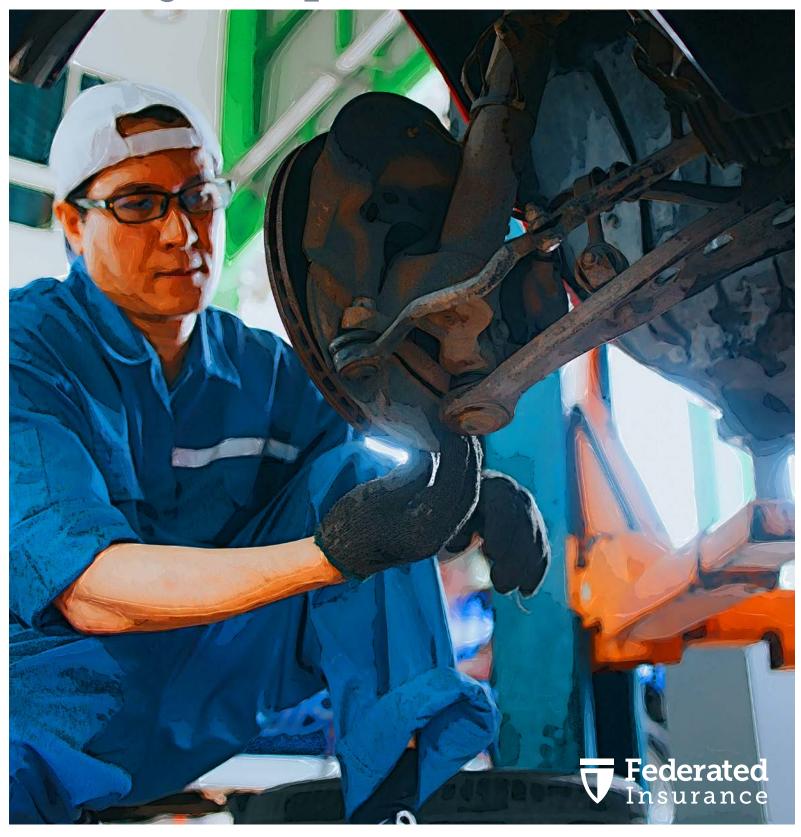
# Risk Mitigation for Auto Repair and Body Shops





#### Introduction

From burns and chemical exposure to mechanical injuries, workers in the auto repair and body shop industry are exposed to a number of hazards that can cause bodily harm and property damage. Finding ways to mitigate these risks can help to avoid or minimize incidents—keeping workers safe and business humming.

One of the most significant hazards is fire. Auto repair shops face fire risks from hot work, flammable liquids, and car batteries. For body shops, spray paint booths present a number of fire-related risks. In both cases, they tend to have oil-soaked rags, flammable liquids, gas cylinders, and other combustible materials in their work areas, which could spontaneously combust. They're also prone to slips and falls, burglary and theft, as well as cybercrime.

Many preventative measures come down to good housekeeping: making sure paint isn't caked onto spray paint booth walls, storing oily rags in self-closing containers, and using a lockbox to store customers' keys. Training employees on safety policies and procedures—and enforcing those policies and procedures—represents an easy, low-cost way to help keep your people, premises, and business safe.



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The most common hazard for auto repair and body shops is fire, which is often related to the use of flammable liquids. "If an auto body shop has a spray paint booth, they're probably using water-based paints. While water-based paints are not flammable per se, once the paint has been sprayed on the vehicle, it's now flammable," says Fred Muldowney-Brooks, Vice President of Risk Services at Federated Insurance. There are additional solvents used for cleaning the surface of the vehicle before the painting takes place, as well as primers and top coats, which are all highly flammable.

There's also typically a buildup of oils, fuels, or other hydraulic fluids on the engine block or tire area, which are flammable. "If you're cutting, torching, grinding, or doing work that generates sparks and you've got combustible or flammable materials around—and there's lots of oxygen—you've got the three components for fire," he says.

Having portable fire extinguishers on hand is an essential component of any auto repair or body shop. After all, a fire can burn out of control in just 30 seconds, so choosing the right classification, size, and location is critical.

#### Portable Fire Extinguishers

Fire extinguishers have three main classifications that indicate the type of fire they will extinguish: A for ordinary combustibles; B for flammable liquids; and C for live electrical equipment. Some extinguishers are marked with multiple ratings, such as BC and ABC, which are capable of putting out more than one class of fire. Fire extinguishers should be selected based on the class of fire you need to extinguish, the potential size of the fire, and the maximum floor area per extinguisher.

A qualified fire extinguisher service contractor should be consulted regarding selection, placement, and servicing of your fire extinguishers. Documented monthly visual inspections should be conducted by employees to ensure that each extinguisher is in its designated place and that there's no obvious physical damage or condition to prevent its operation. Fire extinguishers should also be inspected and serviced annually by the contractor, with a tag attached showing the contractor's name and service date. In addition, employees should receive regular training on fire extinguisher use.

"While water-based paints are not flammable per se, once the paint has been sprayed on the vehicle, it's now flammable."

Fred Muldowney-Brooks,
Vice President of Risk Services at Federated Insurance

#### Spray Paint Booths

The leading causes of fire in spray paint booths include the use of spark-producing equipment such as cutting, welding, and grinding near the spray area, as well as friction—caused in most cases by overheated bearings on the exhaust fan shaft or by rubbing of exhaust fan blades against overspray deposits on walls of the exhaust duct. Other causes include arcing electrical equipment, spontaneous combustion of paint residue, and discharge of static electricity.

"Body shops need to ensure they're spraying in a booth because they can help control fire hazards. Most have a fully enclosed booth, so they can drive the vehicle in. There are also open-faced booths and they still have some control with a proper fire suppression system," says Frank Cina, Manager of Risk Services at Federated Insurance.

The <u>National Fire Protection Association</u> (NFPA) Standard 33 outlines all requirements for a properly installed spray paint booth, including the following guidelines:

All spray paint booths should be equipped with an approved fire suppression system (either a sprinkler system or dry chemical system). All components should be made of non-combustible material and the interior surface should be smooth to help prevent buildup of paint residue and help ensure proper ventilation and cleanup. All parts—including filters—should be removable to ensure that proper cleaning can take place.

Ducts and fasteners should be constructed of steel and properly supported, with 0.45 metres of clearance between ducts and unprotected combustible material, according to the NFPA Standard 91. The ducts should be exhausted directly to the outside, with the discharge point of the exhaust ducts at least 1.8 metres from an exterior wall or roof.

"With some spray booths, there's an interlock so a person can't use the spray gun without the ventilation being on. Depending on the risk, it's advisable. Sometimes they'll monitor the airflow through the filters—we would recommend that since it saves them some guesswork, especially for a downdraft system where you may not see the filters," says Cina.

The primary objective of a properly designed spray paint booth is to help prevent fire and explosion by containing flammable vapours, removing them effectively, and controlling ignition sources.

**Containing flammable vapours:** To help contain vapours properly, consider the following:

- The quantity of flammable and combustible liquids in the spray paint booth area should not exceed a oneday supply.
- The process area should not have more than three approved flammable liquid storage cabinets.
- Mixing of flammable or combustible liquids should be done only in a mixing room or spray area.

Removing flammable vapours: After containing flammable vapours, proper removal is essential in helping to prevent fires. The mechanical ventilation of the spray paint booth should be capable of removing vapours and mists to a safe location, as well as confining and controlling combustible residues, dusts, and deposits. The ventilation system should be able to limit the vapour and mist concentration to below 25 per cent of the Lower Flammable Limit—the minimum concentration that is ignitable.

Controlling ignition sources: Electrical wiring and equipment are the main ignition sources in spray paint booths. Controlling these items is a significant step towards eliminating ignition sources and helping to prevent fires. Electrical wiring and equipment must be suitable for Class I, Division 1 or Class II, Division 1 locations (whichever is applicable). Light fixtures, as with all electrical wiring and equipment, must also meet the same requirements for Class and Division. Electrical interlocks or grounding cables should be used to prevent electrostatic ignition.

Complying with all standards to contain and remove vapours as well as controlling ignition sources can help to avoid fires and explosions. Using a manufactured spray paint booth and following all safety procedures and proper maintenance schedules can help to ensure the safety of your business.

#### Spray Paint Booth Maintenance

Fires in spray paint operation areas can develop very quickly, have high heat release rates, and produce large volumes of toxic smoke. Proper cleaning should be scheduled on a regular basis to ensure that buildup of overspray residue doesn't occur. The following components of the booth require regular maintenance, as per the National Fire Protection Association (NFPA) Fire Protection Handbook:

- Walls, ceiling, and floor: A routine maintenance program should account for the periodic removal of overspray residue from the walls, ceiling, and floor of the booth.
- Filters: Filters should be replaced as often as recommended by the manufacturer. Contaminated filters should be removed from the building as soon as they're replaced or kept immersed in water until disposal, as they present a spontaneous combustion hazard.
- Exhaust ducts: Ductwork requires routine cleaning to keep it clear
  of residue buildup, which is a spontaneous combustion hazard.
  Any accumulation inside the ductwork should be removed using
  non-sparking tools, as vapour pockets may be ignited.
- **Light covers:** Ensure that all light covers are in place and any cracked covers are replaced immediately.
- **Fire protection:** Ensure the automatic extinguishing system is inspected on a semi-annual basis by a recognized servicing contractor.
- General housekeeping: The area should be kept clean of debris, and rags should be disposed of in a portable waste can with a self-closing cover located outside of the spray paint booth.



# Spray Paint Booth Fire Suppression Systems

Spray paint booths, including the exhaust system, mixing room, and other areas, are subject to substantial overspray and should be protected by an approved automatic fire suppression system. In the event that a fire occurs, the fire suppression system—either an automatic sprinkler system or alternate fire protection system—will help extinguish the fire and prevent extensive building damage.

"The most expensive component of a fire prevention strategy is suppression, since it must be done by a qualified fire suppression contractor. In some cases, with sprinkler work, it must be routed a certain way—a plumber may not know the proper way to do it because it's an extra hazard occupancy," says Cina.

Automatic sprinkler system: The sprinkler system should be wet pipe, deluge, or pre-action, to help ensure that water can douse a fire in the shortest possible amount of time. The water supply must be sufficient for all sprinklers likely to open during a fire incident, controlled by a separate control

valve. Help protect sprinkler heads from overspray residue by covering them with cellophane or thin paper bags.

Alternate fire protection systems: Alternate systems should be capable of discharging their contents into the entire protected area simultaneously. Alternates include dry chemical extinguishing systems, carbon dioxide systems, gaseous agent extinguishing systems, or foam water sprinkler systems.

For all types of systems, activation of the fire suppression system should:

- Activate a local alarm.
- Shut down the coating material delivery system.
- Terminate all spray application operations.
- Stop any conveyors into and out of the spray area.

Air make-up and spray booth exhaust systems should not be interlocked with the fire alarm system and must remain functional during an alarm. The fire protection system should also be equipped with a manual and emergency system shutdown station.

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Frank Cina, Manager of Risk Services at Federated Insurance

# Safe Handling of Rags and Wiping Cloths

Rags, wiping cloths, clothing, or other absorbent materials soaked with oil, solvent, thinners, linseed oil, or paint require special handling to help reduce the risk of fire. When materials are soaked with organic substances such as oil, spontaneous heating can occur through oxidation. When this happens, the temperature will continue to increase until spontaneous combustion occurs and the materials burst into flames.

"We've seen quite a few fires involving paints or solvents that are on rags," says Muldowney-Brooks.

Controlling spontaneous combustion: Storing oilsoaked rags in specially designed metal cans with self-closing lids can help to control the danger of spontaneous combustion and safely contain a self-ignited fire, though they need to be elevated so that heat from a fire within the container doesn't ignite a wooden floor or other combustibles under the container. The risk of spontaneous combustion is virtually eliminated by limiting the oxygen in the container. "A fire requires three items: a flammable substance, a source of ignition, and oxygen. It's a fire triangle—eliminate one element of the fire triangle, like oxygen, and you don't have a fire," says Muldowney-Brooks.

Prevention through good housekeeping: Oil-soaked combustible materials could also be ignited by sources such as welding sparks, cutting torch slag, grinding, or discarded cigarettes. Oily waste containers—which bear the label of a recognized testing laboratory such as Underwriters Laboratories or Factory Mutual—should be placed in key locations and emptied daily.

Containing fires in waste containers: Waste containers outside the service garage or auto body shop contain combustible materials, such as spray paint booth wallpaper that captures paint residue and is regularly replaced. Those materials could spontaneously combust and start a fire. If waste containers are placed against a wall, the fire could spread to the building. Review this area and, if applicable, move waste containers away from exterior rear walls.





## Gasoline Transferring

Transferring and handling gasoline is one of the most dangerous activities in an auto repair shop, due to its flashpoint—the lowest temperature at which flammable vapours are produced in ignitable concentrations by a liquid. For gasoline, the flashpoint is -40°C. An open pail of gasoline at room temperature releases flammable vapours into the atmosphere, filling the area above and around the pail with invisible, explosive vapours. A spark, static electricity, or lighting up a cigarette can easily ignite the vapours.

If the process of transferring gasoline isn't completed properly, it could result in a serious fire, as well as burn injuries and property destruction. Vapour containment is key: If there are no flammable vapours in the atmosphere, a fire cannot occur.

To transfer gasoline safely, use a gas caddy—a large container with added features to safely siphon or dispense gasoline. Safety features include a two-way hand pump, flame arrestors, and a bonding cable to eliminate static electricity. Any shop involved in gasoline fuel system service work, including replacing fuel pumps or changing gasoline tanks, must have a gas caddy or enclosed pumping equipment, according to Sentence 4.1.8.4 "Fuel Tanks of Vehicles" of the National Fire Code of Canada.

#### **Recommendations:**

- Ensure you have a gas caddy if you're involved in any gasoline transferring.
- Establish and review proper gasoline transferring procedures with all staff.
- Ensure all new employees receive immediate training on gasoline transferring.

# Storage of Flammable Compressed Gas Cylinders

Any gas under pressure can explode if handled improperly—and cylinders can become missiles if a sudden release of gas occurs. Like a torpedo, an exploding compressed gas cylinder will destroy anything in its path—smashing easily through brick walls, flying distances half a mile or more, at speeds faster than a race car. Several precautions should be taken to prevent loss of lives or property.

#### Storage Tips:

- Compressed gas cylinders must be secured with chains in an upright manner while in storage or on a cart.
- Separate compressed flammable gas cylinders from oxygen bottles by an open space of about 6 metres or with a barrier. Consider a barrier that has a minimum fire resistance rating of half an hour and is at least 1.5 metres high, interrupting the line of sight.
- Spare cylinders should be stored outside the building in a steel cage, on a non-combustible platform protected from the weather. This cage should be locked at all times.
- A non-smoking sign should be posted near the storage area of compressed gas cylinders—and must be enforced.
- Where a cylinder is designed to accept a valve protection cap, caps should be in place except when the cylinder is in use or connected for use.
- When moving a cylinder, the valve must be closed, the regulator removed, and the valve cap installed. Never use the valve cap to lift a cylinder.
- Do not use a compressed gas cylinder if it's damaged or the testing date is expired.

#### **Battery Safety**

While batteries are commonly found in auto repair or body shops, they can also cause a fire, explosion, or bodily injury. For example, sulphuric acid released from a battery can burn and scar the skin, while toxic fumes can cause lung damage and blindness. Damaged batteries can cause harm to the property and environment if corrosive liquid leaks or seeps into the ground.

The use of Personal Protective Equipment (PPE) is mandatory when working with batteries, as a component of your health and safety program. Employees should also be trained on standard operating procedures, including battery installation, removal, charging, maintenance, storage, handling, and transporting.

Installing or removing batteries: Shut down all related electrical loads prior to performing battery maintenance.

Always disconnect the negative (black) terminal connector before connecting or removing the positive (red) terminal connector. This will prevent an electrical arc from occurring should a wrench touch a grounded surface.





Charging batteries: Charging batteries produces highly flammable gases, such as hydrogen gas, which—in the right concentration—could explode when released into the air. Batteries should be charged away from ignition sources, such as hot work, open flames, or other electrical equipment. Short circuits, overcharging, and battery/charger malfunctions can also produce heat and cause a fire.

Before connecting the charger connectors to the battery, make sure the charging circuit isn't energized. Follow the charger's operating instructions and make sure the connections are the correct polarity: positive (red) to positive (red) and negative (black) to negative (black). At the end of the day, unplug the charger from the battery and power supply. If the battery isn't disconnected from the charger, it could result in a reverse flow of current, which could overheat the charger and cause a fire.

Maintenance: Always ventilate the battery compartment prior to performing any maintenance, repair, or tightening of terminal connections. Inspect and maintain batteries as part of your Preventative Maintenance (PM) program and provide spill containment and absorbent materials based on the battery manufacturers' instructions.

Batteries should be kept clean and dustfree to protect against a short circuit, which occurs when an electrical charge flows along an unintended path, thereby bypassing the load. The result is an excessive amount of electrical current in the form of heat or sparks. Spilled electrolyte mixed with dust on a battery can create a low-resistance electrical path, which can cause a short-circuit in the battery. Disconnecting the power supply: A good risk management practice is to disconnect any batteries from equipment stored inside the shop. Consider installing a battery cutoff switch to quickly and easily disconnect a battery's power supply. After installing a battery cut-off switch on the negative post, the battery cable is then attached to the cut-off switch. A mechanism on the cut-off switch tightens and loosens it, which engages or disconnects the power supply from the battery.

Battery bulk storage: Help prevent battery damage and protect the terminals from short-circuiting by storing and packaging the batteries properly. Store batteries indoors or in an enclosed well-ventilated area, such as a sea-can container. Ensure the area is clean, cool, and dry; areas with high temperatures can result in accelerated rates of self-discharge and deterioration of battery performance and life. Also ensure batteries are elevated from the ground and stored away from combustibles.

When stacking batteries, protect the terminals from short-circuiting with non-reactive materials, such as cardboard insulator pads between layers of batteries. As a best practice, protect bulk storage of batteries with an automatic sprinkler system or pre-engineered extinguishing system and provide a spill containment pallet for battery storage areas. Dispose of used batteries in accordance with environmental regulations.

Battery transportation: Use a licensed thirdparty transportation carrier to transport new or used batteries in accordance with the <u>Transportation of Dangerous</u> <u>Goods (TDG) Act and Regulations.</u> Used battery disposal should involve an accredited recycler. Be sure to label and securely package the batteries to prevent movement, vibration, puncturing, crushing, and shorting.

#### Electrical Source Vehicle Fires

Vehicles and equipment contain various electrical components, such as batteries, cables, wiring, power generators, and electronic control units. But charging these electrical components can build up heat, especially if damaged or if safety components fail. This heat buildup can cause components to melt and eventually ignite combustible material or even cause explosions—and, in a matter of minutes, your service centre or repair shop could be engulfed in flames.

"We're seeing issues in service garages with vehicles parked in the shop overnight. Some shops will leave a vehicle inside overnight because they want to work on it first thing in the morning, particularly in the middle of winter. Or they brought it in by tow truck and they don't want to move it," says Muldowney-Brooks.

"Some of these vehicles are causing fires where an ignition has occurred," he says. "We recommend that they don't store the vehicle inside or, at a minimum, they disconnect the battery. In other words, remove the energy source that might be causing any sparks in the electrical wires."

A good risk management practice involves disconnecting batteries from vehicles as soon as they're brought into the shop, particularly if they're being serviced for electrical issues. A notification system should be established to indicate if a vehicle has been made safe by disconnecting the battery, such as a sign or even a red tie. Most damaged vehicles towed in from accident sites should already have the battery disconnected, but it's your responsibility to ensure this has been done properly.

For personal equipment, such as trucks or other motorized equipment, consider installing battery cut-off switches to prevent electrical fires. Cut-off switches are also an effective loss prevention tool to help deter theft of vehicles and equipment—in fact, some newer equipment comes with a factory-installed cutoff switch.

Before performing maintenance, repairs, or tightening of terminal connections, ventilate the battery compartment as batteries vent hydrogen gas, which can accumulate around the battery compartment. Ensure there are no possible malfunctions or damage to the electrical system before reconnecting the battery and storing the vehicle outside. Keep in mind that specialized batteries, hybrid vehicles, or fully electric vehicles require specialized training and equipment with significantly different safety practices.

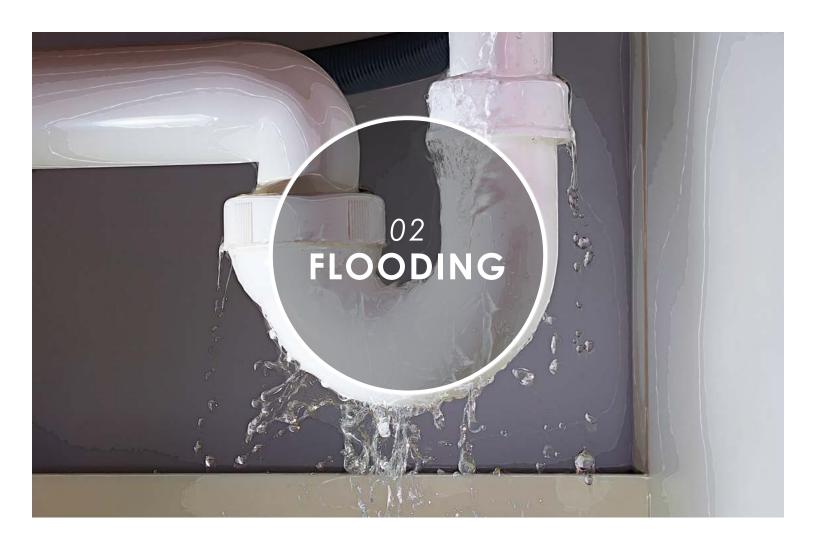
#### **Electrical Fires in Bathrooms**

There has also been an increase in electrical fires involving bathroom fans and switches in auto repair and body shops. The cause is two-fold: environmental and human error. These occupancies tend to be dirty, and have dust, lint, and debris in the air that causes fans and motors to quickly accumulate a layer of grime.

Human error also plays a role; bathroom fans are sometimes left on all day and all night. They can become overheated when left on too long, or when clogged by dust and debris, causing an electrical fire.

Housekeeping should be increased—not just in the bathroom, but throughout the entire facility. Fans should also be on a timer to prevent them from being left on too long, and switches should be maintained and kept in good condition.

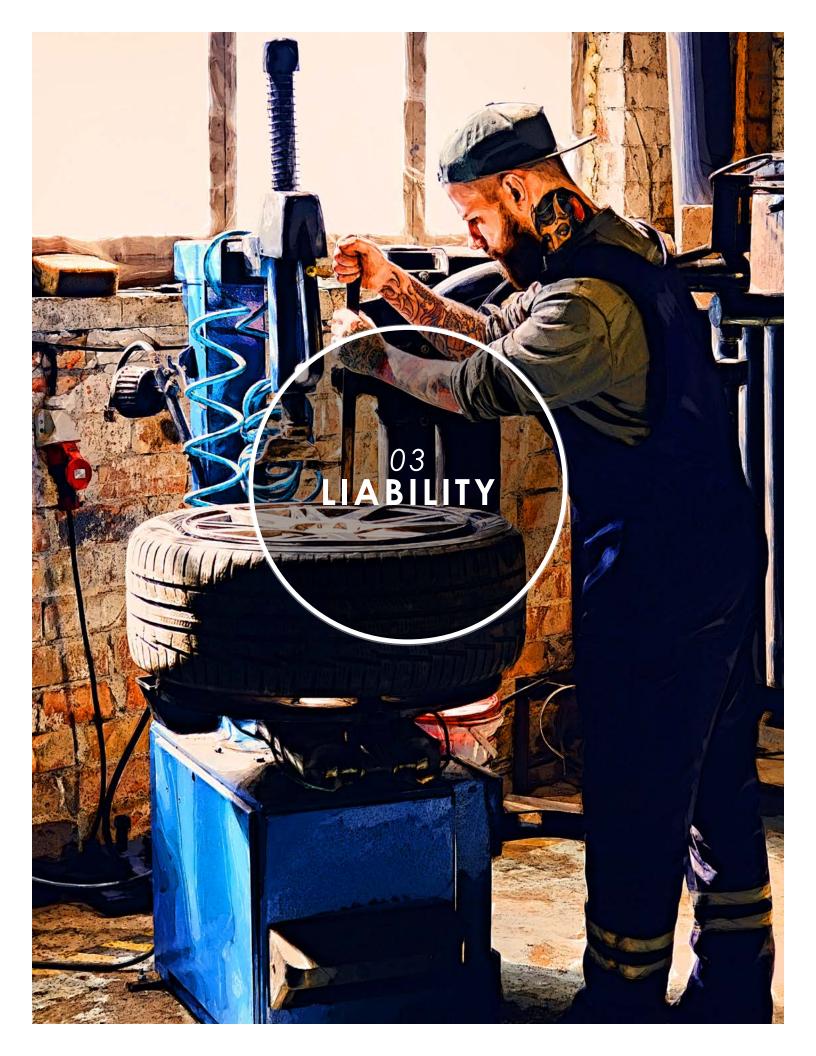




Understanding the risk of flooding should be part of your business continuity plan. If you're in a high-risk area for river or coastal flooding, or an area where there's been an increase in surface/sewer flooding, it's important to have a plan in place. Even heavy rainfall or rapidly melting snow can have a major impact on your business. Local authorities and regional flood forecasting centres across Canada offer information on flood threats and warnings.

As part of your business continuity plan, consider the following:

- Install backflow prevention check valves to stop floodwater from entering at vulnerable points where utility and sewer lines enter the facility.
- Install permanent sump pumps with solar and backup power.
- Adequately seal walls to prevent or reduce seepage and, if necessary, reinforce walls to resist water pressure.
- Have backup systems available for use during emergencies, such as portable pumps to remove flood water, alternate power sources such as generators or gasoline-powered pumps, and battery-powered emergency lighting, located above the high-water mark.



Workers in the auto body service and repair industry face more hazards than many other lines of work. Slip and fall incidents represent 41 per cent of preventable injuries in Canada with a total cost of more than \$3 billion each year, according to Statistics Canada. Workers should be well trained on safety policies and procedures, have access to the necessary PPE, and work in a clean environment free of clutter to avoid accidents.

Mechanics and technicians are susceptible to a range of injuries: strains and sprains from performing repetitive motions, cuts and lacerations from operating power tools and machinery, and eye injuries and chemical burns from handling hazardous liquids and chemicals. Auto repair and body shops also tend to use a lot of greasy liquids and oils in their work, often resulting in a slick, slippery floor and increasing the risk of slips and falls—so ensure workers immediately clean up any spills and wear close-toed, anti-skid shoes.

All hazardous liquids and chemicals should be properly labelled, stored, and include handling information so workers know what to do if they've been exposed. They should also wear safety goggles and gloves when handling hazardous materials. If they're operating power tools, they're at risk of losing a digit or even a limb. Any workers using power tools must be properly trained, wear protective gear, and keep guards in place. Power tools should be properly stored when not in use and inspected for damage on a regular basis.

The Canadian Centre for Occupational Health and Safety (CCOHS) provides guidance on how to design an effective PPE program, as well as precautions for all products used (such as isocyanates in spray painting). Ensure that PPE fits properly and isn't torn or defective. The CCOHS also recommends stopping potentially dangerous work if unauthorized people, such as customers, are in the work area.

If an incident is reported, an Accident Report Form (from your provincial health and safety organization) should be available on site and completed by the claimant and/or any available witnesses outlining the details of the incident. Taking dated photos of the conditions at the scene of the incident, as well as the footwear and/or PPE the person was wearing on that day, are also important pieces of information to collect.

#### Other Liability Exposures

While those in the auto repair and body shop industry are susceptible to injuries, there are also a number of other liability exposures to consider. The workmanship of services and repairs, and the safety of third-party visitors to the premises need to be considered.



#### Workmanship of service or repairs:

- Use only certified automotive service technicians (AST) or apprentices.
- Apprentices should not be allowed to perform repairs unless supervised by a fully certified AST.
- Customer agreements, such as standard quote or work order forms, should be reviewed by legal counsel.
- Work performed should be properly documented, signed, and filed.
- Ensure the shop has undergone recent and ongoing employee technical training and prominently display licences and certificates.
- If work is declined by a customer, ask
  the customer to sign a waiver that
  acknowledges they are refusing the work.
   Waivers should be reviewed by legal counsel.
- Similarly, if work is being requested that could compromise the safety of the vehicle or its safety systems (like the removal of a tire pressure monitoring system), the work should be refused.

#### Tire and vehicle repair:

- When inspecting a flat or used tire, check for any damage to the structure of the tire.
- Do a visual and physical inspection of the inside and outside of the tire to ensure there's no structural damage.
- Proper procedures, techniques, and tools are required to ensure the rubber isn't damaged when it's put on or taken off the rim.
- An inspection of the lug nuts and bolts, wheel hub assembly, and bolt holes is necessary to ensure they're in good condition.
- Proper cleaning of the lug nuts and bolts, wheel, and wheel hub assembly must be done before installation.
- If a wheel has been removed from a vehicle, customers should be informed and asked to come back for a torque check.

#### Slips and falls on premises:

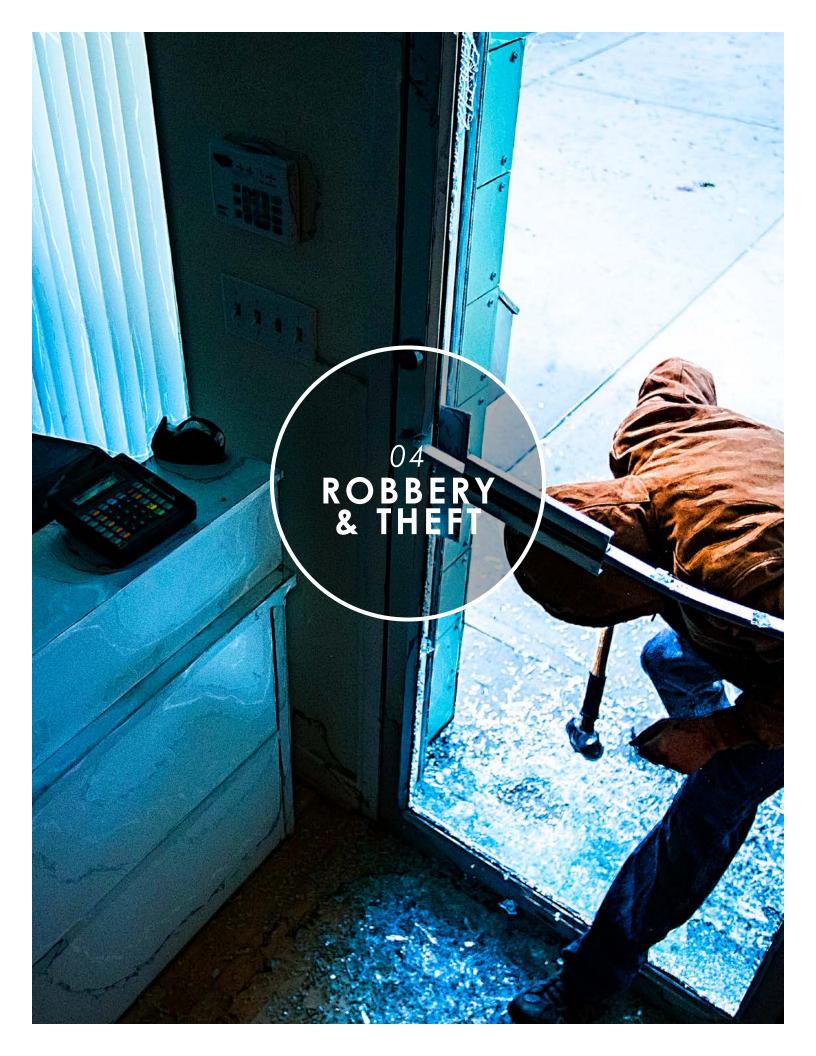
When customers, vendors, or any other third parties are on the property, the shop is responsible for their safety on the lot and in the building. For example, if a customer were to fall and sustain an injury while visiting an auto dealer, the auto dealer could be held legally responsible. Having proper policies, procedures, and documentation in place can help to mitigate these risks.

- For in-house snow removal, ensure that proper logs are maintained.
- For third-party snow removal, keep certificates of liability on file.
- Keep the premises level and free of potholes.
- All interior surfaces should be regularly cleaned of oily and slippery substances.
- Spill absorption kits should be on hand for oil or other slick spills.
- When a kit is used, an incident report should be filed.

#### Hazards in repair shop area:

- A formalized policy should state the shop is a "Staff Only" area.
- Ensure staff have read and signed off on the policy, with copies on file.
- Work areas should be clearly marked and secured from unauthorized access.
- Non-employees (such as equipment service technicians) should be escorted within work areas by authorized personnel.
- Post "Do Not Enter" signs on restricted areas.

In order to limit injuries, personal protection equipment should be required for all employees and provided to visitors where necessary. There should also be visitor sign-in and sign-out logs where appropriate, and visitors should be restricted to certain areas of the premises or accompanied by an employee. If a slip, trip, or fall does occur on the premises, a report needs to be filled out and the reason for the incident needs to be corrected as quickly as possible.



Protection against intrusion, robbery, and theft is a concern of every business owner. Any business that has valuable items or cash on hand is susceptible, particularly if they're located in a remote area with minimal walk-up traffic and easy access.

"The biggest threat for auto repair and body shops is loss of tools or equipment, so they want to have security cameras in place—that's not necessarily going to stop a theft from happening, but it's going to tell you when and where and maybe who stole it," says Derek Browne, Chief Information Security Officer at Federated Insurance.

The following tips can help lower your chance of being targeted for theft:

Cash Control: Keep minimum cash on hand and post highly visible signs that indicate this. Make frequent bank deposits to keep cash amounts low, and vary the time and route you take to the bank to help make it more difficult for thieves to track you.

Access Control: Well-lit premises, both inside and outside, may discourage robbers. Keep exterior lighting at full power at night. The interior of your premises should be kept visible to passersby, and your employees should be allowed unfettered vision of the exterior.

Building Security: Security systems can be an effective deterrent for robbers, including the installation of silent holdup alarms and video systems. Side and rear doors should always be kept closed and secured where appropriate. Use surveillance and motion-sensor lighting wherever vehicles are stored.

The "Two Employees" Approach: The presence of two employees at all times during the workday can be a major deterrent to robbers. The sales counter should never be left without supervision. Exterior tasks, such as cleaning the parking lot or throwing out the trash, should be avoided at night.

# Don't leave tools or equipment on site:

Place identifying marks on tools (ID numbers and company logos) and put them away in a secure location after use, such as on-site lock boxes with hardened locks.

**Keep track of vehicles:** Never leave a vehicle unattended while the engine is running. For company vehicles, install a vehicle tracking system and etch VIN or ID numbers into windows with microdot technology.

# "The biggest threat for auto repair and body shops is loss of tools or equipment."

Derek Browne,

Chief Information Security Officer at Federated Insurance



# Burglar Alarm Systems

A burglar alarm system can help to detect a break-in, but won't necessarily prevent one. These systems should be installed with proper physical security reinforcement such as deadbolt locks, adequate lighting, secure basement windows, and strong exterior doors. Burglar alarm systems can be either monitored or unmonitored. A monitored system notifies a third party when the alarm is tripped, who in turn notifies authorities. An unmonitored alarm only sounds on the premises and relies on neighbours or passersby to call the police.

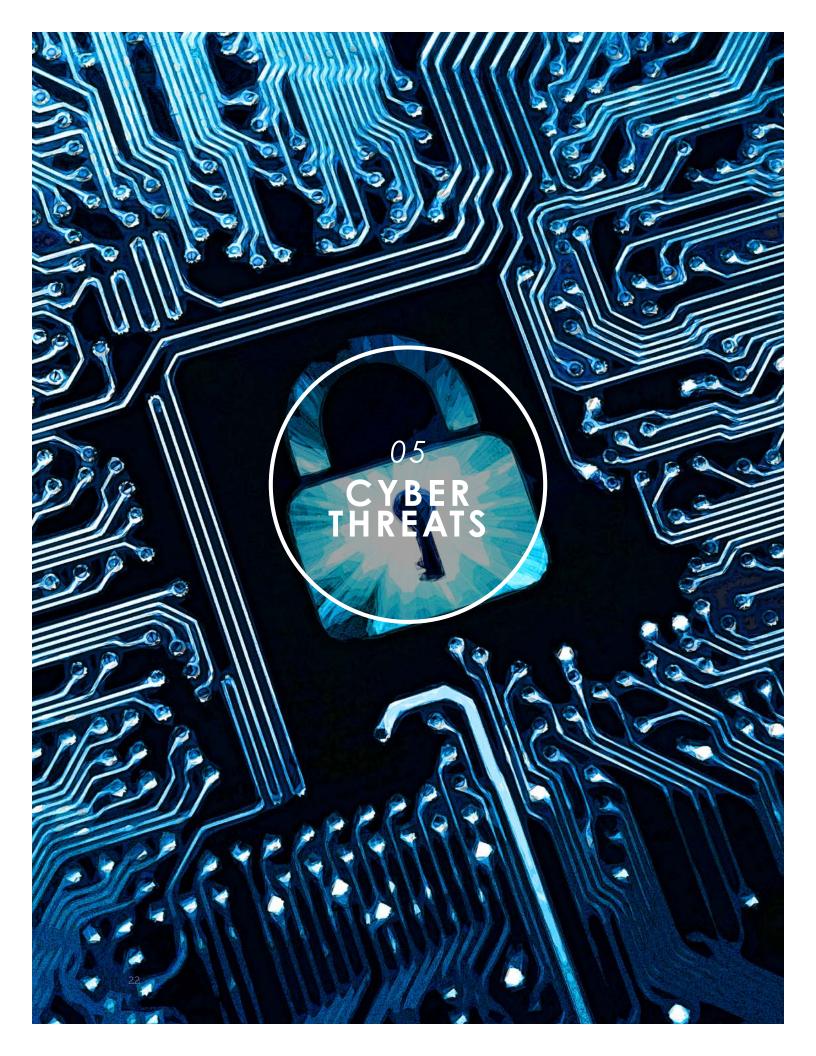
There are many types of burglar alarm systems, which include:

**Motion Sensors:** A motion detection system detects movement in areas covered by the sensors. Some systems transmit high-frequency radio wave signals, while others use infrared light to detect temperature changes (such as body heat).

**Acoustic Sensors:** Acoustic glass break sensors detect the sound of breaking glass. They can also detect sudden shock waves of a breaking object such as glass or a door being kicked in.

**Wireless Security Systems:** Wireless systems offer more flexibility and mobility than traditional wired systems. In addition, wires can't be pulled out or have nails hammered through them, which could set off the alarm or disable the system.

**Beam Security:** Photoelectric beams consist of a transmitter and receiver. When the beam is interrupted, an alarm is triggered. These can be used inside buildings or outside to protect fenced compounds.



The number of cyber and data breaches in Canada continues to skyrocket, with costs hitting new highs. According to IBM Security, the average cost of a data breach in Canada was \$6.75 million per incident in its 2021 survey. And according to a 2020 VMware cybersecurity threat report, 100 per cent of survey respondents in Canada said their business had suffered a security breach over the previous 12 months.

Auto repair and body shops may not see themselves as a target, but these days cyber criminals launch automated attacks that are indiscriminate in nature. There are three main types of attacks: they use ransomware or extortion to get cash; they steal financial or personal data and sell it on the dark web; or they take control of your system and use it as a launchpad to gain access to your contact list. They might not ask an auto body shop for \$1 million in ransom, but even extorting \$5,000 isn't bad for a novice cyber criminal.

If there are any vulnerabilities in your software, and you're not keeping it patched and updated, that could be an issue. Cyber criminals could also attack an employee using social engineering techniques like phishing e-mails or phone calls, to gain access to the network. They can then scan the network to steal data, find new targets, or upload malicious programs such as ransomware. They could also create fake accounts on the server with administrative access.

Most auto repair and body shops don't have a large IT team, if at all, and they most likely don't have a security team. Work with an IT contractor who is familiar with your systems, including any industry-specific software. That contractor should ensure your operating system is up-to-date, patches are applied, and

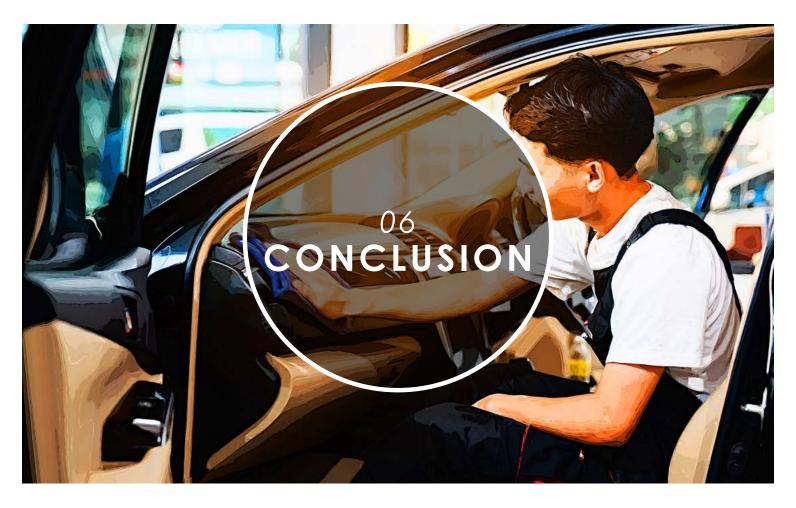
systems are 'hardened,' which means they are securely configured and not easily attackable. Some simple steps you can take include:

- 1. Use encryption where appropriate.
- Change default passwords on all network and computing devices to complex and unique ones.
- Turn off computer services that you don't use like Cortana and media servers.

### Recommended best practices:

- Teach employees how to recognize cyber threats and how they work.
- Provide examples of phishing scams or simulate a phishing attack.
- Manage user privileges and restrict network access to employees and third parties.
- Make sure employees create strong passwords and regularly change them.
- Create protocols for when a device has been stolen or lost.
- Ensure policies are being followed by performing audit checks.
- Establish corrective action when security policies are not being followed.
- Encrypt all sensitive information when transferring or storing it online.
- Prepare backup and recovery strategies.
- Monitor systems to detect and react to attacks.

If you don't take the initiative to protect your online information, you will continue to be vulnerable to attack. Educating employees, having policies and procedures in place, and being prepared for the unexpected will help reduce the risk of being a target.



When it comes to risks, hazards, and exposures, many people working in auto repair and body shops don't think it could happen to them. But a minor mistake or accident could result in a costly—even deadly—incident that causes bodily harm, property damage, and significant loss of revenue. Talk to your agent to ensure you have the proper coverage in place to protect your people, your property, and your business. To find out more, visit us at <a href="https://www.federated.ca">www.federated.ca</a>.

#### About Us

At Federated Insurance, we believe that knowing your business matters because no two are alike. That's why we take the time to get to know yours. Our industry experts can help you better understand your risks and tailor a solution to your unique needs, so that you can spend less time worrying about the risks of your business and focus on the opportunities. It's this personal touch that has set us apart for over 100 years.

Federated Insurance can be traced all the way back to 1890, when a group of farm implement dealers in Minnesota formed an association to reduce their insurance costs. About 30 years later, in 1920, the company's Canadian division was born, with a focus on serving Canadians with the highest level of customer service possible. The company became 100% Canadian owned and operated in 1990 when it was purchased by Fairfax Financial Holdings Ltd. Today, Federated Insurance is recommended by more than 70 trade associations and buying groups across Canada.

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