

Wolf Trailer Company, Inc

"The Safer-Trailer Company"

www.wolftrailer.com



Roll-Coupling Hitches for Heavy Trucks:

``improving safety & truck productivity``

Task Force on Vehicle Weights and Dimensions Policy Meeting

December 5, 2012

Roll-coupling hitch - BC

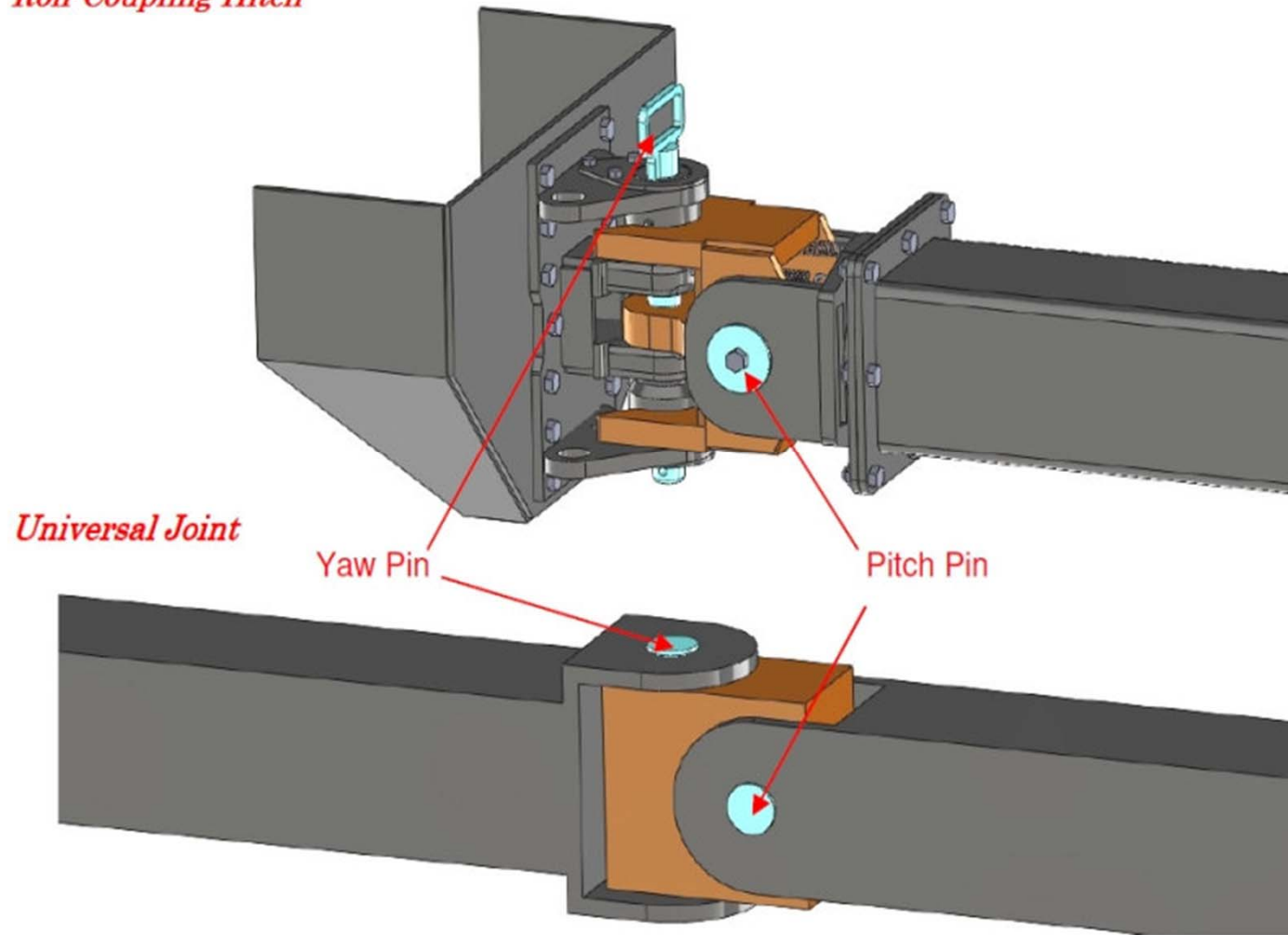


Tridem drive truck / tridem pony trailer

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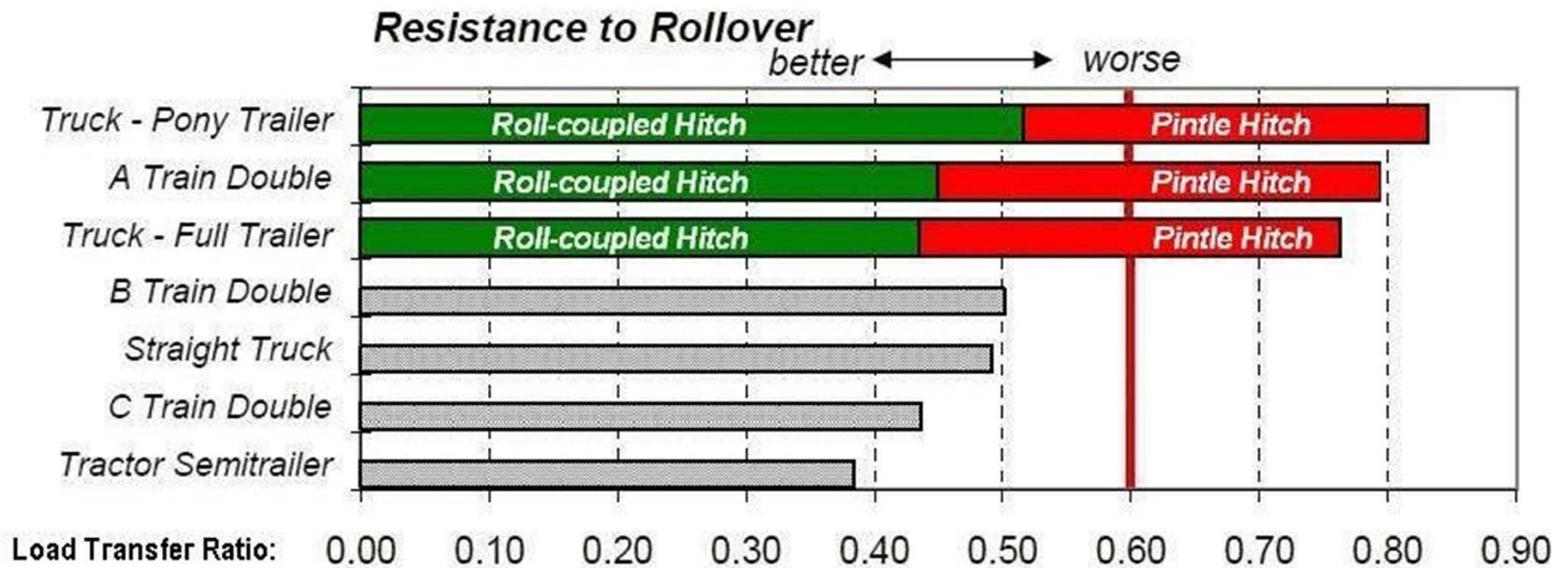
Roll-coupling: how it works

Roll-Coupling Hitch



Why Roll-coupling?

Rollover



John Pearson, 1996, "Performance Based Truck Size and Weight Regulations: A Layman's Guide"

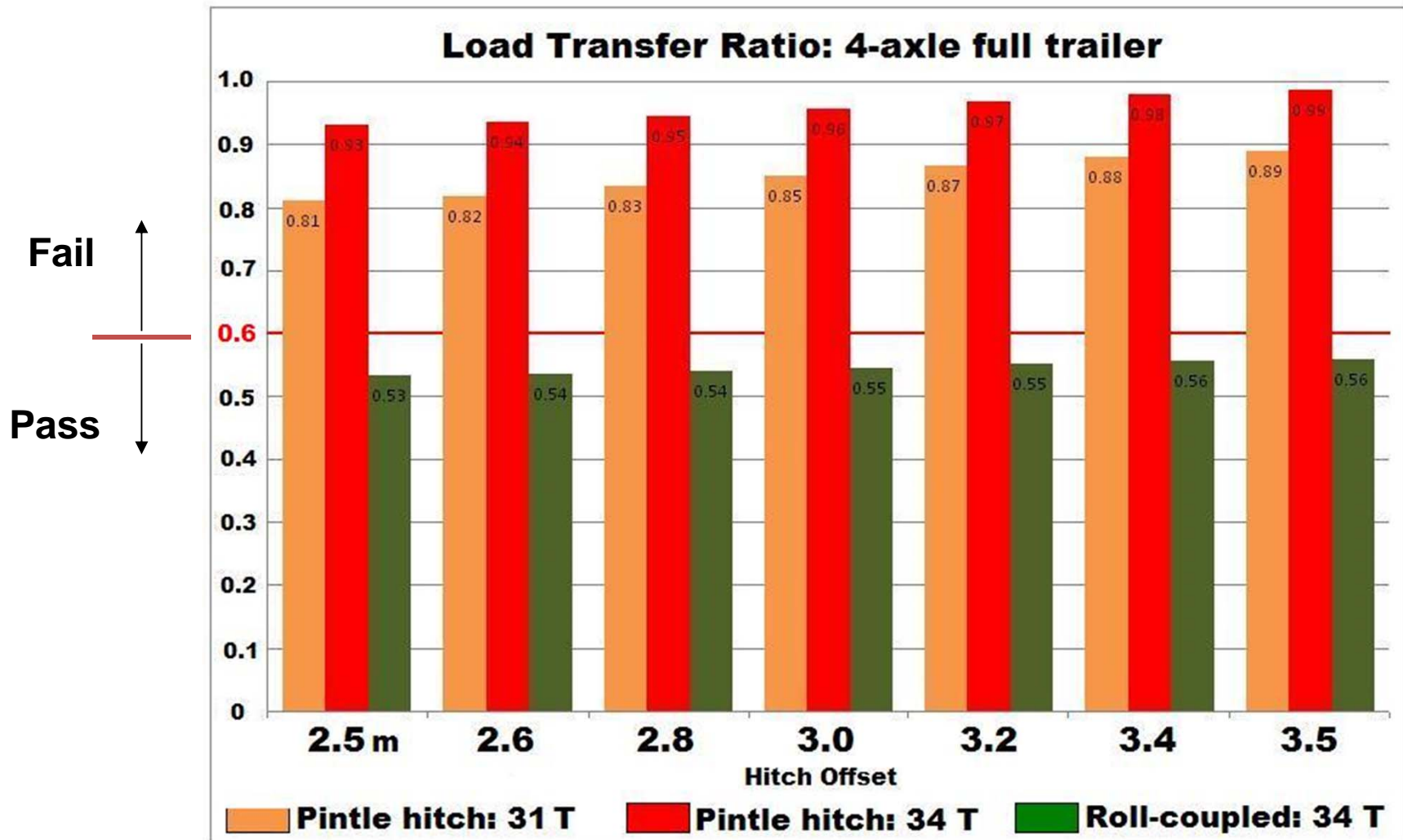
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Why Roll-coupling?



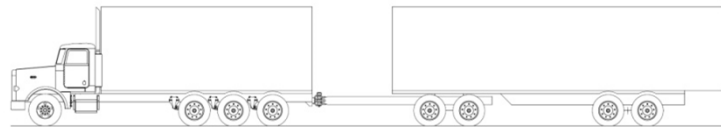
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Roll-coupling / Hitch Offset / LTR

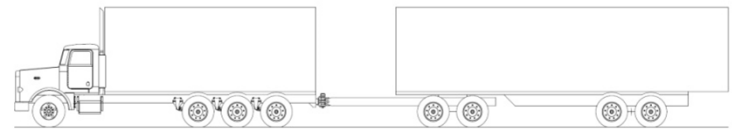
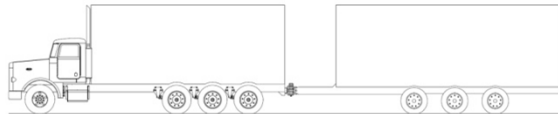


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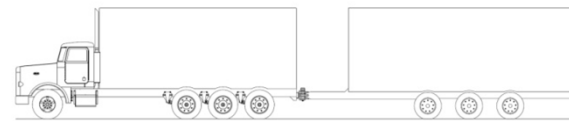
Roll-coupling = New Configuration



Pintle coupling



Roll-coupling



Lack of roll-coupling results in:

1. poor dynamic performance (LTR)
2. less-than optimal payloads - trailer weights reduced by 3 t.
3. LTR performance very sensitive to longer hitch offsets

Roll-coupling units together results in:

1. Improved trailer stability at maximum axle weights
2. Acceptable LTR performance at longer hitch offsets – up to 3m.

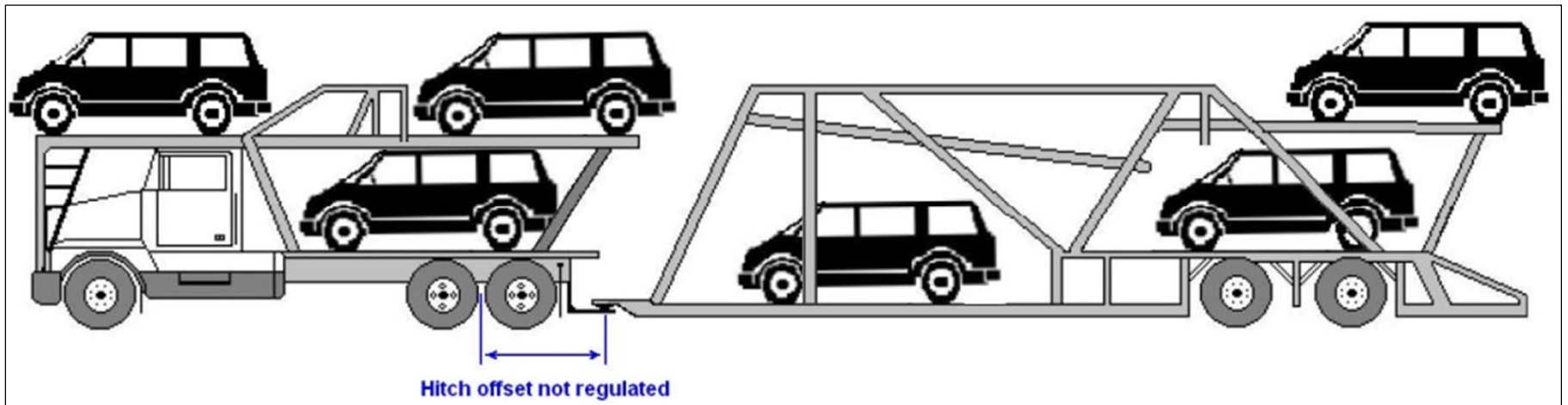
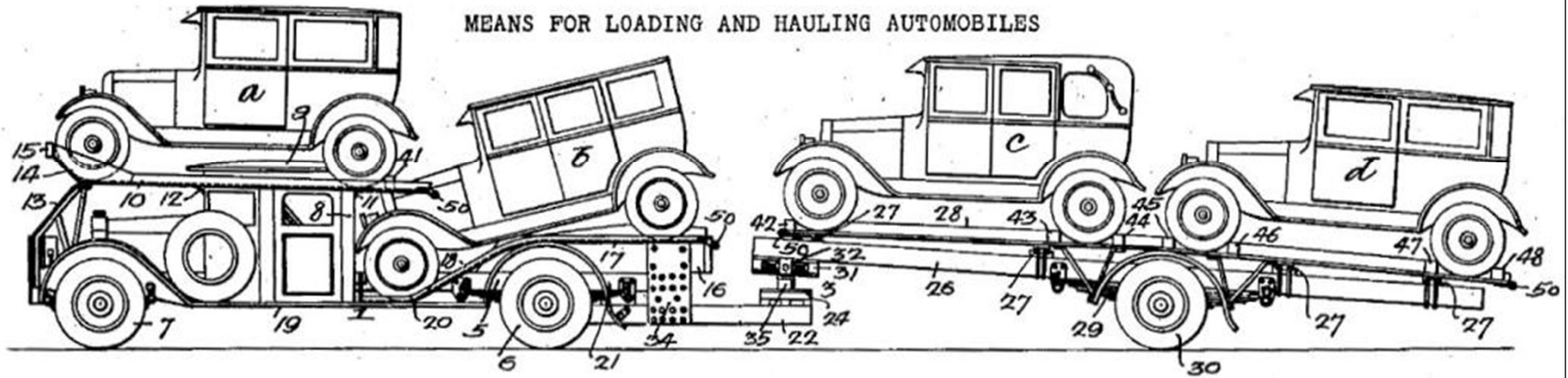
Seperate Category for Auto Carriers in MoU

Sept. 27, 1927.

C. D. GILL

1,643,885

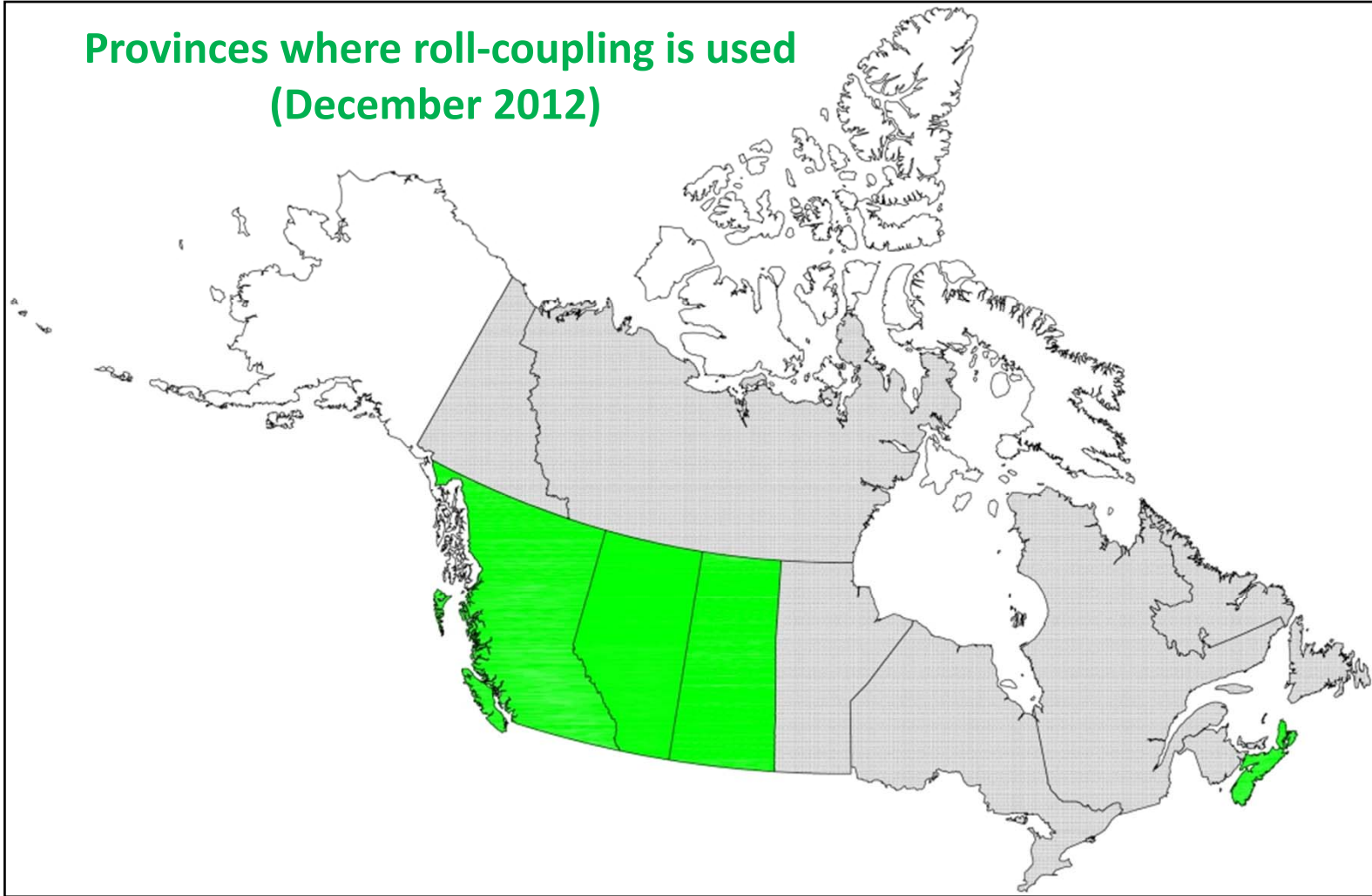
MEANS FOR LOADING AND HAULING AUTOMOBILES



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Time for Regulatory Harmonization?

Provinces where roll-coupling is used
(December 2012)



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Canada Website: www.cancade.com

TRUCK BODY & TRAILER MANUFACTURERS—DISTRIBUTORS

Nov 28, 2012

To whom this may concern:

One of our customers purchased a roll-coupled truck tri-drive truck and pony trailer in BC and had it hauled to our plant in Brandon MB to install grain boxes that we manufacture. After the vehicle was assembled the customer was unable to drive the unladen vehicle to Saskatchewan where it is allowed to haul full loads. We understand that the reason why the truck and trailer cannot operate in Manitoba is that trucks and trailers using pintle hitches are not roll-coupled and as a result TAC has limited hitch offset to 1.8 m; the hitch offset on our customer's roll-coupled truck is longer.

In the interest of promoting transportation safety, inter-provincial commerce and regulation harmonization across Canada we urge the Provincial leaders and the Transportation of Canada to recognize this new technology in the MoU for its safety benefits and to set appropriate weight and dimension limits for these vehicles based on performance measurements of roll-coupled vehicles.

A handwritten signature in black ink, appearing to read "Darrel Thiessen", is written over a light blue horizontal line.

Darrel Thiessen
President
CANCADÉ Company Limited

Manitoba Trailer Mfg.

New truck and pony trailer combt'n
– partial build in BC and final
assembly in Man. for Sask. User

Not allowed to travel in Manitoba
empty but can operate at full weights
in Saskatchewan.



6763 - 76th Street
Red Deer, AB T4P 3R7
Phone: (403) 341-3933
Fax: (403) 341-3381
Toll Free: 1-877-341-3933

Quality People Delivering Quality Service

www.cwcwellservices.com

To Whom It May Concern:

CWC Well Services Corp. is committed to improving safety in the workplace. We started using roll-coupling hitches to improve the safety performance of tri-drive trucks in Alberta and Saskatchewan soon after learning about the technology from a presentation at a PSAC Transportation meeting in October 2010.

CWC has used the roll-coupling hitches for the past two years in our Provost office. We started with two units being outfitted with this hitch. We participated with the pilot project with the province of Saskatchewan with great results. Once the hitch was installed and the driver started driving the unit, he noticed that it was very stable on the roadway with no side to side movement, or movement front to back when using the brake or when accelerating. The pintle hitch set-up this had some movement all of the time. The other biggest thing that the driver noticed was they are now able to back the trailer unit up with more visibility available to the driver; as they can turn from a 30 degree angle with the pintle hitch to about 80 degree turn without doing any damage to the equipment. The two crews that we started with have nothing but good things to say about the roll-coupling hitches set up and as a company we now are using five of the roll-coupling hitches and have only positive feedback.

The roll-coupling hitch is a far better set up than the pintle hitch from a safety point of view, from being more stable on the road way and having more control over backing up the units as well.

We provide services to the oil and gas industry in all four western provinces. We would respectfully request a harmonized approach involving all the provinces regarding the implementation of weight and dimensions for roll-coupled trucks and trailers. I.e. Given the types of specialized equipment used in the industry, we found that increasing the overall length limit of roll-coupled vehicles (where necessary) to 25 meters has allowed us to roll-couple more vehicles and has also improved the maneuverability on small oil leases (less congestion between the vehicles allowing for tighter turns).

Rick Saulnier
Environmental & Transportation Manager
CWC Well Services

Oil & Gas Well Servicing

Operate in the four western provinces – various regs!

Harmonized rules needed for roll-coupled trailers

Harmonize length limit at 25 m.
for both trailer types



LangFab Fabricators Ltd

Truck Bodies, Trailers and Custom Fabricating
Quality & Excellence Since 1975

To whom this may concern:

RE: Roll-coupled Pony Trailers and Full Trailers

LangFab Fabricators Ltd. has been involved in testing roll-coupled components and building roll-coupled pony dump trailers, pony equipment trailers, single axle convertor dollies, tandem axle convertor dollies since 2009 for use in BC, Alberta and Saskatchewan.

During this time our customers have frequently expressed their concerns that while tridem pony trailers with TAC axle spreads can carry 24 tonnes in BC they can only carry 21 tonnes in other provinces. They are reluctant to order tridem pony trailers with TAC axle spreads because the TAC axle spread for tridem pony trailers is too short to carry full loads in Alberta and Saskatchewan. Trucking companies operating across provincial borders will benefit by TAC increasing axle spread allowances on tridem pony trailers to allow these trailers to carry up to 24 tonnes in other provinces.

Roll-coupled vehicles are different from vehicles that are not roll-coupled. If changes can be made to exclude roll-coupled trucks and trailers from TAC limits for non-roll-coupled trucks and trailers, serious consideration should also be given to harmonizing the carrying capacity of roll-coupled 4-axle full trailers to 34 tonnes as is allowed in BC.

Regards,

Glen Goyer

BC Trailer Manufacturer

24 t. in BC, elsewhere 21 t.?

Harmonize pony trailer tridem axle spacing for 24 t.

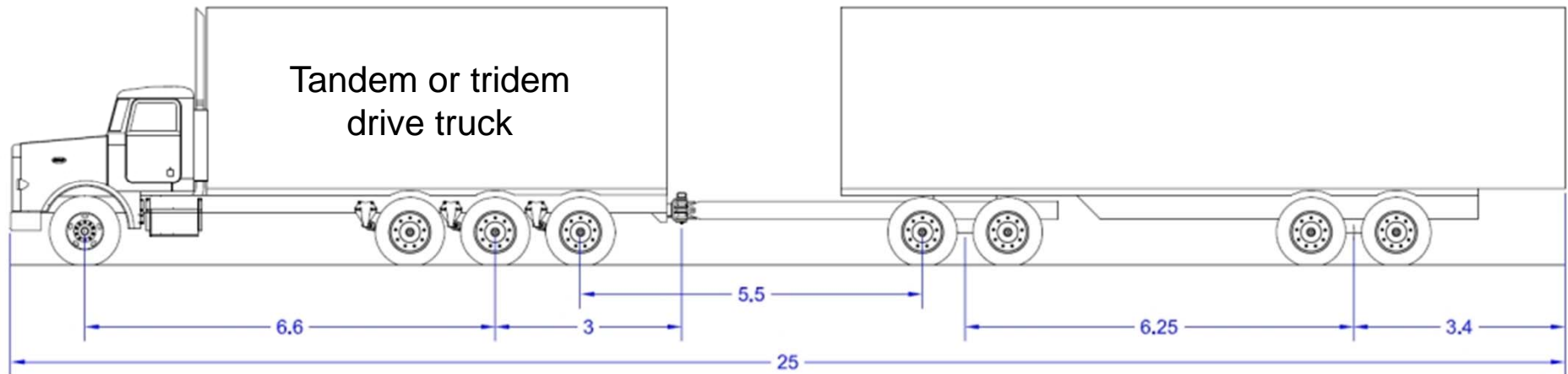
Harmonize full-trailer weights at 34 t. (4-axles)

Engineering & Testing

1	Improving safety performance of full trailers	04/04	FERIC, Séamus Parker P.Eng., R.P.F.
2	Safety performance of non-roll-coupled tri-drive trucks	03/29/06	Woodrooffe & Associates Incorporated John Woodrooffe, P.Eng.
3	Roll-coupled tridem pony trailer	07/04/08	FPInnovations, Séamus Parker P.Eng., R.P.F.
4	Roll-coupling hitches	05/01/09	FPInnovations, Séamus Parker P.Eng. James Sinnett. B.Sc.M.E.
5	Hitch torque capacity	05/20/09	FPInnovations, Séamus Parker P.Eng. James Sinnett. B.Sc.M.E.
6	Tandem drive and tri-drive truck frames	07/16/09	IVT, Mike Macnabb, P.Eng. Randy Berg, P.Eng.
7	R/C Tridem pony trailers can safely carry 24 MT	12/17/09	FPInnovations, Séamus Parker P.Eng. James Sinnett. B.Sc.M.E.
8	R/C 4 Axle full trailers can safely carry 34 MT	06/23/10	FPInnovations, Séamus Parker P.Eng. James Sinnett. B.Sc.M.E.
9	R/C 4 Axle full trailers can safely carry 34 MT	06/23/10	FPInnovations, Séamus Parker P.Eng. James Sinnett. B.Sc.M.E.
10	R/C A-train dolly	07/29/10	FPInnovations, Séamus Parker P.Eng., R.P.F.
11	Pony trailer axle spreads	11/08/10	FPInnovations, Séamus Parker P.Eng., R.P.F.
12	Hitch offset sensitivity analysis	08/08/11	FPInnovations, Séamus Parker P.Eng., R.P.F.

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Proposed Truck / full-trailer



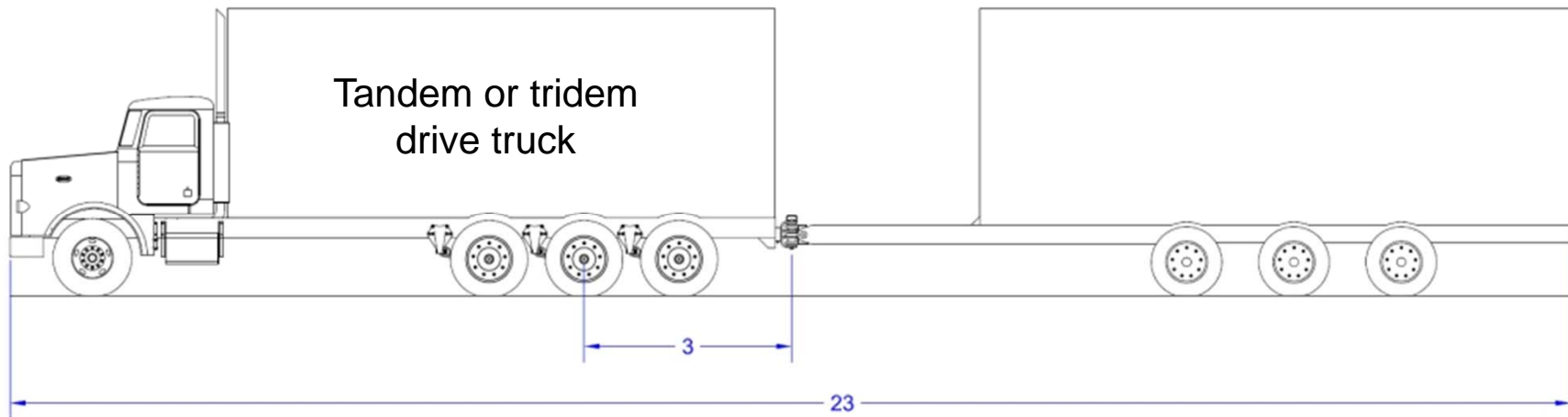
Overall length of 25m

Hitch offset limit 3.0m

34 tonnes on 4-axle trailer

26.1 tonnes on 3-axle trailer

Proposed Truck / pony-trailer

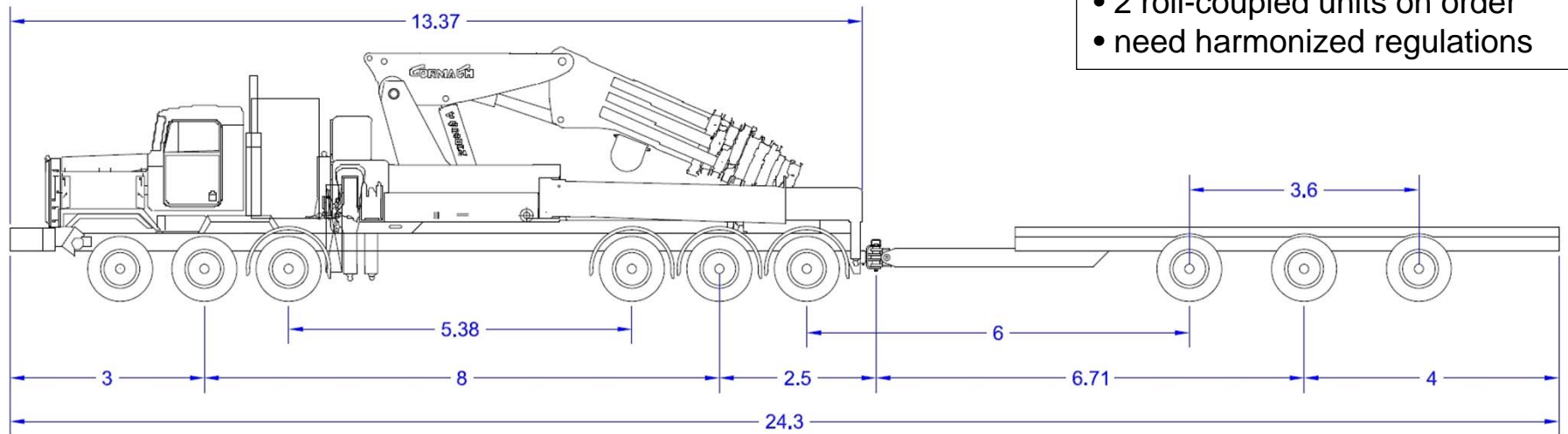


Overall length of 23m

Hitch offset 3.0m

24 tonnes on tridem trailer

Specialty Vehicles Using RC Hitches



Sandman Picker Service
• BC, Alberta, Sask. & N. Dakota
• 2 roll-coupled units on order
• need harmonized regulations

Oil & Gas – large user of pony trailer configurations

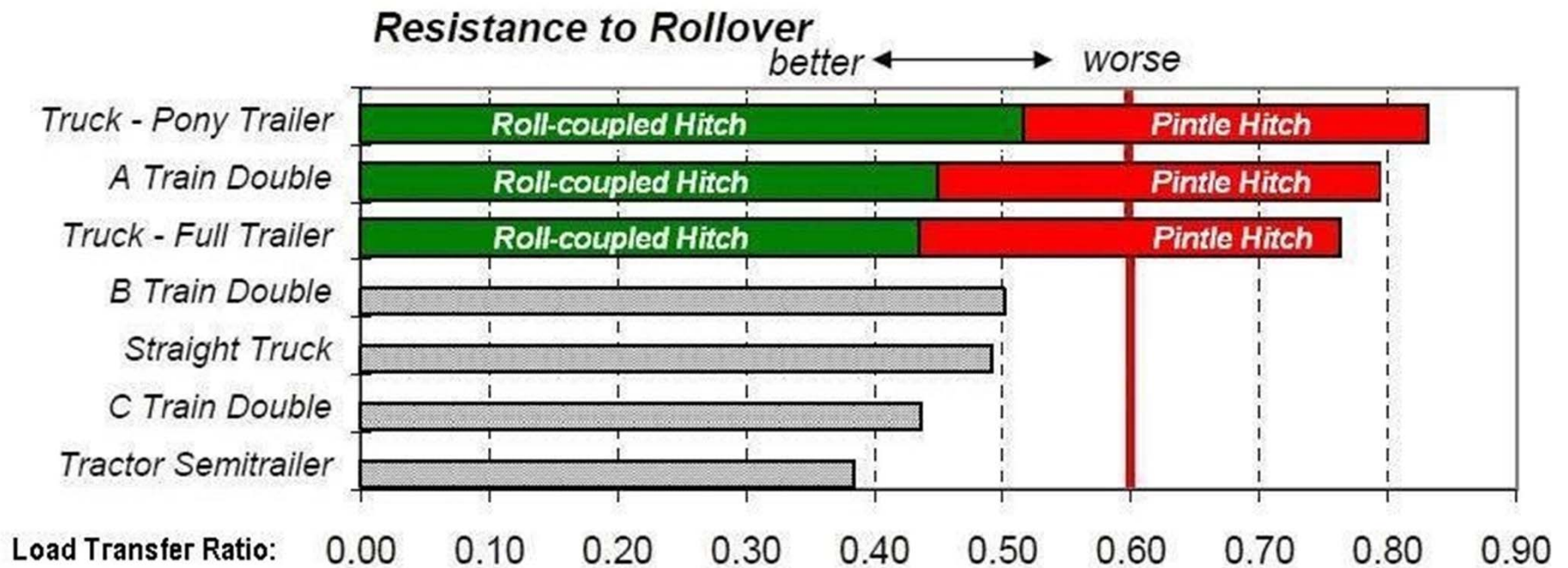
Truck / pony trailer with overall length requirement of 25m and 24 t. on trailer

Recommendations: regulation of r/c units

- 1. House the standard for roll-coupled vehicles in the MoU**
- 2. Add roll-coupled truck trailer categories to MoU**
- 3. Allow medium and wide spread on r/c tridem pony trailers**
- 4. Allow full weights on r/c pony and full trailers**
- 5. Increase hitch offsets for r/c trucks to 3.0 m; over 3.0 m under permit on case-by-case basis**

Why Roll-coupling?

Rollover



John Pearson, 1996, "Performance Based Truck Size and Weight Regulations: A Layman's Guide"

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Thank You



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