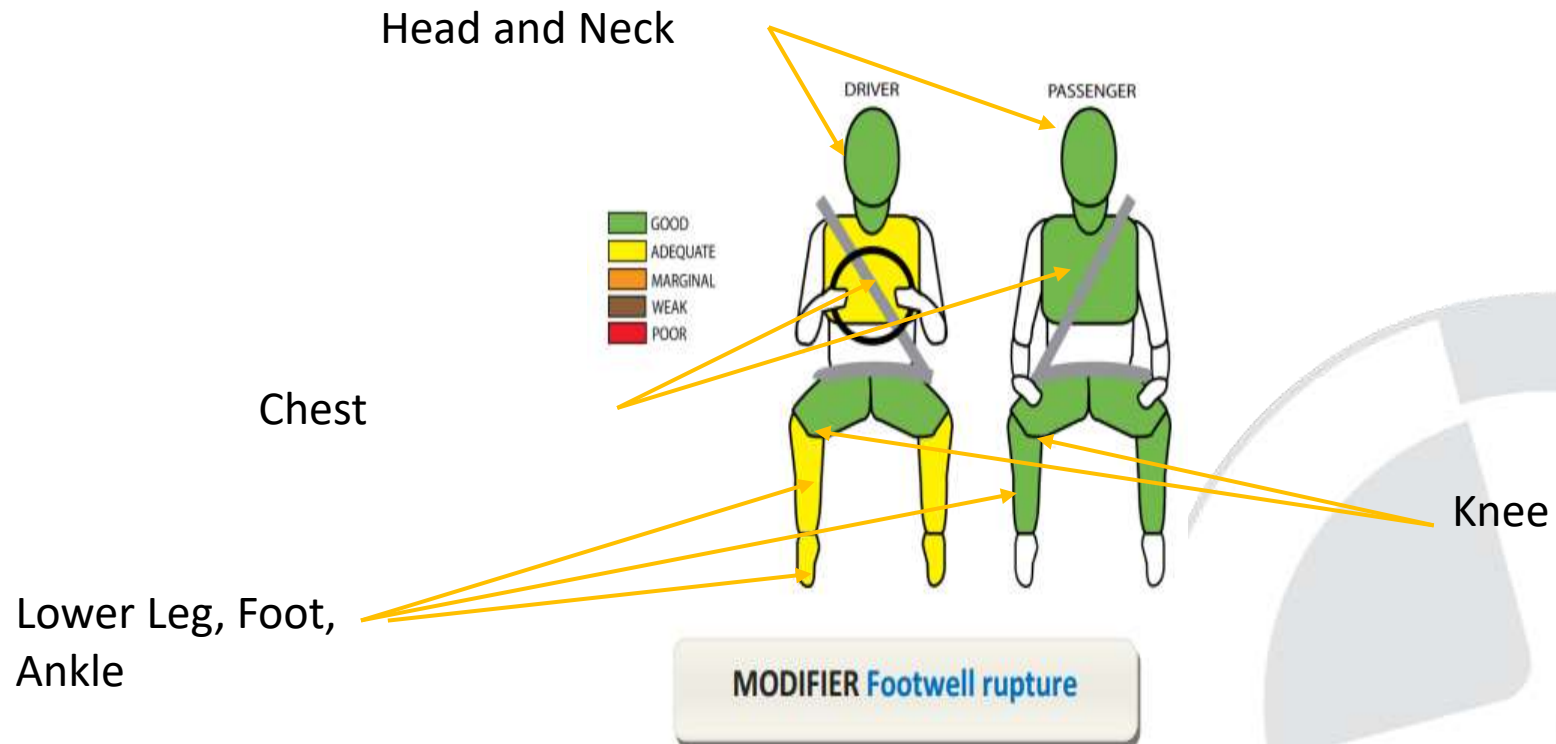


HPT



Frontal Offset Test

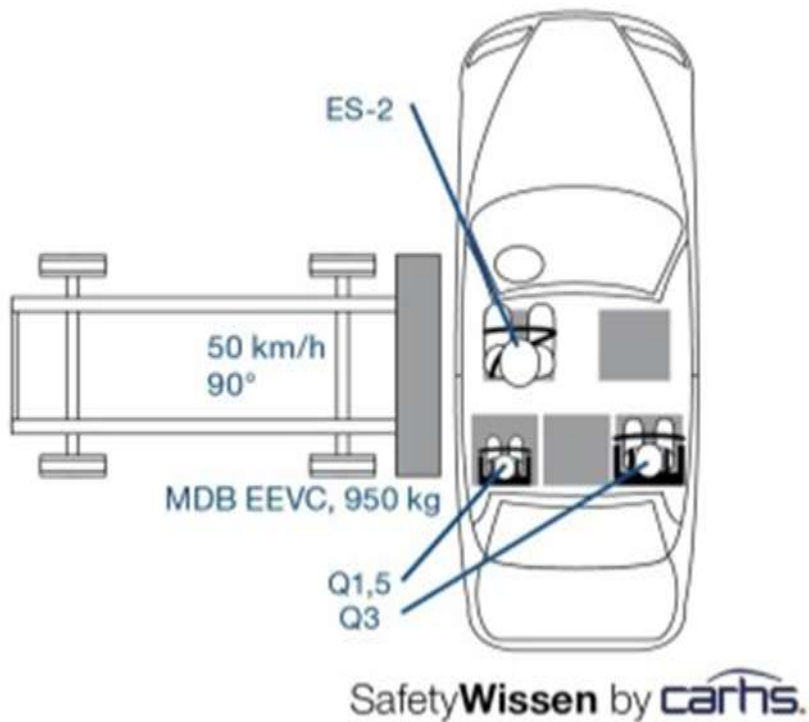


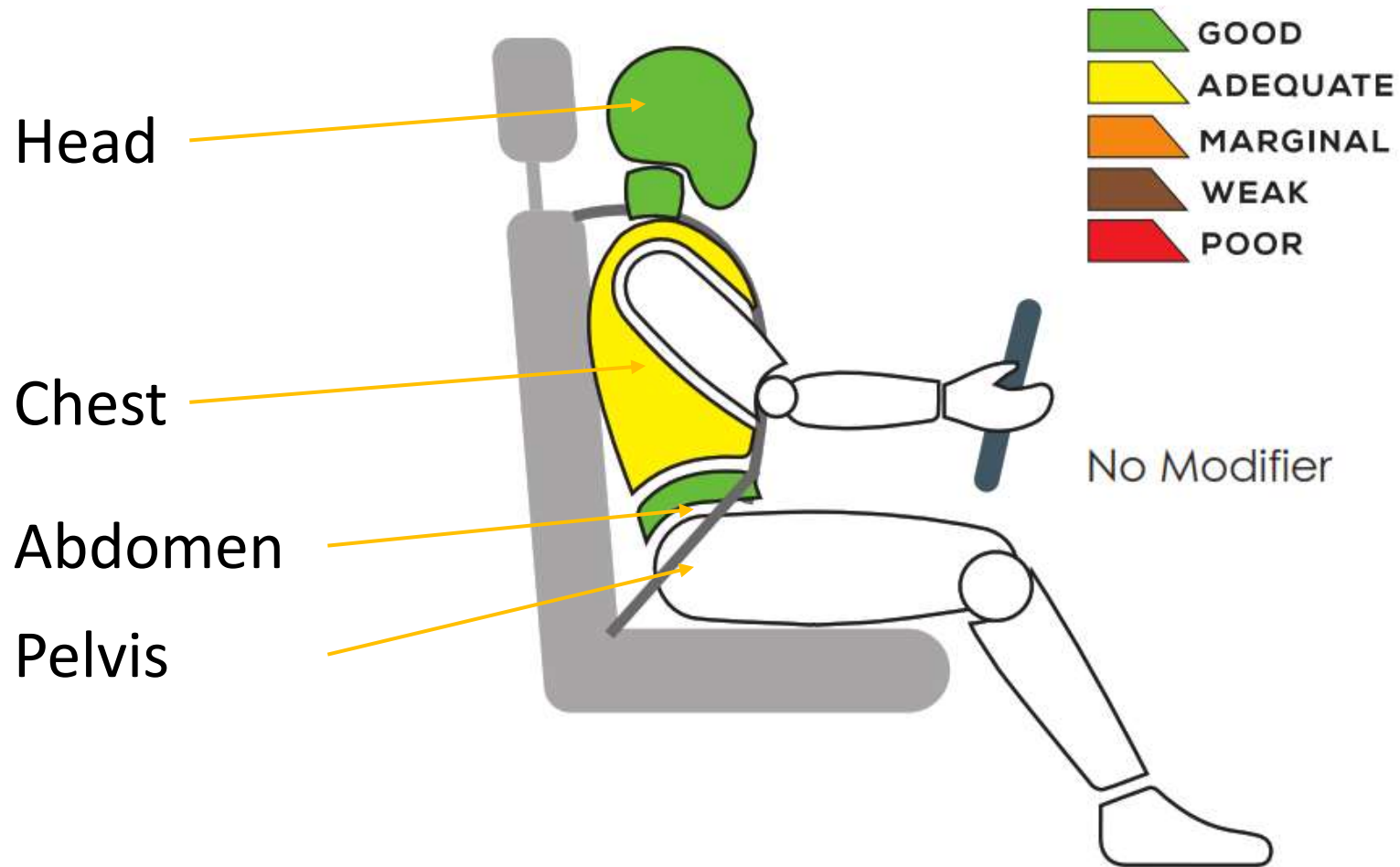


Frontal Offside Test



Side Impact





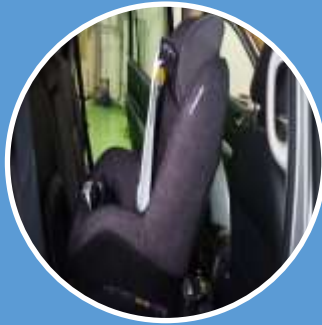
Side Impact Test



Child Occupant Safety (COP) Assessment



Dynamic



CRS
Installation



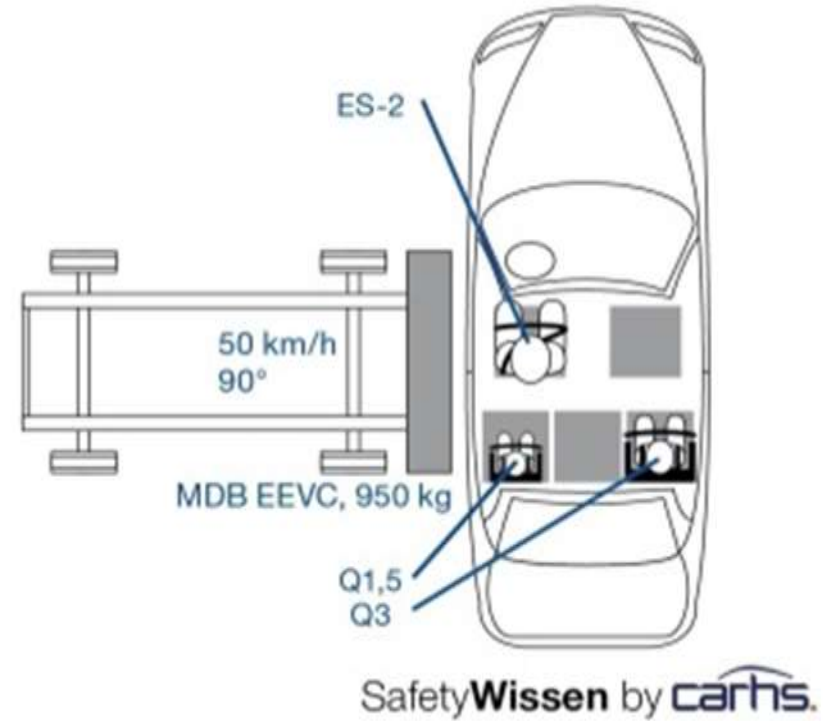
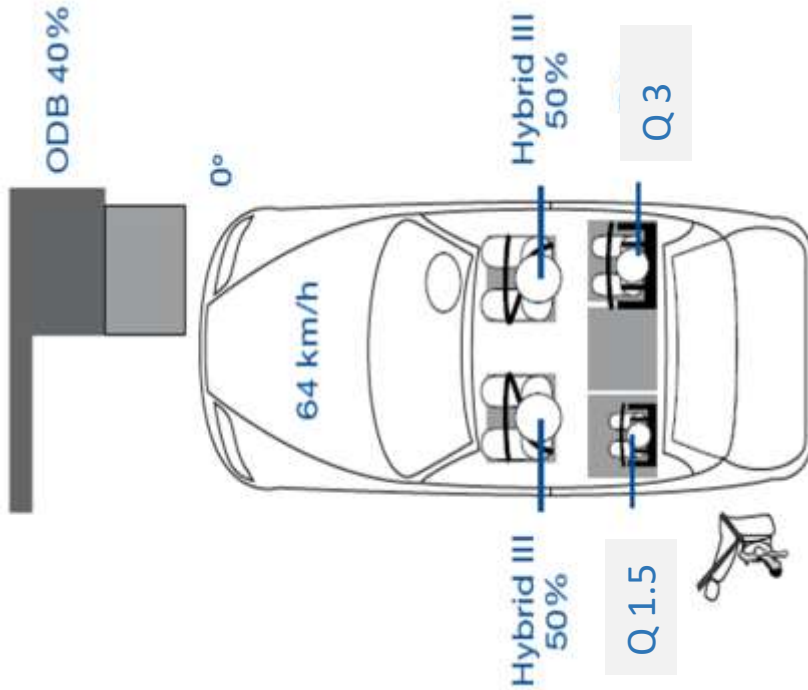
Vehicle
Based
Assessment



Child
Present
Detection



Dynamic Test



SafetyWissen by carhs.

Dynamic Test



Installation Assessment

CRS	DIRECTION	SEAT POSITION						
		FRONT	2ND ROW			3RD ROW		
		PASSENGER	LEFT	CENTRE	RIGHT	LEFT	CENTRE	RIGHT
Maxi Cosi Cabriofix	Rwd	EXEMPT	PASS	PASS	PASS	N/A	N/A	N/A
Combi Malgot	Rwd	EXEMPT	PASS	PASS	PASS	N/A	N/A	N/A
Combi Malgot	Fwd	PASS	PASS	PASS	PASS	N/A	N/A	N/A
Combi Buon Junior Air	Fwd	PASS	PASS	FAIL	PASS	N/A	N/A	N/A
Britax Baby Safe Plus ISOFIX Base	Rwd	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A
Maxi Cosi Milofix	Rwd	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A
Maxi Cosi Milofix	Fwd	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A
Britax Duo Plus	Fwd	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A
Britax Kidfix XP	Fwd	PASS	PASS	FAIL	PASS	N/A	N/A	N/A
Takata MINI*	Rwd	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A
Takata MIDI I-SIZE*	Fwd	EXEMPT	PASS	EXEMPT	PASS	N/A	N/A	N/A

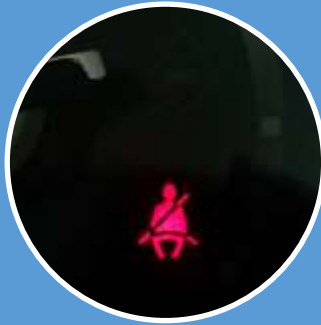
PASS : Install without problem, FAIL : Safety critical problem, EXEMPT : Installation not allowed, N/A : Not available

*Manufacturer's selection

Safety Assist Assessment



EBA



SBR



AEB City



AEB
Interurban



Advance
SATs





Motorcyclist Safety Assessment



BSD/BSV



ARV



AHB



Pedestrian
Protection



Advance
MSTs

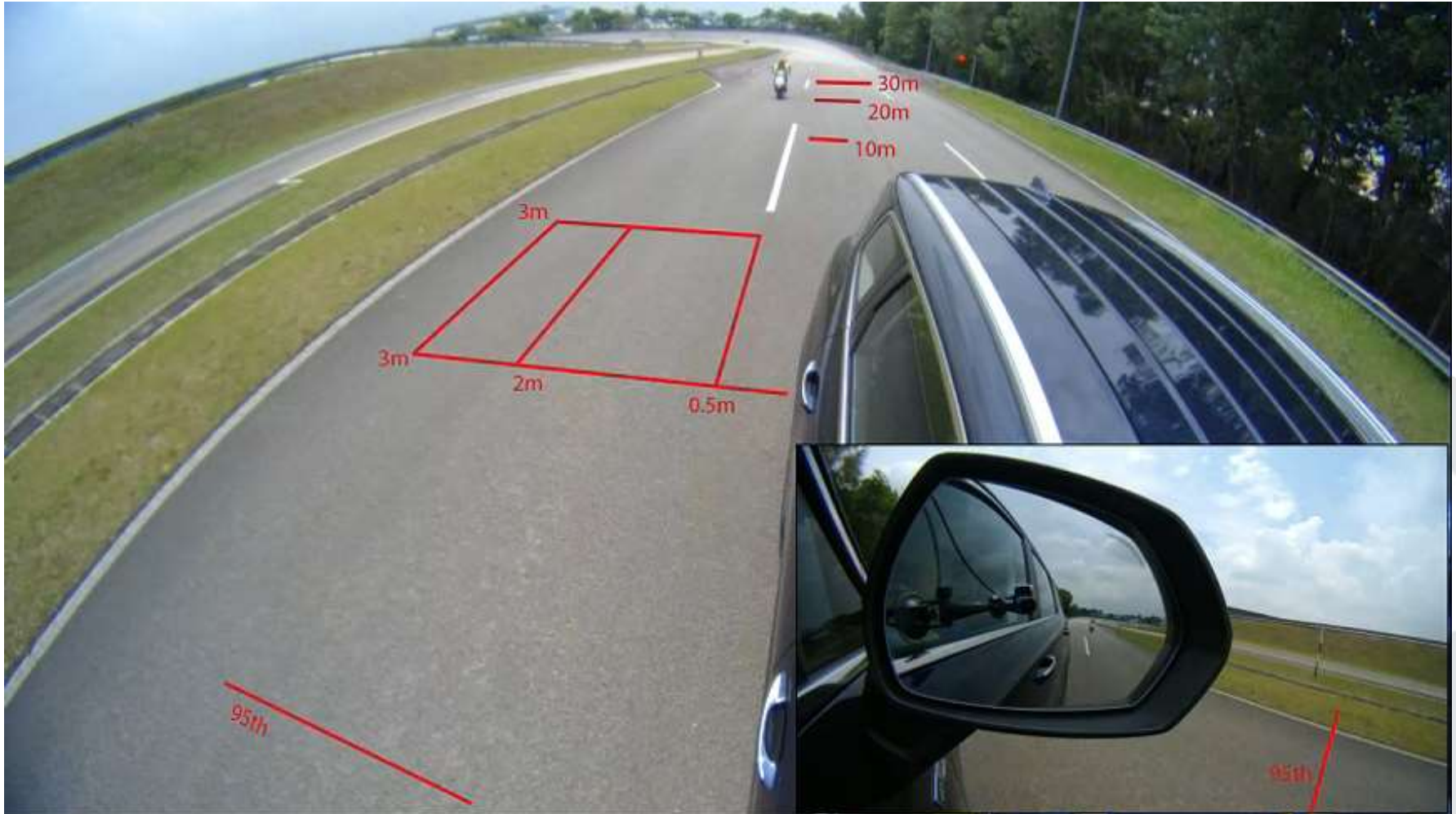


Blind Spot Detection

Motorcycle Size

	Dimension (m)
Length	1.8 to 2.0
Width	0.6 to 0.8
Height	1.0 to 1.4





Blind Spot Visualization



Thank you

Official Website: www.aseanncap.org

Email: salina@miros.gov.my

