O. Reg. 413/05: VEHICLE WEIGHTS AND DIMENSIONS - FOR SAFE, PRODUCTIVE AND INFRASTRUCTURE-FRIENDLY VEHICLES (SPIF)

Webinar – February 15th, 2018
Housekeeping

➢ 45 minute webinar with 15 minutes Q & A
➢ All attendees are muted
➢ Questions? Use 🌸 GoToWebinar ‘Questions’ Pane
➢ Webinar recording – Concrete Ontario website

https://www.rmcao.org/publications/webinar-presentations/
Pat Solomon
Dufferin Concrete
A Division of CRH Canada Group Inc.
Plant Manager

➢ Current chair of the Concrete Ontario Transportation Committee
➢ Past Concrete Ontario Board Member and Chair
➢ Over 30 years experience in the Ready Mix Concrete Industry
AGENDA

1. SPIF Introduction
   ➢ What is SPIF?
   ➢ What does it mean for the concrete industry?
   ➢ Different Types of Ready Mix Truck Configurations

2. Concrete Ontario SPIF Calculator for Ready Mix Trucks
   ➢ Development and Availability
   ➢ Required Inputs
   ➢ Examples

3. Transportation Seminar

4. Next Webinar
What is S.P.I.F.?
SAFE
PRODUCTIVE
AND
INFRASTRUCTURE-FRIENDLY
VEHICLES

SPIF Ontario Regulation O. Reg. 413/05: An Ontario wide standard for commercial vehicles designed to further increase highway safety, improve commercial vehicle productivity, and reduce road/bridge damage caused by heavy vehicles.
SPIF Introduction

➢ The regulations lay out 31 different “prescribed combinations” that specify allowed vehicle dimensions, including height, width, length, number of axles, type(s) of axles, weight allowed per axle and total gross vehicle weight, among other things. **Concrete mixers use primarily 4 configurations.**

➢ Any truck manufactured prior to July 1, 2011, can operate under the pre-SPIF rules until Dec. 31, 2020, and with a permit, can extend this out further until the vehicle reaches 15 years of age. **Concrete mixers have an additional 5 years, for a total of 20 years.**

➢ Any vehicle that was manufactured after July 1, 2011 has to comply with the rules effective immediately.
SPIF Introduction

What does it mean for the concrete industry?

➢ Reductions in volumes shipped

➢ Fines for over-loading

➢ Major capital investments in SPIF compliant trucks
SPIF Introduction

Different Types of Ready Mix Truck Configurations
SPIF Calculator for Ready Mix Trucks

- Developed by Andrea Boddy Consulting and Concrete Ontario to allow the industry to have an easy to use tool in calculating allowable volumes to be shipped as per the new SPIF regulations.

- Primary outputs are:
  1. Allowable payload (m³) at specified density
  2. End date of Grandfathering
  3. One time permit required on date

- Free download at:
  https://www.rmcao.org/publications/transportation/
SPIF Calculator for Ready Mix Trucks

Please note the following before using this tool:
1. Only applies to trucks with revolving drums.
2. Does not apply to aggregate trucks.
3. For non-typical Ontario ready-mix trucks, please see "Guide to Vehicle Weight and Dimension Limits in Ontario", Ministry of Transportation Ontario as this tool only covers typical variations in truck configurations in the province of Ontario.
4. Use of this fleet pre-assessment tool should not replace discussions with industry truck equipment experts in understanding implications of these legislation changes for your business.
5. If any of your 4-axle trucks meet any of the following SINGLE conditions, the Allowable Gross Weight is automatically reduced to 27000 kg:
   ➢ Truck has a static lift axle (non self-steering).
   ➢ Truck has a base length < 8m.

6. If any of your 5-axle trucks meet any of the following SINGLE conditions, the Allowable Gross Weight is automatically reduced to 28000 kg:
   ➢ Truck has a base length < 8m.
   ➢ Truck has a static lift axle (non self-steering).
➢ No significant changes to this type of truck.

➢ SPIF #20 does not require the calculator.
## Required Inputs – SPIF #22

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<tbody>
<tr>
<td><strong>1.</strong></td>
<td>Unit #</td>
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<tr>
<td><strong>2.</strong></td>
<td>Date of manufacture</td>
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| **3.** | Effective Wheel Base (m)  
➢ The longitudinal distance between the geometric centres of front and rear axle units of a truck; (Min. 5.3m) |
| **4.** | Front Axle - Spread (m)  
➢ The longitudinal distance between the centres of the foremost and rearmost axles of a front axle unit; (1.2-2.7m) |
| **5.** | Tandem Axle – Spread (m)  
➢ The longitudinal distance between the centres of the foremost and rearmost axles of a tandem axle unit; (1.2-1.88m) |
6. Truck Tare (kg)
   ➢ Gross weight of the truck (no load)

7. Density of Concrete
   ➢ Typically ~2350kg/m³
Required Inputs – SPIF #22

1. Unit #
2. Date of manufacture

3. Effective Wheel base (m)
4. Front Axle Spread (m)
5. Tandem Axle Spread (m)
Required Inputs – SPIF #22

3. Effective Wheelbase (m)

4. Front Axle Spread (m)

5. Tandem Axle Spread (m)
Required Inputs – SPIF #23

DESIGNATED TRUCK 5 — SELF-STEER TRIAXLE TRUCK

Column (1), Column (20), Column (3), Column (12), Column (31), Column (32), Column (4), Column (5), Column (6)

Tandem Axle Spread (m)

Only measurement required for SPIF #23
# Required Inputs – SPIF #23

1. **Unit #**
2. **Date of manufacture**
3. **Lift Axle**
   - Self-Steer or Non-Self Steer
4. **Lift Axle Tires**
   - Single or Dual
5. **Tandem Axle – Spread (m)**
   - The longitudinal distance between the centres of the foremost and rearmost axles of a tandem axle unit; (1.2-1.88m)
6. **Load Equalization**
   - Load Equalized or Not Load Equalized
7. **Truck Tare (kg)**
   - Gross weight of the truck (no load)
8. **Density of Concrete**
   - Typically ~2350kg/m³
Required Inputs – SPIF #25

Designated Truck 7 — Twin Steer Tri-Drive 5-Axle Truck

Front Twin Axle Spread (m)

Rear Tri Axle – Spread (m)
Required Inputs – SPIF #25

1. Unit #
2. Date of manufacture
3. Front Twin Axle – Spread (m)
   ➢ The longitudinal distance between the centres of the foremost and rearmost axles of a front axle unit (1.2-2.7m)
4. Rear Tri Axle – Spread (m)
   ➢ The longitudinal distance between the centres of the foremost and rearmost axles of a tri axle unit (2.4-2.8m)
5. Truck Tare (kg)
   ➢ Gross weight of the truck (no load)
6. Density of Concrete
   ➢ Typically ~2350kg/m³
SPIF #22 - Examples

Any truck manufactured prior to July 1, 2011, can operate under the pre-SPIF rules until Dec. 31, 2020, and with a permit, can extend this out further until the vehicle reaches 15 years of age. Concrete mixers have an additional 5 years, for a total of 20 years.

Any vehicle that was manufactured after July 1, 2011 has to comply with the rules effective immediately.
SPIF #23 - Examples

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➢ Any vehicle that was manufactured after July 1, 2011 has to comply with the rules effective immediately.
Who to contact?

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Transportation Seminar

➢ May 16th, 2018
➢ Cambridge Hotel & Conference Centre
   (700 Hespeler Rd, Cambridge, ON N3H 5L8)

Register at:
https://www.rmcao.org/category/events/
Questions?
Next Webinar

➢ Thursday, April 26\textsuperscript{th}, 2018
➢ Topic: Portland Limestone Cement (PLC)
➢ This webinar will highlight the recent changes to both CSA A23.1 and OPSS specifications that now allow for the widespread use of this product
➢ Will address any potential technical changes required to expand the use of GUL in the industry