D24#1093979

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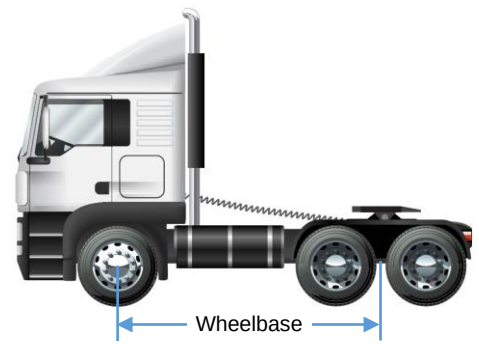
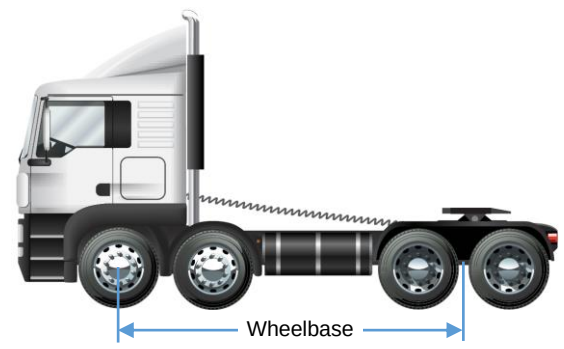
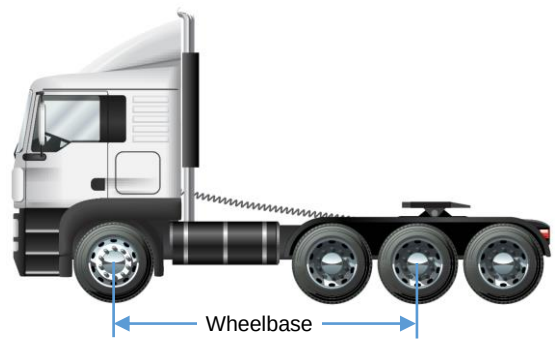
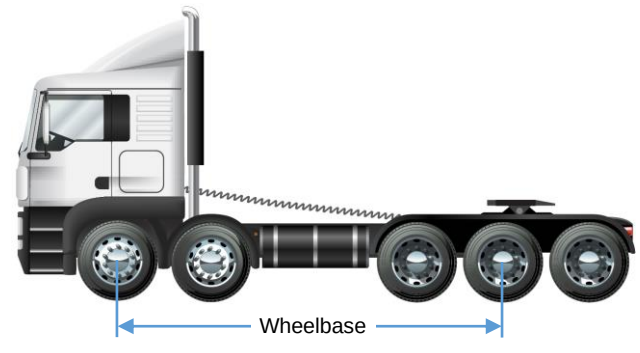
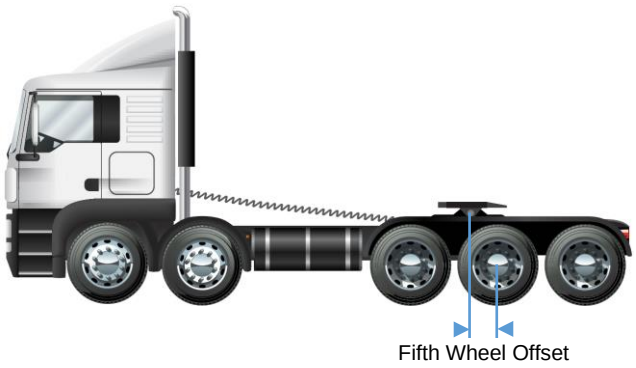
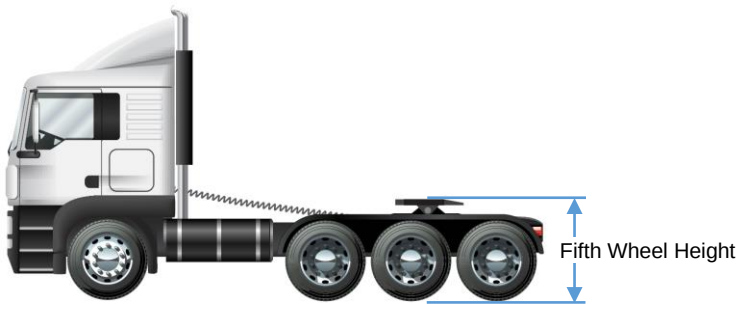
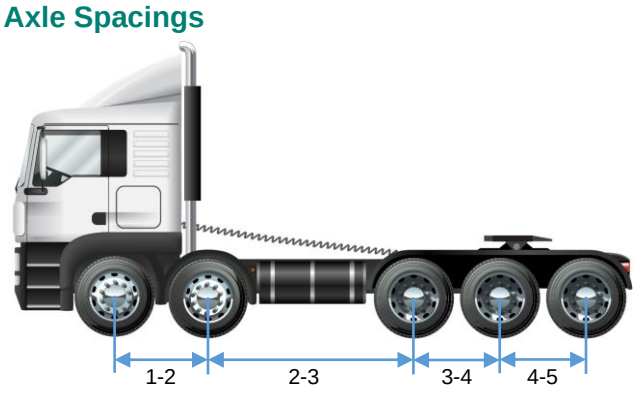
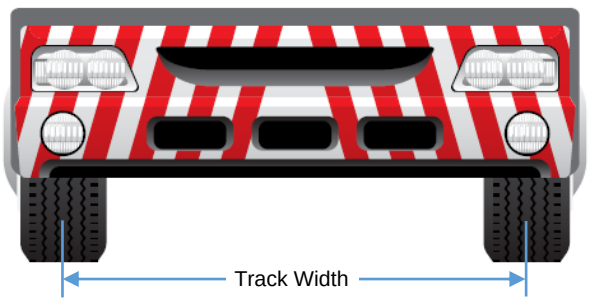
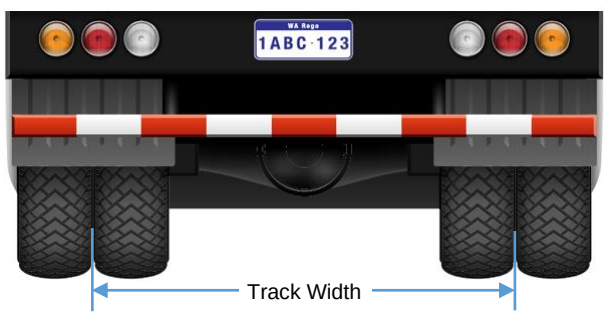
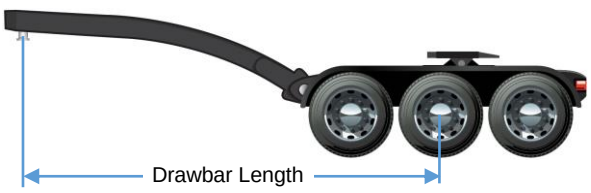
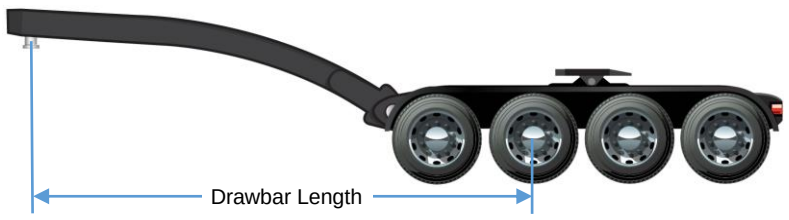
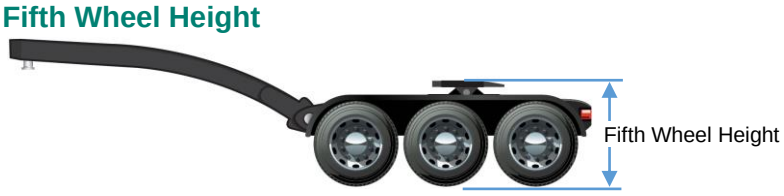
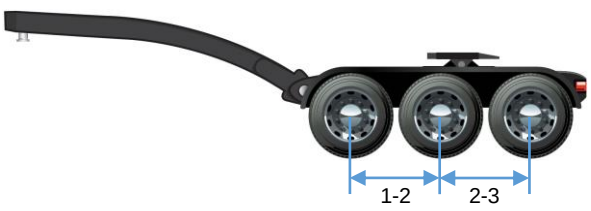
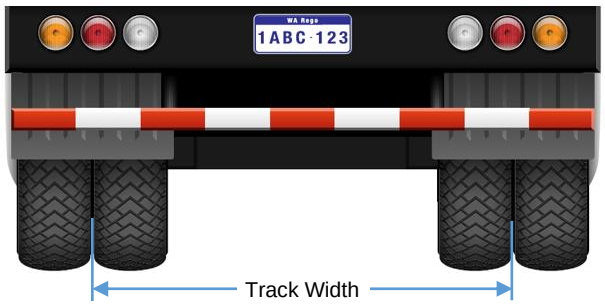
PBS Vehicle Dimension Guide

Contents

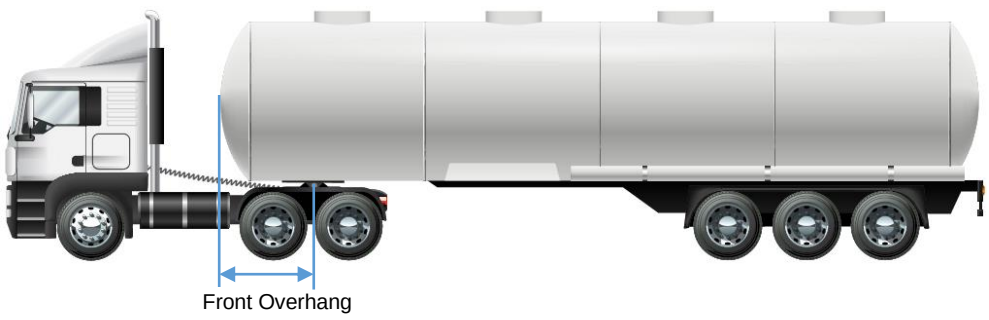
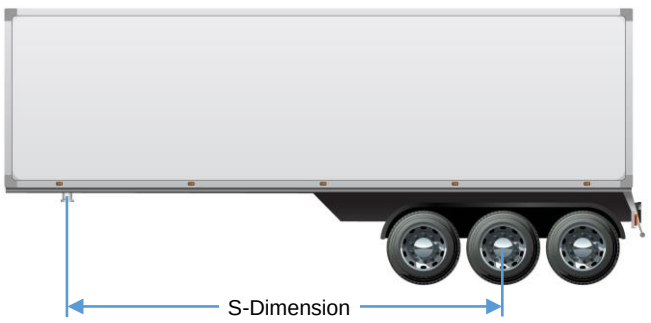
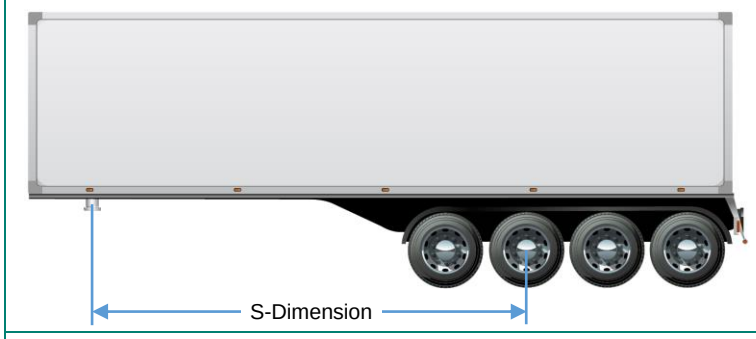
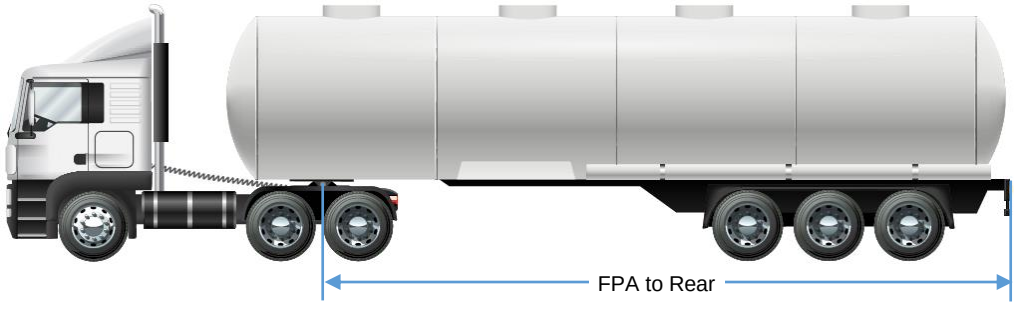
Prime Mover & Truck Dimensions			
Dimension	**Description**	**Measure from**	**Measure to**
Front Overhang – Single Steer Prime Mover  	The part of the prime mover or rigid truck forward of the centre of the steer axle. The front overhang influences the frontal swing.	Centre of steer axle.	Forwardmost part of prime mover or rigid truck.
Front Overhang – Twin Steer Prime Mover  	The part of the prime mover or rigid truck forward of the centre of the forwardmost steer axle. The front overhang influences the frontal swing.	Centre of front steer axle.	Forwardmost part of prime mover or rigid truck.
Wheelbase – Single Steer Tandem Drive  	The distance between the centre of the steer axle and the centre of the rear axle group. The wheelbase influences the swept path and mass distribution of the prime mover or rigid truck.	Centre of steer axle.	Centre of rear tandem axle group.
Wheelbase - Twin Steer Tandem Drive  	The distance between the centre of the forwardmost steer axle and the centre of the rear axle group. The wheelbase influences the swept path and mass distribution of the prime mover or rigid truck.	Centre of front steer axle.	Centre of rear tandem axle group.
Wheelbase – Single Steer Tri Drive  	The distance between the centre of the steer axle and the centre of the rear axle group. The wheelbase influences the swept path and mass distribution of the prime mover or rigid truck.	Centre of steer axle.	Centre of rear tri axle group.
Wheelbase – Twin Steer Tri Drive  	The distance between the centre of the forwardmost steer axle and the centre of the rear axle group. The wheelbase influences the swept path and mass distribution of the prime mover or rigid truck.	Centre of front steer axle.	Centre of rear tri axle group.

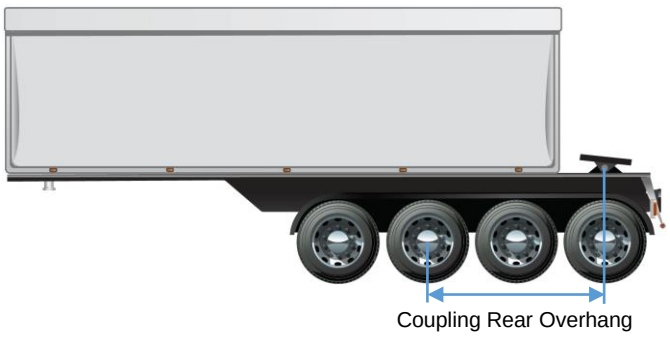
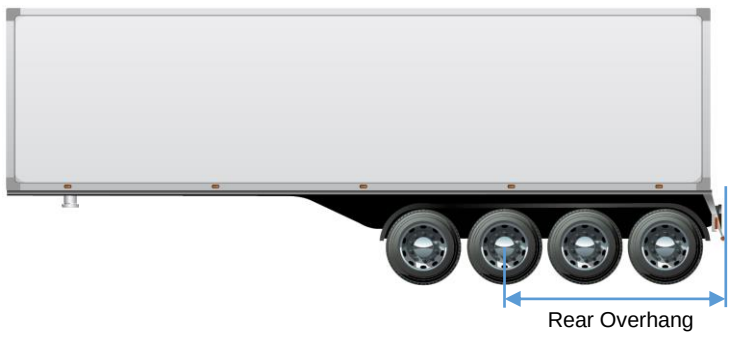
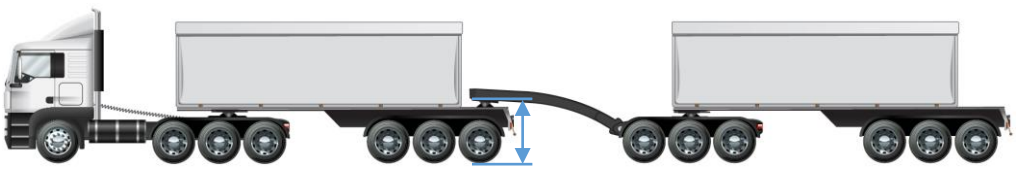
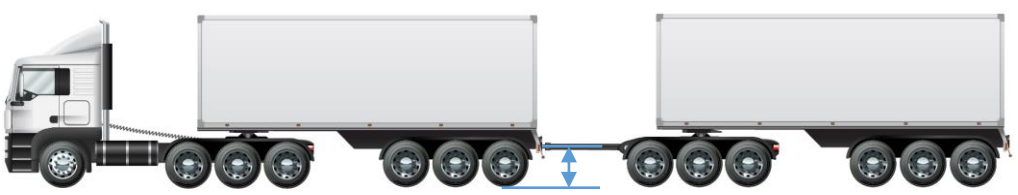
Fifth Wheel Offset 	The fifth wheel offset is the distance the fifth wheel is from the centre of the rear axle group on the prime mover. The fifth wheel position influences mass distribution, swept path and high-speed stability.	Centre of drive axle group.	Fifth wheel pivot point.
Fifth Wheel Height 	Fifth wheel height is the distance from the ground to the top of the fifth wheel. Fifth wheel height influences the overall height, which effects the rollover stability.	Ground.	Top of fifth wheel coupling.
Axle Spacings 	Axle spacings are measured between the centres of adjacent axles. Axle spacings influence vehicle stability, mass distribution, swept paths, as well as pavement and bridge damage.	Centre of axle.	Centre of adjacent axle.
Rear Overhang – Rigid Truck 	Rear overhang is the distance from the centre of the rear drive axle group to the rearmost part of the vehicle. Rear overhang influences swept path.	Centre of rear drive axle group (rear overhang line).	Rearmost part of truck.
Coupling Overhang – Rigid Truck 	Coupling rear overhang is distance the rear coupling is from the centre of the rear drive axle group. Coupling overhang influences swept path and vehicle stability. The closer the coupling is to the centre of the axle group, the better the vehicle stability.	Centre of rear drive axle group (rear overhang line).	Coupling pivot point.
Steer Axle Track Width 	Steer axle track width is the horizontal distance between the centres of the steer tyres. The steer axle track width influences vehicle stability.	Centre of left steer tyre.	Centre of right steer tyre.
Drive Axle Track Width 	Drive axle track width is the horizontal distance between the centres of the dual tyres on a drive axle. The drive axle track width influences vehicle stability.	Centre of dual tyres on left side of axle.	Centre of dual tyres on right side of axle.

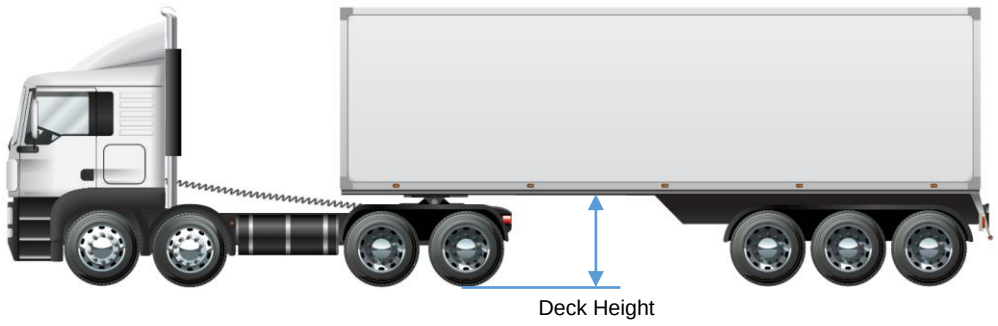
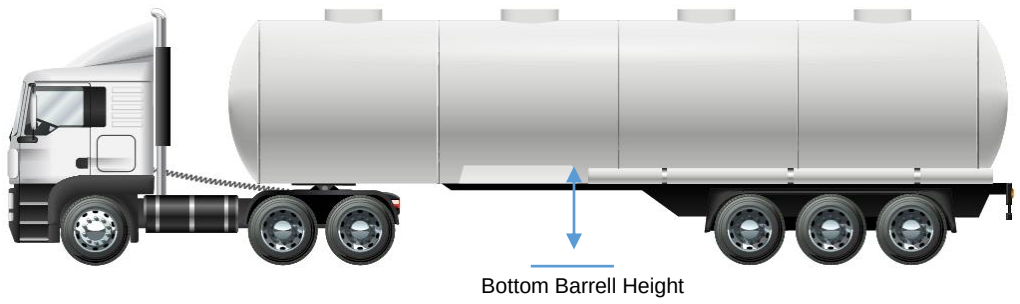
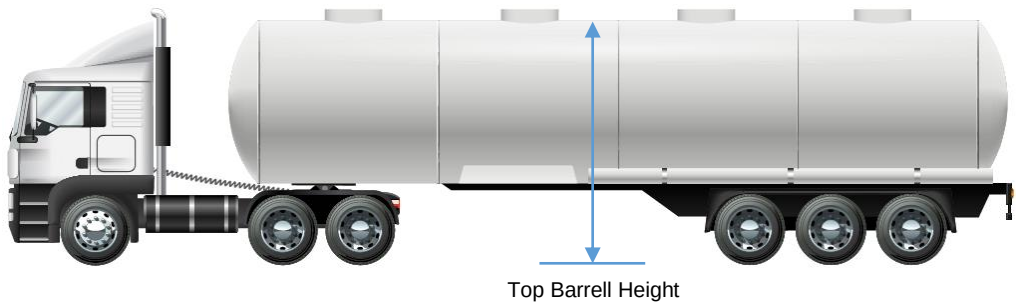
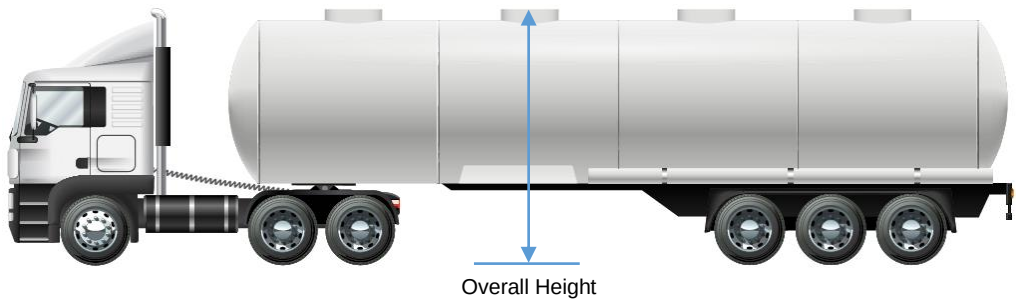
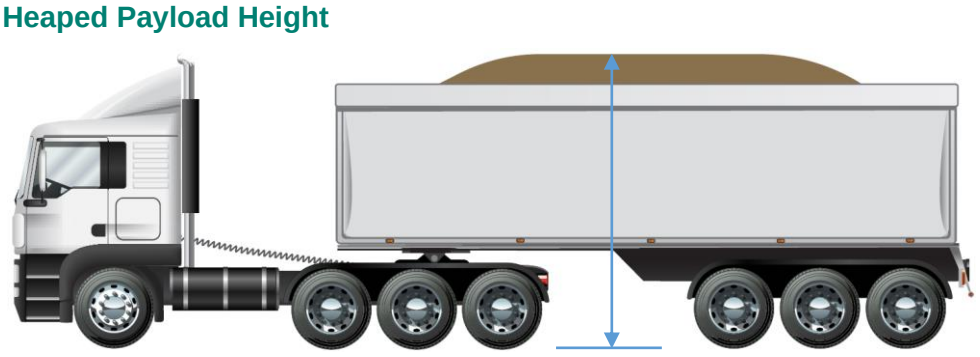
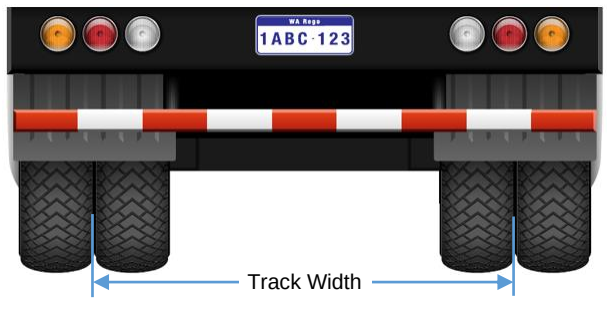
Dual Tyre Spacings 	Dual tyre spacing is the horizontal distance between the centres of adjacent tyres on one side of the axle. Dual tyre spacings influences vehicle stability.	Centre of inner tyre.	Centre of outer tyre.
Dolly Dimensions			
Dimension	**Description**	**Measure from**	**Measure to**
Drawbar Length – Tri Axle Dolly 	Drawbar length is the distance between the centre of the king pin or tow eye to the centre of the axle group on a dolly. Longer drawbars improve vehicle stability.	Centre of king pin or tow eye.	Centre of dolly axle group.
Dolly Fifth Wheel Offset – Tri Axle Dolly 	The fifth wheel offset is the distance the fifth wheel is from the centre of the dolly axle group. The fifth wheel position influences mass distribution, swept path and high-speed stability.	Centre of dolly axle group.	Fifth wheel pivot point.
Drawbar Length – Quad Axle Dolly (with rear steerable axle) 	Drawbar length is the distance between the centre of the king pin or tow eye to the centre of the axle group on a dolly. Longer drawbars improve vehicle stability.	Centre of king pin or tow eye.	Centre of dolly axle group. ***Note:*** *on a quad axle group with a steerable axle, the steerable axle is disregarded, and the rear overhang line is the centre of the remaining axles.*
Dolly Fifth Wheel Offset – Quad Axle Dolly (with rear steerable axle) 	The fifth wheel offset is the distance the fifth wheel is from the centre of the dolly axle group. The fifth wheel position influences mass distribution, swept path and high-speed stability.	Centre of dolly axle group. ***Note:*** *on a quad axle group with a steerable axle, the steerable axle is disregarded, and the rear overhang line is the centre of the remaining axles.*	Fifth wheel pivot point.
Fifth Wheel Height 	Fifth wheel height is the distance from the ground to the top of the fifth wheel. Fifth wheel height influences the overall height, which effects the rollover stability.	Ground.	Top of fifth wheel coupling.
Axle Spacings 	Axle spacings are measured between the centres of adjacent axles. Axle spacings influence vehicle stability, mass distribution, swept paths, as well as pavement and bridge damage.	Centre of axle.	Centre of adjacent axle.

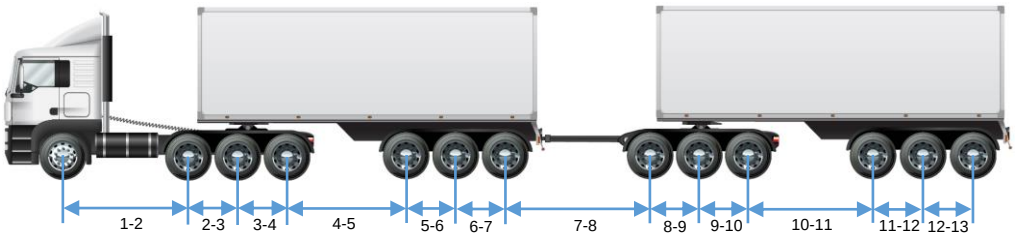
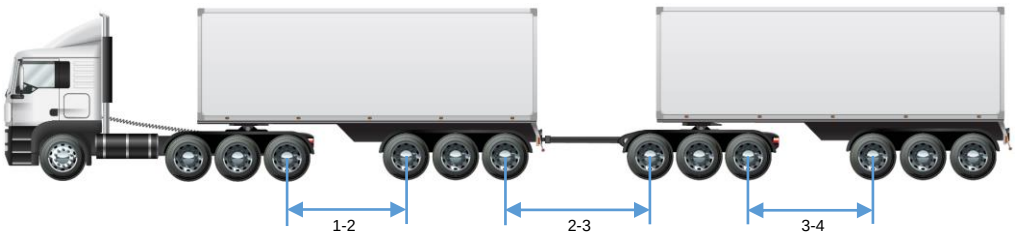
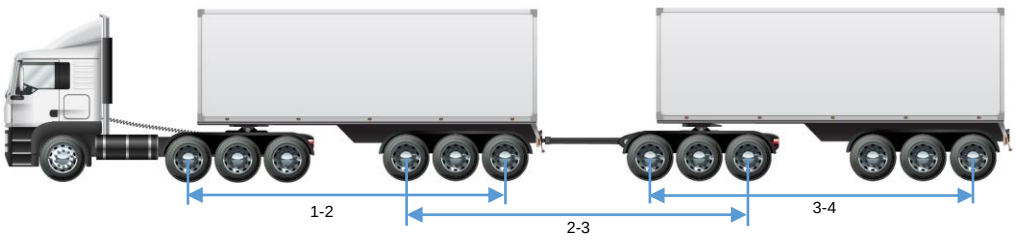
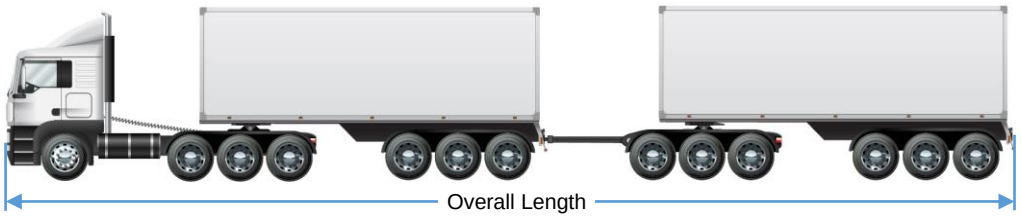
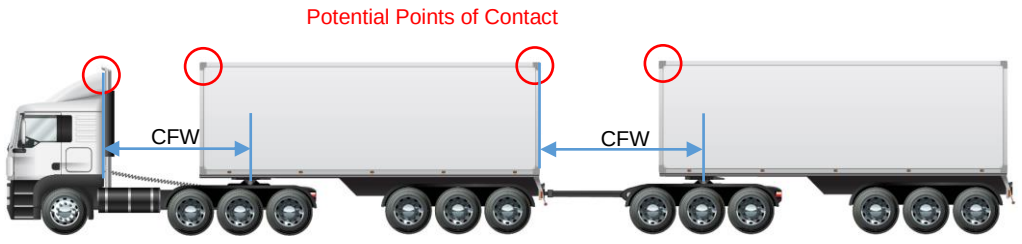
Track Width 	Track width is the horizontal distance between the centres of the dual tyres on the dolly axles. Track width influences vehicle stability.	Centre of dual tyres on left side of axle.	Centre of dual tyres on right side of axle.
Dual Tyre Spacings 	Dual tyre spacing is the horizontal distance between the centres of adjacent tyres on one side of the axle. Dual tyre spacings influences vehicle stability.	Centre of inner tyre.	Centre of outer tyre.

Semi-Trailer Dimensions

Dimension	Description	Measure from	Measure to
Front Overhang 	Front overhang is the distance forward of the articulation point (e.g. king pin). The front overhang is usually measured as a radius and influences the swept path.	Centre of king pin.	Forwardmost part of trailer. Fittings in the centre of the front of the trailer, such as hydraulic hoses that fit within the maximum radius, can be disregarded.
S-Dimension – Tri Axle 	S-dimension is the primary semi-trailer dimension and is the distance between the king pin and the centre of the rear axle group. S-dimension influences swept path and vehicle stability.	Centre of king pin.	Centre of tri axle group (rear overhang line).
S-Dimension – Quad Axle (with rear steerable axle) 	S-dimension is the primary semi-trailer dimension and is the distance between the king pin and the centre of the rear axle group. S-dimension influences swept path and vehicle stability.	Centre of king pin.	Rear overhang line. ***Note:*** *on a quad axle group with a steerable axle, the steerable axle is disregarded, and the rear overhang line is the centre of the remaining axles.*
Front Point of Articulation to the Rear 	The measurement from the king pin to the rear of the trailer influences swept path and vehicle stability.	Centre of king pin.	Rearmost part of trailer.

Coupling Rear Overhang – Tri Axle  Coupling Rear Overhang	Coupling rear overhang is distance the rear coupling is from the centre of the rear axle group. Coupling overhang influences swept path and vehicle stability. The closer the coupling is to the centre of the axle group, the better the vehicle stability.	Centre of axle group (rear overhang line).	Coupling pivot point.
Coupling Rear Overhang – Quad Axle (with rear steerable axle)  Coupling Rear Overhang	Coupling rear overhang is distance the rear coupling is from the centre of the rear axle group. Coupling overhang influences swept path and vehicle stability. The closer the coupling is to the centre of the axle group, the better the vehicle stability.	Rear overhang line. *Note: on a quad axle group with a steerable axle, the steerable axle is disregarded, and the rear overhang line is the centre of the remaining axles.*	Coupling pivot point.
Rear Overhang – Tri Axle  Rear Overhang	Rear overhang is the distance from the centre of the rear axle group to the rearmost part of the trailer. Rear overhang influences swept path.	Centre of axle group (rear overhang line).	Rearmost part of trailer.
Rear Overhang – Quad Axle (with rear steerable axle)  Rear Overhang	Rear overhang is the distance from the centre of the rear axle group to the rearmost part of the trailer. Rear overhang influences swept path.	Rear overhang line. ***Note:** on a quad axle group with a steerable axle, the steerable axle is disregarded, and the rear overhang line is the centre of the remaining axles.*	Rearmost part of trailer.
Coupling Underrun  Coupling Underrun	Coupling underrun is the distance the rear coupling is forward of the rear of the trailer. It is referred to as underrun, as a conventional pin type coupling is typically located under the rear of the trailer.	Coupling pivot point.	Rearmost part of trailer.
Drawbar Coupling Attachment Height – Fifth Wheel  Coupling Height	Drawbar coupling attachment height is the distance from the ground to the drawbar coupling point.	Ground.	Top of rear fifth wheel coupling.
Drawbar Coupling Attachment Height – Pin Type Coupling  Coupling Height	Drawbar coupling attachment height is the distance from the ground to the drawbar coupling point.	Ground.	Centre of rear coupling pin.

Deck Height  	Deck height is the distance from the ground to the underside of the trailer deck. Deck height influences the payload centre of gravity, which effects rollover stability.	Ground.	Underside of deck. ***Note:*** *If the trailer is not level, this measurement is taken as an average by measuring the front, centre and rear.*
Bin Height  	Bin height is the distance from the ground to the top of the trailer bin. Bin height generally determines the maximum water level payload height.	Ground.	Top of bin. ***Note:*** *Typically, the maximum bin height is taken at the highest point, however it can be taken as an average.*
Bottom Barrell Height  	Bottom barrel height is the distance from the ground to the underside of the trailer barrel / tank. Bottom barrel height influences the payload centre of gravity, which effects rollover stability.	Ground.	Underside of barrel / tank. *Note: If the trailer is not level, this measurement is taken as an average by measuring the front, centre and rear.*
Top Barrel Height  	Top barrel height is the distance from the ground to the top of the trailer barrel / tank. Top barrel height influences the payload centre of gravity, which effects rollover stability.	Ground.	Top of barrel / tank. ***Note:*** *If the trailer is not level, this measurement is taken as an average by measuring the front, centre and rear.*
Overall Height  	Overall height is the distance from the ground to the highest point on the trailer. Overall height influences the payload centre of gravity, which effects rollover stability.	Ground.	Highest part of trailer.
Heaped Payload Height  	Heaped payload height is the highest point of a bulk payload that is heaped in the trailer. Heaped payload height influences the payload centre of gravity, which effects rollover stability.	Ground.	Highest part of payload.
Track Width  	Track width is the horizontal distance between the centres of the dual tyres on the trailer axles. Track width influences vehicle stability.	Centre of dual tyres on left side of axle.	Centre of dual tyres on right side of axle.

Dual Tyre Spacings  Dual Tyre Spacing	Dual tyre spacing is the horizontal distance between the centres of adjacent tyres on one side of the axle. Dual tyre spacings influences vehicle stability.	Centre of inner tyre.	Centre of outer tyre.
Combination Dimensions			
Dimension	**Description**	**Measure from**	**Measure to**
Axle Spacings 	Axle spacings influence vehicle stability, mass distribution, swept paths, as well as pavement and bridge damage.	Centre of axle.	Centre of adjacent axle.
Inner to Inner Axle Spacings 	Axle spacings influence vehicle stability, mass distribution, swept paths, as well as pavement and bridge damage.	Centre of rearmost axle in the axle group.	Centre of forwarmost axle in the adjacent axle group.
Outer to Outer Axle Spacings 	Axle spacings influence vehicle stability, mass distribution, swept paths, as well as pavement and bridge damage.	Centre of the forwardmost axle in the axle group.	Centre of rearmost axle in the adjacent axle group.
Overall Length 	Overall length influences vehicle stability, swept path and level of access.	Forwardmost part of the vehicle combination.	Rearmost part of the vehicle combination.
Clearance from Fifth Wheel (CFW) 	This measurement is only required to determine trailer clearances using the Trailer Clearance Calculator.	The fifth wheel pivot point on the prime mover; **Or** The fifth wheel pivot point on the dolly.	The rear of the prime mover that will potentially contact the front of the lead trailer / load; **Or** The rear of the leading trailer or load that will potentially contact the following trailer / load.