

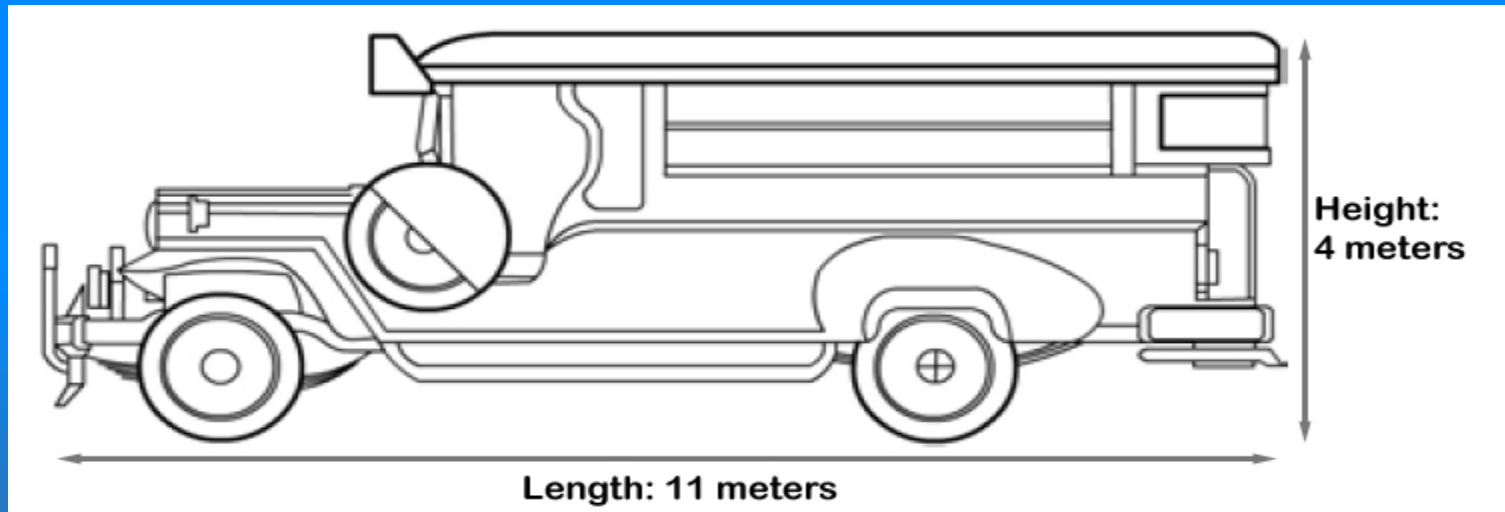
Development of Customized Local Road Vehicle (CLRV) Standards

Comparison of CLRV (Utility Vehicle) Specifications with LTO-MVIS Specifications

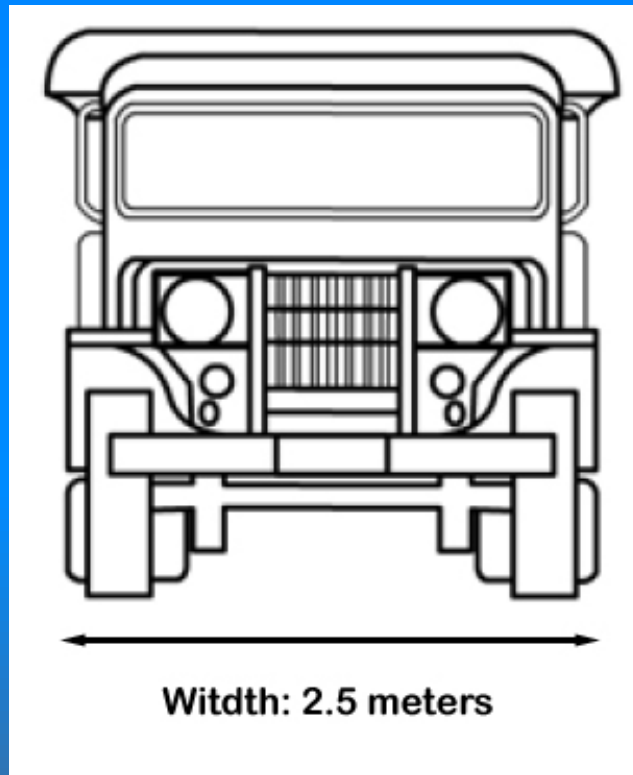
LTO Administrative Order (AO-2009-018)

□ 7.4.2.1.1.1 Maximum
Length: 11 m

■ 7.4.2.1.1.3
Maximum Height: 4
m



□ 7.4.2.1.1.2 Maximum Width: 2.5 m



Weight, Overall Length, Overall Height and Overall Width

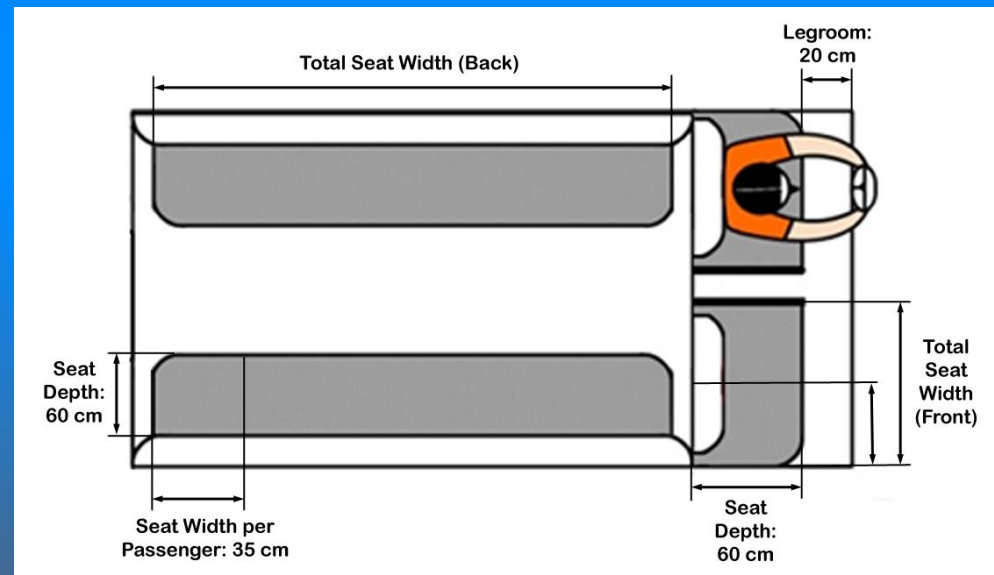
	<i>Gross Vehicle Weight 5000kg max</i>	<i>Overall Length 11m max</i>	<i>Overall Height 4m max</i>	<i>Overall Width 2.5m max</i>
Jeepney				
no of pass	25	38	37	36
no of fail	0	0	0	0
% pass	100	100	100	100
% fail	0	0	0	0
Filcab				
no of pass	11	13	13	13
no of fail	0	0	0	0
% pass	100	100	100	100
% fail	0	0	0	0
LUV				
no of pass	12	15	15	15
no of fail	0	1	0	0
% pass	100	94	100	100
% fail	0	6	0	0

- 7.4.2.24 Minimum Passenger Seat Front Distance

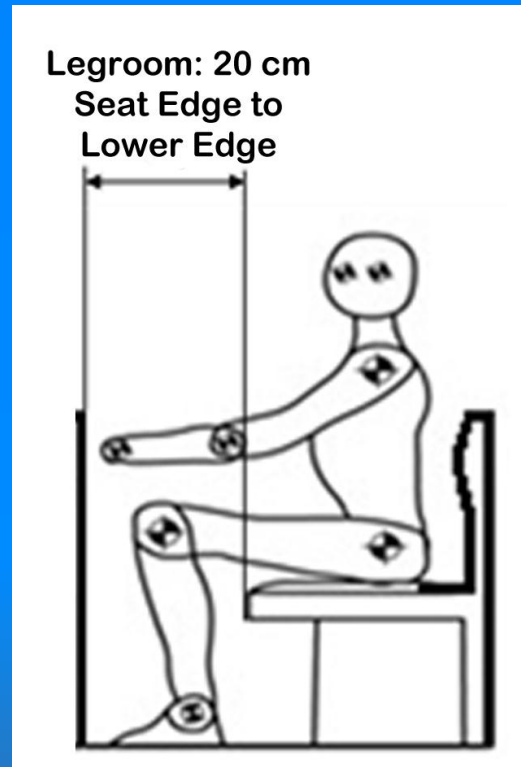
- Length: 60 cm
- Width: 35 cm

- 7.4.2.24 Minimum Passenger Seat Back Distance

- Depth: 60 cm
- Width: 35 cm

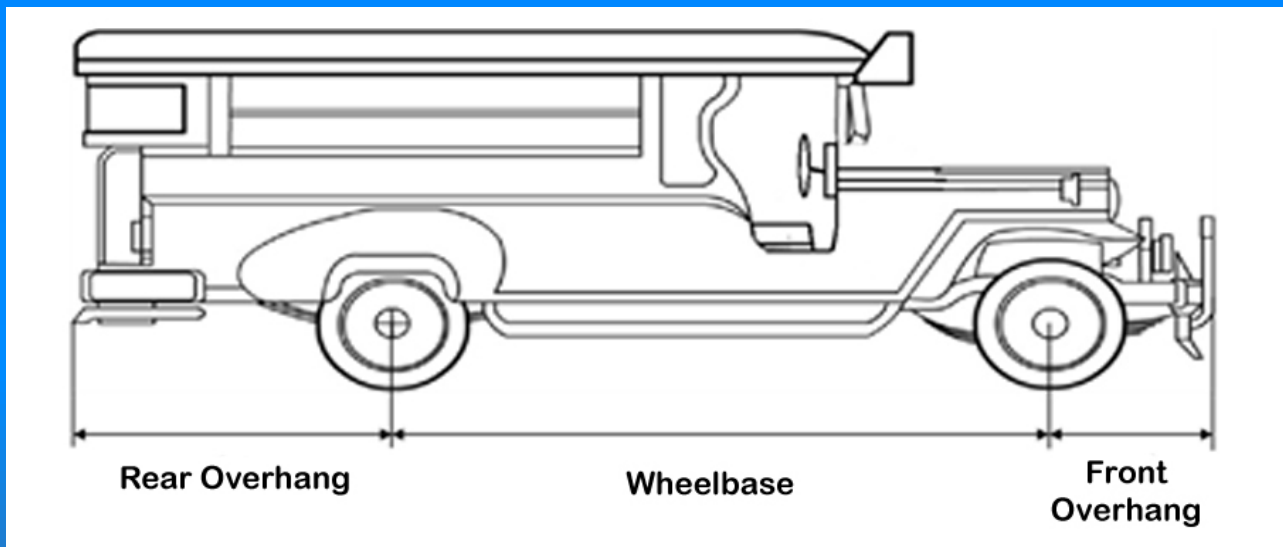


□ 7.4.2.24 Minimum Legroom (front): 20 cm



	<i>Driver Seat - Depth 60cm min</i>	<i>Front Seat - Driver - Width 35cm min</i>	<i>Front Seat - Passenger - Depth 60cm min</i>	<i>Front Seat - Passenger - Width 35cm min</i>	<i>Rear Seat - Passenger - Depth 60cm min</i>	<i>Rear Seat - Passenger - Width 35cm min</i>	<i>Legroom Driver 20cm min</i>	<i>Legroom Passenger Front 20cm min</i>
Jeepney								
no of pass	2	33	9	32	15	17	29	32
no of fail	33	2	25	2	20	12	2	0
no data	4	4	5	5	4	10	8	7
% pass	6	94	26	94	43	59	94	100
% fail	94	6	74	6	57	41	6	0
Filcab								
no of pass	7	8	6	8	1	8	12	9
no of fail	6	5	7	4	12	3	1	0
no data	0	0	0	1	0	1	0	4
% pass	54	62	46	67	8	73	92	100
% fail	46	38	54	33	92	27	8	0
LUV								
no of pass	3	13	3	12	4	8	12	9
no of fail	11	1	10	1	10	4	2	2
no data	6	6	7	7	6	8	6	9
% pass	21	93	23	92	29	67	86	82
% fail	79	7	77	8	71	33	14	18

- Maximum Rear Overhang: 60% of wheelbase



From Vehicle Standards Information (South Wales), rear overhang for trucks must not exceed 60% of wheelbase.

	assume 60% rear overhang limit	assume 50% rear overhang limit
Jeepney		
no of pass	30	29
no of fail	1	2
no data	8	8
% pass	97	94
% fail	3	6
Filcab		
no of pass	5	2
no of fail	1	3
no data	7	8
% pass	83	40
% fail	17	60
LUV		
no of pass	11	11
no of fail	0	0
no data	9	9
% pass	100	100
% fail	0	0

Seatbelts

- 7.4.2.2 Presence of Seatbelt (Driver)

7.4.2.2 Presence of Seatbelt (Passenger)

PNS minimum requirement:
Lapbelt (better if 3-point)

	<i>presence of driver seatbelts</i>	<i>presence of front passenger seatbelts</i>
Jeepney		
no of pass	30	29
no of fail	0	1
no data	9	9
% pass	100	97
% fail	0	3
Filcab		
no of pass	2	2
no of fail	0	0
no data	11	11
% pass	100	100
% fail	0	0
LUV		
no of pass	9	8
no of fail	0	0
no data	11	12
% pass	100	100
% fail	0	0

Parking Brakes

Jeepney/M2

	Number	Percent
Parking brake (existing)	30	88%
Parking brake (does not exist)	4	12%

LUV/M2

	Number	Percent
Parking brake (existing)	4	67%
Parking brake (does not exist)	2	33%

Filcab/M2

	Number	Percent
Parking brake (existing)	8	100%
Parking brake (does not exist)	0	0%

Fabrication of chassis

Jeepney/M2

Mode	No.	Share
Outsourced	22	69%
In-house	10	31%

LUV/M2

Mode	No.	Share
Outsourced	1	17%
In-house	5	83%

Filcab/M2

Mode	No.	Share
Outsourced	0	0%
In-house	5	71%
Original Japan	2	29%

Windshield Glass

LAMINATED	15
SAFETY GLASS	9
TEMPERED	7
UNSAFE*	7
NO DATA	34

Total of 72 surveyed vehicles

*Unsafe includes windshields specified as “Not Tempered”, “Not Laminated”, or “Not Safety Glass”

Rear Passenger Window

Jeepney/M2

Material	No.	Share
Tempered Glass	6	18%
Glass	0	0%
Fiberglass	2	6%
Plastic (sliding)	11	33%
Plastic sheet	10	30%
Open/Grill Only	4	12%

LUV/M2

Material	No.	Share
Plastic sheet	100%	5

Filcab/M2

Material	No.	Share
Tempered Glass	0	0%
Glass	3	33%
Fiberglass	4	44%
Plastic (sliding)		0%
Plastic sheet	1	11%
Open/Grill Only	1	11%



Front Bumper

Jeepney/M2

Material	No.	Share
Steel/Stainless Steel/Galvanized/ GI Sheet/Stainless Pipe/Metal/GI Angle Bar	30	86%
Fiberglass	1	3%
Plastic	4	11%

LUV/M2

Material	No.	Share
Steel/Stainless Steel/Galvanized/ GI Sheet/Stainless Pipe/Metal/GI Angle Bar	3	38%
Fiberglass	3	38%
Plastic	2	25%

Filcab/M2

Material	No.	Share
Steel/Stainless Steel/Galvanized/ GI Sheet/Stainless Pipe/Metal/GI Angle Bar	6	75%
Fiberglass	0	0%
Plastic	2	25%

Anthropometric Measurements of Filipino Manufacturing Workers (Del Prado-Lu, 2007)

Table 2
Anthropometric measurement for sitting

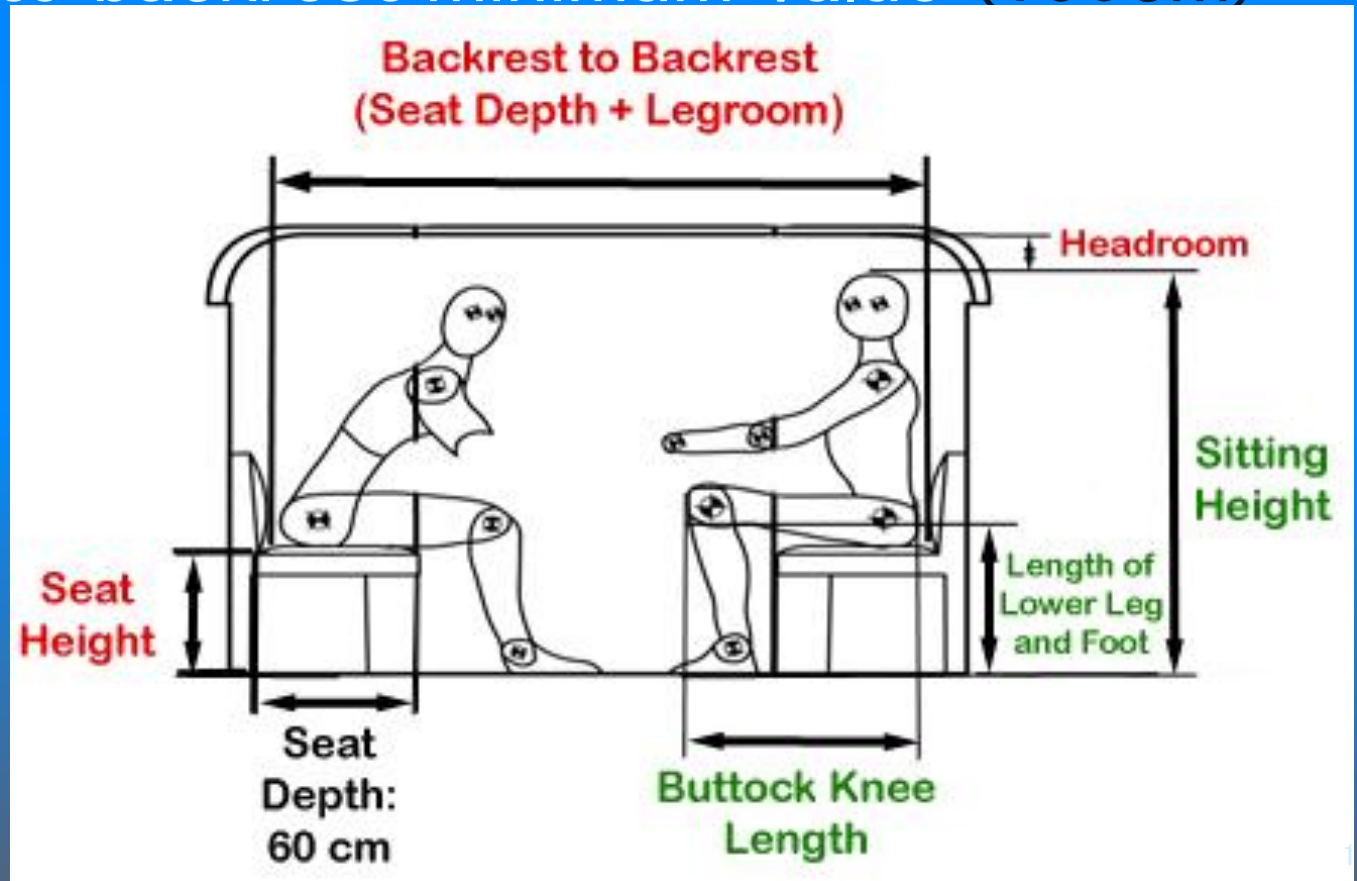
Anthropometric measurement (cm) sitting height	Male (<i>n</i> = 843)					Female (962)				
	Mean	5th Percentile	Median	95th Percentile	Std. Dev	Mean	5th Percentile	Median	95th Percentile	Std. Dev
Sitting height	84.84	78.00	85.00	92.00	5.81	79.92	73.00	80.00	87.00	4.50
Eye height	73.36	67.00	73.00	80.00	3.83	68.38	62.00	69.00	74.00	4.85
Elbow height	22.23	17.00	22.00	27.00	4.21	21.89	17.00	22.00	26.43	4.09
Waist height, sitting	19.44	15.00	19.00	24.00	6.15	22.41	18.00	22.00	27.00	3.21
Hip height	13.28	10.00	13.00	18.00	4.06	15.29	11.00	15.00	20.00	6.71
Hip breadth, sitting	35.60	31.00	35.00	41.00	4.19	36.39	31.00	36.00	42.43	4.83
Thigh clearance height	13.49	10.50	13.00	16.50	4.45	12.82	10.00	12.00	16.00	6.97
Buttock knee length	54.80	49.00	55.00	61.90	5.21	52.73	47.00	53.00	59.00	4.56
Buttock popliteal length	46.40	41.00	46.00	52.00	3.72	45.14	40.00	45.00	51.00	3.69
Knee height, sitting	50.03	45.00	50.00	55.90	3.99	46.98	42.15	47.00	52.00	4.43
Popliteal height	43.33	39.00	43.00	47.00	2.57	40.34	36.00	40.50	44.00	2.90
Buttock width	48.45	35.10	48.00	59.00	7.40	47.66	35.00	48.25	58.00	6.85
Length of upper leg	36.80	29.20	36.00	46.50	6.12	35.96	28.00	36.00	45.00	5.25
Length of lower leg and foot	45.27	38.00	46.00	52.00	4.53	42.14	35.00	42.50	48.00	4.31
Thumbtip reach	71.30	61.00	72.00	79.00	7.12	65.44	56.00	66.00	74.00	7.63
Overhead fingertip reach, sitting	127.92	117.00	128.00	138.00	7.81	116.87	108.00	117.00	128.00	9.77

Recommended Vehicle Dimensions

(Based on ergonomics)

❑ Floor to ceiling height minimum value (140cm)

❑ Backrest to backrest minimum value (150cm)



Recommended Vehicle Dimensions (Based on ergonomics)

- ❑ Stepboard maximum height (25cm)
- ❑ Stepboard minimum depth (25cm)

	Floor to Ceiling Height 140cm min	Seat Height from the Floor (driver) 35cm min	Seat Height from the Floor (Front passengers) 35cm min	Seat Height from the Floor (Rear passengers) 35cm min	backrest to backrest 150cm min	Front Passengers - Largest Width of Stepboard 25cm min	Rear Passengers - stepboard height 25cm max	Rear Passengers - Width of Stepboard 25cm min
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Jeepney

no of pass	7	14	9	18	9	7	30	27
no of fail	30	20	24	16	24	21	3	5
no data	2	5	6	5	6	11	6	7
% pass	19	41	27	53	27	25	91	84
% fail	81	59	73	47	73	75	9	16

Filcab

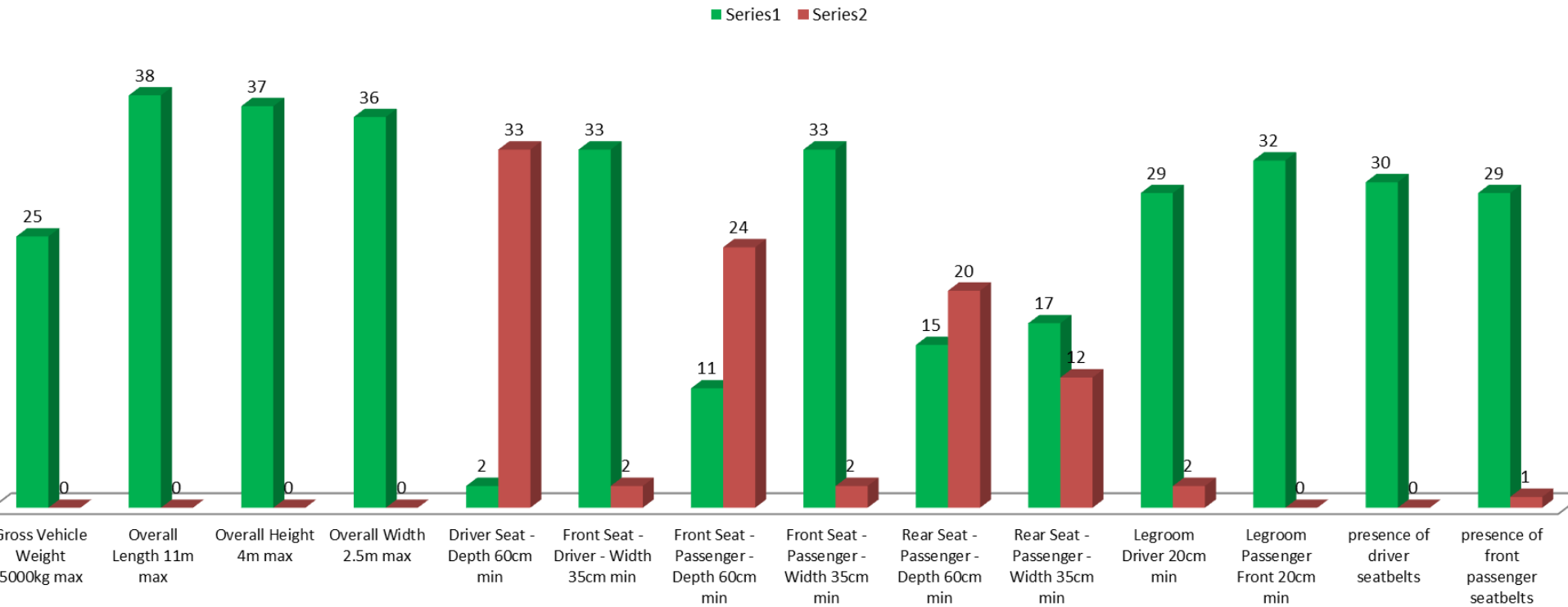
no of pass	4	8	7	4	2	5	9	6
no of fail	9	3	4	9	6	0	0	1
no data	0	1	2	0	5	8	4	6
% pass	31	73	64	31	25	100	100	86
% fail	69	27	36	69	75	0	0	14

LUV

no of pass	2	8	8	8	3	1	10	9
no of fail	13	8	7	6	8	7	0	1
no data	5	4	5	6	9	12	10	10
% pass	13	50	53	57	27	13	100	90
% fail	87	50	47	43	73	88	0	10

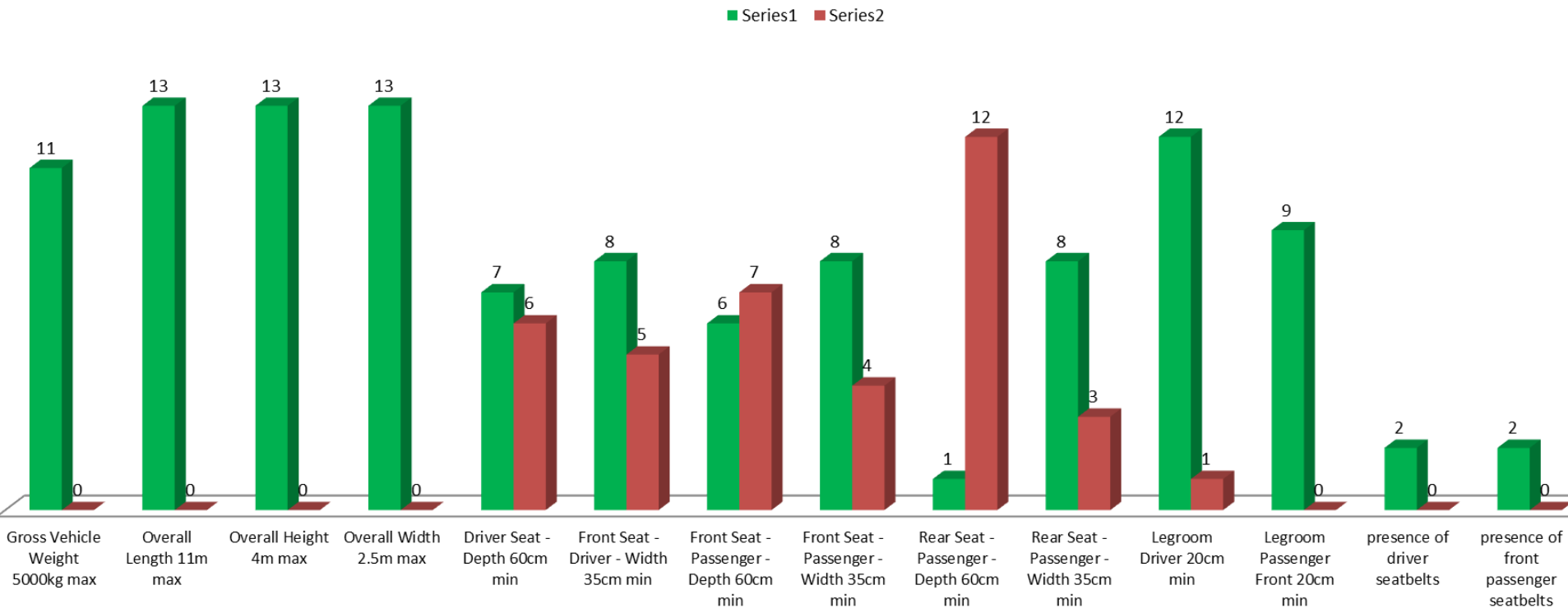
Comparison of Vehicle Specifications with Existing Regulations/Standards – Jeepney

Jeepney (existing standards)



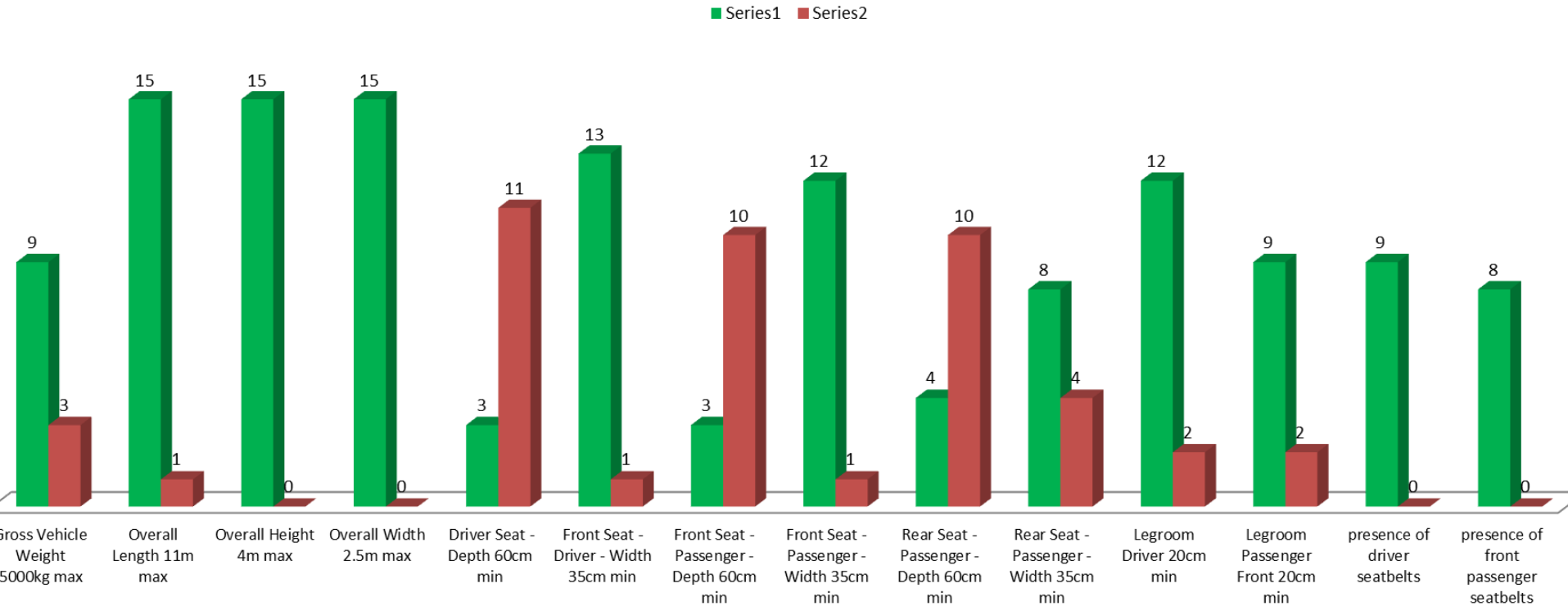
Comparison of Vehicle Specifications with Existing Regulations/Standards – Filcab

Filcab (existing standards)



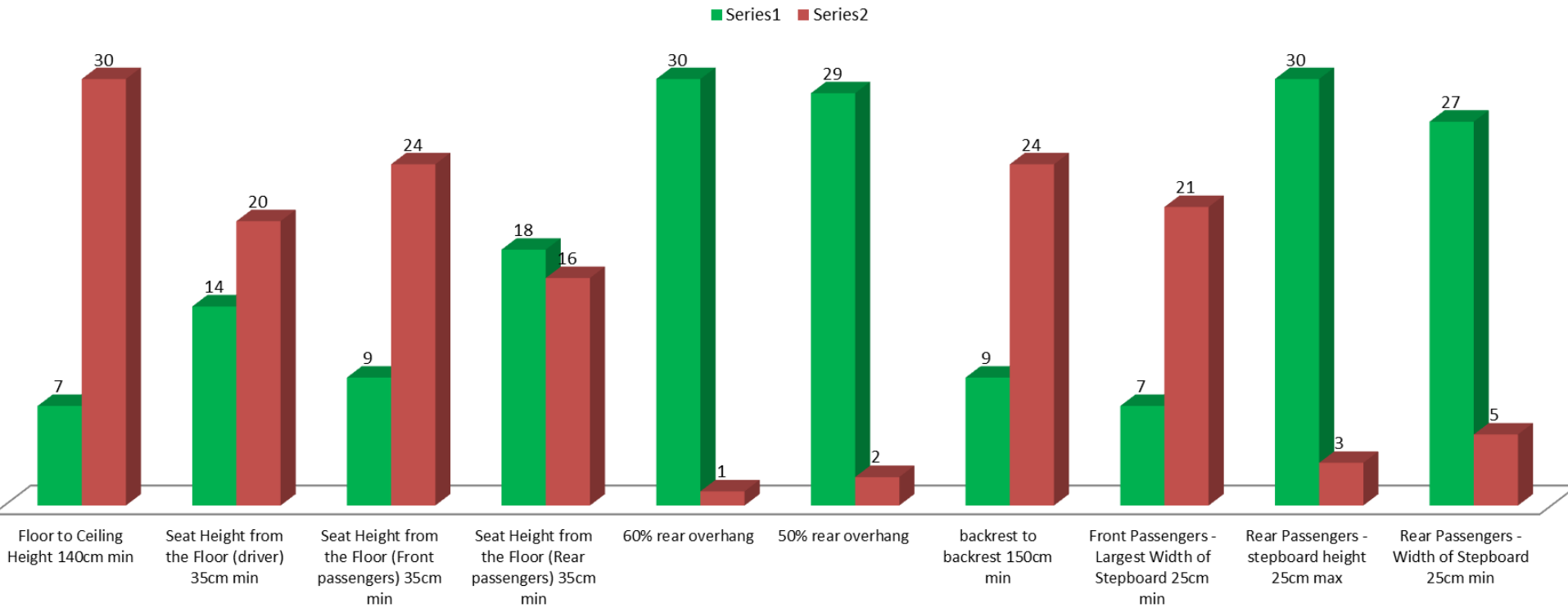
Comparison of Vehicle Specifications with Existing Regulations/Standards – LUV

LUV (existing standards)



Comparison of Vehicle Specifications with Recommended Vehicle Dimensions – Jeepney

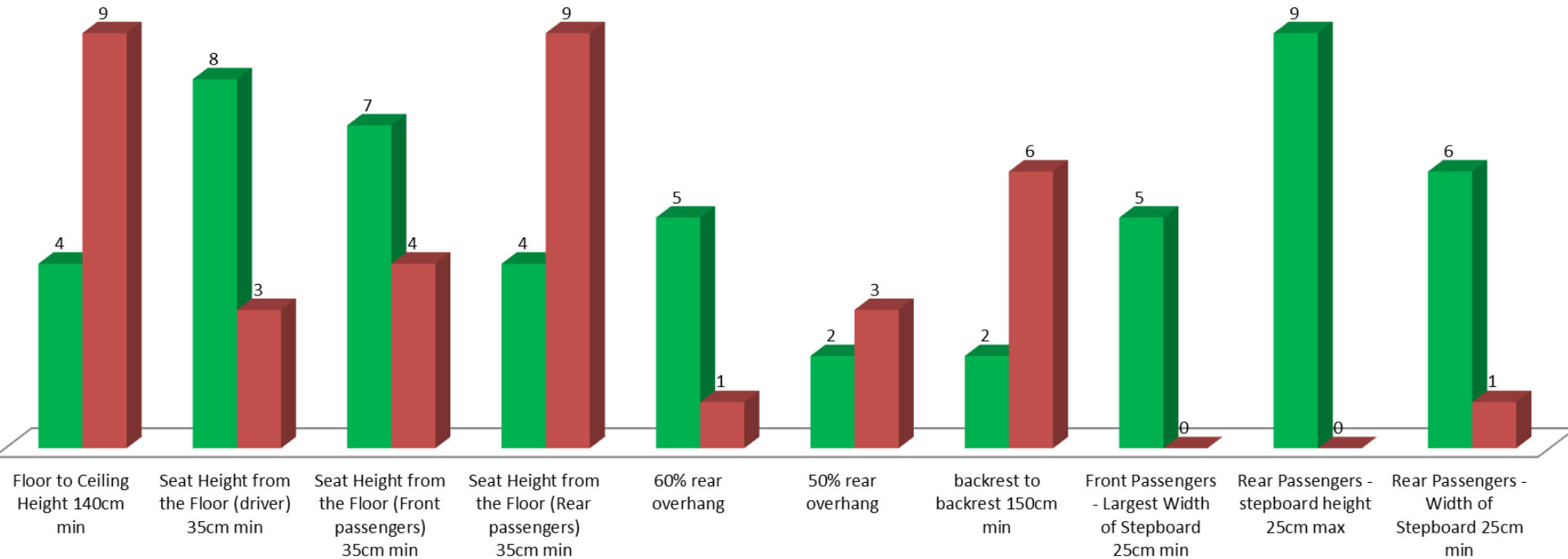
Jeepney (recommended standards)



Comparison of Vehicle Specifications with Recommended Vehicle Dimensions – Filcab

Filcab (recommended standards)

Series1 Series2



Comparison of Vehicle Specifications with Recommended Vehicle Dimensions – LUV

LUV (recommended standards)

Series1 Series2

