



Wide Single Tires (WST) in Canada

Presentation to Task Force on VW&D Policy

Montreal
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Canadian Trucking Alliance

- The CTA is a federation of the provincial trucking associations representing BC, Alta, Sask, Man, Ont, Que and the Maritimes.
- Through these associations, the CTA represents a broad cross-section of the Canadian trucking industry including some 4,500 carriers and industry suppliers.
- The CTA's primary role is to put forward the trucking industry's viewpoint on national and international policy, including regulatory and legislative issues that affect trucking.

Wide Single Tires (WST)

- Introduced in North America in early 2000's primarily as a replacement for traditional dual tires on highway tractor-trailers.
- Tires have less rolling resistance and weight, easier inflation monitoring and maintenance and greater safety.
- A key benefit is that they provide the trucking industry with a tool to significantly reduce greenhouse gas (GHG) emissions.
- Main concern is potential for greater pavement damage, especially when operating at high axle weights on lighter duty highways.

Pavement Concerns

- Virtually all studies conclude there is little concern with WST on strong roadways such as:
 - Major highways
 - Established truck routes
 - Vast majority of tractor-trailer traffic is on these routes.
- Studies also agree that the WST pavement concerns increase at higher axle weights:
 - At higher weights, dual tires generally have more contact area with pavement than WST;
 - Pavement damage at higher axle weights increases exponentially.
- Primary focus of concern is therefore on heavily loaded WST – especially when operating on lighter-duty secondary routes.

Current Weight Allowances

- As set out in the national MoU, all provinces allow WST at 7,700 kg on single axles and 15,400 kg on tandem axles – significantly less than duals.
- For approximately a decade, Quebec and Ontario have allowed WST at ‘equivalent’ weights as dual tires - including 18,000 kg on tandem axles and 26,000 kg on wide tridem axles.
- For nearly 3 years, Manitoba has allowed equivalent to dual tire weights on WST operating on RTAC highways - including 17,000 kg tandem axles and 24,000 kg wide tridem axles.

Ongoing Work

- Considerable work is going on in individual provinces to bring WST in line with dual tires:
 - Pilots or permit programs in Alberta, Saskatchewan and Nova Scotia.
 - Potential pilots in BC and New Brunswick.
- CTA commends the provinces, trucking associations and specific companies (such as Michelin) for their hard work on this difficult file.

Existing WST Regulations Accommodate:

- US trucks equipped with WST can enter and leave any Canadian province with no restriction.
- Canadian tractor-trailers dedicated to 80,000 lb north/south hauls between Canada and the US have no restriction.
- Canadian tractor-trailers that operate exclusively within provinces that allow equivalent to dual tire weights.
- The above represent a minority of Canadian highway tractor-trailers.

Existing WST Regulations Impede:

- Canadian tractor-trailers serving the US that also do domestic moves within Canada, either as part of a triangular movement or as the need arises.
- Canadian domestic tractor-trailers if they travel (or may travel) into areas that restrict their use.
- Impediments force use of dual tires to avoid weight penalties:
 - Places most Canadian vehicles at a competitive disadvantage with US trucks equipped with WST;
 - Existing restrictions extend far beyond the region where they are imposed as they also impact other vehicles that may travel into or through that region.

National Coordination

- Although a number of provinces are individually working to accommodate WST, CTA believes that national coordination is important.
- In its submission to newly formed *Task Force on Trucking Harmonization*, CTA will highlight WST as a key harmonization issue.
- In conjunction with its provincial trucking associations, CTA has developed and formally adopted a policy which proposes an amendment to the national MoU to provide the necessary national coordination and harmonization.
- The proposal acknowledges there are legitimate pavement concerns and includes a number of industry concessions to help provinces address their pavement concerns.

CTA Proposal

- As the MoU sets ‘minimum standards’ which any province may exceed, the proposal will not affect:
 - Those provinces that already have higher allowances, whether in regulation or in permit program;
 - Those provinces that are considering higher allowances.
- Like ‘lowest common denominator’ MoU dual tire weight allowances, these proposed minimum WST standards are primarily targeted at western provinces which generally have lower axle weight allowances.
- It is expected that the eastern provinces will continue with, or work towards, equivalent to dual tire axle weights.

CTA MoU Proposal

- In the MoU, axles with dual tires are currently allowed:
 - 9,100 kg for single axles;
 - 17,000 kg for tandem axles;
 - 21,000 – 24,000 kg for tridem axles.
- Pavement damage starts to become a concern as axle weights approach 9,000 kg.
- Previous Ontario research showed that less than 1% of tractor-trailer VKT involves single axles and less than 6% of all tractor-trailer VKT is at axle weights above 8,000 kg.

First element of CTA proposal:

- **Cap MoU weight on WST at 8,500 kg per axle:**
 - 8,500 kg for single axles;
 - 17,000 kg for tandem axles;
 - 21,000 – 24,000 kg for tridem axles.

CTA MoU Proposal

- Two typical widths of WST: 445mm and 455mm.
- 445mm is most common in US and is the basis of most pavement damage studies.
- Even though the 445mm tire falls well within the MoU's 10 kg/mm maximum weight limit - the contact area of the 445mm tire is considerably smaller than the 455mm at higher weights resulting in more pavement stress.

Second element of CTA proposal:

- **Cap MoU weight of 445mm tires at 7,700 kg:**
 - 445mm allowed on weights up to 7,700 kg per axle;
 - 455mm or greater for any axle weight higher than 7,700 kg.

CTA MoU Proposal

- MoU allows provinces to designate a network of highways to which MoU weights apply:
 - Some provinces designate entire highway network;
 - Others limit MoU weights to specified highways.
- Even some of the designated routes are relatively light duty and are a cause of concern for WST.

Third element of CTA proposal:

- **Allow concerned provinces to declare a second tier network of highways for WST axle weights > 7,700 kg:**
 - Light-duty, secondary highways of concern can be excluded from this network.

Expected Outcome

- Amending MoU as proposed establishes a national minimum standard to harmonize WST allowances.
- It provides a key tool in addressing GHG reduction in the trucking sector.
- It does not impact provinces that already allow, or are considering, higher weights on WSTs.
- It addresses key concerns of pavement engineers.
- It provides considerable flexibility to provinces with concerns about the tires to start with a relatively narrow network of highways.

CTA Request of Task Force

- That the Task Force adopt the proposed CTA MoU amendment.
- If one, or a minority of provinces are not able to support the amendment, the CTA requests:
 - The MoU be amended anyway with excluded provinces listed;
 - CTA understands that some provinces may not be able to commit to the amendment until results of ongoing pilots are known.



Thank You

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