

The Ontario Approach

Ontario's Commercial Vehicle Safety Regime



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Rapid population growth, expanding international trade, emerging industry trends and tragic incidents involving commercial vehicles on Ontario's roadways, led Ontario to strengthen its commercial vehicle safety initiatives to become among the most stringent in North America.

Transportation is a fundamental building block of Ontario's economic prosperity and quality of life. To remain competitive, businesses in the province are dependant on the efficient movement of people and goods, while individuals and communities rely on safe and effective transportation for access to jobs and community services.

Ontario has experienced accelerated economic and population growth in the recent past. The Ontario economy grew 26 % from 1995 to 2000 - an average of 4.7% per year. The population has grown steadily with a 42% increase since the mid 1970's. Traffic volumes have also increased. There are now 8.1 million licensed drivers, 9.1 million registered vehicles and over 80,000 commercial carriers operating on Ontario's roadways. Exports have increased 44% over the past five years and 93% of those exports are destined for the United States.

This growth, the impact of deregulation of the commercial carrier industry, along with introduction of the North American Free Trade Agreement, have contributed to increased trade and traffic on a number of strategic corridors, including many international gateways between Ontario and the United States. This has resulted in more congestion in major urban areas and heightened business concern over rising transportation costs related to market demands for effective just-in-time delivery. While economic and population growth has been welcomed there was growing evidence that safety on Ontario's roadways was being compromised. In 1994-95 an assessment of the state of road safety in Ontario was conducted. The statistics, as well as other evidence, revealed a problem that needed to be attacked aggressively to position Ontario as a safe place for the movement of people and goods for both social and economic reasons.

Among the findings were:

- 999 people killed annually
- 90,065 people injured
- 43.3% out-of-service rate on commercial vehicles inspected at 'RoadCheck' annual inspection blitz in 1994
- A series of fatalities caused by commercial vehicle wheel separations
- Ontario ranked 5th in Canada and 13th in North America with 1.57 fatalities per 10,000 licensed drivers.
- a lack of enforcement resources needed to deal with potentially unsafe commercial vehicle operators added to the problem.

These factors posed significant challenges for the Ontario government and more specifically, to the Ministry of Transportation. Consequently, the Ministry of Transportation was charged with the responsibility to develop programs, services and enforcement to support the safe and efficient use of the province's transportation infrastructure and help to reduce the incidence and associated social and economic costs of road collisions.

Regulation of Commercial Motor Vehicle Transportation in Canada

In Canada, the federal government has authority for the regulation of commercial vehicle movements between provinces and territories while each of the ten provinces and three territories regulate such movements intra-provincially. In concert with the economic deregulation of the commercial vehicle industry, which eased the entry of for-hire truck and bus companies into the Canadian marketplace, an agreement was developed whereby each provincial and territorial government would assume authority to administer the monitoring and enforcement of both intra and extra-provincial carriers within its jurisdiction.

In conjunction with this agreement, and to assist in achieving a consistent approach to regulating, administering and enforcing commercial vehicle safety, the federal government, together with the provincial/territorial governments, created the National Safety Code. The National Safety Code (NSC) is a comprehensive code of minimum standards for the safe operation of commercial motor vehicles. It includes standards for licensing commercial drivers and the operation and maintenance of commercial vehicles. Ongoing consultation and decision-making among the parties including the federal government, the ten provincial and three territorial governments and industry representatives (concerning the NSC and other matters relating to motor vehicle transportation) occurs through the Canadian Council of Motor Transport Administrators (CCMTA). The CCMTA is a not-for-profit organization that is financed through a cost-sharing arrangement by each member government.

Ontario's Commercial Vehicle Safety Programs

With over 11 million residents, Ontario is Canada's most populated province. It is situated in east-central Canada between the provinces of Quebec and Manitoba and borders the US states of New York, Michigan and Minnesota. Due to its geographic location as well as its extensive manufacturing and tourism industries, Ontario is both a major transportation corridor and destination.

Responsibility for commercial motor vehicle safety in Ontario resides with the Carrier Safety and Enforcement Branch (CSEB) of the Road User Safety Division of the Ministry of Transportation. CSEB develops and administers legislative, regulatory, policy and program initiatives to influence the safe on-road performance of truck and bus operators using Ontario's roads. Through its licensing, enforcement and on-road compliance monitoring activities, it seeks to educate and improve the safety performance of non-compliant carriers.

In 1996 the Carrier Safety and Enforcement Branch developed a four-pronged strategy to achieve its objectives. The four elements of the strategy are:

Detection - Programs aimed at identification of both safe and unsafe carriers to ensure enforcement resources and remedial measures can be allocated appropriately.

- 350 enforcement officers
- 41 inspection stations – 7 inspection stations on strategic corridors operate 24/7
- 6 mobile inspection stations
- 42 facility auditors, 200 patrol vehicles
- 20 analysts responsible for monitoring carrier on-road safety records.
- Industry, other enforcement agencies, interjurisdictional referrals

Deterrents- Imposition of strong deterrent measures to encourage compliance.

- Increased fines for safety infractions (up to \$20,000 per offence)
- Absolute liability offence for wheel-separations with a maximum fine of \$50,000
- Commercial Vehicle Impoundment Program for trucks and buses with critical defects
- Pre-determined progressive interventions for CVOR violation rates exceeding established thresholds (i.e. Warning Letter, Facility Audit, Interview, Suspension)

Incentives- Introduction of meaningful incentives to make the investment in safety cost-effective to carriers.

- Fee exemptions for the safest carriers
- Publishing Carrier Safety Ratings for both 'Excellent' and 'Unsatisfactory' carriers
- Carriers with 'Satisfactory' or 'Excellent' ratings are eligible to bid on more contracts (i.e. the Big Three automakers) whereas carriers with 'Conditional' safety ratings are limited as to what they can bid on

Safety Standards- Developing and continuously improving the regulatory regime so that it reflects strategic safety concerns.

- Air Brake Installers course – introduced 1998
- Wheel Installers course – introduced 1998
- Revised vehicle maintenance and inspection regulations - ongoing
- Joint carrier/shipper responsibility for the overloading of vehicles

Commercial Vehicle Safety Programs

A number of commercial vehicle safety initiatives have been implemented over the past decade. One of the fundamental programs introduced to improve safety of commercial carriers operating in Ontario has been the Commercial Vehicle Operator Registration system (CVOR). The CVOR system is an automated monitoring system that tracks the on-road safety performance of commercial vehicle operators. This system was first introduced in 1989. Following extensive industry consultation, the CVOR system was updated and improved for reintroduction along with the Carrier Safety Rating program in 1999. Together these programs are part of the Ontario Ministry of Transportation's comprehensive Road Safety Plan to improve safety on Ontario's roadways.

Commercial Vehicle Operator Registration Program

Carriers that operate in Ontario, both for-hire and private, whether large or small fleets, must register with the CVOR program. Once a carrier is registered with the CVOR program, a profile is created that includes the carrier's vital information (such as name, place of business, commodities carried, fleet size and corporate officers). The CVOR system then monitors all on-road 'events' within Ontario and keeps track of the results of facility audits and any interventions undertaken by the ministry. Changes to the carrier's profile data such as fleet size are recorded in the database. This profile information is necessary for the effective and efficient monitoring of a carrier's safety performance.

How it Works

The CVOR System evaluates a carrier's safety performance based on the events captured on its CVOR record, including accidents, driver and carrier convictions, Commercial Vehicle Safety Alliance (CVSA) inspections and the results of any facility audits conducted.

The first step in evaluating a carrier is to assess its on-road performance based on three separate safety indicators to determine its violation rate for each. These are:

- Accident points per vehicle per month
- Safety-related conviction points per vehicle per month
- Points on vehicle inspections per vehicle unit inspected

The violation rates in each category are compared against a threshold value (established based on the carrier's fleet size and percentage of kilometres travelled in Ontario) to determine the percentage of threshold. This is a measure of the carrier's performance in each of these categories relative to that of other carriers of similar size.

Threshold Values

The allowable points for a given carrier within a sliding two-year window are called the carrier's threshold. Threshold values for accidents and convictions are based on the carrier's "adjusted" fleet size. Adjusted fleet size is calculated by adding to the number of commercial motor vehicles that the carrier operates within Ontario, the number of vehicles that are "double-shifted" (i.e. operate for more than one 8 hour shift per day). For carriers that travel outside Ontario, this adjusted fleet size is then reduced in proportion to the percentage of travel within Ontario. This reduction does not apply to carriers that operate solely within Ontario. The threshold value for commercial vehicle inspections is not based on the carrier's adjusted fleet size. It is simply a function of the number of vehicle units inspected within the same sliding two-year window.

Two years was set as the monitoring window as it was felt this is long enough for a carrier to demonstrate improvement or deterioration of its overall safety performance. It is considered an adequate length of time to show the impact of any interventions taken with poor performers.

Violation Rates

The CVOR System calculates the carrier's violation rates for accidents, convictions and inspections separately. These individual violation rates are then converted to a percentage and compared to the carrier's threshold. The percentage of threshold in each category is combined in a weighted average to arrive at an overall percentage of thresholds. Since accidents are considered a key indicator of road safety they are weighted at double the severity of convictions and inspections giving them more importance in the overall percentage of threshold.

The CVOR system automatically 'triggers' a carrier for a review when poor performance is identified, based on the carrier's overall violation rate as a percentage of its overall CVOR threshold.

Predetermined intervention stages have been established at which point carrier interventions or sanctions are considered. When one of these stages has been reached, a Ministry analyst conducts a detailed analysis to verify the carrier's profile information and the appropriateness of the type of intervention being considered. A review may also be triggered due to other incidents such as a serious accident, wheel-separation, vehicle impoundment or habitual non-compliance.

Violation Rates and Corresponding Interventions

35% = Warning Letter	Notification to carrier that on-road events are impacting its safety record (once a warning letter is sent another will not be triggered for 5 years)
65% = Facility Audit	Examination of a carrier's safety practices & record-keeping
80% = Interview	Carrier representative meets with Ministry official to discuss ways to improve safety performance
100% = Sanction	Carrier's operating privileges are suspended for a predetermined period or permanently cancelled

Types of Sanctions:

Fleet Limitation – a restriction on the number of commercial vehicles a carrier may operate during the sanction period

Suspension – suspension of a carrier's operating privileges and seizure of plates and permits for a specified period of time

Cancellation – a permanent suspension (cancellation) of a carrier's operating privileges that applies to all commercial vehicles and trailers under the carrier's control.

Note: All sanctions ordered by the Registrar of Motor Vehicles may be appealed to the Licence Appeal Tribunal (LAT). Either party may appeal a decision by LAT to the Ontario Court of Appeal.

Notification of all interventions and sanctions are directed to the corporate officer or senior official of the company. In this way, the individual who has control and accountability for the carrier's operation is aware of the Ministry's concerns regarding its safety performance and is expected to take the necessary steps to improve.

Role of Facility Audits

The results of a facility audit conducted on a carrier will be recorded on its CVOR record. A facility audit is an examination of a carrier's safety practices, programs and record keeping to determine compliance with established laws and regulations. A ministry auditor or investigator conducts the facility audit at the operator's principal place of business for the purpose of determining the carrier's compliance with relevant highway safety legislation. Facility audits are conducted in accordance with National Safety Code standard # 15.

A facility audit consists of an assessment in each of three profiles; the vehicle profile, the driver profile and the safety programs and training profile. Upon conclusion of the assessment of each profile a score is calculated. A score of 55% or better in each of the vehicle and driver profiles is considered a pass. A score of 80% or better is required to achieve an excellent safety rating. The safety programs and training profile may be included, at the carrier's option to improve its overall score, but it is not used to reduce the score

The results of the facility audit are combined with the CVOR violation rate on the carrier's record to determine its carrier safety rating. If a carrier has not had an audit but has a satisfactory on-road violation rate it will be assigned a rating of *Satisfactory-Unaudited*.

Carrier Safety Rating Program

The Carrier Safety Rating program is an incentive-based public label issued by the Registrar of Motor Vehicles to truck and bus companies operating on Ontario's roadways. These ratings publicly identify the highway safety performance of carriers and are directly linked to each carrier's on-road safety performance monitored by the CVOR system. Ratings are assigned to all carriers operating on Ontario roadways, including those based outside of Ontario.

Carrier safety ratings enhance the marketability and economic competitiveness of safe Ontario carriers by enabling them to promote their rating to potential customers, insurance companies and financial institutions. The names of carriers with 'excellent' and 'unsatisfactory' safety ratings are published on the government website. This serves to reward excellent carriers and motivate unsafe carriers to improve their safety performance, as many companies require carriers to have a good safety rating to qualify for contracts.

There are five safety ratings that can be assigned to a carrier. The table below outlines the predetermined violation rates and facility audit scores that trigger interventions and Carrier Safety Ratings:

Carrier Safety Ratings and Normal Performance Levels

AUDIT SCORE	ON-ROAD PERFORMANCE (Percentage of CVOR Threshold)			
	0 to 10 *	>10 to 65	>65% to 100	>100 **
80% to 100%	Excellent	Satisfactory	Conditional	Unsatisfactory
55% to < 80%	Satisfactory	Satisfactory	Conditional	Unsatisfactory
0 to < 55%	Conditional	Conditional	Conditional	Unsatisfactory
No Audit	Satisfactory- Unaudited	Satisfactory- Unaudited	Conditional	Unsatisfactory

Note #1: To receive an excellent safety rating, both the 'overall' violation rate and the 'accident' violation rate must be 10% or less.

Note #2: Once a carrier is rated 'conditional', it retains that rating for a minimum of six months. If the conditional rating is due to a failed audit, then the carrier must pass a new audit to be upgraded to 'satisfactory'. If the rating was due to a poor violation rate, it must improve to a level less than 65% before being upgraded.

Note #3: A carrier is rated 'unsatisfactory' during a sanction period. After a carrier completes a sanction period, it becomes upgraded from 'unsatisfactory' to 'conditional' and must complete the minimum six-month period with that rating.

With the implementation of the Carrier Safety Rating Program:

Ontario carriers now have access to an effective marketing tool;

- Insurance companies have additional information upon which to assess risk;
- Shippers and school boards now have a simple mechanism to assess the safety of carriers with which they do business; and
- Members of the public can obtain a reliable and easy to understand assessment of a carrier's highway safety performance.

Incentive-based programs such as, carrier safety ratings, reduce the direct impact of government involvement by stimulating voluntary compliance in order to achieve the advantages of a public recognition, which in turn, may be marketed. Additional benefits include the impact of engaging the insurance industry, shippers, school boards and travel agencies. This provides these stakeholders ready access to safety ratings and dramatically expands the compliance net for the ministry. Carriers rated 'conditional' are motivated to improve their safety record to avoid higher insurance premiums or the loss of a key contract.

To that end, access to safety ratings is available through a variety of mechanisms including a carrier's public record, or a list of 'excellent' and 'unsatisfactory' safety ratings via the ministry's website, **www.carriersafetyrating.com**.

Commercial Vehicle Impoundment Program

Another key initiative is the Commercial Vehicle Impoundment Program (CVIP). CVIP was introduced in February 1998 as part of the Ministry's aggressive road safety plan to improve commercial vehicle safety in Ontario.

The Commercial Vehicle Impoundment Program takes commercial vehicles found to have critically defective components off the road for a minimum of 15 days. This was the first such program in North America.

How it Works

If one or more critical defects are found on a bus, truck or trailer following a Commercial Vehicle Safety Alliance (CVSA) inspection, an officer will remove the plates and inspection stickers from the specific vehicle unit. A vehicle found with a critical defect is in much worse condition than a vehicle placed out-of-service based on the CVSA criteria. (Note: *Vehicles will not be impounded for failing to meet CVSA out-of-service standards*). Critical defect criteria set out clear guidelines for determining when defects are serious enough to be considered critical to the safe operation of a commercial vehicle or trailer. Critical defect criteria have been developed for brakes, wheels and rims, steering, tires and suspension/frame components.

Once an impoundment order is issued by the Registrar of Motor Vehicles, the vehicle's load will be removed at the inspection facility, if feasible and practical, and the vehicle will be transported to an impound facility where it will remain for the designated period. The owner may claim the vehicle after all costs associated with towing, removal and impoundment of the vehicle have been paid. The vehicle must then be certified as safe before it can be operated in Ontario.

To date there have been over 825 commercial vehicles impounded since the inception of the program in February 1998. At the 11 strategic truck inspection stations, an average of 4 critically defective commercial vehicles are impounded each week. Evidence obtained at roadside inspections and in enforcement interviews has indicated that commercial vehicle operators only send their best tractors and trailers into Ontario to avoid the potential of being impounded for critical defects.

Effectiveness of Commercial Vehicle Safety Programs

Ontario is beginning to realize the improvements in commercial vehicle safety as well as overall road safety, as a result of the combined efforts of the various initiatives implemented over the past decade, but more specifically, since the introduction of Ontario's Road Safety Plan in late 1995.

With the investment of \$6.5 billion in new and improved safety programs and infrastructure, Ontario has begun to turn the tide to a safer, more reliable highway system in spite of the increase in traffic.

- Ontario ranks first in Canada and second in North America in terms of road safety based on 1.05 fatalities per 10,000 drivers in 2000.
- 849 people killed in vehicle collisions in 2000 (lowest level since 1950)
- number of people injured was 85,009 in 2000 – down from 90,030 in 1994 even though the number of licensed drivers increased by 1.1 million
- number of fatalities in truck collisions decreased from 326 in 1994 to 150 in 2000
- 22.4% out-of-service rate on commercial vehicles inspected at 'Road Check' annual inspection blitz in 2001 (reduction for the 7th year in a row) and the number of out-of-service defects found per out-of-service inspection has decreased by 30% since the impoundment program was implemented
- Annual overall out-of-service rate for commercial vehicles inspected dropped from 42.2% in 1996 to 35.3% in 2000
- Wheel separation incidents decreased from over 215 in 1996 to 65 in 2001 (2 fatalities since 1996)
- Between 1994 and 2000 collisions involving large trucks dropped by 13.8% (even though the number of large trucks registered increased by 19.3%)
- 84% of carriers receiving a warning letter reduce their rate of accident involvement, conviction accumulation and vehicle safety component defects by 50% over successive 6-month time periods (79% improve following an audit)

Conclusion

While much work remains to be done, Ontario's emphasis on commercial vehicle safety has proven itself. Overall, the mindset of the commercial vehicle industry toward safety has changed. The statistical indicators suggest a noticeable improvement in safety based on a decrease in the number of fatalities, commercial vehicle wheel separations, out-of-service rates and other key statistics. These same statistics suggest that a levelling off has begun to occur.

To take the next step and realize significant gains toward the Canadian goal of a 20% reduction in commercial vehicle fatalities and injuries from the year 2000 to 2010, Ontario will need to refine and refocus its strategies and programs. More targeted research into the impact of some of the recently implemented initiatives such, as carrier safety rating will need to be conducted. New legislation pertaining to the aggregate industry and the CVOR program are awaiting approval. Also, new technological enhancements are being developed such as roadside data capture for enforcement officers, pre-clearance at truck inspection stations and in-car inquiry systems.

The Carrier Safety and Enforcement Branch has conducted a strategic planning exercise and is developing a new 3 to 5 year plan to build on the previous Road Safety Plan. This new plan will combine some of the elements of the 1995 plan and will expand on the use of technology and incentives for safe carriers to permit us to focus resources and enforcement effort on the poor performers. This plan will also address security issues arising from the tragic events of September 11th in the United States to enhance public safety while permitting the free flow of people and goods at United States border crossings and on Ontario's highway system.

Trade and traffic on Ontario's roadways is expected to continue to increase. To maintain and improve commercial vehicle safety, Ontario has worked closely with its industry partners and stakeholders to identify ways of making Ontario a safe and attractive place to visit and conduct business.

Source Documents

The following documents were referenced in the preparation of this paper:

Ontario Road Safety Annual Report – 1994 to 2000

Ministry of Transportation Business Plan 1994-95, 1999-00, 2000-01

RoadCheck Final Report – 1994 – 2001

Ontario's Road Safety Plan 1995

Ontario' Carrier Safety Rating and Commercial Vehicle Operator Registration System Public Guideline

MTO's Facility Audit Self-Audit Guide

Ontario Economic Outlook and Fiscal Review 1993 – 2001

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