

MTO Stakeholder Consultations Road-Building Machines

March 11, 2015

Fleet Forward 2020



National Research
Council Canada

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MTO Stakeholder Consultation: Road-Building Machines

Presentation Outline

1. Introduction
2. History of road-building machines
3. Definitions
4. Commercial vehicle requirements
5. Slow moving vehicles
6. Weights and dimensions



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Introduction

NRC - CMRC

National Research Council Canada (NRC)

- Primary research and technology organization of the Government of Canada
- Federal organization

 **Ontario**

Ministry of Transportation of Ontario (MTO)

- Responsible for transport infrastructure and related law in Ontario
- Provincial organization

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Introduction

The purpose of this session is to:

- Inform the stakeholders of proposed changes to the definition of road-building machines;
- Discuss any implications on operations in light of these changes; and
- Seek stakeholder feedback on the new definitions and requirements.



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History of Road-Building Machines

Concept originally introduced in 1949

- Purpose built vehicles which were not manufactured to, nor could they meet, manufacturing safety standards for vehicles operating on highways and therefore required exemptions;
- Operated at low speeds on the roadway or shoulder during highway construction or maintenance;
- Not designed or used to carry a load;
- Not based solely on design, the vehicle needed to be primarily used in actual roadwork.



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History of Road-Building Machines

Definition changed in 1979

- Removed the use provision – changed to “design commonly used”;
- Added specific vehicle types;
- Allows for a vehicle to be a road-building machine even though it only ever works on private property and is not a machine which actually builds roads.

New road-building machine definition will change on January 1, 2016

- Budget commitment requires the registration of impacted vehicles by April 1, 2016;
- The proposed implementation will take place between January and April 2016.

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Current Definition

Currently, a road-building machine is defined as:

“a self-propelled vehicle of a design commonly used in the construction or maintenance of highways, including but not limited to:

- a) asphalt spreaders, concrete paving or finishing machines, motor graders, rollers, tractor-dozers and motor scrapers;
- b) tracked and wheeled tractors of all kinds while equipped with mowers, post-hole diggers, compactors, weed spraying equipment, snow blowers and snow plows, front-end loaders, back-hoes or rock drills; and
- c) power shovels on tracks and drag lines on tracks;

but not including a commercial motor vehicle”

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Exemptions for Road-Building Machines

Exemptions for road-building machines include:

- Vehicle permits (licence plates and registration);
- Driver's licence, although a minimum age of 16 is required to operate;
- Federal manufacturing standards;
- Vehicle equipment including tire requirements, brakes, vehicle configuration;
- Safety inspections;
- Speed limit;
- Commercial Vehicle Operators' Registration (CVOR);
- Seat belt requirements;
- Vehicle insurance;
- Fuel tax (they are permitted to use coloured diesel);
- Hours of service; and
- Emissions testing.

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Reasons for Modifying the Road-Building Machine Definition

Traditionally a road-building machine was equipment specific to road-building

- Transported to and from construction sites (or where work was being performed);
- Exemptions were required since some road-building machines operate on a roadway to perform a task or function but could not comply with typical standards for on-road vehicles.

MTO's interpretation since 1979 has given liberal application to the term "road-building machine"

- Manufacturers began building "road-building machines" on a truck chassis
 - No longer requiring an exemption to perform their tasks;
 - Operation at highway speeds;
 - Safety concerns regarding exemptions applied to modernized road-building machine designs;
 - Very similar to other commercial vehicles.

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Reasons for Modifying the Road-Building Machine Definition

Additional reasons for modifying the definition of road-building machine:

- As fees for commercial vehicle registrations increased, exemptions granted to road-building machines created an uneven economic playing field;
- Alignment with other Canadian provinces;
- 2014 Ontario budget commitments.

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Reasons for Modifying the Road-Building Machine Definition

2014 Ontario Budget Commitment

- Part of the government's commitment to "Fair and Efficient Tax System".
- Province is proposing amendments to the Highway Traffic Act to modernize treatment of unregistered road-building machines that use public roads and highways by 2016.
- A change to the road-building machine definition will:
 - Reduce the number of vehicles that meet this exemption;
 - Increase road safety;
 - Reduce the number of vehicles that can use coloured fuel; and
 - Increase fuel tax revenue.

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Implications of Road-Building Machine Definition

The implications of treating vehicles that are very similar to commercial motor vehicles as road-building machines include:

- No requirement for motor vehicle insurance;
- Lack of safety inspections that monitor mechanical fitness;
- Potential for unqualified drivers to be operating large vehicles at highway speeds;
- Safety performance is not monitored by MTO;
- Without registration, no database exists to monitor number of vehicles, emissions compliance and trend data;
- Without registration, tracking of vehicles for the purpose of reducing theft is not possible;
- Lost revenue from vehicle registration fees, driver licensing fees and fuel tax.

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Proposed Definition Principles

The proposed road-building machine definition will include the following core components:

- Vehicle class that has a road-building or road maintenance function;
- Not capable of meeting manufacturing and equipment standards; and
- Not used to carry a load unless required to perform a road-building or maintenance function.

Additional Restrictions

- Road-building machines will be added to Section 76 of the Highway Traffic Act deeming that they will be considered slow-moving vehicles and restricted to speeds no greater than 40 km/h.

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Proposed Definition Principles

To be considered a road-building machine, a vehicle must NOT be:

- Able to meet Federal manufacturing and Provincial equipment standards;
 - If due to a modification, the modification must be necessary to fulfill its road-building function.
- Built on a truck chassis;
- Identified as a Federally compliant vehicle;
- Used to carry a load, other than what is needed to perform a road-building or maintenance function.
 - Excludes rock trucks within the immediate vicinity of the construction or work site at which it is being used.

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Proposed Definition Principles

Road-building machines **MUST** be:

- Required to have the primary purpose of road building or maintenance;
- Restricted to speeds of 40 km/h or less and considered a “slow-moving vehicle”.

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Proposed Definition Principles

Items that will NOT be included in the new definition:

- Classification of vehicles based upon their ability to reach highway speeds;
- Requiring that road-building machines be floated to jobsites;
- Restrictions on interactions with traffic;
- Restrictions to operate solely within defined construction zones;
- Requirements concerning the driver or operator to be currently under road building or maintenance contract.

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Proposed Definition Principles

Vehicles that will continue to be road-building machines:

- Any vehicle listed in the current definition including:
 - Asphalt spreaders, concrete paving or finishing machines, motor graders, rollers, tracker-dozers, motor scrapers;
 - Tracked and wheeled tractors while equipped with mowers, pot-hole diggers, compactors, weed spraying equipment, snow blowers and snow plows, front-end loaders, back hoes or rock drills;
 - Power shovels on tracks and drag lines on tracks.
- Rock trucks
 - May contain restrictions on load carrying
- Cranes not designed for highway operation

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Proposed Definition Principles

Vehicles that will continue to be road-building machines:

- Street sweepers that are:
 - Slow-moving;
 - Three-wheeled.



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Proposed Definition Principles

Vehicles that will NO LONGER be considered road-building machines:

- Mobile cranes that do not meet previous requirements;
- Stone slingers;
- Any vehicle built on a truck chassis including (but not limited to):
 - Hydrovacs;
 - Sewer Cleaners;
 - Sweepers;
 - Paint trucks;
 - Vacuum trucks; and
 - Water trucks.

Questions?



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Commercial Vehicle Requirements

If your vehicle is no longer considered a road-building machine, you will require:

- Commercial Vehicle Operator's Registration (CVOR);
- Vehicle registration;
 - Safety Standards Certificate;
 - Drive Clean testing.
- Motor vehicle insurance;
- Driver's licence;
- Use of tax-included fuel;
- Safety inspections;
- Limitations on hours of service.

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Commercial Vehicle Requirements

Commercial Vehicle Operator's Registration (CVOR)

- Program developed by MTO to promote the safe operation of trucks and buses on Ontario roadways;
- For purposes of the CVOR, the term **operator** is defined as:
 - The person or company who is directly or indirectly responsible for the operation of the vehicle, conduct of the driver and carriage of goods or passengers;
 - The operator may own or lease the vehicle;
 - Operator is also used to distinguish the operator from driver;
 - The driver may be the operator or a person hired by the operator;
 - A person who is the operator and the driver of a vehicle is required to comply with the rules for both the driver and the operator.

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Commercial Vehicle Requirements

Commercial Vehicle Operator's Registration (CVOR)

- CVOR system tracks the on-road safety performance of operators over a two year period recording information such as:
 - Operator information;
 - Convictions;
 - Reportable collisions;
 - Commercial Vehicle Safety Alliance (CVSA) safety inspections;
 - Ministry interventions.
- An operator's performance is based on three safety indicators:
 - Collisions;
 - Convictions;
 - Roadside inspections.

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Commercial Vehicle Requirements

Commercial Vehicle Operator's Registration

- To acquire a CVOR, an operator must:
 - Complete a CVOR application form;
 - Pay a \$250 fee per organization; and
 - If required, complete a CVOR written test (\$32 per test and retest).
- CVOR test must be written by a corporate officer, owner or partner;
- Annual CVOR renewal fee is \$50;
- If a valid CVOR is already held, the commercial vehicle may be added to the registration.

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Commercial Vehicle Requirements

Safety Standards Certificate (SSC)

- Issued by an approved Motor Vehicle Inspection Station (MVIS);
- Same components inspected as annual inspection;
- A vehicle may not be plated unless it is proved fit for the road;
- SSC is required for registration purposes.

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Commercial Vehicle Requirements

Drive Clean Testing

- Test required to verify emission compliance in vehicles;
- For heavy-duty vehicles, the test could involve:
 - Conducting an opacity test (for diesel vehicles);
 - Conducting a two-speed idle test (for gasoline vehicles);
 - Scanning your OBD computer (advisory results only).
- Test is required annually for heavy-duty vehicles over seven years old:
 - Non-diesel and diesel vehicles in Southern Ontario;
 - Diesel vehicles in all of Ontario.
- Cost of test is set by each facility

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Commercial Vehicle Requirements

Motor Vehicle Insurance

- Must have insurance which meets or exceeds minimum liability requirements under the Compulsory Automobile Insurance Act;
- Costs vary by insurance provider.

Driver's Licence

- Appropriate licence with associated fees will be required for the type of vehicle being operated.

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Commercial Vehicle Requirements

Vehicle registration

- Need to register at a ServiceOntario location;
- Will require:
 - Identification;
 - Proof of insurance from an insurance provider in Ontario;
 - Safety Standard Certificate;
 - Drive Clean emissions test results;
 - CVOR certificate number;
 - VIN;
 - Proof of purchase showing tax paid (bill of sale or receipt);
 - New Vehicle Information Statement (NVIS), if available;
 - Vehicle permit or ownership if available; and
 - Affidavit if documents not able to be obtained.

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Commercial Vehicle Requirements

Vehicle registration

- If your vehicle is imported you will require:
 - Vehicle Import Form (Form 1); and
 - Importation documents.

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Commercial Vehicle Requirements

Fuel Tax

- Vehicles that are no longer considered road-building machines will no longer be able to use coloured fuel;
- Current gasoline and fuel tax rates:
 - 14.7 ¢/L on gasoline;
 - 14.3 ¢/L on diesel.
- Coloured fuel may still be used in a separate tank to power onboard auxiliary equipment:
 - If no separate tank exists, clear fuel must be used but the owner may apply for a fuel tax refund on the fuel used to operate the equipment.

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Commercial Vehicle Requirements

Fuel Tax Refund

- To be eligible for a Power Take-Off (PTO) tax refund:
 - PTO equipment must use fuel from the same fuel tank that supplies fuel to the engine propelling the vehicle;
 - Power from the PTO equipment is not used to propel the vehicle on a highway;
 - Tax has been paid in respect to the fuel used in Ontario as reported on the claimant's International Fuel Tax Agreement (IFTA) quarterly tax return; and
 - Refund application must be filed within four years of when the tax was paid.

Questions?



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Commercial Vehicle Requirements

Ongoing Requirements:

- Daily inspection;
- Annual inspection;
- Vehicle maintenance; and
- Hours of service.



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Commercial Vehicle Requirements

Daily Inspection

- Required to ensure any problems or defects are identified before the vehicle is operated on the highway:
 - An inspection of the vehicle or vehicles is conducted prior to operating them;
 - The inspection is conducted with the use of a schedule listing the vehicle components and systems that require inspection;
 - An inspection report is completed;
 - The report and the inspection are valid for 24 hours;
 - Driver carries the inspection schedule and report in the vehicle;
 - Driver also records on the report any defects found while operating the vehicle or at the end of the day;
 - Defects must be reported to the operator at the time they are discovered;
 - Operator must repair the defect immediately, or before the next dispatch, and keep records of repair.

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Commercial Vehicle Requirements

Daily Inspection

- Minor defects
 - Must be recorded and reported to the operator as soon as possible;
 - Operator is required to repair any defects prior to next dispatch.
- Major defects
 - Vehicle may not be operated;
 - Must be recorded and reported to the operator as soon as possible;
 - Operator is required to repair any defects prior to operation.
- Inspection records must be retained for a minimum of six months.

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Commercial Vehicle Requirements

Annual Inspection

- Must be completed at a Motor Vehicle Inspection Station (MVIS);
- Must meet the minimum inspection criteria required under the National Safety Code Standard 11 Part B “Periodic Commercial Motor Vehicle Inspections” (NSC 11B)
 - NSC 11B is used across Canada (excluding Quebec) and is published by the Canadian Council of Motor Transport Administrators (CCMTA).
 - NSC 11B is available at www.CCMTA.ca
- Although, it is a new requirement to inspect these vehicles annually, this type of inspection is likely part of a preventive maintenance program.

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Commercial Vehicle Requirements

Vehicle Maintenance

- Performance (Maintenance) Standards are the minimum mechanical standards a commercial motor vehicle must comply with while operating on a highway.
- All commercial vehicles must be maintained to the inspection criteria outlined in Regulation 611 “Safety Inspections” Schedules 1 and 2.

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Commercial Vehicle Requirements

Hours of Service

- Hours of service regulations in Ontario have:
 - Daily driving requirements;
 - Mandatory off-duty time and work-shift requirements;
 - Cycle requirements; and
 - Record-keeping requirements (daily log or time records).

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Commercial Vehicle Requirements

Hours of Service

- Daily driving limits
 - The 13 hour **driving time** in a day limit;
 - The 14 hour **on-duty** in a day limit:
 - On-duty time includes performing any function at the request of the operator (driving or otherwise).
 - The 10 hours **off-duty** in a day rule.

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Commercial Vehicle Requirements

Hours of Service

- Work-shift limits
 - Work-shift is the period that begins when a driver goes on-duty at the end of a period of at least eight consecutive hours of off-duty time, and ends when the driver starts the next period of at least eight consecutive hours off-duty;
 - There are several rules which need to be followed:
 - A maximum of 13 hours of **driving time** in a work-shift;
 - A maximum of 14 hours **on-duty** in a work-shift;
 - A maximum of 16 hours **elapsed time** in a work-shift.
 - Eight consecutive hours of rest are required.

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Commercial Vehicle Requirements

Hours of Service

- Driving cycle limits
 - Seven day cycle:
 - Must not exceed 70 hours of on-duty time.
 - 14 day cycle:
 - Must not exceed 120 hours of on-duty time;
 - Must take at least 24 consecutive hours of off-duty time after accumulating 70 hours of on-duty time.
 - Cycle reset:
 - Seven day cycles reset after 36 consecutive hours of off-duty time;
 - 14 day cycles reset after 72 consecutive hours of off-duty time;
 - At the start of a new cycle, drivers may switch their cycle or switch the starting time of their day.
 - Regardless of cycle, the driver must have at least 24 consecutive hours of off-duty time in the preceding 14 days.

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Commercial Vehicle Requirements

Hours of Service

- Logbooks
 - A driver must maintain a log unless:
 - The vehicle they are operating is driven solely within a radius of 160 km of the driver's starting location;
 - The driver returns at the end of the day to the location from which they started; and
 - The operator retains a record tracking driver hours.

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Commercial Vehicle Requirements

Hours of Service

- Operator responsibilities
 - Must monitor the compliance of each driver;
 - If non-compliance is determined, the operator must:
 - Take immediate remedial action;
 - Record the dates on which the non-compliance occurred;
 - Issue a notice of non-compliance;
 - Record the date of issue of the non-compliance notice; and
 - Record the actions taken.
 - Must retain daily log records for a minimum of six months.

Questions?



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Weights and Dimensions

Weight and Dimension Limits

- Road-building machines (and commercial motor vehicles) are subject to weight and dimension limitations;
- In the past, enforcing these restrictions on road-building machines has been limited due to the fact that:
 - Road-building machines are not required to enter Truck Inspection Stations and are therefore not weighed by enforcement officers; and
 - Road-building machines are not registered, not part of a CVOR, nor require a licensed driver and therefore if there is a violation, it is difficult to determine who to charge.

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Weights and Dimensions

Weight Limitations

- The ministry has identified some vehicle types that have been manufactured outside of weight and dimension limitations and do not qualify for an oversize/overweight permit, including:
 - Hydro-excavators;
 - Sewer cleaners; and
 - Street sweepers built on a truck chassis.
- As a commercial motor vehicle they will be required to enter Truck Inspection Stations and be weighed.

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Weights and Dimensions

Weight Limitations

- The ministry is working with this industry to develop a solution that does not render these vehicles unusable due to weight limits, this may include:
 - Additional weight allowance for existing vehicles while operating within manufacturer's limits.
 - Require future vehicles to be manufactured and operated to comply with the Highway Traffic Act weight and dimension limitations.

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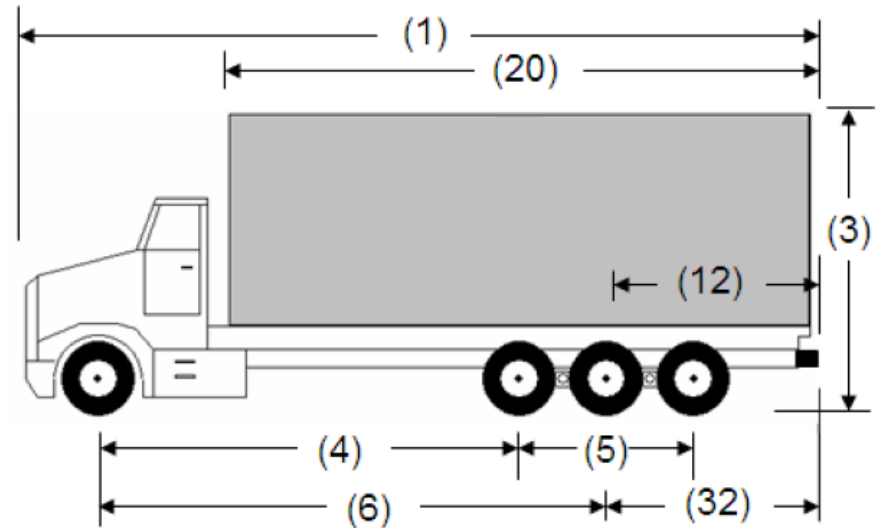
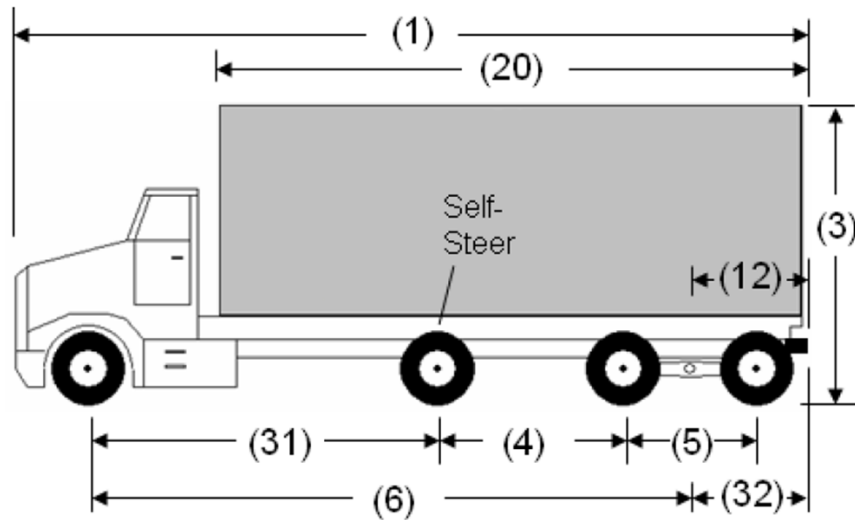
Weights and Dimensions

Weight Limitations

- Highway Traffic Act weight limitations are based upon:
 - Class of highway;
 - Reduced load periods;
 - Vehicle configuration:
 - Width of tires;
 - Number of tires per axle;
 - Number and placement of axles;
 - Manufacturer's weight ratings.

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Weights and Dimensions



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Weights and Dimensions

Limitations on Vehicle Dimensions

- Vehicle width:
 - May not exceed 2.6 m while operating on a highway except:
 - Road service vehicles including such a vehicle while travelling to and from a maintenance site or repair center; and
 - Auxiliary equipment that extends beyond either side of the vehicle that:
 - Is not designed to carry a load; and
 - Does not extend more than 10 cm from the side of the vehicle.
- Width of load:
 - May not exceed 2.6 m while operating on a highway.

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Weights and Dimensions

Limitations on Vehicle Dimensions

- Vehicle length:
 - May not exceed 12.5 m while operating on a highway excluding road service vehicles.
- Vehicle height:
 - May not exceed 4.15 m while operating on a highway.

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Weights and Dimensions

Oversize and Overweight Permits

- Upon application in writing, a permit may be granted to a vehicle or combination of vehicles to allow the movement of:
 - a load, object or structure that cannot reasonably be divided and moved within the prescribed dimensional limits;
 - a vehicle that cannot reasonably be divided and moved within those limits and that is not itself carrying a load, object or structure or drawing or carrying a vehicle;
 - a vehicle or combination of vehicles that is used exclusively to move a load, object or structure or to draw or carry a vehicle as described in clauses (a) and (b).

Questions?



Thank you



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