THAILAND’S NATIONAL STANDARD OF VEHICLE WEIGHTS, DIMENSIONS AND EMISSIONS

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Department of Land Transport
RELEVANT LAWS AND REGULATIONS REGARDING WEIGHS, DIMENSIONS AND EMISSIONS

- Land Transport Act, B.E. 2522 (1979)
  - Registration of Vehicle, Vehicle Dimensions Regulation, Operation of Freight and Passenger Transport, Annual Taxation and Inspection
- Highway Act, B.E. 2535 (1992)
  - Road Design, Vehicle and Axle Weight Regulations
- Industrial Product Standards Act, B.E. 2511 (1968)
  - Product Standard Regulations, Emission Standard of Vehicles (in compliance with National Pollution Control Board’s Order)
## Truck Dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>( \leq 2.55 \text{ m}^1 ) and the vehicle body must not exceed 15 cm wider than the vertical plane tangential to the tyre’s outer surface</td>
</tr>
<tr>
<td>Length</td>
<td>( \leq 12.00 \text{ m}^{2,3} )</td>
</tr>
<tr>
<td>Height</td>
<td>( \leq 4.00 \text{ m}^4 )</td>
</tr>
<tr>
<td>Other</td>
<td>Front Overhang (FOH) ( \leq 50% ) of Wheelbase, Rear Overhang (ROH) ( \leq 66% ) of Wheelbase</td>
</tr>
</tbody>
</table>

**Note:**

1. For the maximum width of 2.60 m is allow for truck with refrigerated loading compartment
2. The outer turning radius must be less than 12.50 m and inner turning radius must be larger than 5.30 m
3. The maximum rear swing-out of less than 0.80 m is applied to the vehicle which exceeds 10 m in length
4. The maximum height of 3.00 m is allow for the vehicle with less than 2.30 m in width
## SEMI-TRAILER DIMENSIONS

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>( \leq 2.55 ) m</td>
</tr>
<tr>
<td>Length</td>
<td>( \leq 13.60 ) m</td>
</tr>
<tr>
<td>Height</td>
<td>( \leq 4.00 ) m¹</td>
</tr>
</tbody>
</table>
| Other      | ▪ Front Overhang \( \leq 50\% \) of Wheelbase, Rear Overhang \( \leq 40\% \) of Wheelbase  
▪ Distance from King Pin to the rearmost part of the trailer \( \leq 12.00 \) m |

**Note:** ¹ The maximum height of 3.00 m is allow for the vehicle with less than 2.30 m in width.
### Full Trailer Dimension

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>&lt; 2.55 m</td>
</tr>
<tr>
<td>Length</td>
<td>&lt; 8.00 m</td>
</tr>
<tr>
<td>Height</td>
<td>&lt; 4.00 m(^1)</td>
</tr>
</tbody>
</table>

**Other**
- Front Overhang (FOH) < 50% of Wheelbase,
- Rear Overhang < 50% of Wheelbase or < 66% of WB in case of Fully Enclosed Compartment Trailer or Trailer with ramps at the rear
- Wheelbase of 4.30 m for two-axle trailer\(^2\) or 3.70 m for three-axle trailer\(^2\)

**Note:**
\(^1\) The maximum height of 3.00 m is allow for the vehicle with less than 2.30 m in width
\(^2\) With reference to the Weight regulation of Department of Highways, Ministry of Transport
Vehicle and Axle Weight Regulation: Highway Act B.E.2522

<table>
<thead>
<tr>
<th>Number of Axles</th>
<th>Number of Wheels</th>
<th>Number of Tyres</th>
<th>GVW Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>4</td>
<td>&lt; 7,000 kg</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>10</td>
<td>&lt; 20,000 kg</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>6</td>
<td>&lt; 11,000 kg</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>12</td>
<td>&lt; 20,000 kg</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>6</td>
<td>&lt; 15,000 kg</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>12</td>
<td>&lt; 30,000 kg</td>
</tr>
</tbody>
</table>

Note: GVW = Gross Vehicle Weight  
○ = Single Tyre  
● = Dual Tyre

Department of Land Transport
FOR VEHICLE COMBINATION: TRACTOR AND SEMI-TRAILER (1)

- **2 Axles 4 Wheels 6 Tyres**
  - GVW ≤ 15,000 kg ≤ 11,000 kg ≤ 20,000 kg

- **3 Axles 6 Wheels 10 Tyres**
  - GVW ≤ 25,000 kg ≤ 20,000 kg ≤ 20,000 kg

- **4 Axles 8 Wheels 12 Tyres**
  - GVW ≤ 30,000 kg ≤ 20,000 kg ≤ 20,000 kg

**Note:**

GCW = Gross Combination Weight

**GCW**
- ≤ 35,000 kg
- ≤ 45,000 kg
- ≤ 50,000 kg

**Regulation:** Highway Act B.E.2522
Note: Y = Distance from King Pin to Center of first Axle

GCW = Gross Combination Weight
FOR VEHICLE COMBINATION : TRACTOR AND TRAILER (1)

Vehicle and Axle Weight Regulation : Highway Act B.E.2522

Note: X = Wheelbase
Note: Z = Distance between center of the Tractor’s Rear Axle Group to the Trailer’s Rear Axle Group
Emission Standards

Requirement of Newly Registered Vehicle
(Industrial Product Standards Act, B.E. 2511)

○ Heavy Duty Truck Diesel Engine / CNG Engine
  • Directive 1999/96/EC EURO 3
○ Light-Duty Vehicle :
  • Directive 1999/102/EC(B) EURO 4

In-use Vehicle Inspection Criteria
(Land Transport Act, B.E.2522)

<table>
<thead>
<tr>
<th>Measurement</th>
<th>No Load</th>
<th>Full Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opacity Meter</td>
<td>45%</td>
<td>35%</td>
</tr>
<tr>
<td>Smoke Meter (Filter Type)</td>
<td>50 HSU</td>
<td>40 HSU</td>
</tr>
</tbody>
</table>
## Existing Agreements

<table>
<thead>
<tr>
<th>Agreement</th>
<th>Dimension (Meters)</th>
<th>Weight (Tons)</th>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Width</td>
<td>Height</td>
</tr>
<tr>
<td>ASEAN, Thai-Lao PDR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thai-Cambodia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS (Early Harvest), Thai-Lao PDR-Vietnam</td>
<td>Vehicle size, weight and emissions must comply with the entering country regulations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Future Agreements

- **# Thai – Malaysia**: Technical Requirement on vehicle size and weight will be inline with ASEAN Agreement
- **# Thai – Myanmar – India**: On hold, waiting for fully implementation of GMS

### Abbreviation

- **ROH** = Rear Overhang
- **10W** = 10 Wheeler-Single Rigid Truck
- **12W** = 12 Wheeler-Single Rigid Truck
- **HSU** = Hatridge Smoke Unit
- **6+8W** = 2 Axle/6 Wheeler Tractor with 2 Axle/8 Wheelers Semi-Trailer
- **10+8W** = 3 Axle/10 Wheeler Tractor with 2 Axle/8 Wheelers Semi-Trailer
- **10+12W** = 3 Axle/10 Wheeler Tractor with 3 Axle/12 Wheelers Semi-Trailer
Enforcement Mechanism

- Annual Inspection (for Emissions)
- 70 Weighing Stations (for Weight Violation)
- Spot Check: Land Transport Inspector, Highway Police and Local Authorities