



ASEAN Automobile Safety Forum 2018/10



15th November 2018

Karawang, West Java, Indonesia

Bloomberg
Philanthropies



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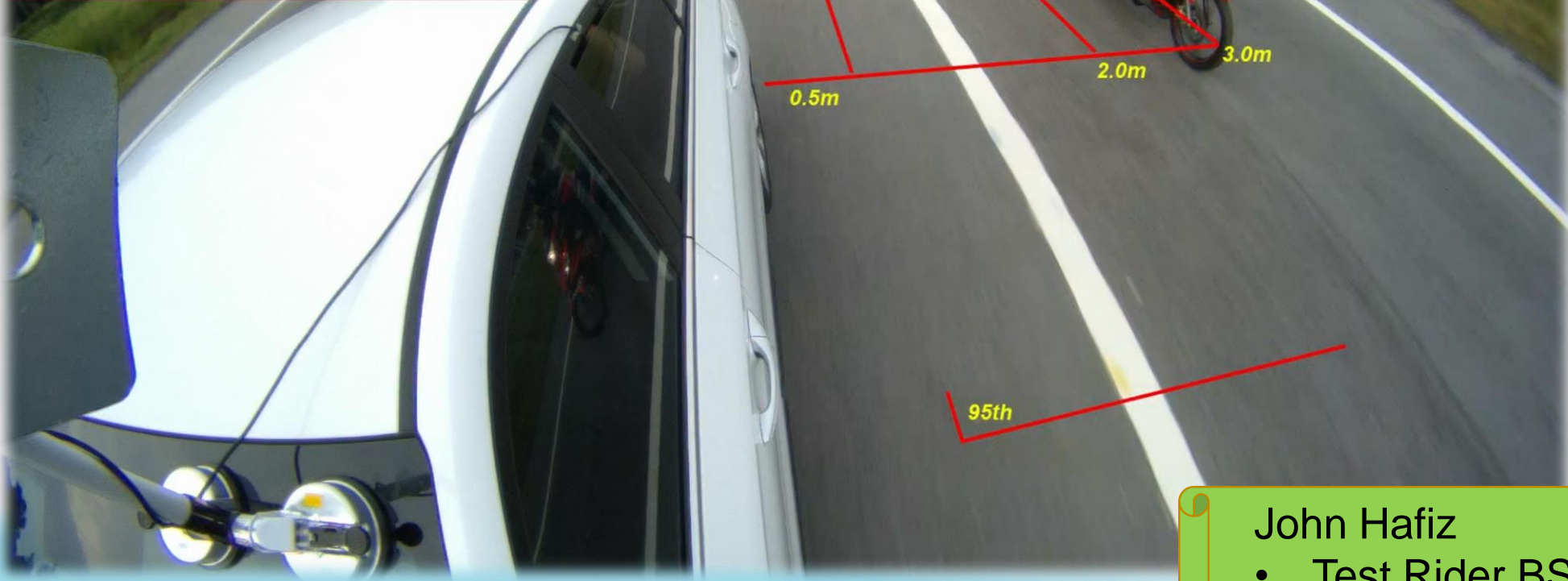
FIA Foundation
for the Automobile and Society

GLOBAL



NCAP





John Hafiz

- Test Rider BST
- Project Coordinator

N1-Vehicle category

- Small truck lorry safety -



AASF 2018/10

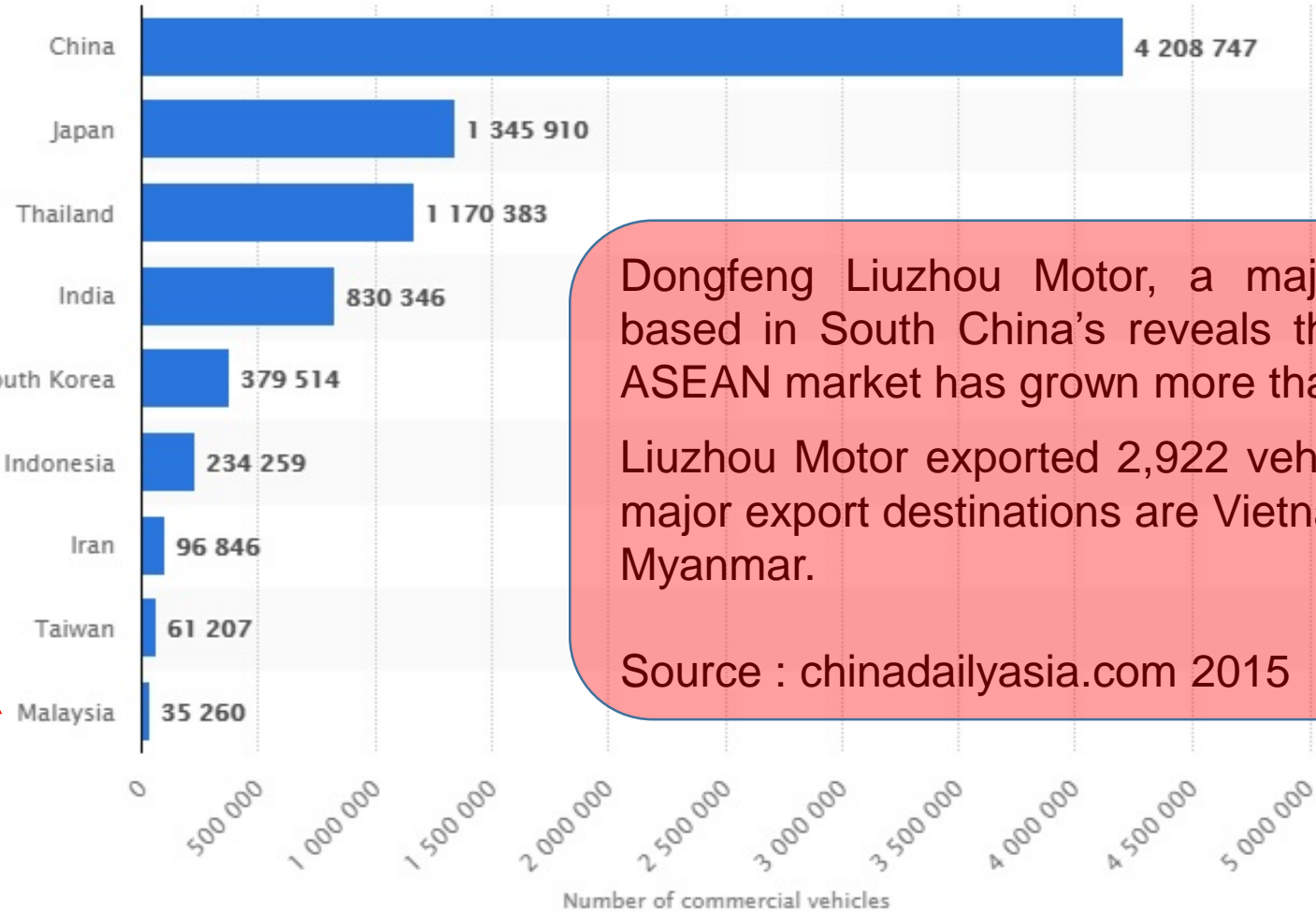
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Commercial vehicles produced in ASIA, 2017

ASEAN

Selected countries in Asia



Dongfeng Liuzhou Motor, a major truck manufacturer based in South China's reveals that its sales volume in ASEAN market has grown more than 100 percent.

Liuzhou Motor exported 2,922 vehicles, mostly trucks. Its major export destinations are Vietnam, the Philippines and Myanmar.

Source : chinadailyasia.com 2015

BESTSELLING NEW CARS ACROSS THE ASEAN 2017

LIVING/ASEAN



ASEAN AUTOMOTIVE
MARKET SIZE
#1 INDONESIA
#2 THAILAND
#3 MALAYSIA

TOYOTA AVANZA



TOYOTA HILUX



PERODUA AXIA



TOYOTA
HILUX



TOYOTA
COROLLA ALTIS



TOYOTA
HILUX



TOYOTA
VIOS



TOYOTA
VIOS



SUZUKI
CARRY

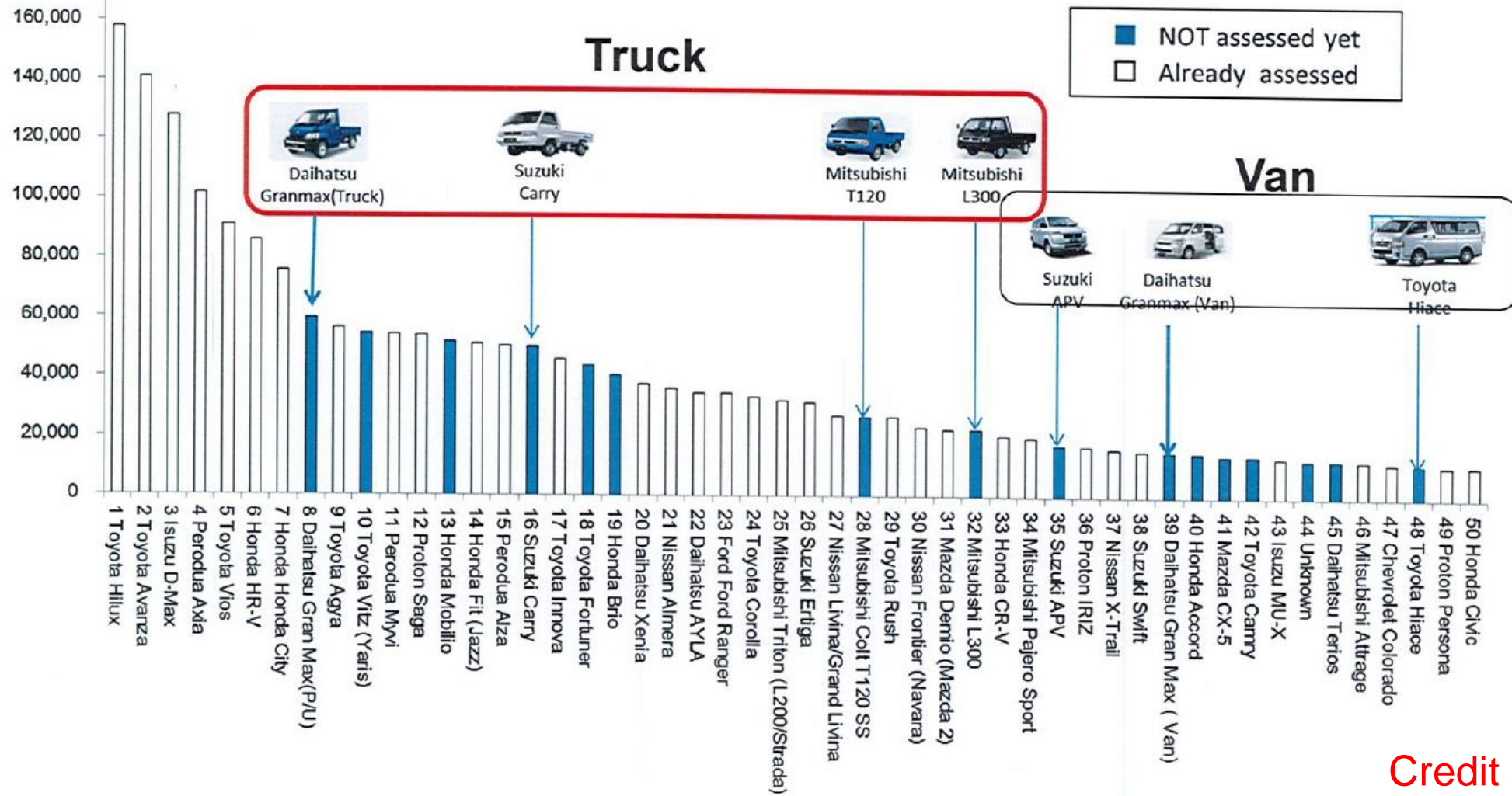


TOYOTA
VIOS



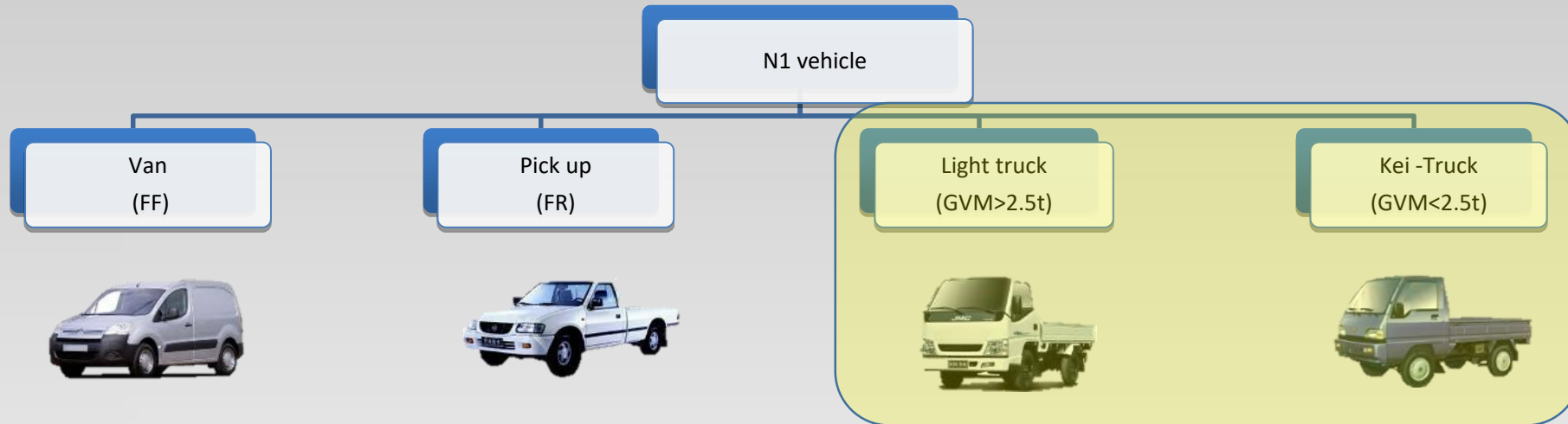
Suzuki has opened a factory in Myanmar in 2017 and produced 2,700 Suzuki Carry trucks, of which about 1,000 units were sold in the domestic market.

Sales Volume in 2015 (sum of Indonesia, Thailand and Malaysia)



Credit : Daihatsu

What is N1 category vehicle?



CATEGORY: N

Category N – Power-driven vehicles having at least four wheels and for the carriage of goods

Category	Vehicle Description
N1	Vehicles for the carriage of goods and having a maximum mass not exceeding 3.5 tonnes
N2	Vehicles for the carriage of goods and having a maximum mass exceeding 3.5 tonnes but not exceeding 12 tonnes
N3	Vehicles for the carriage of goods and having a maximum mass exceeding 12 tonnes



SUZUKI CARRY



DAIHATSU HI-JET

What is Kei-Truck?

'tiny/mini'

Limited specification

- Vehicle length: < 3.40 m
- Vehicle width: < 1.48 m
- Vehicle height: < 2.00 m
- Engine displacement: < 660 cc



MITSUBISHI MINICAB

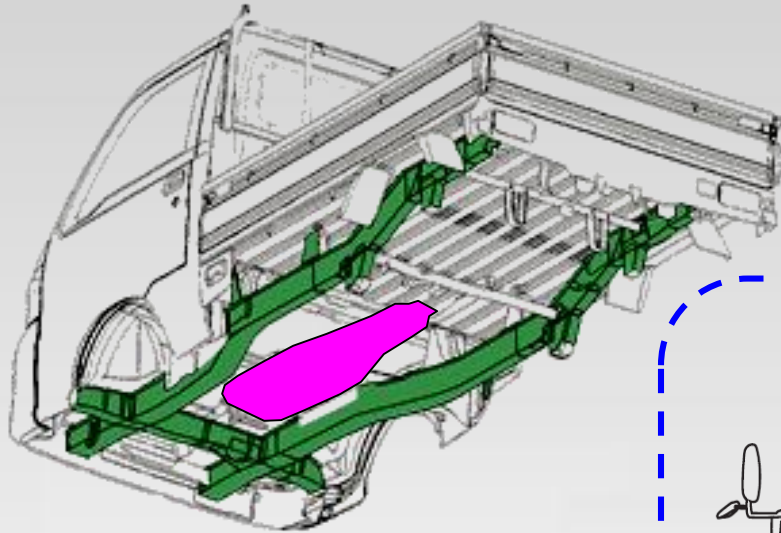


HONDA ACTY

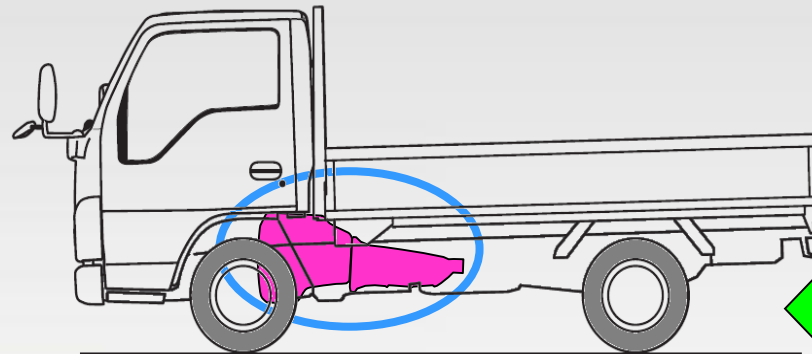


Why the engine location different?

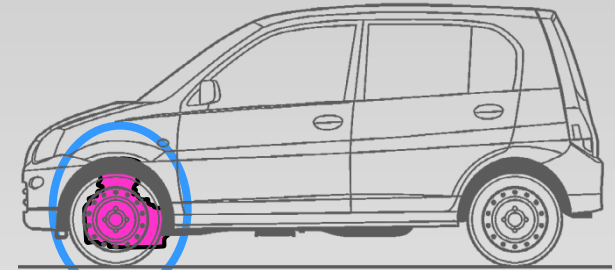
In Small Lorry type, the engine are located below the occupant to ensure large cargo space.



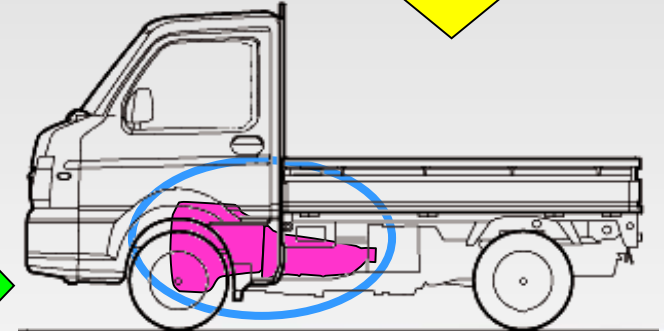
Bottom view of the vehicle body



N1 truck (GVM > 2.5 t)



Different type



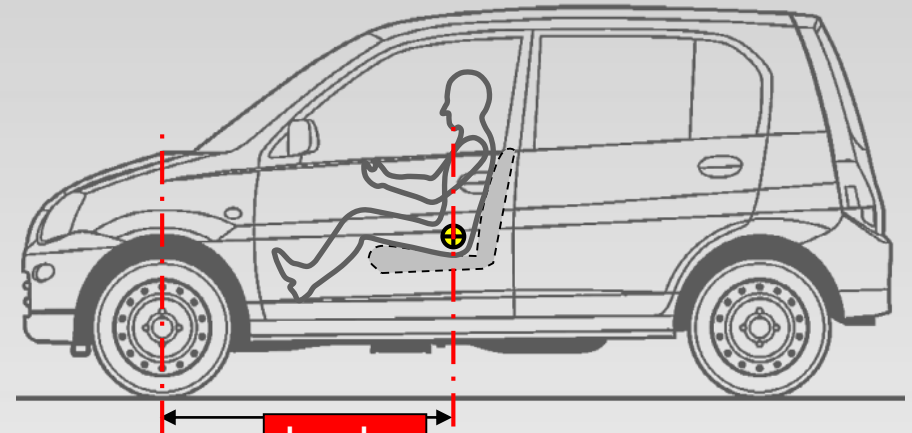
N1 truck (GVM < 2.5 t)

Same type

Longitudinal distance

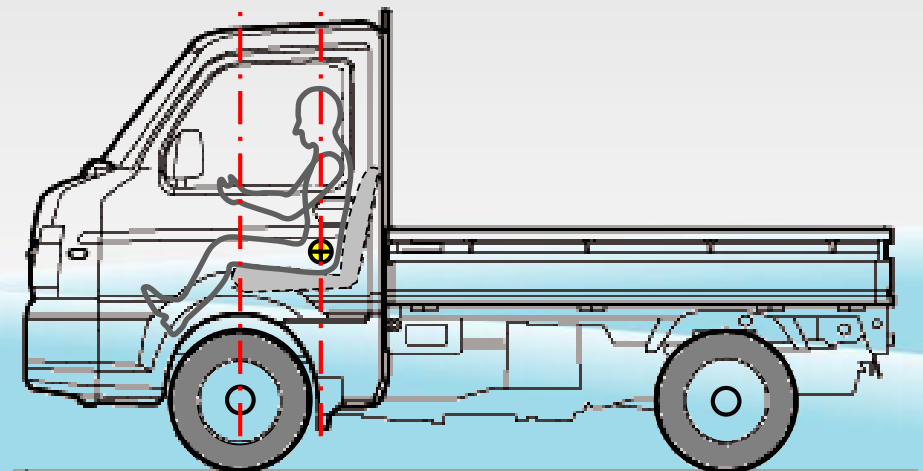
d value: Longitudinal distance between the hip point (R-point) on the driver's seat and the center of the front axle

Passenger Vehicle

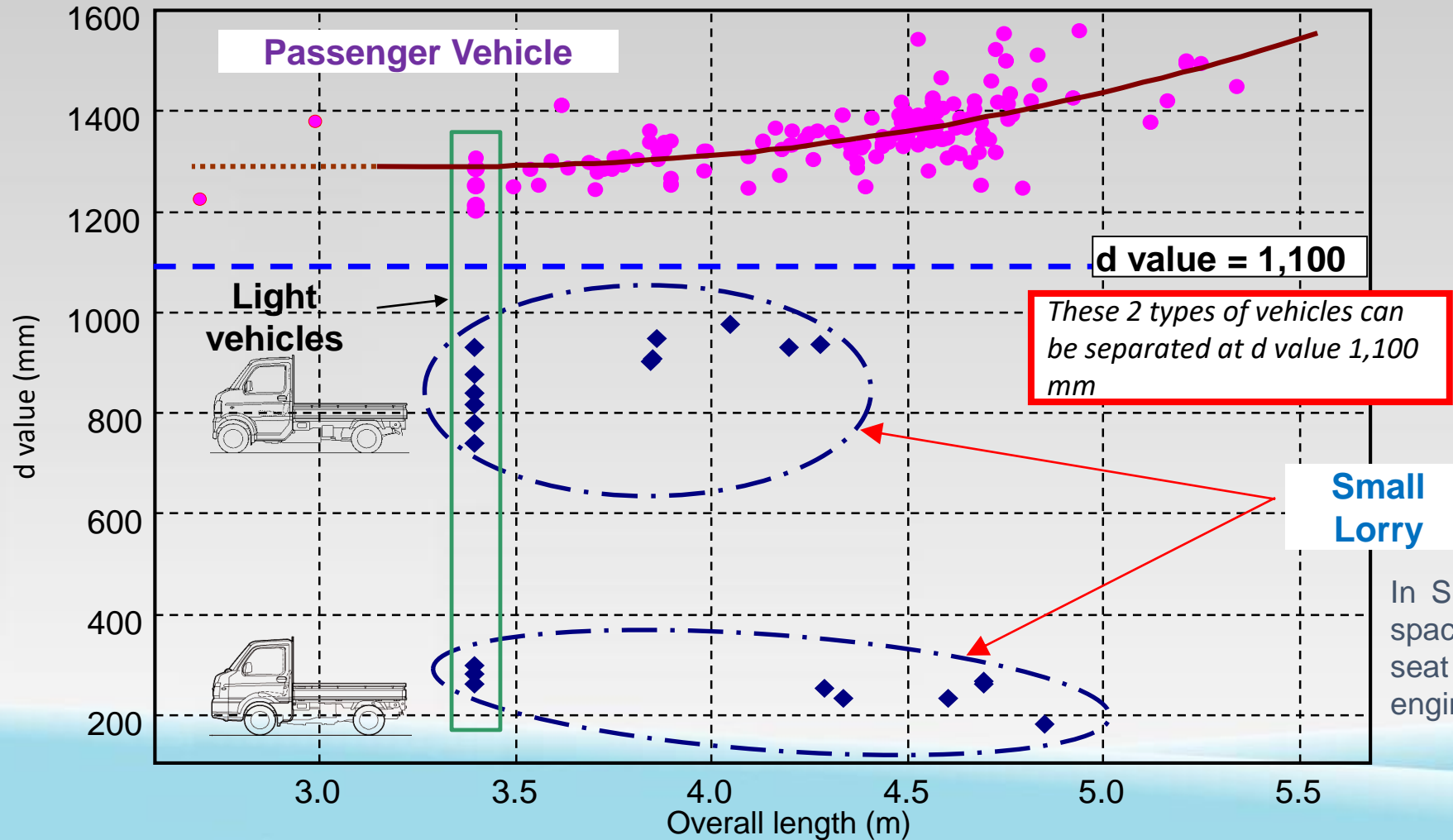


Therefore, d value, which expresses the positional relation between occupant and front tyre can be used to classify these two vehicles.

Small Lorry



d-Value comparison

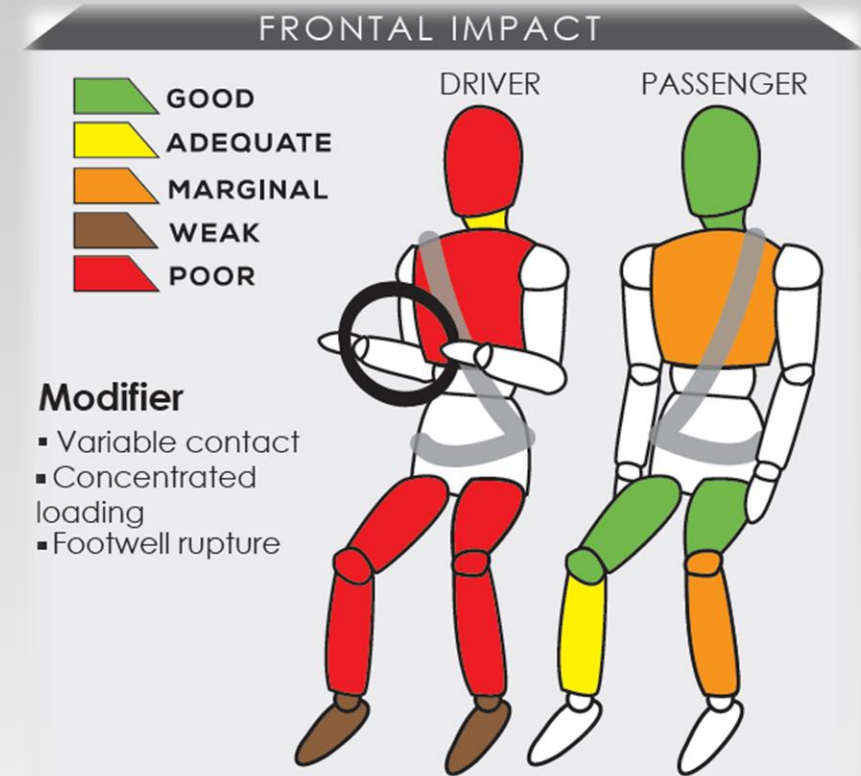


In Small Lorry type, to ensure large cargo space, it is necessary to locate the driver's seat as forward as possible, i.e., above the engine and front wheel.

Frontal Offset Crash Test



Post-crash test image ; Frontal Offset 64KM/H

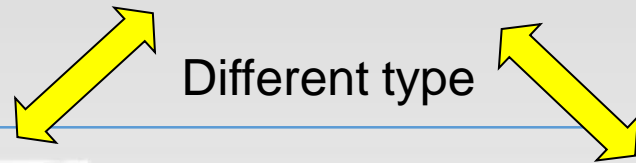
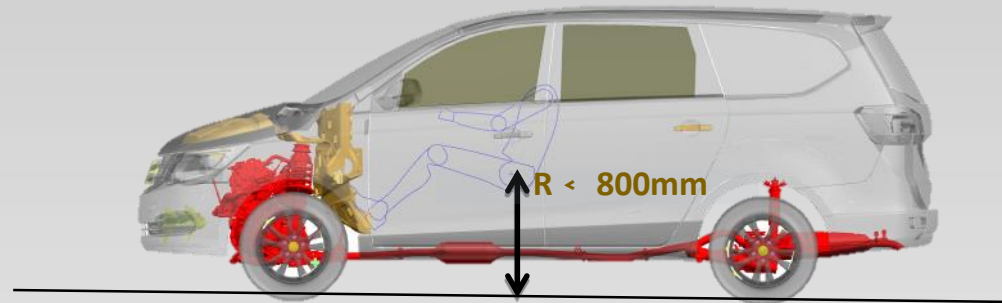


In the frontal impact test, the driver sustained severe injury to the whole body. The front passenger only had marginal protection to its chest with possibility of serious injury to the lower legs in a real world crash.

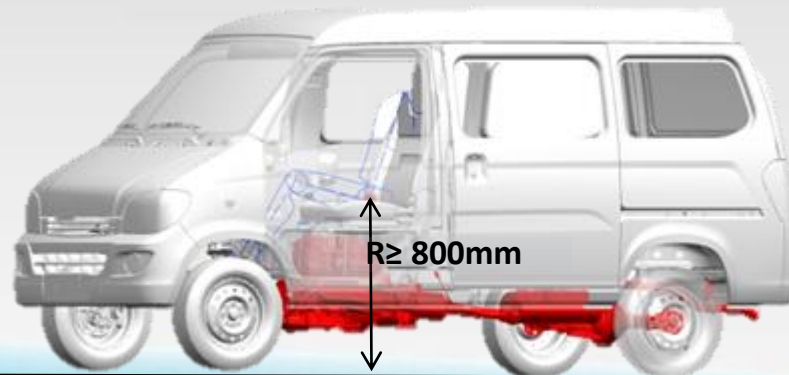
Dummy injury of frontal crash test



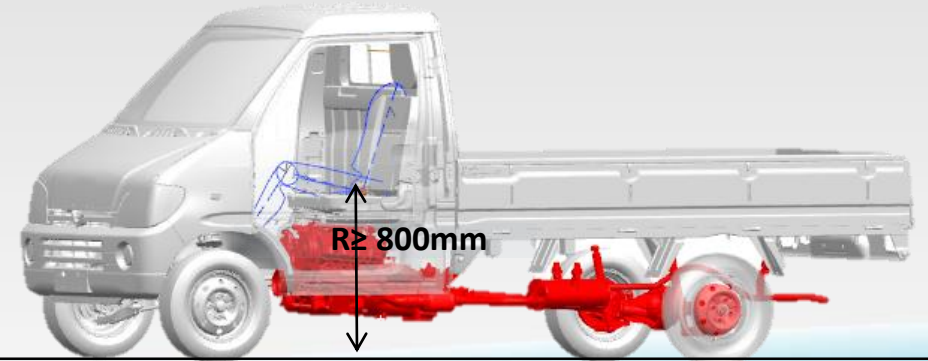
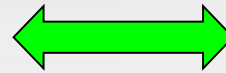
Vertical distance from ground



Different type

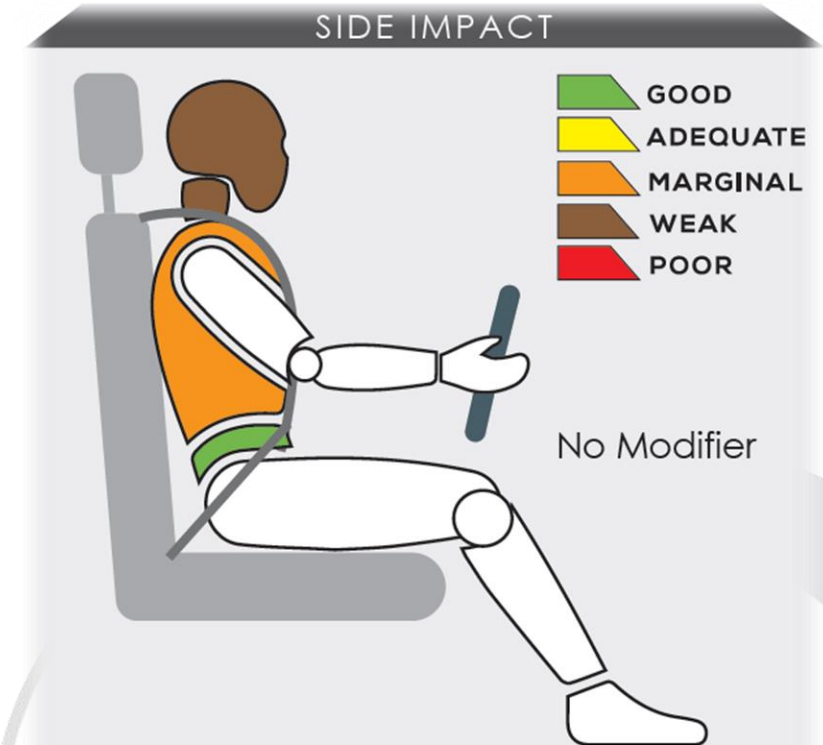


Same type



GVM ≤ 2.5 ton
R-point $\geq 800\text{mm}$ from the ground
Mid-engine and with rear axle drive

Side Impact Crash Test



Dummy readings in the side impact test showed weak protection to the driver's head. In addition, the chest too faced slightly similar result in this impact test.

ASEAN NCAP small lorry crash test



Malaysia: Food-Truck fever



It is estimated in the year 2016, there are an estimated 70 modern food trucks in the Klang Valley alone, with an average of **five** food trucks opening each month.

Songthaew in Thailand & Angkot in Indonesia

‘the two bench seats fixed along either side of the back of the truck’
Has been used in [Thailand](#), [Laos](#) and [Indonesia](#) as a [share taxi](#).



Real life accident



Vietnam : Overloaded always OK?

In Vietnam, truck overloading used to be a common problem on the country's roads, as drivers can earn more money by loading more cargos and making fewer trips.





We are observing you!!

Please help us in making our
road more safer.

Thank you.

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