

Commercial Vehicle Safety and Enforcement Program

Background

The Ministry of Transportation (Ministry) has a mandate to provide Ontarians with a safe, efficient, and integrated transportation system. Its Road User Safety Division (Division) focuses on improving safety and security for road users, and its activities include the regulation of commercial vehicles operating in the province and enforcement of safety standards. During the 2007/08 fiscal year, the Ministry spent over \$39 million on its commercial vehicle enforcement program.

Ontario is one of the major transportation corridors for freight movement through Canada and the United States. Ministry data indicate that there was a 32% increase in commercial vehicle traffic over the 10-year period from 1995 to 2004, with approximately 73 million truck trips in Ontario annually.

Owners of commercial vehicle businesses (known as operators) in Ontario are required to register with the Ministry. This requirement also applies to out-of-country operators whose commercial vehicles travel into Ontario. There are more than 200,000 operators registered with the province, and these operators report having over 1.2 million commercial vehicles, including 30,000 buses.

The Ministry maintains 37 fixed and about 70 temporary roadside inspection stations along

Ontario highways. Of the Division's 416 staff, about 250 work at these stations conducting random inspections of commercial vehicles that pass by. In addition, all commercial vehicles must be inspected and safety-certified annually by a licensed mechanic at one of Ontario's 13,500 Ministry-licensed Motor Vehicle Inspection Stations.

The Ministry has a rating system for monitoring the safety performance of operators. The system uses a formula based on roadside inspection results, collisions, convictions of either the operator or any of the operator's drivers, and audits at the operator's place of business. A number of intervention options are available to the Ministry when operators are found in violation of safety standards; these include warning letters, interviews with the operator, facility audits, and other sanctions up to and including revocation of the operator's right to operate in Ontario.

Audit Objective and Scope

The objective of our audit was to assess whether the Ministry had adequate monitoring and enforcement systems and procedures in place to ensure that commercial vehicles in Ontario are operated safely.

Our audit included examination of documentation, analysis of information—including the use of

a number of computer-assisted audit techniques to analyze registration data for commercial vehicle operators, and operators' safety records—interviews with ministry staff, and visits to five district offices and a number of roadside inspection stations. In addition, we attended a number of facility audits, investigations at motor vehicle inspection stations, and bus terminal inspections; and participated in safety inspection blitzes.

Our audit also included a review of relevant audit reports issued by the Ministry's internal auditors; however, because the internal auditors had not done any recent work in the areas covered by our audit, their work did not result in a reduction of the scope of our audit or the extent of our procedures.

Our audit followed the professional standards of the Canadian Institute for Chartered Accountants for assessing value for money and compliance. We developed audit criteria for meeting our audit objective. These were discussed with and agreed to by senior management at the Ministry.

Summary

Initiatives undertaken by the Ministry of Transportation (Ministry) over the past decade have undoubtedly contributed to the progress made in reducing both the rate of fatalities involving commercial vehicles and the rate of collisions per 1,000 kilometres driven by commercial vehicles on Ontario roads. Specifically, the collision rate dropped by 10% during the 10-year period from 1995 to 2004. However, 9.2% of all collisions in Ontario still involve a commercial vehicle, so there is still considerable room for improvement. The Ministry needs to increase its efforts to obtain the information needed to identify the higher-risk operators and must strengthen its enforcement activities and its oversight of private-sector motor vehicle inspection stations if it is to ensure that unsafe commercial vehicles are kept off the road.

Our more significant observations were as follows:

- Since our last audit of commercial vehicle safety and enforcement in 1997, the Ministry has implemented a number of road safety initiatives targeting commercial vehicles and drivers. These include limiting driver hours of operation, passing legislation to reduce commercial vehicle speeds, suspending and impounding vehicles with critical defects, and implementing a new operator-safety-rating system.
- The Ministry relies on the Commercial Vehicle Operator's Registration (CVOR) system to track an operator's safety record so it can identify the higher-risk operators. However, some 20,600 operators—that have been involved in collisions, that have been convicted, or that have been pulled over for a roadside inspection—have never applied for the required CVOR certificate, and the Ministry takes little follow-up action against these operators. As well, the Ministry does not know the number of operators currently in business because there is no requirement for CVOR certificates to be periodically renewed. In addition, the thousands of tow truck operators in the province are exempt from the requirement to register with the Ministry, even though enforcement staff expressed concerns about the safe operation of these vehicles.
- The number of roadside inspections conducted by the Ministry has dropped by 34% since the 2003/04 fiscal year to approximately 99,000 per year. In 2007, only three out of every 1,000 commercial vehicles were subject to a roadside inspection.
- A disproportionate percentage (65%) of roadside inspections were conducted between 6:00 a.m. and 2:00 p.m. Although 21% of commercial vehicles trips are made at night, only 8% of the inspections are conducted at night.

- Although the Ministry indicated in response to our 1997 audit that officers must spend a minimum of 50% of their time doing roadside inspections, this performance target is no longer in place, and we noted that the number of roadside inspections per officer is averaging one to two per day. Inspections are also not done consistently across districts. For instance, the percentage of vehicles that inspectors pulled off the road, known as the out-of-service rate, varied from 15% to 35% by district, and the percentage of charges laid against drivers or operators based on inspections ranged from 8% to 30% among districts.
- Although the Ministry has implemented an improved bus information tracking system, it has not been able to meet its target for bus inspections. More than 140 bus terminal inspections were overdue, with some terminals not having been inspected for more than four-and-a-half years. In fact, 76 bus terminals had never been inspected, even though four of these had over 100 buses in operation.
- The available impoundment facilities were not adequate for ensuring that all unsafe vehicles were pulled off the road for the minimum 15-day penalty as called for by the impoundment program. Since only 15 truck inspection stations had impoundment facilities, unsafe vehicles identified in other locations were released after being repaired without the time penalty being imposed. Enforcement officers also tend to avoid impoundments because of the paperwork involved.
- Inspectors could often not retrieve operator safety records from the CVOR system quickly enough to use them in deciding which vehicles warranted a more thorough roadside inspection. As well, almost 10,000 inspection reports were waiting to be entered into the system, some having been backlogged for five months.
- The Ministry was not including in its safety ratings United States data on collisions and roadside inspection results as called for under the federal *Motor Vehicle Transport Act*. We noted 18,000 such events that had not been entered into operator records. Nor had some 3,500 convictions under the Ministry's red light camera program been recorded against the operators' records.
- The number of interventions against high-risk operators has been declining since 2003; and the most serious interventions, such as suspension or revocation of an operator's CVOR certificate, dropped by 40% from 2003 to 2007. Two-thirds of 740 operator facility audits—which ministry policy requires for operators with high safety violation rates—were cancelled by ministry staff. Our review of a small sample of these files indicated that more than half of those audits should have been conducted.
- The ability of the Ministry to take action against operators working under leasing arrangements was unclear, and several such operators that had high violation rates had not been audited or sanctioned.
- Although new operators have been shown to have a much higher likelihood of being in a collision, in Ontario—unlike in the United States—there is no program specifically targeting this high-risk group.
- All commercial vehicles are required to be regularly safety-certified by a licensed mechanic. We noted that the inspection standards used are outdated, and the Ministry does not exercise adequate oversight of this process and has little effective control over the issuance of safety standard certificates to inspection stations. We therefore questioned whether the Ministry has adequate assurance that this certification process ensures the mechanical safety of commercial vehicles.
- Ministry data over the past decade indicated that mechanical defects as a contributing factor in collisions fell by 34%, while driver behaviour as a contributing factor increased by

23%. However, minimal resources are devoted to providing operators and drivers with education programs to upgrade their skills.

- Meeting the goals of the Canadian national road safety plan will be challenging. For example, although the number of fatal collisions involving commercial vehicles has been gradually dropping and Ontario has been able to reduce its overall fatality rate by 2.3% and the serious injury rate by 9.7% over a four-year period, both are still well short of the 20% reduction by 2010 called for under the plan.

OVERALL MINISTRY RESPONSE

The Ministry values the Auditor General's observations and recommendations and is committed to taking action on these. The Ministry is dedicated to ensuring that Ontario's roads remain among the safest in North America and shares the Auditor General's desire to keep unsafe commercial vehicles off Ontario roads.

The Ministry appreciates the Auditor General's observations that the overall fatality rate in Ontario is the lowest it has ever been in the province. Since 1995, the collision rate for commercial vehicles has fallen by 10% in Ontario and the Ministry is pleased to note that the collision rate among the most important subcategory, large trucks, has dropped by 20%. These improvements can be attributed, in part, to the Ministry's commercial vehicle safety initiatives, such as the impoundment program for unsafe vehicles, operator safety system, and new hours-of-service regulations.

of 0.87 per 10,000 licensed drivers (this includes both commercial and passenger vehicle drivers). This was the lowest-ever recorded rate for Ontario and the second-lowest in Canada. It represents a decrease from the 2004 rate of 0.92 per 10,000 drivers and reflects the significant progress made since the early 1980s, when the rate was close to 3.

Vehicles have generally become safer over the years owing to new technology such as air bags. As well, seat belt legislation has had a positive impact on driver safety. Other ministry initiatives have undoubtedly also had an impact on the improvement in overall fatality rates. Two such initiatives relating specifically to commercial vehicle fatality rates are the impoundment program for unsafe vehicles and the new operator safety-rating model (we discuss both these initiatives later in this report). In addition, the following three safety initiatives are expected to further decrease accidents and fatalities.

One good initiative since our 1997 audit has been the introduction of a safety rating for each operator. The rating is based on a number of factors, such as collisions, operator or driver convictions, defects noted during inspections, and the results of facility audits.

More recently, Ontario has been working with the Canadian Council of Motor Transport Administrators (CCMTA) to modernize commercial vehicle drivers' hours-of-service rules to reflect advances in scientific research into human sleep patterns and fatigue management practices. As a result of this work, new regulations were established effective January 1, 2007, to help ensure that drivers get the necessary rest to safely operate their vehicles. Drivers now cannot drive more than 13 hours in a day or after being on duty, driving or otherwise, for 14 hours. A driver must also have a minimum of 10 off-duty hours in a day and take eight consecutive hours off between work shifts. As well, all drivers must have a period of at least 24 consecutive hours off-duty every two weeks. Drivers are required to

Detailed Audit Observations

NEW INITIATIVES

In 2005 (the last year for which this information has been compiled), Ontario had an overall fatality rate

maintain daily logs or time records of their driving, on-duty, and off-duty times.

Speed limiters are devices that restrict the amount of fuel injected in the engine when a vehicle reaches a predetermined speed. Since 1995, most heavy-duty diesel trucks have been manufactured with electronically controlled engines compatible with these devices. In response to an Ontario Trucking Association recommendation and Ontario traffic-survey data indicating that between 30% and 60% of large trucks travelling on 400-series highways were exceeding 110 kilometres per hour, the Ministry introduced legislation in March 2008 requiring that all commercial vehicles operating in Ontario be equipped with a speed limiter. The legislation was passed in June 2008, and the Ministry intends to develop regulations that apply the legislation to all large trucks built after 1995 and that set speed limiters in Ontario to a maximum speed of 105 kilometres per hour. On the basis of the experiences of other jurisdictions such as Australia and the European Union countries, speed limiters should work to decrease the risk of truck crashes as well as the severity of crashes when they occur. For example, according to one Saskatchewan study, casualties are reduced by 7% for every kilometre-per-hour reduction in average vehicle speeds. An Australian study indicated that if heavy trucks were 100% compliant with vehicle speed laws, there would be a 29% reduction in heavy-vehicle crashes.

While such initiatives are encouraging, the percentage of Ontario collisions involving commercial vehicles is rising. It was 7.9% in 1995 but 9.2% in 2005. This may indicate that the Ministry has been relatively more successful in improving passenger-vehicle safety than in improving commercial vehicle safety.

To address this, the Ministry needs to make further improvements to ensure that the registration data for all operators are current, the safety-rating system is working properly, and all commercial vehicles are maintained in a mechanically safe condition. Our audit recommendations address six

major themes: registration of commercial vehicle operators; roadside inspections; intervention activities; motor vehicle inspection stations; safety education and awareness; and measurement and reporting of road safety.

REGISTRATION OF COMMERCIAL VEHICLE OPERATORS

Federal legislation requires each province to register, monitor, and assess the safety performance of its own operators. Ontario's *Highway Traffic Act* (Act) requires all commercial vehicle operators that operate in Ontario to register with the Ministry and obtain a Commercial Vehicle Operator's Registration (CVOR) certificate. A legible copy of the certificate must be carried in all commercial vehicles and provided to Ministry inspection staff if requested.

Exemptions to Registration Requirements

Although in general the Act requires all commercial vehicle operators to register for a CVOR certificate, there are some exceptions. For instance, emergency vehicles such as ambulances and fire-fighting vehicles are not required to register and are not monitored under the Ministry's commercial vehicle enforcement program. (However, there are other provincial statutes and regulations governing these vehicles and their maintenance.) Another exemption is for tow trucks. This exemption appears more problematic because these vehicles are not regulated under any other federal or provincial legislation. Both ministry staff and police officers we interviewed expressed concern about the mechanical fitness of the thousands of privately operated tow trucks on Ontario's highways.

Completeness of Registration

The more complete the commercial vehicle operator registration process is, the more useful and efficient it is for purposes of ensuring that the safety requirements for road users are met. For the registration

process to be complete, all operators should be registered and the Ministry should have up-to-date information on their commercial vehicles.

When registering, operators must give the Ministry certain information, such as the name and address of their business, insurance details, driver's licence numbers, and the number of drivers operating their vehicles. Until April 2007, operators also had to report annually the size of their commercial vehicle fleet; since then, operators have been required to report annually the total number of kilometres that their fleet travelled in Canada.

Whereas operators register for one CVOR certificate that covers all the vehicles in their business, they register each of their commercial vehicles separately through the province's Private Issuing Network (PIN) offices, the same offices that register all other Ontario drivers and vehicles. At the time of our audit, there was no requirement for PIN staff to ensure that owners of commercial vehicles had valid CVOR certificates when they registered their vehicles. We found almost 1,600 cases where owners of commercial vehicles had registered their commercial vehicles with the Ministry but did not have a CVOR certificate. There is no ministry process for determining if the owner is actually operating a business and should have a CVOR certificate.

A CVOR record is also created by the Ministry when a commercial vehicle is involved in an "on-road event" and the operator is found not to be registered. These events include collisions, convictions, and roadside inspections. In such cases, the operator is given instructions for registering for a CVOR certificate and an operator record is created with a "not registered" status. In our audit we found that there were about 20,600 such unregistered operators as of December 2007, and we noted that little follow-up had been done to make sure that the operator ever obtained the required CVOR certificate. Although the Ministry may lay charges against such operators, this is only done in a minority of situations, for we noted that only 2,900 unregistered operators had been charged from 2003 to 2007. Of these operators, 775 were still unregistered at the

time of our audit. One of them had been charged six times and had still never registered.

Registration Renewal

Unlike some other Canadian provinces, such as Quebec, Manitoba, Nova Scotia, and New Brunswick, Ontario has no process for renewing CVOR certificates. Therefore, it is difficult for the Ministry to know precisely how many operators are in business in the province and how big their businesses are, and thus the usefulness of the CVOR information in identifying higher-risk operators is hindered. At the time of the audit, the Ministry was developing a proposal for a new registration process by which all registered operators would have to periodically renew their CVOR certificates and update their operational information every year.

RECOMMENDATION 1

To help ensure that all commercial vehicle operators are registered and that they have provided all required information about their operations, the Ministry of Transportation should:

- consider revising the registration requirements to ensure that all operators are required to regularly renew their Commercial Vehicle Operator's Registration (CVOR) certificate and update their operating information;
- work with the Private Issuing Network to connect the CVOR registration process with commercial vehicle registrations to highlight operators without a CVOR certificate; and
- follow up on all unregistered operators to ensure that they are properly registered within a reasonable time.

MINISTRY RESPONSE

Commercial vehicle operators must be properly registered and provide complete and accurate information. The Ministry is exploring a registration and renewal program to strengthen

registration for Ontario-based carriers. This program would require periodic renewal of operating certificates and updating corporate and operational information annually.

The Ministry is working with ServiceOntario's Private Issuing Network to ensure that owners of commercial vehicles are aware of CVOR requirements when registering their vehicles. The process for registration, documentation, and enforcement will be clearly communicated to the Private Issuing Network, ministry enforcement staff, and police services.

ROADSIDE INSPECTIONS

One of the Ministry's most important enforcement activities for ensuring commercial vehicle safety is the roadside inspection program. Random inspections of both vehicles and drivers' records are conducted at roadside inspection stations in accordance with the North American Commercial Vehicle Safety Alliance (CVSA) standards. These standards pertain to vehicle weight, load security, and mechanical and driver fitness. Vehicles with critical defects may be impounded, and unsafe drivers may be suspended. Figure 1 shows the number of inspections conducted from 2000/01 to 2007/08 by the four Ministry regions.

Efficiency of Roadside Inspections

The Field Operations Branch manages all roadside enforcement activities, including roadside inspections in the Ministry's four regions and its 17 district offices. In 2007/08, the Ministry employed approximately 250 field enforcement officers, who conducted some 99,000 roadside inspections. As Figure 1 shows, the number of these inspections has dropped over the last four years, with 34% fewer inspections conducted in 2007/08 than in 2003/04.

In response to a similar observation in our 1997 *Annual Report*, the Ministry told us that officers

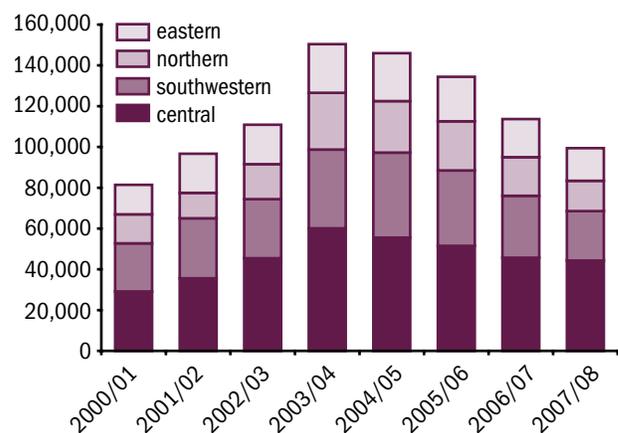
would henceforth be expected to spend a minimum of 50% of their time performing roadside inspections. Currently, enforcement officers are conducting on average only one or two inspections per working day, and the Ministry advised us that the 50% benchmark is no longer an expectation.

Sixty percent of roadside inspections are conducted at one of the 37 fixed truck-inspection stations, 37% by patrol staff at mobile locations, and 3% by the police. One concern regularly mentioned by ministry staff in our discussions with them was the difficulty they had in adequately monitoring some of Ontario's busiest highways because of the geographical location of these inspection stations. It was also clear from our audit that the Ministry can inspect only a small percentage of commercial vehicles under this roadside inspection program. Specifically, our analysis showed that from 2003 to 2007, only 20% of Ontario operators were subject to any roadside inspections. In 2007, only three out of every 1,000 commercial vehicles were subject to roadside inspection.

Since the chance of being inspected is so small, it is important to ensure that the inspection system does not inadvertently provide opportunities for unscrupulous operators or drivers to bypass inspections altogether. In this regard, our analysis of inspection data found that roadside enforcement

Figure 1: Number of Roadside Inspections by Region, 2000/01–2007/08

Source of data: Ministry of Transportation



varied across districts and regions. And as shown in Figure 2, the number of inspections performed during different times of day varied considerably. The same figure also shows that inspection activity is not correlated with relative traffic volumes.

Specifically, the majority (65%) of roadside inspections are being conducted during the morning and early afternoon. The number of inspections dropped by 58% (from 84,777 to 35,681) in the afternoon from 2:00 to 10:00 p.m., whereas traffic volume drops only slightly from the morning and early-afternoon levels (from 41% to 38%). Inspections during the night were relatively infrequent, only 8% of inspections being conducted during these hours. And yet the volume of traffic during these hours, though less than during the day, still constituted 21% of all commercial traffic, or about half of the volume during the morning. In this regard we found that nine of the 15 district offices had conducted fewer than 100 nighttime inspections in 2007, and that one office had conducted only six nighttime inspections in the whole year.

The Ministry has no detailed standards or guidelines that establish performance expectations for its inspectors or that help its staff allocate scarce inspection resources to the areas of greatest “risk” to the public and ensure that systemic gaps in inspection coverage are avoided. Rather, inspections were conducted on the basis of individual officers’ experience and professional judgment. Not unexpectedly, therefore, we noted wide variations across the province in inspection activity.

As shown in Figure 3, the average number of inspections conducted by enforcement officers has been falling since 2005/06.

There were also variations in the number of inspections between district offices. For example, we noted that over the last several years, officers in one district conducted on average about 370 inspections in a year while in another district, inspectors averaged almost 650 inspections in the same period—76% more. Our analysis also noted that the results of inspections often differed considerably. For example, the percentage of inspections

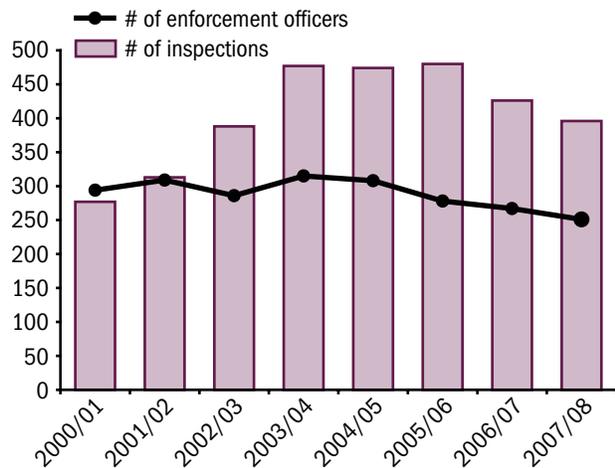
Figure 2: Average Number of Inspections Conducted by Time Period and Volume of Traffic, 2003–2007

Source of data: Ministry of Transportation

Time	Distribution of Traffic Volume (%)	Avg. # of Inspections per Year	Distribution of Inspections (%)
06:00–13:59	41	84,777	65
14:00–21:59	38	35,681	27
22:00–05:59	21	9,801	8

Figure 3: Average Number of Inspections per Inspector and Number of Inspections, 2000/01–2007/08

Source of data: Ministry of Transportation



resulting in vehicles being pulled off the road until specific problems are corrected, known as the out-of-service rate, varied from 15% to 35%. Similarly, the percentage of inspections that resulted in charges against drivers or operators ranged from 8% to 30%.

Co-ordination of Inspection Resources

To ensure a continuous enforcement presence along Ontario’s main highway corridors, resources must be co-ordinated. For instance, if a station is closed between noon and 6 p.m., it would be prudent for a neighbouring station to be open during this time period. We reviewed the staffing schedules for inspectors at each of the truck inspection stations along

these main highways and found that there was only minimal co-ordination of operating hours among these stations. The results of our analysis for the five main corridors are illustrated in Figure 4, which shows that most of the inspection stations along these corridors were closed for many hours every day and the overall operating hours per day varied from 63% to 14%. Although there is no requirement for all inspection stations to be operating at all hours of the day, there are also no benchmarks or standards setting out the Ministry's coverage expectations for any of these major corridors.

There were many evenings and nights (6 p.m. to 6 a.m.) when all the truck inspection stations along some of these corridors were closed. As mentioned earlier, traffic volumes during this period can be substantial—as high as 60% of daytime volumes. Similarly, weekends and statutory holidays were another time in which inspection coverage dropped significantly because stations were closed. Although we recognize that traffic volume during these times is usually lower than normal, operators of commercial vehicles that want to avoid being inspected could take advantage of these coverage gaps, thus raising road safety risks.

RECOMMENDATION 2

To ensure that best use is made of roadside inspection resources, the Ministry of Transportation should:

- develop benchmark targets for the number of roadside inspections to be performed;
- conduct regular risk assessments to determine the best times for the stations to be open to minimize gaps in vehicle roadside inspections, and allocate inspectors accordingly; and
- monitor actual inspections and results so that systemic inconsistencies are identified for follow-up.

MINISTRY RESPONSE

Roadside inspections are critical to ensuring commercial vehicle safety. A plan is already under development to effectively identify and assign roadside inspection resources, including facilities and staff.

The Ministry hired 50 new enforcement officers and is hiring additional supervisors to ensure more roadside inspections take place at key locations along major corridors. New performance standards will be introduced for all officers and supervisors.

The Ministry has been exploring a commercial vehicle information system to support better planning of roadside inspections. Among other benefits, the system would allow the Ministry to monitor enforcement activities, vehicle trends, and out-of-service rates.

Figure 4: Inspection Coverage along Main Highway Corridors

Source of data: Ministry of Transportation

Highway Corridor	Daily Truck Volume	Overall Enforcement Coverage Based on a 24-hour Day (%)	Inspection Stations Closed at Night (%)	Inspection Stations Closed during the Weekend (%)	Inspection Stations Closed during Statutory Holidays (%)
Windsor-Toronto	45,909	63	13	44	50
Sarnia-Toronto	44,319	49	30	67	33
Windsor-Fort Erie	30,622	58	17	52	50
Toronto-Lancaster	28,718	38	73	94	92
Toronto-Sault Ste. Marie	27,565	14	72	99	100

Bus Inspections

In 2000, we conducted an audit of school vehicles and recommended that the Ministry improve its inspection process by focusing on high-risk operators and using information technology. In response, the Ministry implemented initiatives to enhance, in particular, its school bus inspection process. In 2003, it implemented a Bus Information Tracking System (BITS). The system was later expanded to monitor all bus operators in Ontario. The Ministry now maintains a central database of information on all Ontario bus operators, including the sizes and ages of their fleets, and the results of ministry inspections. Instead of stopping buses at ministry inspection stations, enforcement officers visit bus terminals to inspect these vehicles. Buses are chosen for inspection on the basis of the operators' fleet sizes and the number of bus terminals an operator maintains. The time between visits to bus terminals is intended to range from four to 15 months, depending on the results of past terminal inspections. Every year, the Ministry conducts some 8,000 buses inspections at nearly 1,000 terminals across Ontario.

However, we found that buses were not always being inspected as scheduled; in all districts, many inspections were overdue. Specifically, we found that, as of December 2007, more than 140 bus terminal inspections were overdue, some by more than four-and-a-half years. We also noted 76 bus terminals that had never been inspected—half of these terminals had been in business since 2002, and four of them had over 100 buses in operation.

We compared the results of our data analysis of ministry records with the bus inspection overdue report generated by BITS and found that about 20 bus terminals were not listed on the overdue report, even though they had not been inspected in the past four years.

RECOMMENDATION 3

To provide adequate assurance that bus operators are keeping their vehicles mechanically safe, the Ministry of Transportation should:

- complete the backlog of overdue inspections at bus terminals with a focus on the large or higher-risk operators; and
- conduct a data-quality review of its recent Bus Information Tracking System to determine why there are errors in its system reports.

MINISTRY RESPONSE

Bus inspections are a priority for this Ministry. The Ministry has addressed the backlog identified by the Auditor General, conducting over 2,000 bus inspections since April 2008. In May 2008, the Ministry further strengthened inspections by putting a system in place to mitigate future backlogs. A risk-based approach to bus inspections was modified and includes factors such as age of buses, size of bus fleet, and past safety performance, allowing the Ministry to identify higher-risk operators and vehicles for quicker inspections.

The Bus Information Tracking System is being monitored to ensure inspection activities are conducted and action taken in a targeted, timely fashion.

Vehicles with Defects

In 1998, the Ministry introduced the Commercial Vehicle Impoundment Program. Under the program, commercial vehicles considered unsafe may be impounded for 15 days or more as a deterrent. These vehicles must also be repaired and certified as safe by a licensed mechanic at a Ministry-approved motor vehicle inspection station before they can return to the road. Specific criteria for identifying unsafe vehicles were developed to deal with defective brakes, wheels and rims, steering, tires, and suspension and frame components.

We found that the available impoundment facilities and their operating arrangements were not adequate. For instance, only 15 truck inspection stations have impoundment facilities. Ministry

staff informed us that this is primarily due to the absence of local towing arrangements at the other stations. Vehicles found to be unsafe in locations without impoundment facilities were accordingly released after the problems were corrected without being impounded. We sampled 660 vehicles found to be unsafe but not impounded during the period from 2004 to 2007, and reviewed the inspection documentation. According to the program criteria, almost 180 (27%) of these vehicles should have been impounded. Enforcement officers also acknowledged that impoundments required extensive paperwork and a prolonged approval process and therefore were sometimes avoided.

We further noted that the number of impoundments ordered has been dropping since the program began. Only 111 vehicles were impounded in 2007, just over half as many as in 1998 (212), when the program started. The impoundment rate also varied widely among facilities, with over 85% of all impoundments occurring at only four of the 15 locations.

In our review of operator and impoundment records, we also noted over 200 impoundments that had never been entered into the system. Such incomplete documentation practices can often mean that operators escape the penalties that would otherwise be imposed on them when they have a history of infractions.

Vehicles found to have less serious defects during an inspection may be released on condition that the operator send proof to the Ministry within 15 days that the fault has been adequately repaired. In our analysis of the approximately 850 defects of this type flagged between 2003 and 2007, we found that for 20% of them there was no evidence that the repairs had in fact been made. In such cases we noted minimal evidence of ministry follow-up, and only 5% of such operators were charged. In addition, these less serious defects were not handled consistently across the province, for we noted an additional 37,800 vehicles with similar defects for which proof of repairs was not required.

RECOMMENDATION 4

To ensure that non-compliant carriers are dealt with on a timely basis and unsafe vehicles are promptly removed from the road, the Ministry of Transportation should:

- provide guidance on how impoundments of vehicles with serious defects are to be handled for those truck inspection facilities with no impoundment area available;
- investigate the reasons for the significant variances in vehicle impoundments across the province to ensure that operators are treated consistently; and
- establish guidelines for verifying that the repairs relating to less serious defects noted during roadside inspections have been made.

MINISTRY RESPONSE

Ontario is the only North American jurisdiction with a commercial vehicle impoundment program.

New policies were implemented in April 2008 requiring operators to make repairs and report back to the Ministry within 15 days where vehicles are judged to have less serious defects.

Commercial vehicles with critical defects are not allowed back on the road. Officers observing vehicles with critical defects take immediate action, including charging the operator, placing the vehicle out-of-service, removing its number plates, or impounding the vehicle.

The Ministry will strengthen impoundment guidelines for enforcement officers and supervisors and ensure impoundment principles are communicated and applied consistently across the province.

Roadside Inspection Capture System

The Roadside Data Capture (RDC) system is an on-line system installed at roadside inspection

stations and in enforcement vehicles for use in the Ministry's inspection and enforcement activities. The RDC system, which started as a pilot project in 2005, replaced an older system in August 2007.

The Ministry requires all commercial vehicles to enter a roadside inspection station when they are signalled to do so. Enforcement officers first weigh a vehicle and verify that it does not exceed the maximum weight allowed for each axle, while attempting to check the operator's record in the RDC system to identify past problems that may indicate a high-risk vehicle or operator. During our visits to the roadside inspection stations, we found that it was often difficult to retrieve these records because of the low bandwidth of the RDC network. Officers informed us that this was often the reason they simply relied on visual checks of the vehicles for obvious mechanical defects to determine if they should pull the vehicle over for a more thorough inspection.

When an officer completes an inspection, he or she can enter the results into the RDC system, which then automatically updates the operator's record. Nevertheless, some district offices did not make these data entries and continued to send paper inspection reports to the Commercial Vehicle Enforcement Branch. As of February 2008, almost 10,000 of these paper inspection reports were waiting to be entered into the system; some had been backlogged for five months.

Another useful function of the RDC system is its automatic flagging of vehicles that had critical defects identified in their last inspection. This flag helps the enforcement officers recognize high-risk vehicles at the roadside inspection stations. However, we noted that the system automatically turns this flag off if 90 days have passed since the defect was identified.

The RDC system also allows enforcement officers to issue electronic provincial offence tickets under the *Highway Traffic Act* for violations detected during roadside inspections. This capability is being used at six district offices, and the resulting tickets have been found to have fewer errors than the previous handwritten paper tickets. However, operator

records are not updated until the tickets have been processed by the courts, and none of the provincial offence data are subsequently transferred to the Ministry of the Attorney General's court information system. As well, the Ministry has not made full use of the data maintained in the system, for this new electronic notice system is often being used as a printing machine only.

RECOMMENDATION 5

To ensure that enforcement officers can use the recently improved information technology system to identify high-risk operators that might warrant a more thorough roadside inspection, the Ministry of Transportation should:

- improve network bandwidth at the roadside inspection stations;
- encourage districts that issue paper inspection reports to input them electronically in the Roadside Data Capture system;
- reassess the decision not to have the system flag all vehicles that were found to have critical defects in previous inspections once 90 days have passed; and
- consider establishing a data interface with the court system to transfer provincial offences charges electronically.

MINISTRY RESPONSE

Technology is a valuable tool for enforcement officers, helping them keep our roads safe. In the last four years, the Ministry has implemented several new business applications that do precisely that, including Electronic Provincial Offence Notices, Electronic Commercial Vehicle Inspection Reports, and the Inquiry Services System.

The Ministry is developing a strategy to improve bandwidth at enforcement offices and truck inspection stations. New hardware is being installed in every enforcement vehicle to improve the speed of data transmission.

In response to the Auditor General's observations on the backlog of paper inspection reports,

the Ministry trained district enforcement office staff and utilized additional resources, eliminating the backlog in August 2008. Additional staff will be trained and provided with access to the Roadside Data Capture system to ensure that paper-based reports are entered into the system in a timely manner.

The Ministry will evaluate its current business rules for flagging vehicles in the Roadside Data Capture system found to have critical defects.

INTERVENTION ACTIVITIES

The Ministry's CVOR system automatically assesses each operator on the basis of event data, including collisions, convictions, and roadside inspections, as well as facility audits. These assessments use predetermined formulas and safety performance thresholds that an operator is expected not to exceed. The collision and conviction thresholds for each operator are based on fleet size and the average number of kilometres travelled per month in Canada; inspection thresholds depend on the number of drivers and vehicles inspected over the past 24 months and the number of violations found during these inspections.

The Ministry calculates an operator violation rate based on points accumulated from event data over a moving two-year period. Different points are assigned depending on such things as the type of any collision that occurs, convictions against

the operator or a driver, as well as defects noted in roadside inspections. When an operator's violation rate meets a predetermined level, the Ministry may initiate an intervention or sanctioning process (see Figure 5). This violation rate, combined with the facility audit results (if any), is used to calculate a safety rating for the operator. Other events that may trigger an intervention include wheel separations, impoundments, or a collision causing death.

Accuracy of Safety Rating

In 1999 the Ministry began assigning public safety ratings to operators. Insurance companies, financial institutions, and other interested parties can find out the operator's safety rating to assist in their business decisions. Our review of the operator records showed that almost 74,000 (40%) of the registered operators did not have a safety rating. The Ministry explained that no safety rating was assigned to these operators because they have not been involved in any reported incidents or failed inspections, and accordingly there is little basis for a rating. Many of these operators may no longer be in business, but since the Ministry does not require licences ever to be renewed, this cannot be verified.

In April 2007, the Ministry introduced a new intervention model and changed the safety-rating formula in an effort to focus on operators that were most likely to be involved in future collisions. One of the major features of this new safety-rating model was that it replaced "fleet size" as a parameter with "kilometres travelled in Canada." During

Figure 5: Operator Safety Ratings and Ministry Interventions

Source of data: Ministry of Transportation

Violation Rate (%)	Safety Rating	Intervention
>=100	Unsatisfactory	sanction
85-100	Conditional (carriers are also rated conditional when they fail any facility audit irrespective of the violation rate)	interview
70-85		audit
50-70	Satisfactory (if facility audit passed with at least 55% score) OR	audit
35-50		warning letter
15-35	Satisfactory Unaudited	none
15 or less	Excellent (if facility audit passed with at least 80%)	none

the two-year transition period from April 2007 to April 2009, both pieces of information are being used to calculate a blended threshold for road safety monitoring. The accuracy and completeness of this information is important for triggering timely and appropriate intervention; we noted, however, that both these pieces of information were often inaccurate or missing.

All operators are required to register their fleet size when registering for their CVOR certificates or when they have revised information. However, our data analysis found that 3,200 operators had not registered all their vehicles, and another 1,150 had not reported their fleet size at all. In such cases, the Ministry uses default values set at the lowest thresholds possible, and this is much more likely to trigger a ministry intervention if an event occurs. This may not be the most efficient use of ministry resources, and additional effort is needed in such cases to request updated information from the operator so that a more precise safety rating can be calculated.

Most operators also did not report their kilometres travelled within Canada to the Ministry. We noted over 100,000 (55%) operators who had never reported such information. In 2006 and 2007, the Ministry launched an initiative to request that operators update their fleet size and kilometric information and revised about 27,000 operator records with the information obtained. However, the information has still not been obtained from the majority of operators.

In reviewing how the safety rating is applied in practice, we noted that the two-year violation-tracking period is often shortened unintentionally because of delays in entering conviction and collision data into the system. The Ministry uses the collision date as the starting point for the two-year period instead of the conviction date, thus making the actual monitoring period shorter than intended and, in many cases, almost of no use. For instance, our analysis of conviction records between 2003 and 2007 found that over 10,000 convictions (5%) were delayed for more than a year, and for almost 700 convictions the delay was greater than two years. In these latter cases, the convictions had no

effect on the operator's safety rating, because the two-year monitoring period had expired before the convictions were entered into the system.

Another area of delay we noted was the entering of collision reports involving commercial vehicles. Although we found that collision information was generally entered into operator records promptly, there was a delay of up to two months if the operator's CVOR number was missing. This delay again shortens the monitoring period since the Ministry uses the collision date instead of the data entry date as the starting date for the two-year monitoring cycle.

Out-of-province Events

The federal *Motor Vehicle Transport Act* requires each province to register, safety-rate, and monitor its local operators on the basis of events throughout Canada, the United States, and Mexico. All out-of-province and out-of-country events are submitted to the Canadian Council of Motor Transport Administrators (CCMTA), which is responsible for forwarding them to the jurisdiction in which the operator is based.

We found that data on collisions occurring in and roadside inspection results conducted in the United States for Ontario operators were being submitted to the CCMTA and being forwarded to the Ministry in accordance with the federal *Motor Vehicle Transport Act* requirements. However, the Ministry did not update operator records with these data. We noted over 18,000 such events for the five-month period between August and December 2007. The Ministry explained that because of the different definition of a conviction between the two countries, it felt it was unreasonable to apply these results against Ontario's operators. Whereas Canada uses actual conviction data, the United States incidents are based on charges laid against the operator before the case is actually settled by a court. We believe this information would still be useful to roadside station officers in identifying potential higher-risk vehicles warranting a more detailed inspection.

Red Light Cameras

The Ministry has installed cameras at selected intersections throughout the province. Under its red light camera program, a photograph is taken of the rear licence plate of any vehicle that runs a red light, and the owner of the vehicle is charged. We estimated that about 3,500 commercial vehicles were convicted under this program in 2007. However, for the reasons explained below, the Ministry does not record these failures to stop at a red light against commercial vehicle operators, and accordingly, operators' safety ratings are not affected by such incidents.

Tractors and trailers are considered two separate vehicles. They are licensed separately and often have different owners. Since there is no requirement to display a tractor licence plate on the back of a trailer that is attached to the tractor, it is often difficult to identify a driver who runs a red light while pulling a trailer. The Ministry commented that tractors may pull several different trailers within a short period of time. This lack of relevant licence information can also hinder investigations into hit-and-run accidents.

We further noted that even when a truck without a trailer is convicted under the red light camera program, the Ministry did not record such offences on the operator records even though it had enough information about the operator to do so.

RECOMMENDATION 6

To help ensure the integrity of the Commercial Vehicle Operator's Registration system and to enhance the reliability of the operator's safety rating, the Ministry of Transportation should:

- consider what sanctions might be effective for operators that do not provide all required information, including their fleet size and kilometric data;
- implement procedures to ensure that all carrier collisions and convictions are promptly and accurately recorded in operator records;

- reconsider the decision not to use collision and roadside inspection violation data from the United States in its risk assessments; and
- consider requiring that a tractor licence plate also be displayed on the back of trailers so that the operator can be more easily identified.

MINISTRY RESPONSE

The Commercial Vehicle Operator Registration system is a vital part of operator safety ratings. Since 2007, operators must report their fleet size and kilometric data. This information identifies higher-risk operators. Those operators failing to report this information are subjected to more frequent and severe interventions when detected on the road. The Ministry is considering further oversight enhancements through annual renewals of operating certificates, including updates of corporate and operational information.

New procedures will ensure that conviction and collision data are recorded on operator records. Consistent with other Canadian jurisdictions, the Ministry has adopted the National Safety Code standard requiring that the date of offence be entered on the operator record rather than the date of conviction.

The Ministry is participating in a joint Canada/U.S. working group to resolve data-exchange issues between the two countries. The Ministry will work toward implementing a reciprocal recognition agreement, enabling the use of U.S. collision, inspection, and violation data when determining the safety rating of Ontario operators.

As it is common industry practice across North America to transport commodities in trailers not owned by the tractor operator, the Ministry will consider the recommendation to display tractor plates on trailers within the context of North American practices.

High-risk Operators

Although the number of operators has been increasing by about 5,000 a year, the number of operators flagged by the Ministry for intervention has remained stable. However, the actual number of interventions undertaken, particularly the ones directed at the most dangerous operators, has been falling, particularly for 2007, as shown in Figure 6.

As summarized in Figure 5, the first intervention that the Ministry makes is to issue the operator with a warning letter when the operator's violation rate rises above 35%. We found that the Ministry had adequate procedures for ensuring that all such warning letters were sent out promptly.

The Ministry also conducted over 290 interviews with operators whose violation rate had reached 85% for the years 2003 to 2007. During the interview, the operator must present a plan for improving its safety performance. However, the Ministry does not follow up to ensure that the operator has actually made any promised improvements.

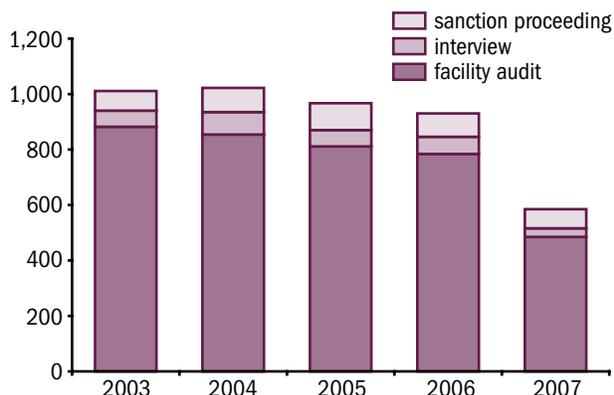
The most serious intervention available to the Ministry is to order a sanction against the operator. These sanctions can include revoking its right to operate in Ontario, seizing the operator's assets, suspending its CVOR, or placing a limitation on the fleet size. As illustrated in Figure 7, the number of sanctions arising from sanction hearings dropped from 62 (sanctions imposed in 87% of cases heard) in 2003 to 37 (sanctions imposed in 54% of cases heard) in 2007. We found that the majority of sanctions imposed were for the suspension of the operator's licence, with the average suspension being for 27 days.

Facility Audits

Facility audits are conducted at an operator's premises by enforcement officers when the violation rate reaches 50%. Standard procedures include an examination of the operator's records, vehicle maintenance records, driver log books, and trip documentation. A mechanical inspection of a sample of

Figure 6: Interventions Undertaken, 2003–2007

Source of data: Ministry of Transportation



vehicles may also be conducted. A score is assigned on the basis of the defects noted during the audit, and this score affects the operator's safety rating.

Ministry guidelines require all facility audits to be completed within 90 days after the CVOR system flags the operators. However, we found that it took the Ministry an average of about 230 days to complete a facility audit, with 67% of audits not having been completed by the due date.

One of the reasons for this delay was that three separate ministry application systems are used as part of the facility audit process. Operator- and audit-related data are re-entered manually into another system after being flagged by the CVOR. When a facility audit is completed, the results are reviewed twice at district offices and then by the Commercial Vehicle Enforcement Branch before being entered into the operator records. We noted that on average it takes six weeks to review the completed audit results. Ministry staff commented that the causes of the delay include waiting for missing operator information, such as fleet size or distance travelled, in order to calculate the violation rate, and staff shortages at the district offices.

As soon as an operator's violation rate reaches 50%, the CVOR system flags the operator for a facility audit—with one exception. If an operator has been audited in the previous 12 months and has stayed within the audit range (violation rate between 50% and 85% as noted in Figure 5), the

Figure 7: Number of Sanction Hearings and Orders, 2003–2007

Source of data: Ministry of Transportation

	2003	2004	2005	2006	2007
sanction hearing	71	87	97	84	69
sanction ordered	62	66	59	55	37
% of hearings leading to sanction	87	76	61	65	54

CVOR system does not flag the operator for another intervention even if the operator commits an additional infraction. The Ministry has recognized this shortcoming, and in January 2008 it prepared a report identifying these operators. We were informed at the time of our audit that the Ministry had begun following up on these incidents with the relevant operators.

Standards and procedures for the Commercial Vehicle Enforcement Branch’s review process for determining whether a facility audit should be conducted also need to be improved. Although we noted that some 740 operators were identified by the CVOR system as requiring a facility audit in 2007, almost 500 of these cases were dismissed by ministry staff with no further action being taken. We sample-tested 21 of these rejected facility audits with ministry management and found that 11—or about one-half—of these dismissed facility audits should have been conducted. We further noted that the violation rate of some of these operators continued to rise during the six months after they had received a warning letter about their safety performance.

Leased Vehicles

Many of Ontario’s commercial vehicles are operated under leasing arrangements. We noted that the respective responsibilities of the leasing company and the lessee were often unclear in a number of areas, including the CVOR registration process; the handling of collisions, convictions, and inspection results; and the intervention process. In our

testing we found that several operators under leasing arrangements had violation rates that, if the vehicles had not been leased, would have called for serious intervention, but they had never been audited or sanctioned. The Ministry believes that the safety rating for such carriers may be inaccurate because incidents involving them are not handled consistently and therefore it generally takes no action against them.

New-entrant Program

Studies of safety performance show that new operators have a much higher chance of being involved in collisions than other operators. They also have a lower rate of safety compliance. Ontario has no program for targeting this high-risk group.

In this regard, we noted that in the United States, the Federal Motor Carrier Safety Administration in January 2003 adopted a new-entrant fitness-assurance process for educating and monitoring all new operators. Every new operator in the U.S. is required to register as a “new entrant” and is subject to an 18-month safety monitoring period. All new entrants have to pass a safety audit near the end of this 18-month period as well as having their roadside collision and inspection results evaluated. An operator that fails to demonstrate good safety-management practices may have its registration revoked. This new-entrant program also applies to Ontario operators that operate in the United States.

RECOMMENDATION 7

To ensure that appropriate and timely action is taken on higher-risk operators, the Ministry of Transportation should:

- improve the review process involved in determining when sanctions should be imposed;
- conduct all facility audits on a timely basis and ensure that decisions to dismiss facility audits are appropriately approved;

- review the responsibilities of leasing companies and lessees to ensure that incidents involving them are handled in the same way as incidents involving operators that own their vehicles; and
- consider an education and monitoring program for new operators similar to what is required in the United States.

MINISTRY RESPONSE

The Ministry agrees that action must be taken to address higher-risk operators and has taken steps to ensure that sanctions are initiated immediately against those operators. In the first six months of 2008, the Ministry initiated 79 sanction proceedings. While interventions undertaken remained relatively constant from 2003 to 2006 and dropped in 2007, this was due, in large part, to the transition to a new safety-rating model.

Overdue facility audits will be completed quickly through redeployment of resources and more streamlined processes. Ministry staff were instructed in July 2008 not to override recommended interventions without strong justification and a full explanation.

Leasing companies and lessees must be provided with more detailed information on their respective responsibilities. To ensure consistent enforcement, the Ministry will send out clear direction to enforcement and police agencies. This will be followed up by sending information to leasing/rental companies outlining their responsibilities.

An education and monitoring program for new operators would be an effective measure, and the Ministry is exploring such a program.

MOTOR VEHICLE INSPECTION STATIONS

All commercial vehicles are required to have regular mechanical inspections within a specified time and

be safety-certified by a registered mechanic. All commercial vehicles are required to display their safety certificate as evidence that they have been inspected by a registered mechanic within the past year. All motor vehicle inspection stations (MVIS), most of which are private garages, register with the Ministry, register the licensed mechanics they employ, and renew the station licence at least once every year. As of March 2008, there were 13,000 MVIS stations with almost 33,000 licensed mechanics registered.

However, commercial vehicles may not be inspected properly by the motor vehicle inspection stations before being certified as mechanically safe, partly because the inspection standards used are outdated. We note that the Ministry's internal audit service expressed similar concerns in a 2004 report, but no corrective action has been taken. Our concerns are set out in the following sections.

Outdated Inspection Regulations and Information System

We found that the ministry regulations concerning the safety inspections by motor vehicle inspection stations were out of date. For example, such advances in technology as airbags, anti-lock brakes, and air brakes were not covered. The Ministry did conduct a study in 1993 to update these inspection standards, but the recommendations arising from this study were never implemented. A similar study was conducted in 2003/04 to modernize regulations for the licensing and operation of inspection stations, but again, the recommendations were never implemented.

The MVIS system itself is also out of date. Although its purpose is to track all licensed motor vehicle inspection stations and the mechanics working at them, we found the system to be a very basic database without the capacity to provide adequate management reports or otherwise help the Ministry to monitor and oversee the network of inspection stations. In 2003, the Ministry hired a consulting firm to review this program and the decade-old

MVIS system. However, none of the consultant's recommendations have yet been implemented.

Licensing and Inspection of Stations

Unlike other provinces, such as British Columbia, Alberta, and Manitoba, which inspect their motor vehicle inspection stations periodically, Ontario cancelled its cyclical inspection process in 1988. Investigations are now conducted only if complaints are received from the public or if a problem comes to the attention of ministry enforcement staff. In our *1997 Annual Report*, we expressed our concern about the absence of an inspection process, and the Ministry committed to developing criteria for choosing high-risk stations for inspection audits. However, during our current audit, we noted that no progress had been made in this area. Specifically, there are no guidelines or process for identifying high-risk MVIS stations or taking any enforcement action against them. We also found that there were no procedures for identifying problem operators that applied for a new MVIS licence, thereby "cleaning" their record.

Licensed inspection stations purchase safety standard certificates with removable stickers from the Ministry and apply these stickers to the commercial vehicles that have passed their safety inspections. On average, about 600,000 safety standard certificates are ordered every year. Ministry staff review these sticker orders, and if they notice that an MVIS appears to be ordering an excessive number, they notify the local district office, which is expected to follow up with the station. However, there was no process for ensuring that all such cases were in fact investigated, and the district offices we visited informed us that these investigations were not being conducted because of staff shortages and the lengthy process involved in attempting to prosecute non-compliant stations. In our data analysis, we found mechanics who had issued as many as 380 safety inspection stickers in one year, which was almost eight times as many as those issued by an average mechanic.

Where a station was inspected, we found that the investigations were not conducted the same way by all district offices. We noted that the activities of investigators, some of whom are licensed mechanics and some of whom are not, ranged from simply checking paper records or observing the existence of mechanic's tools to more thoroughly reviewing the work performed by the mechanic. Moreover, there was no tracking and management reporting mechanism to ensure that all investigations were completed in a timely manner, and many of the files we attempted to review at district offices could not be located.

When the Ministry does find stations or mechanics to be non-compliant, such as by performing inspections improperly, it has the power to revoke a station's licence or a particular mechanic's registration. However, we noted that this was rarely done, even when a station had a long history of convictions or had been sent numerous warning letters. Our analysis of MVIS data found stations that had a large number of convictions on their record but were still continually and routinely licensed by the Ministry to operate.

Licensed Mechanics

When a motor vehicle inspection station registers for a new licence or re-registers at the end of each calendar year, the mechanics working at the station must also register with the Ministry. Our review of this registration process found that the Ministry had insufficient controls to ensure that only fully qualified mechanics are licensed to work at these stations. When a new mechanic is registered with the Ministry, his or her mechanic's licence is verified with the Ministry of Training, Colleges and Universities, which issues and maintains these licences. However, no further verification is done to ensure that the mechanic remains licensed and in good standing, even if he is terminated at one station and begins working at another. We also found that the two ministries do not notify each other of

any mechanic's licences that have been revoked for inspection violations or other reasons.

A mechanic may work for more than one inspection station at the same time; however, we noted mechanics who were registered and working at two or more stations located far away from one another. The risk is that the mechanic's licence number may be used to certify vehicles that the mechanic had not actually inspected. The Ministry has no process for identifying mechanics who are registered with more than one station or for assessing the risks involved in such situations. We also noted over 75 mechanics who were registered as working at more than five stations at the same time.

Inventory Control

Motor vehicle inspection stations order safety certificates from the Ministry in booklets of 10 and are required to return unused ones to the Ministry. The certificates are numbered sequentially, and the Ministry records these numbers as the certificates are ordered by each station. Thus, if the Ministry inspects a vehicle that has just been certified and finds it to be mechanically unsafe, it should be able to determine which station performed that suspect inspection. We found that the Ministry's inventory-control procedures need to be improved. Although all certificates returned to district offices are supposed to be sent back to the Commercial Vehicle Enforcement Branch, district offices often keep these returned certificates. We attempted to reconcile the records at the Branch with the inventory records maintained at district offices and found that about 4,000 of these returned certificates were unaccounted for. We also noted that another 400 certificates had been returned to district offices, but the Branch had no record of these returns. Sometimes district offices transferred some of their returned stickers to other inspection stations, but the Ministry's tracking records for these resold certificates were not updated; thus the Ministry's ability to determine which MVIS had conducted a particular inspection was compromised.

Out-of-province Inspection Certificates

The federal *Motor Vehicle Transportation Act* requires each province to recognize safety inspection certificates issued by another province. Likewise, safety certificates issued by the United States federal or state governments are to be accepted as proof of an annual inspection provided the inspections are done in accordance with U.S. federal regulations. We noted that whereas 25 states comply with and follow these federal regulations when conducting commercial vehicle inspections, the other 25 states do not, but rather follow their own inspection standards. The Ministry has no evidence that such inspections are conducted to the same standard as those states that meet the U.S. federal regulations. The Ministry had no guidelines to help enforcement officers assess the comparative value of these certificates, and in practice, all were accepted.

We also noted that U.S. inspection certificates are not controlled as tightly as Ontario certificates. In Ontario, inspection stickers issued to MVIS stations may be affixed onto commercial vehicles only by licensed mechanics after an inspection. U.S. operators, however, can purchase blank U.S. inspection certificates at truck stores. Although under U.S. law, the blank inspection certificates may be filled in only by a certified mechanic after conducting an inspection, Ontario enforcement officers have little assurance that such stickers are valid when they conduct their roadside inspections.

Our review of collision records suggests that the Ministry might improve its risk assessments by analyzing these data by the home location of the vehicle involved. We noted that vehicles from some U.S. states have poorer performance records than others. For instance, commercial vehicles in Arizona, Rhode Island, and Alaska were involved in proportionally more at-fault collisions than Ontario vehicles, and commercial vehicles in Arizona, Rhode Island, and Maine that were inspected were more likely than Ontario vehicles to have out-of-service defects.

RECOMMENDATION 8

To ensure that the required regular safety certifications by private-sector licensed mechanics are reliable in determining whether commercial vehicles are mechanically safe, the Ministry of Transportation should:

- update its safety inspection standards to address current technology such as air brakes, anti-lock brakes, and airbags;
- enhance the functionality of its Motor Vehicle Inspection Station system so it provides management and inspectors with useful risk-based information;
- strengthen inventory and monitoring controls to identify whether an excessive number of safety standard certificates are being issued to private-sector inspection stations or mechanics certifying an abnormally high number of vehicles;
- work with the Ministry of Training, Colleges and Universities to establish a process for exchanging information on problem mechanics or those with revoked licences;
- ensure that mechanics registered at multiple stations are actually inspecting the vehicles they certify; and
- given that some states have significantly less rigorous standards than Ontario does, develop guidelines for validating inspection certificates issued south of the border.

MINISTRY RESPONSE

Modernization of inspection standards for heavy trucks and buses is needed. Plans are in place to modernize inspection standards for heavy trucks and buses.

The Ministry is developing new processes for receiving, co-ordinating, and assigning investigations, better utilizing data available in the Motor Vehicle Inspection Station system.

The Ministry is investigating mechanics registered at multiple inspection stations, excessive stock orders, and missing inspection certificates that have been identified by the Auditor General. A process will be implemented to quickly identify and investigate these indicators of potential fraud. The Ministry is launching a pilot project with the Ministry of Training, Colleges and Universities to allow ministry enforcement officers to verify the credentials of licensed mechanics. Both ministries are working toward a data exchange protocol to ensure timely notification of revoked mechanics' licences.

Although inspection data show that the overall safety of U.S. trucks is similar to that of trucks in Canadian jurisdictions, enforcement officers will be given clear direction to consider vehicles based in non-compliant states as a factor in selecting them for inspection.

SAFETY EDUCATION

Ministry statistics reveal that in collisions involving commercial vehicles, driver behaviour is a greater factor than mechanical failures. We analyzed the collision data recorded in the CVOR system over the 10 years from 1998 to 2007, and noted that driver behaviour and condition being cited as a contributing factor rose by 23% over this period while vehicle mechanical defects being cited as a contributing factor fell by 34% over the same period. Accordingly, improving driver performance is key to improving road safety.

The Ministry has a number of informal ways of educating commercial operators, particularly about new regulations related to vehicle safety. For instance, enforcement staff discuss relevant legislation and policy with drivers during roadside inspections or facility audits, and also attend stakeholder events to promote road safety or discuss new regulations. However, we noted very little in the way of formal programs to educate commercial vehicle

operators, drivers, or motor vehicle inspection stations on such things as overall regulatory requirements or specific mechanical or driver-behaviour issues. Nor has the Ministry conducted any recent stakeholder surveys to determine what type of training the operators think they need or could benefit from. In our *1997 Annual Report*, we recommended improvements in the ministry education process and stakeholder communication, but we have noted little progress in that regard since that time. The Ministry did start publishing a newsletter for commercial motor vehicle operators in early 1997; however, the newsletter was discontinued in 1998.

Although the Ministry maintains records of all commercial vehicle operators and driver convictions, it conducts little analysis of these data to determine the most common reasons for convictions and to develop mitigation strategies, such as driver education. Accordingly, we analyzed these conviction records for the period from 2003 to 2007, and found that the main reasons for a commercial vehicle conviction have been the same over the years. Figure 8 summarizes these convictions for 2007.

Furthermore, according to the Ministry's roadside inspection result analysis, the most common out-of-service defects were also generally the same over the years. Figure 9 summarizes these out-of-service defects for 2007. Nevertheless, there were no ministry education or awareness programs targeting these specific problems or advising operators of the most common defects so that they could pay particular attention to them in their own vehicle safety programs.

Figure 8: Top Five Reasons for Convictions of Operators or Drivers in 2007

Source of data: Ministry of Transportation

1	speeding
2	excessive load weight
3	improper use of seatbelt
4	failure to provide evidence of vehicle inspection as prescribed by regulations
5	failure to perform required daily pre-trip inspection

RECOMMENDATION 9

Given that an increasing percentage of collisions involve driver behaviour rather than vehicle mechanical defects, the Ministry of Transportation should assess whether some reallocation of resources to an increased focus on driver education and training might be warranted. As well, it should provide information to operators and drivers to assist them in reducing the incidence of the most common problems.

MINISTRY RESPONSE

Many collisions are clearly the result of driver behaviour. In response, the Ministry has strengthened commercial driver hours of work regulations and Class "A" driver testing rules.

The Ministry is also working with the Ministry of Training, Colleges and Universities to improve how commercial drivers are trained, tested, and licensed. Improvements to the Class "A" driver's licence were implemented in June 2008 and more appropriately reflect the type of vehicle used for road tests.

ROAD SAFETY MEASUREMENT AND REPORTING

In our *1997 Annual Report*, we recommended that the Ministry more formally assess the effectiveness of its efforts to improve commercial vehicle safety and periodically report on this evaluation. The Ministry committed to doing so, and it completed its first annual comprehensive performance evaluation of commercial vehicle safety in 1998. This study was based on data for 24 months ending in 1997. Since then, however, there have been no further program evaluations.

We also noted little progress in the development of measures of program effectiveness or efficiency. Ministry business plans continue to outline the general aim of the program, which is to improve

Figure 9: Top Five Out-of-service Defects—Driver and Mechanical, 2007

Source of data: Ministry of Transportation

	Driver Defects	Mechanical Defects
1	failure to maintain hours-of-work log	insecure load
2	failure to provide log book	brakes out of adjustment
3	improper driver's licence	inoperative parking brake
4	suspended driver's licence	failed lighting system
5	driver's licence without air brake endorsement	damaged air-supply line

safety and security for all road users and to maintain Ontario among the safest jurisdictions in North America. However, performance benchmarks or targets for determining whether this aim is being achieved have yet to be established.

The Ministry did launch a Strengthening Commercial Vehicle Safety (SCVS) Project in May 2005 with the intention to establish program goals and performance measures, rationalize roadside inspection activities, and modernize the facility audit process. The project was also slated to study the likely impact of future changes in economics, traffic volume, and freight movement on the enforcement program, and to develop automated management reports to assist in resource planning. However, this project was terminated in mid-2007 because of resource constraints, and the study was not completed.

The Ministry is also required to table annually in the Legislature a report on road safety providing statistics on traffic incidents in the province, including collisions, fatalities, convictions, injuries, and property damage, as well as the type of vehicles involved and where collisions occurred. At the time of our audit, the last report tabled—in spring 2008—was for the 2005 calendar year. In our *1997 Annual Report*, we also found that this report was not being tabled on a timely basis.

Target '97 Task Force

In response to public pressure to improve truck safety in Ontario, in fall 1996, the Ministry, together with industry stakeholders, created the Target '97 Task Force on Truck Safety. On March 10, 1997, the Task Force tabled its final report, which contained 79 recommendations for improving truck safety. The recommendations address carrier safety ratings, the Commercial Vehicle Operator's Registration system, maintenance and inspection standards, hours of work, and driver training.

We reviewed the status of 55 recommendations that are relevant to this audit and found that 32 of them had been implemented. These are summarized in Figure 10.

Road Safety Vision 2010

In 1996, a Canadian national road safety plan was developed by the Canadian Council of Motor Transport Administrators (CCMTA) and the country's ministers of transportation. The CCMTA is a non-profit organization with representation from the federal, provincial, and territorial governments; its purpose is to deal with administrative and operational matters pertaining to road safety, including the regulation of commercial vehicles.

The national road safety plan, which is called Road Safety Vision 2010, sets a national target for reducing the number of road users killed or injured by 30% during the 2008–10 period compared with the period from 1996 to 2001. There are also a number of sub-targets, one of them being a 20% reduction in the number of road users killed or seriously injured in crashes involving commercial vehicles. According to statistics from 2001 to 2005, the overall fatality rate in Ontario has been reduced by only 2.3% and the serious injury rate by 9.5%. Both of these are still well below the 20% target reduction rate. In both categories, Ontario was ranked seventh among the 12 jurisdictions.

Figure 10: Implementation of Recommendations from Target '97 Task Force

Source of data: Ministry of Transportation

	# of Recommendations	# of Recommendations Implemented as of February 2008
commercial vehicle operation registration system	14	11
driver hours of work	12	9
inspection and maintenance standards	18	10
establishment of operator safety ratings	11	2
Total	55	32

Road Safety Performance Analysis

Since the Ministry had established and reported on only minimal performance measures for assessing the effectiveness of the commercial vehicle safety program, we analyzed the collision data of all Canadian jurisdictions for the period 1995 to 2005 (the latest available data) from Transport Canada.

As summarized in Figure 11, the Transport Canada data for Ontario indicate that the number of fatal collisions involving commercial vehicles has been fluctuating over the past 10 years but has been gradually dropping. Although the reasons for this improvement are unclear, they would include improved safety features, such as airbags, vehicle structural reinforcements, and the requirement to wear seatbelts. Driver behaviour also appears to be improving, for, according to ministry data, the collision rate per 1,000 kilometres travelled fell by 10% between 1995 and 2004.

Although the above reductions are encouraging, there is still room for improvement. While collision rates have been dropping, the total number of collisions causing injuries has remained stable, with a

total of 3,857 in 1995 and 3,976 in 2005, well above the CCMTA Vision 2010 target. In absolute terms, the total number of collisions involving commercial vehicles has also climbed by 22%—from 17,354 in 1995 to 21,103 in 2005.

Moreover, our analysis found that 9.2% of all Ontario collisions involved commercial vehicles, an increase over the 1995 figure of 7.9%.

Collisions involving commercial vehicles that lost wheels on the highway were a cause of great public concern in 1996/97, when a record number of 215 incidents were reported. We reviewed the number of such incidents and noted that they dropped dramatically in 1998 to about 100 and have remained the same since then.

RECOMMENDATION 10

The Ministry of Transportation should regularly analyze enforcement and traffic information to help management assess the effectiveness of its roadside inspection and other road safety programs in reducing fatalities and collisions. As well, it should expedite the tabling of the

Figure 11: Injuries and Property Damage from Collisions Involving Commercial Vehicles

Source of data: Transport Canada

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
fatal injury	158	149	148	131	150	127	139	146	154	147	118
non-fatal injury	3,699	3,779	3,672	3,336	3,579	3,677	3,400	3,655	3,693	3,702	3,858
property damage	13,497	13,485	14,407	13,144	15,021	15,984	15,520	15,936	17,605	17,124	17,127

required report on traffic incident statistics and make this report, as well as other performance measures on its commercial vehicle road safety program, available to the public.

MINISTRY RESPONSE

The Ministry is working to enhance data collection and storage, including options such as a commercial vehicle information system. The system will allow the Ministry to better monitor enforcement activities, vehicle trends, and out-of-service rates by region and many other parameters.

The Ministry shares the Auditor General's concerns regarding tabling of required statistical reports and is investigating options to speed up this process. The Ministry continues to work with its road safety partners such as police services and the Coroner's Office to expedite delivery of the annual road safety report.