



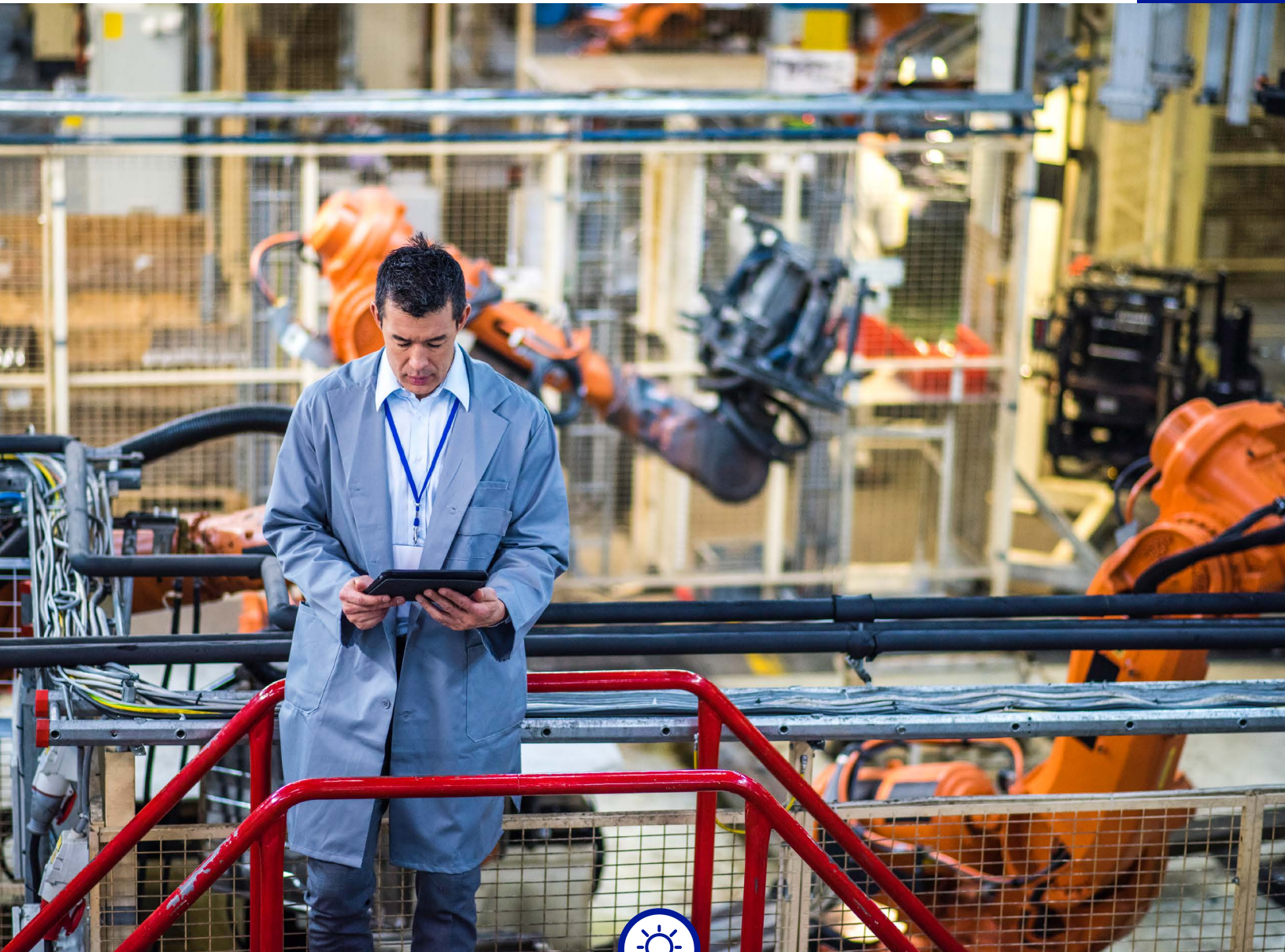
# Mastering Automotive Shipping Challenges: Strategies for Shippers

Prepare your automotive supply chain for changing consumer demands that affect car manufacturers, suppliers, logistics providers and retailers.

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Your industry has seen sweeping changes in the past few years. The automotive sector has been hit by massive disruptions, from supply chain shortages to the steady decline of vehicle sales. While these challenges are rooted in the current geopolitical environment, they are also partly related to the emerging trends we've been seeing in the industry—such as the rise of electric and autonomous vehicles (EVs and AVs). In fact, it's predicted that as many as 55% of all new car sales could be [electrified by 2030](#). Furthermore, topics like digitization, the push for sustainability and changes to cross-border trade caused by the [United States-Mexico-Canada Agreement \(USMCA\)](#) are among many other new initiatives we'll be examining.

In this whitepaper, we'll be taking a deep dive into how auto parts suppliers and merchants can overcome and adapt to the current challenges and trends shaking up the industry. With our expert advice, you'll be on the road to prepare your automotive supply chain for the future.

## No challenge too big or too small

We cover a variety of automotive challenges and solutions. Get answers to questions like:

- ✓ Why are some aftermarket parts difficult to ship?
- ✓ How do you solve poor shipment visibility and routing?
- ✓ How do you improve quality control to avoid product recalls?





Unpacking the latest  
automotive supply chain trends



Recent automotive trends and [supply chain innovations](#) are connected to changing customer expectations and worldwide events. Both of these factors are putting a lot of pressure on many automotive manufacturers and major car brands to change—and businesses like yours will be affected as well.

The current trends tend to fall in one of these three categories:

❶ **Sustainability is a top priority**

Due to growing concerns around climate change and the [demand for more eco-friendly practices](#) across all industries, many automotive companies are beginning to [prioritize sustainability](#) as a key business objective.

❷ **Increased adoption of digitization and automation**

In addition to sustainability, the automotive industry is also recognizing the importance of digitization. As technology continues to evolve, businesses are investing in digital solutions that can improve efficiency and enhance the customer experience.

❸ **Exploring opportunities for dual manufacturing**

With the rise of EVs and the increasing demand for sustainable transportation options, many companies are exploring opportunities to expand into dual manufacturing. This is when car brands work together to fill in production gaps due to a lack of comprehensive expertise with EVs. For example, [Honda is using GM's EV platform](#) to produce an entire lineup of new vehicles that run on the latest battery technology.

Let's take a closer look at the individual trends driving these big changes.

## Working towards sustainability

Governments and customers alike are putting pressure on automotive businesses to prioritize sustainability in all areas of their operations. New government directives, like Canada's plan to [reach net-zero emissions by 2050](#), alongside changing expectations from customers, investors and even employees are steering the entire industry in a greener direction. The push for sustainability not only includes eco-friendly practices in the manufacturing of vehicles, but also in supply chains, packaging and delivery options and methods.

- ✓ **Sustainable packaging:** One way that you can address environmental concerns is through the use of sustainable packaging. This means [packing and shipping auto parts](#) with materials that are biodegradable or recyclable. For example, this can be as simple as moving away from dark plastics and using recyclable lighter coloured plastics instead. Additionally, you can also focus on reducing the amount of packaging you use to minimize overall waste.
- ✓ **Green deliveries:** You can also make your supply chain more eco-friendly with green delivery methods. This might involve working with a shipping provider who offers [electric or hybrid vehicles for deliveries](#), as well as delivery route optimization to reduce fuel consumption.
- ✓ **Returns management and recycling vehicles:** Another way to tackle sustainability concerns is by partnering with a shipping provider who offers a robust [returns management](#) program. This will let you offer auto parts returns to your customers, or even provide them with an option to recycle or refurbish old and used parts. And even when a vehicle reaches the end of its life, it's still valuable. Old vehicles can have many parts that are still in good working condition, which can be salvaged and kept for future sales.

Discover how customer expectations are [shaping sustainable shipping practices](#).





## Electrification and hybrid cars

The move towards EVs is the way of the future. Many automotive companies are now investing heavily in the manufacturing and shipping of EVs, batteries and other hybrid auto parts. This shift towards renewable energy is also part of a larger effort to reshape the automotive industry to fit the demands of sustainability and reduce carbon emissions. That's why Purolator has [plans to invest \\$1 billion CAD](#) in electrifying vehicles and terminals across Canada.

## Autonomous vehicles are on their way

AVs are self-driving vehicles that use a combination of sensors, cameras and machine learning algorithms to navigate roads and make decisions without the control of a driver. They have the potential to revolutionize the automotive industry by improving safety, reducing traffic congestion and lowering carbon emissions by using optimal travel routes. However, they could also lead to a further decline in traditional vehicle sales. AVs tend to be marketed as a more sustainable alternative to vehicle ownership and, as a result, people may opt for AV ride sharing services instead of owning their own cars. This shift in consumer behaviour could have big implications for the industry in the long run.

## Business-to-consumer (B2C) e-commerce for auto parts delivery

E-commerce is now a game-changer for many industries, and the automotive sector is no exception. Many auto shops and workshops have realized the benefits of selling car parts directly to their customers via online stores. In fact, independent workshops attribute around [4.2%](#) of their purchasing volume to online shops or marketplaces, a number that is expected to increase to 6.9% percent in 2025. These online retailers are attracting customers with lower prices, more product selection and an exceptional quality of service—such as [expertly packed and shipped auto parts](#). And customers are getting more convenience out of the deal, as they can easily purchase auto parts from the comfort of their homes. The rise of e-commerce has transformed the way people buy and sell auto parts, and it's likely this trend will continue into the future.



How a delivery provider can help you [master your retail omnichannel strategy](#).





## The digitization of supply chain management

As an automotive supplier, you're always looking for new ways to gain more accurate data from your supply chain. And with the demand for faster shipping, it's become even more important for shippers to have maximum visibility into their supply chain operations. That's why there's a trend for automotive shippers to turn to digital solutions, like:



**Cloud-based supply chain management (SCM) software**—which provides a centralized platform to manage all aspects of your supply chain, from procurement to delivery. SCM software can provide your supply chain with real-time visibility, allowing for better communication and collaboration among suppliers, manufacturers and distributors. It can also track inventory levels, monitor production schedules and optimize logistics operations.



**Internet of Things (IoT) sensors**—that can be attached to shipments for tracking and monitoring. By using sensors to collect data on exactly where and when vehicle parts are stored and transported, you can gain valuable insights to improve your supply chain's performance. For example, sensors can be used to monitor the temperature and humidity levels of parts in transit to detect if they are at risk of damage or degradation.



**Advanced warehouse management**—the process of optimizing warehouse operations with the [latest scanning and sorting technology](#). This can involve Radio Frequency Identification (RFID) to track inventory and improve accuracy, barcoding and automated sorting and retrieval systems. Effective warehouse management can help to reduce the cost of storing and moving inventory, as well as improving order fulfillment times and overall customer satisfaction.



**Artificial intelligence (AI)**—for data analysis, optimizing delivery routes and predicting potential disruptions in your supply chain. AI can be used to analyze large amounts of data very quickly. This can help you identify areas for improvement, and even automate processes such as inventory management and order fulfillment, freeing up your employees to take on more critical tasks. For example, AI-powered forecasting can help you leverage historical data, market trends and predictive analytics to anticipate demand for aftermarket parts, allowing you to adjust your production schedules accordingly. It can even create more accurate predictions through your supply chain's [digital twin](#). Through a digital representation, you can see how your supply chain can be affected by severe weather or geopolitical events, giving you a chance to prepare contingency plans for different situations.



**Supply chain automation**—involves using technology to streamline and optimize various processes without the need for manual intervention. This can include automating order processing, inventory management and scheduling shipments. It can also help to improve safety and quality by reducing the risk of human error in manufacturing and logistics processes. Building on the example in the previous section, if a route is blocked by severe weather, you can automate your system to request supplies and transportation from a different region.





**Transportation optimization**—using technology and data analysis to optimize transportation routes and facilitate better communication throughout your entire supply chain. By establishing clear channels of communication with your suppliers, you can improve delivery times and make transportation more efficient from end to end. This is especially important in your industry, where automotive products often need to arrive at their destination quickly and without delay. Additionally, more efficient transportation can speed up your supply chain's last mile, leading to a better customer experience.



**Supply chain visibility**—the ability to track and monitor products as they move through your supply chain. Through Global Positioning System (GPS) tracking, barcoding and RFID, you'll be able to monitor shipments and inventory levels as they change. Accurate supply chain visibility can reduce the risk of stockouts and improve your inventory management overall.

By digitizing your supply chain, you create agile processes that can adapt to changing situations. Plus, a logistic provider who offers data analytics can help you identify areas for improvement, so your operations can gain [as much supply chain efficiency as possible](#).

Looking for advice on the future of supply chain management?  
[Read what an expert has to say.](#)







Navigating complexity: Solutions  
for overcoming automotive supply  
chain challenges

Now that we've taken a good look at the latest trends, let's talk about the challenges that automotive businesses are facing today. From getting shipments across the border on time, to packing and shipping EV batteries safely, we'll be touching on a wide variety of relevant roadblocks and finding ways to solve them.



Build a resilient supply chain strategy and prepare for unexpected challenges. [Download our \*\*whitepaper\*\*.](#)

## Adapting to sustainable logistics and managing customer expectations

While speed has traditionally been a key factor among competing automotive supply chains, it's now crucial to prioritize green supply chains as well. Shipping faster often calls for a dedicated delivery service (DDS) that uses more fuel and resources, leading to a higher carbon footprint. By focusing on sustainable shipping practices instead, you can reduce your environmental impact and meet the changing demands of your customers. However, this does raise questions such as:

- Do automotive suppliers and merchants really need to sacrifice speed to meet sustainability expectations?
- What are the limitations to sustainability in car production?
- What potential does a green supply chain have?

While the answer to these questions depends on each individual business, the key to remaining competitive over the long term is finding the right balance of efficiency and sustainability. One way of doing that is to opt for consolidated shipping for your regular shipments, and next-day deliveries for critical needs. By working with a shipping provider who can sweep the dock and consolidate both your freight and courier shipments, you can start shipping in larger quantities with reduced frequency. That means you'll be able to keep up with all your orders, while still reducing your carbon footprint with less frequent shipments. And when your customers need an item delivered fast, choose a [next-day delivery service](#) to get them what they need right on time.





## Auto parts and labour shortages

The shortages in warehouse labourers and auto parts are major challenges that affect every business in the automotive industry. As many as [36%](#) of surveyed auto shops have indicated that a shortage of parts is their top issue. What caused this dilemma? Recent global events have played a significant part in reducing the number of workers able to work in warehouses and have slowed down ocean freight shipments. This has led to a backlog of customer orders and a scarcity of auto parts. While demand for auto parts remains high, the supply is simply too limited to fulfil a growing backlog of orders.

One possible solution to this challenge is restructuring your supply chain. This might mean nearshoring your warehouses so that they're closer to your final delivery location. Doing so can help reduce delays in shipping time when parts shortages do occur. For example, many U.S. automotive shippers are nearshoring their operations in Mexico, reducing the amount of time it takes to transport parts. But nearshoring isn't an all-or- nothing solution, and having a mix of nearshore and offshore options only stands to increase your supply chain's agility, reduce delays and provide more flexibility, which can help keep both your customers and labourers happy.

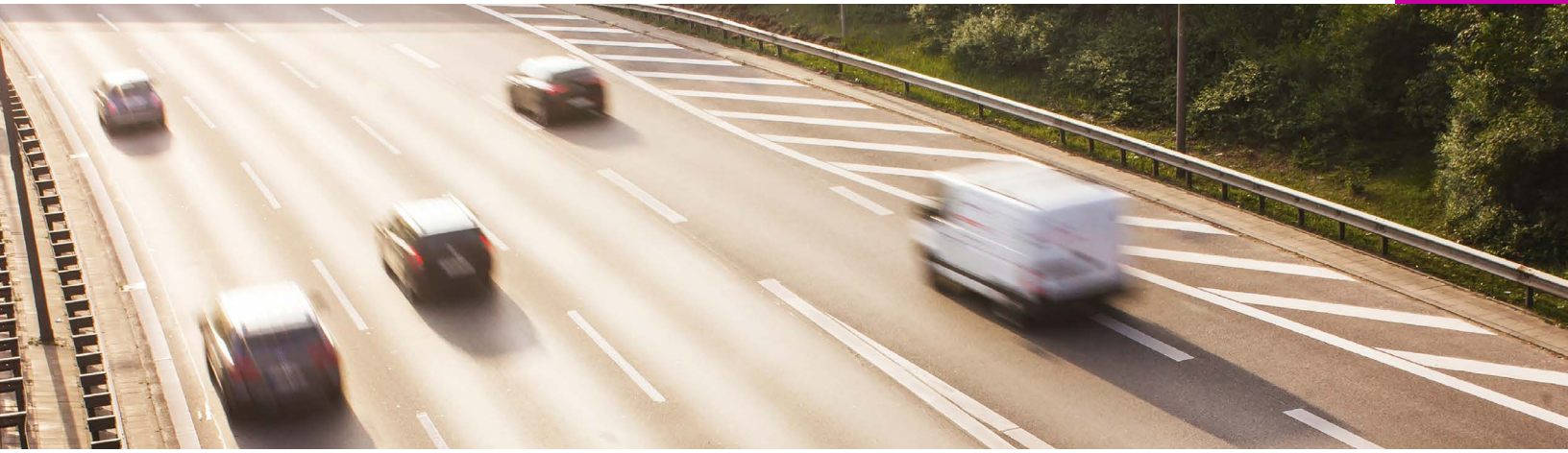
## Semiconductor shortages

While it's only one factor of the overall parts shortage problem, the ongoing [semiconductor shortage](#) has had a significant impact on the automotive industry. The shortage has caused production delays and forced automakers to cut back on the production of newer vehicles that use a variety of electronic components. The good news is that [demand forecasting can help prevent this situation from happening again](#) in the future. By accurately predicting demand, auto parts suppliers can work with semiconductor suppliers to ensure a steady stream of products and avoid production delays.



How do you sell auto parts like a pro?  
[Learn how in our checklist.](#)





## The decline of vehicle sales

It's no secret that vehicle sales have been in decline. Automakers in Canada managed to sell only 1.49 million new vehicles in 2022, a drop of [9.1%](#) from the previous year. A combination of inflation, shortages and a changing consumer mindset have caused car sales to go downhill, but there are still opportunities to be found for your business. In line with the trend for sustainability, customers are choosing to repair or refurbish older vehicles instead of replacing them.

One way to adapt is for you to pivot from selling entire vehicles to selling aftermarket auto parts instead. The demand for parts is rising, especially in the [e-commerce sector](#). Additionally, work with a trusted shipping partner who offers [reverse logistics management](#) to make the most of this change. By making returns a part of your logistics plan, you'll be able to recycle and sell auto parts in a circular supply chain.

## Digital transformation and cybersecurity threats

The automotive shipping industry is currently undergoing a [digital transformation](#), with transportation management software (TMS), machine learning and AI being some of the key trends. While keeping up with these advancements is a challenge for companies in the industry, it's a necessary step to stay competitive. But even though digital transformation can greatly improve your supply chain's efficiency, it still has its own set of issues to overcome. As supply chains shift from traditional strategies, which are more manual, to automated digital strategies, there are bound to be unforeseen challenges that arise. What are these digital transformation challenges? At the moment, one major problem is that as digital transformation is more widely adopted, more supply chains become vulnerable to cybersecurity threats. In 2022, the number of publicly reported [auto-related cyberattacks jumped 239%](#) compared to 2018. While most of these attacks have only targeted individual vehicles so far, it's only a matter of time before automotive supply chains are threatened as

well. To make this change as safely as possible, ensure you have [robust cybersecurity measures](#) in place to prevent unexpected threats from derailing your plans. Here are a few ways to get started:

- ✓ Conduct regular cybersecurity assessments to identify vulnerabilities and potential threats.
- ✓ Implement strong access controls and authentication measures to prevent unauthorized access to sensitive data.
- ✓ Use encryption to protect data in transit and at rest.
- ✓ Train your employees on cybersecurity best practices.
- ✓ Establish clear policies and procedures for handling sensitive data.

## Why digital transformation is vital for the automotive industry

You already know that your supply chain is the backbone of your automotive business. However, the main draw of digital transformation is the promise of a more efficient, accurate and predictable supply chain. Let's take a closer look at why a smooth and [efficient supply chain](#) is so important.

With an optimal supply chain, your business can take advantage of key benefits, such as:

- **Increased efficiency:** Eliminate timesinks in your transportation routes and improve the accuracy of your labelling and packaging processes.
- **Controlled inventory levels:** Reduce storage costs and improve cash flow for your business.

The automotive industry is extremely competitive, and any delay or disruption can cause a ripple effect, resulting in lost sales and damaged reputations. That's why it's so important to keep your supply chain optimized with the latest technology, so you can stay ahead of the competition and keep your business running without a hitch.



## Lack of visibility in warehouse inventory management

Recent disruptions have affected many automotive warehouses, causing an imbalance of over and understocked inventories, and a lack of visibility into inventory levels continues to be a persistent problem for many businesses. One of the primary challenges of warehouse inventory management for automotive suppliers is the sheer volume and variety of aftermarket parts that need to be tracked and managed. With so many different types of parts and components, it can be difficult to maintain accurate inventory levels and ensure that the right parts are in the right place at the right time.

Purolator's National Hub  
Toronto, ON

Purolator's National Hub helps businesses get deliveries to their destinations quickly and reliably while employing sustainable practices.

[Learn more](#)



In an industry where production schedules are tight and delays are costly, the need for accurate visibility into your inventory is vital. To address this challenge, some companies are turning to advanced inventory management technologies such as RFID tracking and automated systems that can provide real-time data on their inventory levels. This allows them to route supplies to where they're needed most and achieve balanced stocks throughout their warehouses. Work with a shipping provider who uses [advanced supply chain management systems and world-class automation](#) to optimize your sorting and picking process—helping you deliver shipments accurately and minimize wasted time and efforts.



## The increasing talent and skills gap

An aging workforce combined with a lack of interest from younger generations has led to a widening talent and skills gap within the automotive industry. This challenge is especially relevant for Canadian automotive manufacturers, where even the Automotive Parts Manufacturers' Association (APMA) in Ontario has [highlighted the issue and called for new talent](#) from diverse communities. If left unaddressed, this gap can result in increased production costs and decreased efficiency, negatively impacting the industry as a whole.

There are two clear solutions to this skills gap for your business. The first approach is along lines of APMA's solution, where you:

- Invest in training and development programs that focus on upskilling your existing workforce, such as workshops and online courses.
- Launch targeted marketing campaigns that promote the automotive supply and manufacturing industry as an exciting career path for younger people, alongside apprenticeship programs and partnerships with educational institutions.

The second approach is to bridge the talent and skills gap with [new technology](#). Automation and digitalization can help reduce your supply chain's dependence on manual labour, minimizing the impact of the talent shortage. Additionally, the use of artificial intelligence and machine learning can help identify areas where additional skills and expertise are required.

## The need for resilient J.I.T. manufacturing

Just-in-time (J.I.T.) manufacturing is a production model that aims to minimize inventory levels and increase efficiency by producing and delivering products exactly when they are needed. While J.I.T. has been widely adopted in the automotive industry, it can also pose significant challenges to your supply chain. One of the biggest challenges of J.I.T. is its vulnerability to disruptions. Any delay or interruption in the delivery of parts can have a significant impact on production schedules, leading to costly downtime. To overcome this challenge, you need to establish a strong relationship with your suppliers and implement effective communication solutions.

Depending on the needs of your business, better collaboration with your suppliers might simply mean more frequent communication and establishing clear alignment on J.I.T. processes. But if you're looking to push that relationship a step further, you may want to discuss how your suppliers can invest in automation and tracking technology to [build resiliency and keep your supply chain in sync](#). Understandably, this can be a major obstacle for small and medium-sized suppliers. To overcome this challenge, try partnering with a shipping provider who [already has the technology in place](#). That way, you can continue working with the same suppliers you trust while also creating a more technologically resilient supply chain for your J.I.T. manufacturing needs.





## Why quality control needs to be a top priority

Quality control plays a crucial role in [supply chain management](#), reinforcing your customer experience and reducing retention rates. When your customers receive aftermarket parts of a high standard, they aren't likely to complain or look for other auto parts merchants and suppliers. However, due to its routine nature, it's easy to overlook the significance of a robust quality control process. This can lead to a gradual decline in the overall process. On top of that, many automotive supply chains involve multiple tiers of suppliers, each responsible for providing different components and materials—making it difficult to ensure quality control processes are followed across all channels.

As this is a complex challenge that can affect your entire supply chain, it's best to tackle it from multiple angles. Here's how you can get started:



Coordinate with your suppliers and manufacturers. Everyone needs to be on the same page about quality control measures, and agree on a standardized, measurable procedure to carry them out. They should be able to produce reports to prove that their quality control measures are effective.



When it's right for your business, turn to third-party auditors to ensure standards are up to date and reliable. External auditors function as a fresh set of eyes that can spot problems your internal auditors may not have noticed. The right external auditor should be able to improve your operations and make your customers happier.

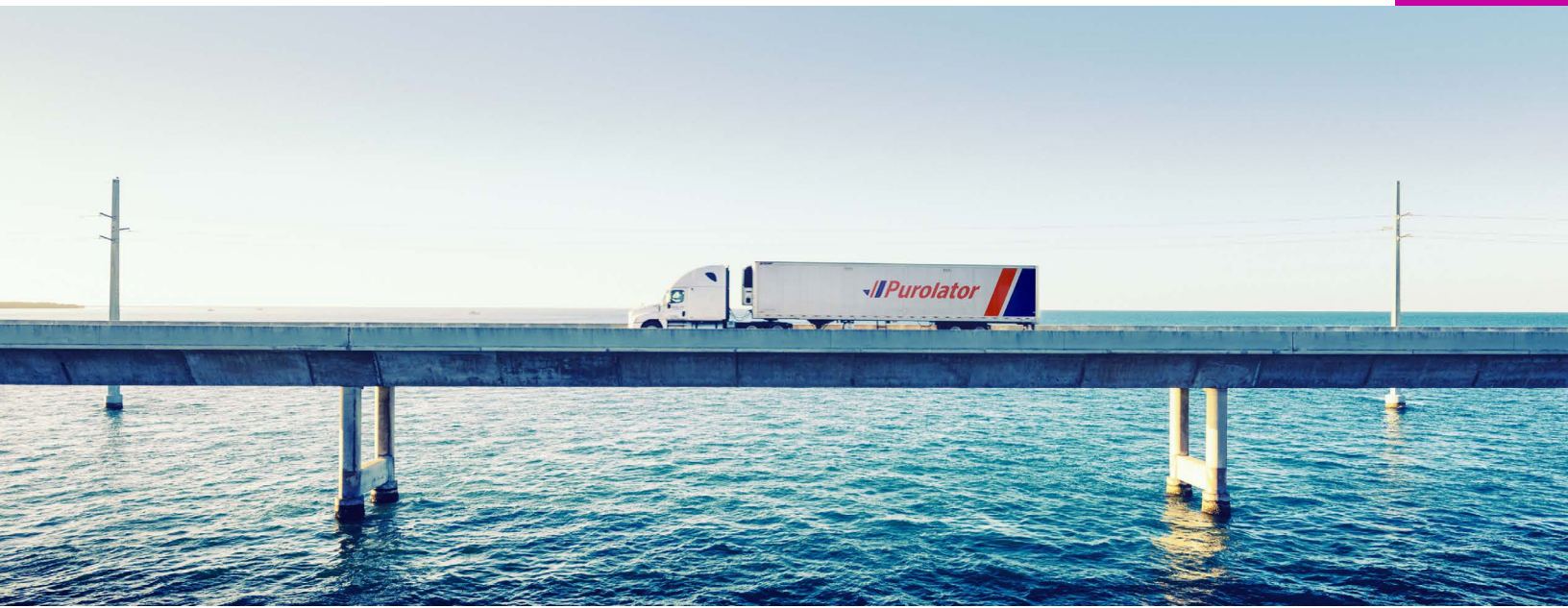


Use technology to increase transparency and traceability in the supply chain. This can help identify the source of any quality issues and ensure that all suppliers are complying with regulations.



Make [reverse logistics a part of your supply chain](#). Even when you have exceptional quality control procedures, there are bound to be some things that slip through the gaps. By offering your customers an option to return products they aren't satisfied with, you can reuse the returned products while keeping customer retention rates high.





## Cross-border shipping regulations

Customs clearance can often pose a challenge when you need to quickly ship automotive parts across the border. Shipping regulations vary by country, and can cause significant delays due to additional paperwork and inspections by customs officials. In some cases, certain automotive parts may need to be classified as [dangerous goods \(DG\)](#) due to safety concerns and other restrictions. As a result, it's crucial for you to have a good understanding of customs requirements and to work closely with a shipping provider who can guide you through the process while delivering your products on time.

When you're considering a cross-border shipping provider, choose one that can offer a consolidated customs clearance option to move all your automotive parts and supplies across the border quickly. Your shipping provider should also be able to support you by working with multiple brokers if needed. It's important to choose a shipping partner that understands your business and supply chain so your products get to your customers intact and on time.

Your shipping partner should also be able to support your business' unique challenges like shipping large, awkwardly shaped and heavy auto parts. Automotive parts can weigh a lot, especially when shipped in bulk. Pick a provider that can offer you a [500 kg Exemption](#), so your heaviest supplies can be admitted through customs with fewer regulations. In addition, check if they offer consolidated customs clearance so you can move large quantities of products over the border without a hitch. Finally, look for a shipping partner who is an expert in [customs clearance](#), offering a fast, seamless journey across the border for your DG and all your other shipments, too.

## How do you ship auto parts to the rest of the world?

Which car parts you can and can't ship internationally depend on what your shipping provider is willing to transport and the restrictions of the country you're sending them to. Different providers have varying regulations on what auto parts they are allowed to ship, but there are some common rules:

- 1 Most providers won't let you ship parts containing liquids. Parts like radiators, engines, fluid reservoirs, fuel tanks and gearboxes will require a purge certificate to prove that they are empty of all fluids.
- 2 Fragile items that aren't covered by an insurance policy, such as wing mirrors, windscreens and windows, may have surcharges.
- 3 Many providers can't send hazardous auto parts over the border, so be sure to partner with a carrier who can [deliver DG](#) if you need to get them shipped.
- 4 Shipping providers also have restrictions on the size and weight of the parts they can deliver. And if you're shipping bulky goods, make the most of your shipment by working with a provider who can offer [special handling services](#) (SHS) and a [500 kg Exemption](#).

Here's a list of common auto parts that can be [shipped internationally](#):

- Bonnets and body panels
- Bumpers
- Doors
- Exhausts
- Gearboxes and engines
- Infotainment displays and satellite navigation systems
- Lights
- Wheels and deflated tires



## Shipping from Canada to the U.S.: Southbound Logistics

If you're shipping auto parts over the U.S.-Canada border, you need to declare your shipment as one of three types of customs entries when sending them to the U.S. These entries include:

- ✓ **Section 321:** Shipments valued at \$800 USD or less are usually duty-free and referred to as a Section 321 entry.
- ✓ **Informal entry:** For goods valued at over \$800 USD but are less than \$2,500 USD.
- ✓ **Formal or commercial entry:** Formal entries—also called commercial entries—are complex shipments, valued at over \$2,500 USD.

## Shipping from the U.S. to Canada: Northbound Logistics

Despite requiring the same customs entry information as a shipment to the U.S., automotive shipments to Canada require a couple additional steps. When you're shipping to Canada, the Canada Border Services Agency (CBSA) may need:

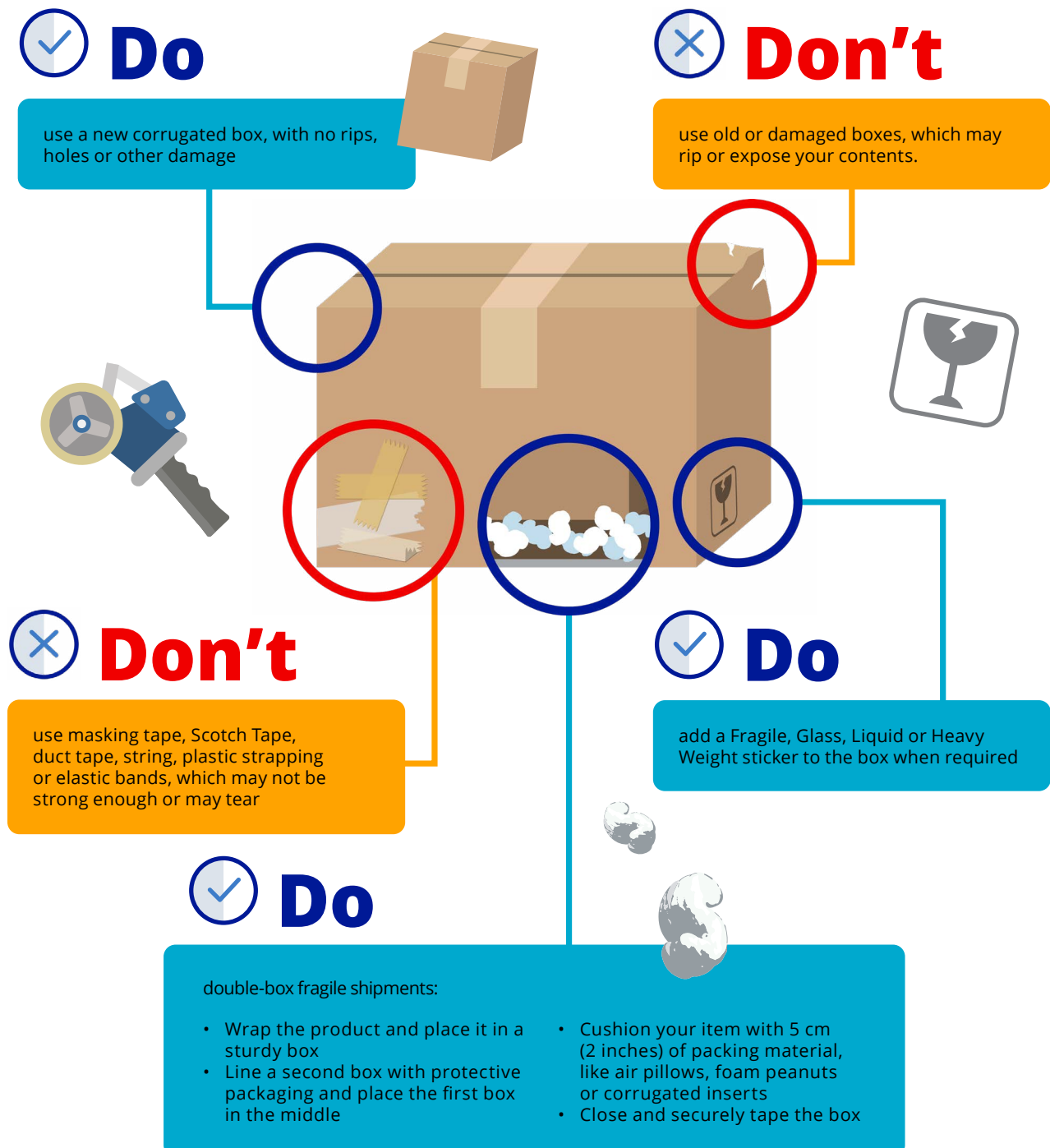
- **Canada Customs Invoice (CCI):** A CCI lists the date of the shipment, name, address and phone number of both the shipper and the consignee. It also includes a detailed description of the item or items being shipped and the total estimated value of the shipment.
- **Non-Resident Importer (NRI):** Although an NRI is optional, it does simplify the importing and exporting process if you're running a U.S.-based company that requires cross-border shipping. By applying to become an NRI, your company will be registered as both the importer and exporter, and assume responsibility for all taxes, fees and duties owed to Canada. This makes the import/export process a lot easier, and many Canadian companies prefer to only work with U.S. businesses that are registered as an NRI.



## Packing and shipping auto parts

Proper packaging is essential to protect your auto parts during transit, especially if you're shipping fragile and high-value items. The right packaging helps your products reach their destination safely, and also reduces the cost involved in replacing damaged items. However, shipping heavy or oversized items that fall under the DG category can indeed be a challenge. One such item is the EV battery, which can pose a risk during transportation due to its chemical components.

### Dos and don'ts of packaging





## Tips for packing and shipping electric vehicle (EV) batteries

As the popularity of EVs continues to rise, the demand for [shipping EV batteries](#) is expected to increase as well. It's important for automotive suppliers to follow strict regulations when transporting these batteries, such as labelling them clearly and using a fully enclosed, water-proof package. Choose a shipper who offers special handling services (SHS) for oversized or heavy goods, cross-border shipping services and DG transportation services to deliver your EV batteries safely throughout North America.

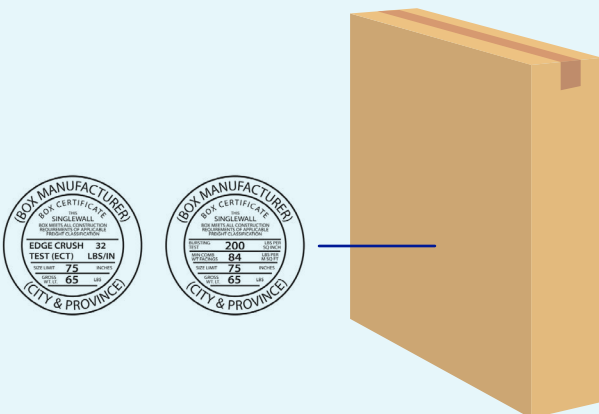
Batteries can be large, fragile and weigh well above 500 kg; therefore, the [500 kg Exemption](#) is often necessary for shipping EV batteries.

- [Use packaging and boxes with adequate protection](#) to prevent movement during transit.
- Make sure that your shipments are labelled correctly.
- Separate the batteries from one another to reduce the risk of damage.

## How to package large, oddly shaped and fragile items

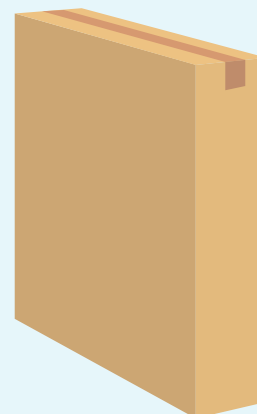
### How to select the right box

- ✓ Use a new corrugated box (avoid using old boxes) that's free of any punctures, tears or corner damage, and ensure all its flaps are intact.
- ✓ Ensure the weight of the contents does not exceed 50% of the gross weight limit indicated on the Box Manufacturer's Certificate on the box.
- ✓ Ensure the box is rated at a minimum Edge Crush Test (ECT) value of 32 lbs./inch or bursting test of 200 lbs./sq. inch, as indicated on the Box Manufacturer's Certificate.
- ✓ Fill voids in the distribution container with at least 3" (7.6 cm) of cushioning material to restrict interior movement.



### How to seal your box properly

- ✓ Apply tape to a clean dry surface only.
- ✓ Use pressure-sensitive adhesive tape (packing tape), water-activated reinforced tape or water-activated paper tape (minimum 60-lb [27-kg] grade) that measures at least 3" (7.6 cm) in width.
- ✓ Do not seal the package using masking, cellophane, Scotch or duct tape.
- ✓ Do not put string, plastic strapping, elastic bands or paper overwrap around the package.
- ✓ Seal all flaps and seams securely using the following "H-Style" taping method using three strips of 3" (7.6 cm) wide pressure-sensitive adhesive poly tape.





Need more details on packing and shipping auto parts? [Learn more in our article.](#)

### Tips for packing mirrors, car engine parts, mufflers and headlights

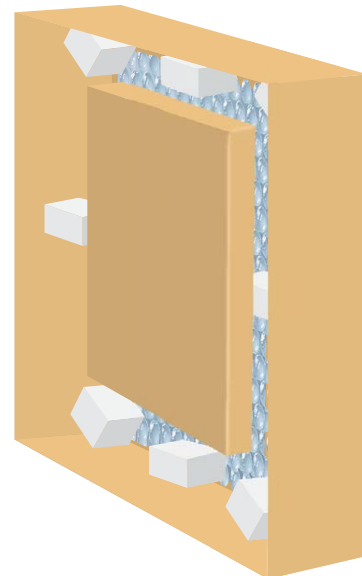
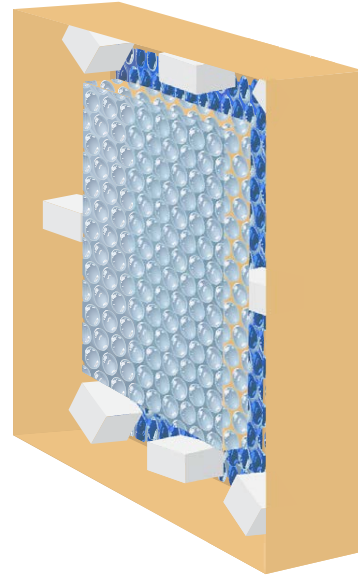
Mirrors, car engine parts, mufflers and headlights need extra protection in transit. Here are some tips for packing these types of parts:

- ✓ Use double-wall corrugated boxes that are the correct size to reduce shifting in transit.
- ✓ Make sure the box is big enough to fit the item without being punctured or damaged.
- ✓ Use padding to keep pieces from moving around and potentially breaking in transit.

### Tips for packing doors, hoods and panels

Doors, hoods and panels should be packed in their own boxes. Here are some tips to help keep them intact during transit.

- ✓ Use at least 3" of cushioning material to fill any empty space left in the box.
- ✓ Cover sharp edges with plastic or foam along with 6" rigid corrugated inserts.
- ✓ Pack items in a double-wall corrugated container box that has the corresponding Edge Crush Test (ECT).







Automotive parts  
shipping classifications



Beyond freight classes, every automotive part has different considerations when it comes to shipping, including special handling, dangerous goods and its size, shape and density. Below we've classified auto parts and accessories, primarily for vehicles using combustible engines, as well as EV batteries.

### Auto parts and accessories with special handling considerations



#### Wheels and Tires

Includes wheels, rims, tires

Stowability may be a concern



#### Exhaust System

Includes mufflers, hangars, clamps



#### Lithium Batteries

Commonly shipped for EVs

Dangerous Goods



#### Oil Delivery Parts

Includes oil pumps, oil filters, oil coolers

Stowability may be a concern



#### Auto Body Parts

Includes bumpers, fenders, spoilers, rims, trunks, doors

Special handling may be required



#### Suspension Parts

Includes stabilizer bars, shock absorbers, suspension systems, control arms

Stowability may be a concern



#### Performance Parts

Includes filters, shock absorbers

These may be classified as dangerous goods



#### Low-voltage Electric Systems

Includes antennas, radio and media players, speakers, alternators, batteries, gauges and meters, ignition systems, lighting and signalling systems, sensors, cameras, starters, electrical switches, air bag control systems



#### Interior

Includes floor components and parts, car seats and belts



#### Powertrain

Includes braking systems, powertrain components, engine components and parts, engine cooling systems, engine oil systems, exhaust systems, fuel supply systems, suspension and steering systems, transmission systems

These may be classified as dangerous goods



#### Miscellaneous Parts

A/C, bearings, hoses, mirrors





# Automotive supply chain glossary



With so many unique acronyms and terms, keeping track of automotive supply chain vocabulary can be challenging. Here's a list of common terms for you to refer to:



### Automotive logistics

The process of managing the flow of vehicles and parts from the manufacturer to the dealership or end customer.



### Damage codes

A system of codes used to indicate the type and severity of damage to a vehicle during transportation.



### Automotive shipping/delivery

The transportation of vehicles and parts from one location to another, typically using trucks, trains or ships.



### Freight

Goods or cargo that are transported by a carrier.



### Bill of lading (BOL)

A legal document that details the type, quantity and destination of goods being shipped, as well as the terms of the shipment.



### Logistics network

The interconnected system of transportation, storage and distribution that allows goods to be moved from one place to another.



### Carrier

A company that transports goods or people from one place to another.



### Proof of Delivery (POD)

A document that confirms the delivery of goods to a specific location.



### Co-loading

The practice of combining multiple shipments from different companies into a single container or truck to reduce costs.



### Vehicle Identification Number (VIN)

A unique code assigned to each vehicle that identifies its make, model and year of manufacture.





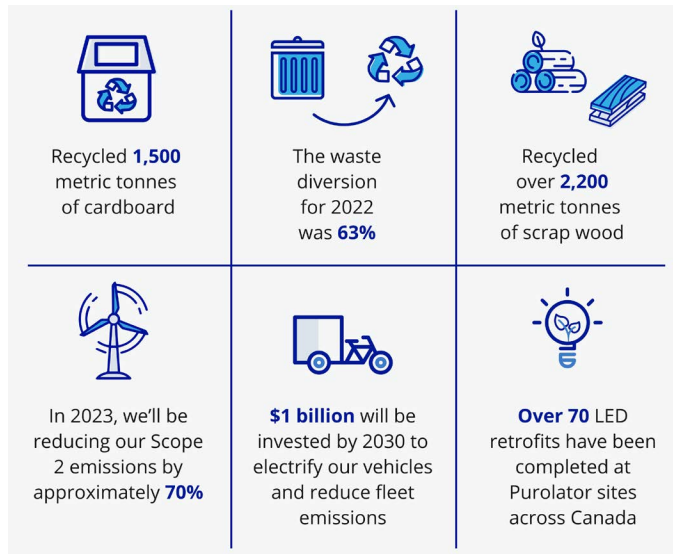


How Purolator can help  
automotive businesses

ONTARIO  
AR 16867  
VOLVO TO THE RESCUE

As a leading provider of integrated freight, courier and logistics solutions, we're ready to help you [optimize your supply chain strategies](#), save time and [reliably deliver your auto parts and industrial equipment](#). Here's how we can help your business adapt to the latest trends and overcome the current challenges in the automotive industry:

## We're committed to sustainability



Sustainability is [a top priority](#) for us. We're the first Canadian courier company to launch all-electric vehicles. Our other green initiatives include:

- ✓ Alternative fuel and fully electric delivery trucks, e-bikes and low-speed vehicles.
- ✓ Installing energy-efficient equipment in our buildings and reducing waste to lower our carbon footprint.
- ✓ Packaging that is biodegradable and/or recyclable, as well as packages made out of recycled materials.

## Ship EV batteries with ease

Know that your oversized/heavy or DG, such as EV batteries, will travel safely and be received responsibly. Our shipping staff includes specialists who are trained to handle and ship hazardous items. Our services include:

- ✓ [Special handling and DG shipping](#)
- ✓ [500 kg Exemption](#) for oversized shipments
- ✓ Packaging assessment to make sure your goods are as protected as possible

## Sweep the dock and ship auto parts in bulk



Work with a shipping provider who can consolidate your courier and freight automotive shipments. By sweeping the dock, you'll be shipping parts at a lower frequency—which can help reduce your carbon footprint—while still meeting the expectations of your customers. Additionally, all our trucks have Transported Asset Protection Association (TAPA) [Level 1 Trucking Security Requirements \(TSR\)](#) certification.

## Get urgent shipments delivered on time

Whether you need next-day or two- to three-day shipping, [our express and ground services](#) deliver your packages on time more often than our competitors do. And we offer a [Mission Critical](#) service to fulfil your most urgent deliveries.



Learn how Legrand used [freight consolidation to optimize distribution](#).

## Reach your customers wherever they are

Our vast network covers 99.9% of Canadian postal codes, and we're also ready to help you ship across the border, so you can [import and export](#) your auto parts with our customs clearance guidance. Our cross-border solutions can support your nearshoring or offshoring operations or help deliver your parts and supplies across the border.

## Improve your customer service and returns experience

With the rise of e-commerce, your customers are expecting smoother returns. By sorting, repackaging or refurbishing as needed, Purolator can help with your [returns management](#) process and provide an excellent customer experience as well.



The automotive industry is in the middle of many significant changes. With EVs, AVs and sustainability initiatives gaining popularity, it's important for companies to stay ahead of the curve and adapt. By partnering with the right shipping provider, you can ensure that your automotive products are delivered efficiently and sustainably. And there are even more changes on the horizon. As ties with China become strained, Canada is looking towards India for an upcoming free trade agreement. Monitoring how this shift, and other trends, will impact your supply chain is now more important than ever.





Ready to adapt your automotive supply chain for the future? Contact our team of experts to get the latest solutions for today's challenges.

[Contact us](#)