




RiskIntel™
Enhancing Trucking
Highway Safety: Strategies
for Risk Mitigation

echelon®
Insurance

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Canada's truck drivers play a crucial role in keeping supply chains moving.

Canada's truck drivers play a crucial role in keeping supply chains moving, ensuring families and business across the country and around the world get the goods they need on time. While the trucking industry plays a pivotal role in the economy, it also faces significant challenges, particularly concerning highway safety and risk mitigation.

Each year, accidents involving long-haul trucks occur on highways, resulting in property damage, economic disruptions, and potentially loss of life. As the Canadian trucking industry continues to evolve,

it is necessary for drivers and fleet operators to have proper safety measures in place to prevent accidents and promote safe driving practices. The purpose of this guide is to provide a broad overview of some of the key issues related to truck highway safety as well as measures operators may consider to improve their safety standards to ensure the safety of drivers, passengers, and other road users.

Key issues impacting highway safety for commercial truck operators

Poor maintenance

Poor maintenance of trucks can also contribute to accidents on highways. Faulty brakes, worn-out tires, and other maintenance issues can impact the ability of the truck to stop or maneuver on the road.

When trucks are not properly maintained, they can experience mechanical failures that can cause accidents. For example, if the brakes fail, the driver may not be able to stop the truck in time, resulting in a collision. Similarly, if the tires are worn out or not inflated properly, they may blow out and cause the driver to lose control of the truck. If coupling devices are not inspected routinely, they may malfunction and cause the connection between truck and trailer to fail or become loose.

In addition to mechanical failures, poor maintenance of a vehicle's safety devices can lead to accidents. Safety devices include headlights, windshield wipers, turn signals, and horns. For example, if the headlights or taillights are not working, other drivers may not be able to see the truck at night, increasing the risk of a collision. If a vehicle's turn signals or horn are defective, drivers would have a difficulty notifying other road users of their intended direction. If the windshield wipers are not working, the driver may not be able to see the road in bad weather conditions, which can also lead to accidents.

Poorly maintained trucks can also lead to increased downtime and higher maintenance costs in the long run, which can ultimately impact a company's bottom line. Regular maintenance and inspection of trucks can help to prevent accidents, reduce downtime, and improve the overall safety and efficiency of a company's fleet.

Driver fatigue

Driver fatigue occurs when a driver becomes excessively tired or sleepy while driving. This condition can be caused by a variety of factors including lack of sleep, long working hours, stress, substance use, and medical conditions. Driver fatigue is a serious problem that can lead to accidents on the road. When a driver is fatigued, their reaction times slow down, and they are more likely to make mistakes or fall asleep at the wheel. This can be especially dangerous when driving at high speeds or on long, monotonous roads.

In fact, the Ontario Ministry of Transportation (MTO) found that driver fatigue is a factor in at least 20% of police-reported large truck collisions in Ontario¹.

To prevent driver fatigue, it is important for drivers to get enough sleep before driving, take regular breaks during long journeys, and avoid driving at times when they are likely to be tired, such as late at night or early in the morning. It is also important that drivers avoid the use of alcohol or drugs, which can impair driving ability and increase fatigue.

In Canada, the Hours of Service Regulations mandate how long commercial drivers can operate their vehicles for before they need rest². In addition, some operators are required to install electronic logging devices (ELDs) in their fleet to replace written logbooks. These devices help to reduce fatigue related losses by automatically recording driving time and odometer readings, improving the management and accuracy of a driver's hours of service record. It is important for drivers to take these regulations seriously and comply with them to ensure their own safety and the safety of others on the road.

Speeding

The consequences of speeding can be severe and include accidents, injuries, and even fatalities. In fact, Transport Canada reported that speeding/driving too fast accounted for 24.7% of all fatal roadway crashes in Canada in 2021³. Speeding was the top driver-related factor in fatal crashes involving commercial motor vehicles in 2020, according to the Federal Motor Carrier Safety Administration (FMCSA)⁴.

Speeding reduces a driver's ability to react to unexpected situations, increases the stopping distance required, and makes it more difficult to control the vehicle. The size and braking capability of a commercial truck can have a compounding effect on the consequences of speeding, leading to catastrophic accidents.

In addition to road safety concerns, speeding can result in legal consequences. In many jurisdictions, driving over the posted speed limit can result in fines, points on the driver's license, and even the suspension or revocation of driving privileges.

Therefore, it's important to always drive at a safe and appropriate speed, taking into account the road and weather conditions, traffic, and other factors that may affect your driving. If you're driving a truck or any other type of commercial vehicle, it's important to follow the rules and regulations that apply to your industry, including speed limits and other safety requirements.

Braking distance

The braking distance of a heavy vehicle such as a truck or a bus depends on several factors, including its speed, weight, brake condition, as well as the road surface. Generally, the higher the speed and weight of the vehicle, the longer the braking distance required will be.

According to FMCSA, the stopping distance for a fully loaded tractor-trailer traveling at 55 mph (89 km/hr) on a dry road is approximately 196 feet (60 meters), which includes both the perception and reaction time of the driver and the actual braking distance of the vehicle⁵. This distance can increase significantly in adverse weather conditions, such as rain, snow, or ice.

In Ontario, commercial vehicles must maintain a minimum distance of at least 60 metres (200 ft.) following distance between themselves and other vehicles when travelling on a highway at a speed over 60 km/h, except when overtaking and passing another motor vehicle⁶.

It's important for drivers of heavy vehicles to maintain a safe following distance and to allow for plenty of space to brake, especially when traveling at high speeds or in hazardous conditions. Additionally, regular maintenance and inspections of the braking system can help ensure that the vehicle is able to stop safely and efficiently.



Distracted driving

Distracted driving is another issue impacting highway safety for commercial trucks. Using mobile phones, eating and drinking, or adjusting a vehicle's navigation system can divert a driver's attention from the road, leading to accidents. In fact, 79% of drivers admit to doing something while driving that is distracting according to CAA, meaning the prevalence of this threats is incredibly alarming when it comes to road safety⁷.

According to data from Transport Canada's National Collision Database (NCDB), distracted driving contributed to an estimated 19.7% of fatal collisions in 2021, an upward trend over the previous three years⁸. Given the potential blind spots and breaking distance required for large commercial trucks, a driver who takes their eyes off the road for only seconds risks the safety of those around them.

To prevent distractions while driving, drivers must remember to pull off the road for meals and avoid the use of phones for texting or dialing phone numbers. Though many fleets have GPS systems, in cases where drivers use paper maps they should only be read while the vehicle is parked. Reading, texting, and dialing occupy a driver's eyes and hands and can have devastating consequences. Drivers must remember that if something is taking their attention from the road, the safest thing to do is pull over.

Distracted driving penalties are provincially legislated, and as an operator, it's important to know that a driver's behaviour while operating a company vehicle can impact the organization. For example, in Ontario, a driver convicted under a company's commercial vehicle operator's registration (CVOR) will also create to a record of conviction against the operator, which can lead to increased commercial insurance costs.

Poor weather conditions

Weather conditions can pose a significant safety hazard for commercial trucks navigating highways. Poor conditions, such as heavy rain, snow, strong winds, and fog can make driving more challenging for truck drivers by reducing visibility and traction, which can increase the risk of accidents.

Wet or icy roads

Trucks require more space than passenger vehicles to stop safely under normal conditions. This distance is increased when precipitation hits. Slippery roads due to ice or snow amplify the challenge, requiring longer braking distances and making it harder for trucks to maintain control. Drivers must be prepared to slow down on slick roads and need to adjust the following distance with the vehicle in front of them.

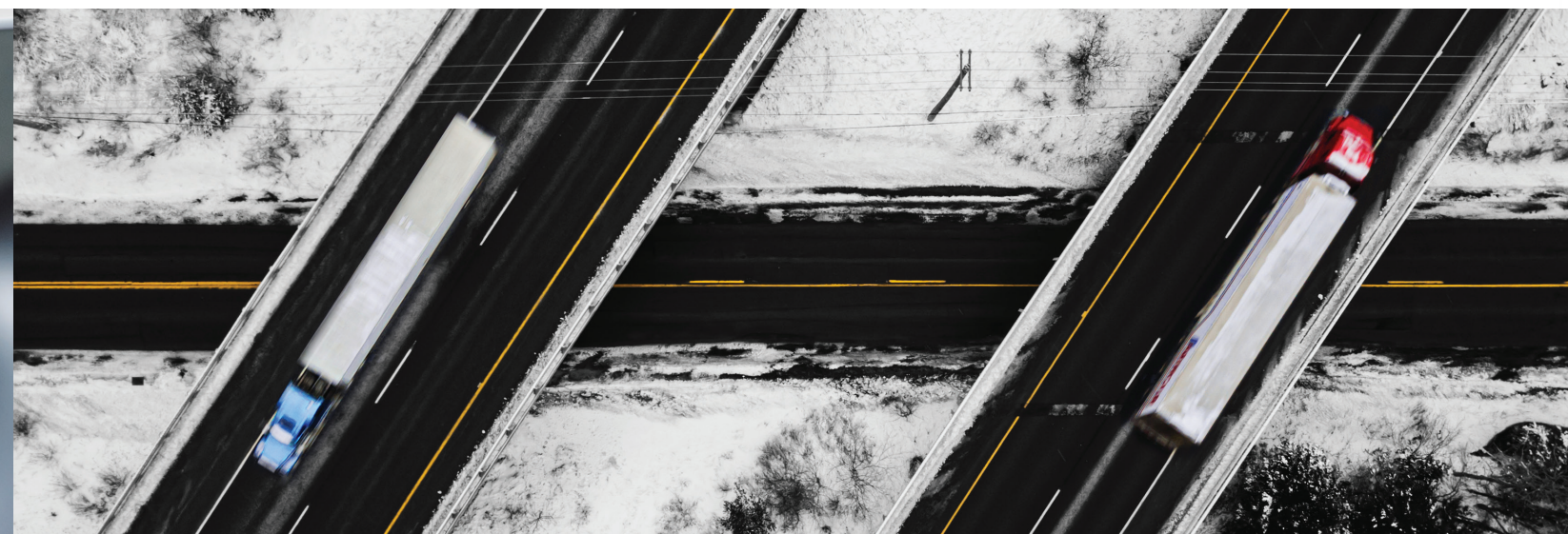
Strong winds

Strong winds can destabilize large trucks, causing them to sway or overturn. When wind speeds pick up, drivers must stay alert and prepare to steer with caution to minimize sway into other lanes. In case of flying or loose objects hitting the vehicle and causing damage, drivers should pull over at a safe location such as a designated rest stop to document and assess the damage.

Fog

Fog can greatly reduce visibility for all road users, creating dangerous driving conditions. If caught in fog, drivers should reduce speed gradually, increase following distance, and use their low-beam headlights in addition to fog lights. If the fog becomes too dense to continue travelling in, drivers should pull off the road to the shoulder or a safe parking area and turn on hazard lights to call attention to their presence.

Road conditions can change quickly due to poor weather events, which is why drivers must adjust quickly by reducing their speed, maintaining safe following distances, using their headlights, and, in extreme cases, pulling off the road. Safety is the top priority year-round, and drivers must remember that it's better to arrive late and safe than to risk accidents due to extreme weather such as snow or sleet.





Measures to Improve Truck Highway Safety

There are several strategies commercial fleet operators can employ with respect to training, equipment maintenance, and collaboration with other industry stakeholders. Though not exhaustive, we've highlighted the key strategies businesses can consider incorporating into their day-to-day operations.

Regular training

One of the most effective measures to improve truck highway safety is to provide regular ongoing training to drivers on topics such as safety and regulatory standards. Training programs should focus on safe driving practices, including the importance of taking breaks, the dangers of speeding, and the need for proper maintenance. Providing additional training is not only beneficial for drivers when faced with challenges on the road, but it may also positively impact how an insurer evaluates a company's loss control measures as this strategy demonstrates a commitment to reducing risk and operating as safely as possible. By improving its safety score, an operator may reduce its premiums and positively impact the company's bottom line.

It's recommended that commercial operators consult with their Broker or insurer regarding risk mitigation strategies, as some insurance companies offer discounts to drivers who complete defensive driving courses. Additionally, operators can work with their insurer to identify and address specific safety concerns through training programs, such as distracted driving or speeding. Many insurers have in-house experienced risk mitigation consultants who will work with Brokers and customers to develop tailored training programs to meet their ongoing needs.

For example, Echelon provides additional training and development support delivered in partnership between our in-house risk mitigation experts and our partner, CarriersEdge, the platform of choice for leading risk consultants and service providers. Doing so ensures risk mitigation is kept top of mind, allowing fleets to continue operating safely and efficiently.

Improved maintenance

It's important for trucking companies to prioritize maintenance of their vehicles. This can include regular inspections, replacing worn-out parts, and ensuring that vehicles are roadworthy before they are used on highways.

Preventative maintenance checklists are a useful tool for the purpose of conducting comprehensive fleet inspections, ensuring the safety of the vehicle, employees, and others on the road by scheduling maintenance and repairs to prevent wear and tear. Proper preventative maintenance is a vital part of a fleet safety program and should be completed in accordance with a company's maintenance policy for each vehicle within a commercial fleet operation.

Technology

Technology can play an important role in improving truck highway safety. This can include the use of telematics to monitor driver behavior and detect fatigue, as well as the use of sensors to detect maintenance issues before they become a problem.

From a safety perspective, telematics can help identify opportunities to improve several aspects of commercial trucking operations. This includes using information about driver behaviour to recommend where additional training is needed, and vehicle maintenance reporting, both of which contribute to building safer fleets. These measures not only allow long-haul trucking operators to optimize their fleet's safety and efficiency, but also help to improve their safety score. Leveraging telematics to drive improvement to an operator's fleet safety standards can improve an operator's safety score, which, in turn, can lead to lower premiums.

Strict regulations and industry collaboration

Governments and regulatory bodies should continue to enact and enforce strict regulations to ensure that trucking companies adhere to safety standards. This can include mandating regular inspections of trucks, limiting the number of hours that drivers can work, and imposing penalties for companies that violate safety standards.

Collaboration between different stakeholders, including trucking companies, drivers, associations, regulators, and other road users, is essential to improve truck highway safety. This includes sharing best practices, reporting safety issues, and working together to promote safe driving practices.

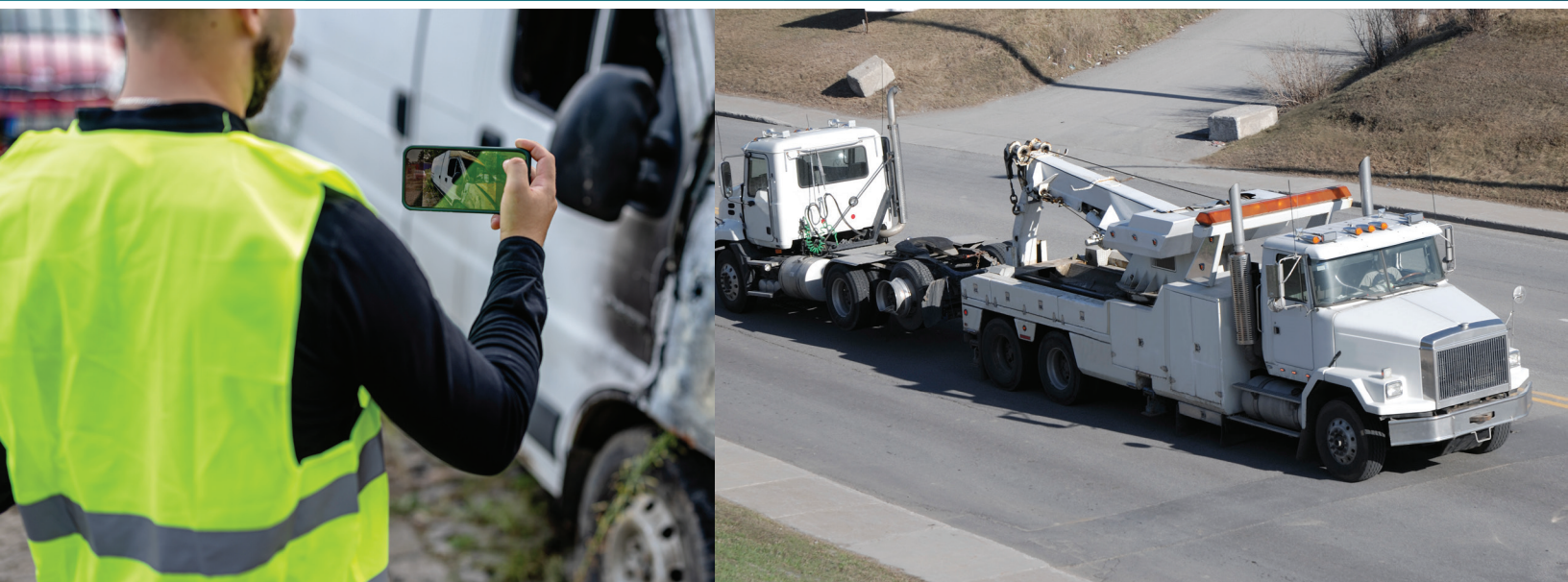
For example, the Ontario Trucking Association (OTA) is comprised of commercial trucking companies of all sizes and segments of the industry (i.e. for-hire carriers, private carriers, intermodal etc.). As one of the largest trucking associations in North America, OTA advocates for responsible trucking policies with government and industry stakeholders. Through the OTA, carriers and drivers can access education programs and training materials to ensure they're informed on the latest road safety regulations and best practices.

The role of insurers

Insurance companies can play an important role in promoting highway safety and should be considered a partner in risk mitigation. Most insurers have resources and training partnerships that can go a long way in helping trucking companies prevent loss. In addition to offering risk management services, educational programs, insurers may collaborate with commercial operators to implement safety measures such as regular vehicle maintenance and driver fatigue management programs. Ultimately, commercial vehicle insurers aims to reduce accidents, injuries, and property damage through these programs, which is why it is integral for drivers and operators to leverage their expertise.

By taking an active role in promoting highway safety within their day-to-day operations, adopting telematics technology within their fleet, and collaborating with industry associations as well as their insurer, commercial fleet operators can help to reduce the number of accidents and injuries on the highways and create a safer driving environment for everyone.





How to Respond to an Accident

Being involved in an accident of any magnitude can be unsettling for drivers, which is why it's important for operators to prepare their drivers with a simple step-by-step accident response plan. Doing so ensures drivers are prepared to capture important information from the incident, including injuries or physical damage.

No matter how minor an accident is, drivers should stop their vehicle if safe to do so or pull over to a safe area. Hazard lights as well as warning triangles should be used around the vehicle to alert others on the road. In an emergency, the driver must call 911 to report the incident, and, if other vehicles are involved, check for injuries. When possible, the driver should collect information from other drivers involved, and contact their operator and/or insurance to begin the claims process.

Utilizing an accident reporting form

Accidents have little to no warning, which is why trucks should always be stocked with the appropriate documents, including an emergency contact list and an accident reporting form (see Appendix A). If possible, drivers should utilize an accident report form to collect key information such as contact information for those involved in the incident, including their insurance policy information, and any potential witnesses. The make, model, and license/VIN numbers of involved vehicles should be recorded, as well as information about injuries or property damage. Some accident report forms may have space for a driver to illustrate in more detail the circumstances of the incident, including direction of travel and cross streets. In addition to road, weather, and lighting conditions, information about responding police officers, emergency services, and tow trucks should also be recorded.

If available, dash cam video and photos taken of the incident should be retained on file with the completed accident report form to assist in defence against potential claims.

Conclusion

Highway safety is a complex issue that requires a multifaceted approach. Despite their vital economic role, commercial trucks pose significant risks to highway safety due to their size and weight which is why it is important to prioritize highway safety to ensure that all road users, including truck drivers, passengers, and other motorists, arrive at their destinations safely.

We continue to see advances in trucking technology such as electronic stability control, collision warning systems, and improved brake systems, which have helped to mitigate some of the risks associated with commercial trucks. Additionally, regulations on driver hours and truck maintenance as well as ongoing training programs have helped to reduce the likelihood of accidents caused by driver fatigue or equipment failure.

However, room remains for continued improvement to enhance highway safety. This includes more widespread adoption of technology such as mandatory automatic emergency braking and lane departure warning systems, as well as continued investments in infrastructure improvements to support safe and efficient truck transportation. Collaboration between different stakeholders is also essential to create a culture of safety and promote safe driving practices. Ultimately, a safer trucking industry will benefit all road users and help prevent accidents on highways.

References

¹Driver fatigue is a top ranked risk in Ontario's trucking industry

www.ihsa.ca/Road-Safety-Solutions/Driver-fatigue-is-a-top-ranked-risk-in-Ontario.aspx

²Commercial Vehicle Drivers Hours of Service Regulations

www.laws-lois.justice.gc.ca/eng/regulations/SOR-2005-313/page-1.html#h-719527

³Canadian Motor Vehicle Traffic Collision Statistics: 2021

www.tc.canada.ca/en/road-transportation/statistics-data/canadian-motor-vehicle-traffic-collision-statistics-2021

⁴Large Truck and Bus Crash Facts 2020

www.fmcsa.dot.gov/safety/data-and-statistics/large-truck-and-bus-crash-facts-2020#A4

⁵CMV Driving Tips - Following Too Closely

www.fmcsa.dot.gov/safety/driver-safety/cm-v-driving-tips-following-too-closely

⁶Driver conduct, Ministry of Transportation Truck Handbook

www.ontario.ca/document/official-ministry-transportation-mto-truck-handbook/driver-conduct

⁷Distracted Driving

www.caa.ca/driving-safely/distracted-driving/

⁸Canadian Motor Vehicle Traffic Collision Statistics: 2021

www.tc.canada.ca/en/road-transportation/statistics-data/canadian-motor-vehicle-traffic-collision-statistics-2021



Appendix A: Automobile Accident Report Form

RiskIntel.
Automobile Accident Report

It is critical that incidents involving occupants, pedestrians, and other motorists be documented in an Automobile Accident Report. Doing so allows your business to investigate the cause of the incident, help identify the parties involved in the incident, and take corrective action to prevent such an incident from reoccurring. Notify your insurer of a possible claim and ensure you report the name and position of the person to whom you reported the claim. In the event of an injury to another party, alcohol and drug testing should be completed immediately.

This report form, hours of service, dash cam video, and photos taken of the incident should be retained on file to assist in defence against potential claims. A hard copy of the completed accident report form should be organized and kept on file. Where possible, an accident report form should also be stored in an electronic database that is backed up at regular intervals. Completing this report cannot in any way be construed as an admission of liability.

Administrative Details					
Business name					
Name of Driver					
Date of report					
Street address	City	Province	Postal code		
Report completed by	Title				
Email address	Phone number				

Key insurance personnel to contact in the event of an accident	
Name	Title (i.e. safety officer)
Insurance Company	Phone number

Incident Information					
Please note, this report captures information on up to two involved vehicles. Please ensure driver, vehicle, and insurance information is recorded for all additional involved vehicles and attached to this document.					
Date of incident	Time of incident	Hours of service	No. vehicles involved		
Location					
Province/State	Road/Street/Highway	Closest cross street/Mileage marker			
Property damage (other than to vehicles)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Injured (even minor)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Number of Injured Parties	Ambulance attended
Incident description					

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Incident Sketch	
Please illustrate details of the incident to support existing dashcam footage and photos taken on your camera or cellphone. If any street is more than two-lane or is one way only, please indicate.	
<p>Show cars</p> <p>You <input type="checkbox"/> A</p> <p>Other <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Z</p>	<p>Please include:</p> <ul style="list-style-type: none"> • Position of vehicle at time of collision • Road sign(s) • Intersection(s) • Entrance(s) and/or exit(s) • Curve(s) • Uphill / Downhill • Number of vehicles • Label each street • Indicate directions
Witness one information (if applicable)	Witness two information (if applicable)
Name	Name
Address	Address
Phone number	Phone number
Is witness a passenger of vehicle one or two?	Is witness a passenger of vehicle one or two?
<input type="checkbox"/> No	<input type="checkbox"/> No
Additional details	Additional details
Circumstances	
Road Conditions	
Lighting	
Additional details (i.e., speed, direction, other's speed, other's direction)	
Injuries (if applicable)	
Position in the vehicle	Care received
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> <input type="checkbox"/>	Departure ambulance
	<input type="checkbox"/> Yes <input type="checkbox"/> No
Type of injury (i.e., bleeding, unconscious, broken members)	

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Click to download a fillable
Automobile Accident Report Form
or visit echeloninsurance.ca/riskintel

echeloninsurance.ca

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