



Freight Shipping Guide *for Business*



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Introduction

Whether you're a gallery owner shipping artwork to a patron or a corporation transporting office furniture across the country, all businesses can benefit from working with professional freight shippers. No matter what your business is shipping, our Freight Shipping Guide for Business can help you plan your shipment from start to finish. ***In this guide, you'll learn about:***

Types of Freight Shipping: Between LTL (less than truckload) shipping, FTL shipping, and other modes of transport, choosing the best shipping method for your cargo can be confusing. This section of the Freight Shipping Guide for Business describes the most common methods of freight shipping, as well as advantages and disadvantages of each, to make your choice as easy as possible.

Freight Classifications: Many modes of transport price cargo based on freight class. Read this section to learn how freight class is determined, as well as how to identify the class of your shipment.

When to Hire a Freight Shipping Company: Some shipments should always be handled by professional freight shipping companies. We can help you decide whether you should hire someone to help with your business's shipment.

How Freight Shipping Can Help Small, Medium, and Large Businesses: Businesses of every size rely on freight shipping, whether you're a small business shipping handmade furniture to select clients or a large corporation with a nationwide chain of warehouses.

Packing Special Items and Equipment: When you're shipping items that require special care like artwork, medical equipment, manufacturing materials, or other high-value items, it's especially important to prepare and package your shipment properly before pickup.

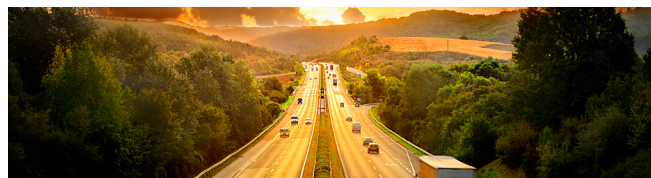
Get our tips for packing and shipping fragile, high-value, and other items that require special care.

Types of Freight Shipping

From air to sea, there are many ways to ship your goods via freight. Choosing the best method for your shipment can be confusing, so we've created this guide to the most common ways to ship freight to help you understand your options. **When it comes to shipping freight, there are many factors to consider, including:**

- The cost of delivering your shipment
- The physical size or volume of your shipment
- What you're shipping—is it fragile or hazardous?
- How much your cargo weighs
- How fast you need it to arrive

With these factors in mind, keep reading to determine which shipping method is best for you.



LTL (Less Than Truckload)

LTL stands for "less than truckload", which means that your shipment will take up less than an entire truckload. Typically, this means your cargo will weigh between 100 and 10,000 lbs. LTL is the most popular type of freight shipment, and it's also the most cost-effective form of road transportation. This is because the cost of your shipment will be shared with other LTL freight shipments, and you only pay for the space in the truck that you need. If you're a small business that doesn't ship in large quantities or are looking for a budget-friendly shipping method, LTL freight shipping may be a good option for you.

It may be cheaper, but because your shipment shares space in a truck with other cargo, LTL shipments often take longer to reach their final destination due to more frequent stops and reworking the cargo.

Advantages

- Cost effective
- Reliable
- Ideal for smaller shipments

Disadvantages

- Can take longer to reach final destination
- Greater risk of loss or damage as shipments are handled or transferred to different trucks

TSI specializes in LTL shipping. Whether you're a small business shipping artwork to customers across the country or a large business shipping office equipment to a new location, we can connect you with the right LTL shipper for your needs. **We offer two levels of service:**

Economy Shipping

Economy shipping is ideal for those who are looking to cut costs and who are able to pack their own cargo.

With Economy shipping, you pack your stuff yourself, meet the driver, and help load your boxes onto the truck. Upon arrival, your shipment will be dropped off curbside. We also offer Economy Select and Economy Plus shipping:

Economy Select: You still pack your stuff yourself, but you get indoor pickup and delivery, as well as a shorter pickup window.

Economy Plus: Ideal for shipments of 1-3 items you can't box yourself. We pick up the goods, box them, and hold them for our economy carrier.

White Glove Shipping

With our White Glove service, we do all the work for

you. A two-person team of professional movers will come and pack your cargo, load everything onto the truck, and provide inside delivery at the destination.

FTL (Full Truckload)

FTL, or Full Truckload shipping, is exactly what it sounds like. Instead of sharing space in the truck with other, smaller shipments, an FTL shipment will fill (or mostly fill) the entire truck.

FTL shipments may cost more, but they will often arrive quicker and there is less risk of damage because your shipment won't be transferred during transit. FTL is also ideal for commodities that require refrigeration, temperature control, flatbeds, or other oversize or overweight shipments.

Typically, FTL shipments weigh more than 10,000lbs, or consist of ten or more pallets, but sometimes, FTL is the right option for smaller shipments. If you have a small but fragile or high-risk shipment for example, FTL might be the best shipping method.

Advantages

- Quicker transit time
- Less risk of loss or damage
- Ideal for fragile or hazardous shipments, or cargo that requires special consideration

Disadvantages

- May cost considerably more than LTL
- Less flexible—not ideal for shipments with the same origin, but different destinations



Partial Truckload

It may sound similar to LTL shipping, but partial truckload shipments are not the same as LTL shipments. Partial truckload shipments use a single, dedicated truck (similar to FTL) that is capable of handling all types of commodities, including refrigerated or temperature controlled goods, hazardous materials, and overweight/oversize goods.

Partial truckload shipping is reserved for medium-sized loads that are booked by volume.

Advantages

- Often faster
- Ideal for commodities that require special consideration

Disadvantages

- Can be costly
- Not ideal for smaller loads

Air Freight

Air freight is transported by—you guessed it—air. Air freight offers the fastest transit time and is highly reliable because of the meticulous planning and organization required for air travel. As a result, delays are uncommon, but if your shipment is delayed, the delay is minimal because flights depart so regularly.

Air freight is primarily used for high-value, low-volume shipments. These shipments typically have a higher density, which means they weigh enough to be considered freight, but don't take up as much space on the plane. If your package is heavy (more than 100lbs) but small, air freight may be cheaper than LTL shipping.



Advantages

- Fastest transit time
- Minimal delays
- Ideal for heavy, high-value, or low-volume shipments

Disadvantages

- Costly
- Not ideal for larger packages



Rail Freight

Rail freight is cost-effective, efficient, and environmentally friendly. It's widely used for shipping bulk construction or hazardous materials.

Sea Freight

Because of its long history, the sea freight industry has well-established processes and protections in place, making it a reliable choice for international shipments. Sea freight is also cost-effective, and size, volume, and weight are all easily accommodated, making sea freight ideal for bulk international shipments. However, it is less efficient than air freight.

Advantages

- Can easily accommodate most cargo
- Cost effective

Disadvantages

- Slower than other forms of international freight shipping



FCL (Full Container Load)

FCL shipping is typically a sea freight designation.

When shipping FCL, a full container is used exclusively for a single shipment, and the space is not shared with other cargo. The container doesn't need to be filled to the brim with cargo.

FCL shipments can be cheaper than LCL shipments because the cost per unit of freight is higher with LCL than it is for FCL. FCL is also often faster because containers don't need to be opened.

LCL (Less Than Container Load)

Similar to LTL ground shipping, LCL freight consolidates cargo from various shippers into one container. Like FCL, LCL freight is typically reserved for sea freight. Depending on the size of your shipment, the costs of LCL shipping may be higher than FCL shipping, and it will take also longer to arrive.



Freight Shipping Classifications

In the United States, each commodity or type of product is assigned a National Motor Freight Classification (NMFC).

Freight classifications are defined by the National Motor Freight Traffic Association (NMFTA), and establish a standardized system designed to provide consumers (both residential and commercial) with a uniform pricing structure when transporting freight.

The freight class of the cargo you plan to ship helps determine the cost of your shipment, and it's also important information to have on hand if you need to make a claim on a lost or damaged shipment.

Freight class is determined by four factors:

1. *Density*
2. *Stowability*
3. *Handling*
4. *Liability*

Let's take a closer look at each of these factors.

Density

Density describes **the space your cargo occupies in relation to its weight**. It's calculated by dividing the weight of the item in pounds by its volume in cubic feet. Unless there are any major concerns with stowability, handling, or liability, density is the most significant factor when assigning a freight class.

How to calculate density:

1. Measure the length, width, and height in inches of your freight in its packaging.
2. Multiply Length x Width x Height to calculate the volume of your cargo in cubic inches.

$$L \times W \times H = \text{inches}^3$$

3. To calculate cubic feet, divide the volume of your freight in inches³ by 1,728 (the number of cubic inches in a cubic foot).

$$\text{inches}^3 / 1,728 = \text{feet}^3$$

4. To calculate density, divide the weight of your freight by total cubic feet.

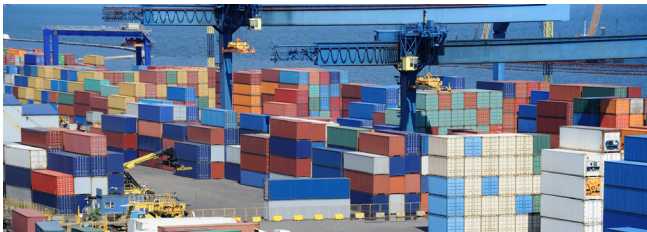
$$\text{feet}^3 \times \text{weight in lbs} = \text{freight density}$$

Stowability

Stowability quantifies **the ease or difficulty of loading and carrying your cargo onto and off of the truck.**

Most freight is easily stowable in trucks, trains, and boats, but some cargo is regulated by government or carrier policies that will make stowability more difficult. For example:

- Some items cannot be stowed together.
- Hazardous materials are transported according to specific safety policies and regulations.
- Excessive weight, length, or oddly shaped protrusions may make it impossible to load your cargo with other freight.
- Some freight can't bear additional load, and therefore can't be stacked.



Handling

Freight is often loaded using mechanical equipment. Most freight poses no difficulties, but some cargo requires **special attention because of its weight, shape, fragility, or other safety hazards.**

Liability

Liability measures the probability of freight theft or damage, as well as the likelihood of damage due to adjacent freight. Perishable cargo, or cargo that is prone to spontaneous combustion or explosion, is classified according to liability and assigned a value per pound.

Freight Classifications (lowest cost to highest cost)

There are 18 freight classifications. Use this chart to help determine your freight classification:

Class Name	Examples	Weight
50	Cargo that fits onto a standard, shrink-wrapped 4x4 foot pallet; very durable	Over 50lbs
Clean Freight		
55	Bricks, cement, hardwood flooring	35-50lbs
60	Car accessories and car parts	30-35lbs
65	Car accessories and parts, bottled beverages, books in boxes	22.5-30lbs
70	Car accessories and parts, food items, automobile engines	15-22.5lbs
77.5	Tires, bathroom fixtures	13.5-15lbs
85	Crated machinery, cast-iron stoves	12-13.5lbs
92.5	Computers, monitors, refrigerators	10.5-12lbs
100	Boat covers, car covers, canvas, wine cases	9-10.5lbs
110	Cabinets, framed artwork, table saw	8-9lbs
125	Small household appliances	7-8lbs
150	Auto sheet metal parts, empty bookcases	6-7lbs
175	Clothing, couches and other stuffed furniture	5-6lbs
200	Auto sheet metal parts, aircraft parts, packaged mattresses	4-5lbs
250	Bamboo furniture, mattress and box spring, plasma TVs	3-4lbs
300	Wood cabinets, tables, chairs	2-3lbs
400	Deer antlers	1-2lbs
500	Bags of gold dust, ping pong balls	<1lb

When to Hire a Freight Shipping Company

There are a few instances when businesses of any size should always hire a freight shipping company to transport their goods—if you're shipping something that's too large for UPS or too small for a traditional mover, or you don't have the facilities or expertise to pack and ship on your own, for example.

You should also consider hiring a freight shipping company to help with:

- Shipping fragile or high-value items
- Single item shipping or large, one-time shipments
- Recurring shipments
- Emergency or expedited shipments



Fragile or High-Value Items

Freight shipping companies are the most qualified to help you ship high-value, specialized, or fragile items. It can be difficult and costly to purchase insurance from a third-party provider for these items, and working directly with your freight shipper to cover valuable items can significantly simplify the process.

Fragile or High-Value items include:

- Artwork, such as paintings or sculpture
- Medical equipment
- Antique furniture

TSI specializes in shipping fragile and high-value items. Visit our website at tsishipping.com for information on shipping these items and to request a quote.

Single item shipping or large, one-time shipments

If you have a single item that requires shipping, or need to ship a large item that you don't have the facilities or expertise to package and transport, a freight shipping company like TSI can help get your shipment where it needs to go.

Single item or large, one-time shipments could include:

- Supplies or promotional materials for trade shows
- Shipping inventory or raw materials to other locations
- Shipping artwork between locations for new exhibits
- One-time donations to natural disaster areas



George works for a manufacturing company that produces generators in Spokane. When a hurricane hit Florida and the south coast, George's company spearheaded a week-long donation campaign to collect supplies of water, food, and other goods from his community to send, along with some generators, to affected areas. Wanting to get these items to the disaster area as quickly as possible after collecting the donations, George reached out to us for help palletizing and picking up these goods. Thanks to our expedited and emergency shipping services, we were able to get these supplies where they were needed most in as little time as possible.

Recurring Shipments

Once you get two or three shipments on the books, the best freight shipping providers can begin arranging your shipments in a single email. This helps streamline the shipping process, leaving you more time to tackle other aspects of running your business.

Recurring shipments might include:

- Shipping machine parts from a sterilizer
- Shipments of supplies to areas recovering from natural disaster, such as clothing and home goods

Emergency or Expedited Shipments

If you need to arrange for a last-minute pickup or expedited shipment, a freight shipping company like TSI will have the expertise to schedule a pickup and ensure your shipment is delivered on time.

Jennifer coordinates logistics for the manufacturing company she works for. Her company frequently sends machines and equipment to a leading provider of medical devices, and when her client contacted her in need of an emergency shipment, Jennifer reached out to us for help. We found a team of drivers who worked 24 hours a day to get the equipment where it needed to be safely.

Common emergency or expedited shipments include:

- Medical equipment, such as equipment that's needed at another location in your network, or equipment that needs immediate repair
- Artwork, such as shipping original paintings or sculptures to a gallery on time for an opening or show
- Construction equipment
- Supplies and equipment to natural disaster zones
- Last-minute holiday shipments, such as retail businesses sending inventory to other locations
- Shipments of seasonal goods
- Returning rental equipment before lease-end dates

Karl's small business, based in Tulsa, leased a 3D printer from a company in Pittsburgh to create a prototype of a new product he is developing. After printing a successful prototype, Karl got carried away with the other aspects of running his business, and forgot he needed to ship the 3D printer back to its manufacturer. Suddenly, his lease-end date was looming, and Karl needed to get the printer back to the supplier in 2 days or he'd be charged a penalty. We helped Karl organize an expedited shipment, and he was able to get the printer back to the supplier on time.

How Freight Shipping Can Benefit Small, Medium, and Large Businesses

Businesses of every size rely on freight shipping, whether you're a small business shipping handmade furniture to select clients or a large corporation with a nationwide chain of warehouses. From acquiring supplies and materials to sending goods to customers or other stops on your supply chain, you will have to work with a freight shipping company at some point in the course of your business's day-to-day operations.

Let's take a closer look at how small, medium, and large businesses can benefit from freight shipping.

Small Businesses

Small business owners often have to wear multiple hats as they manage the full gamut of day-to-day operations, from production to accounting and business development to sales and marketing. Freight shippers can help small businesses as they grow, including:

- Art galleries
- Small medical practices or legal offices
- Taxidermists
- Small offices
- Retail stores



Allan recently relocated from Los Angeles to Denver, and he took his small investment firm with him. Unsure of the best way to relocate his office, Allan reached out to us for help. Together with Allan, our experts created a relocation plan that involved packing up and delivering his sensitive documents, as well as his office equipment, technology, and furniture. With our help, Allan's office move went smoothly and he was able to get right back to business.



Emily, an interior designer in Savannah, GA, commissions a lot of custom furniture from her brother, Peter, who lives in Nashville. She also frequently purchases art from a gallery in Scottsdale, AZ. After experiencing delays as a result of working with different shipping providers, Emily reached out to us to help her coordinate shipments from both locations to her clients in Savannah. Now, her clients' furniture and artwork arrives on time and undamaged, her projects progress on schedule, and her clients are even happier than ever with her work.

PRO TIP: If you're shipping art, make sure you work with a freight shipping company that can provide the appropriate insurance.

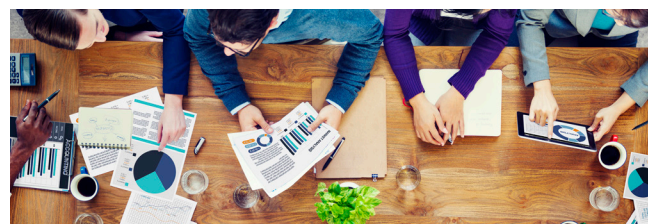
Partnering with a freight service provider leaves small business owners with more time to deal with the other important aspects of running their business, like earning new clients and increasing your revenue.

If your small business's client base is growing, a freight shipping company like TSI can help you manage the increased workload and prevent any disruption to your current production and shipping schedule. Freight shipping can also help get your products to customers

you may not have been able to reach before, especially if your business sells items that typical shipping services like USPS, UPS, or FedEx can't handle, such as furniture or mattresses. They do this by:

- **Speeding up the quote process.** If you regularly ship packages or goods to customers, shipping companies will streamline the process so that you can schedule a pickup and delivery in as quick as a single email.
- **Offering flexible shipping methods** that can be tailored to meet the needs of small businesses. For example, LTL (less than truckload) shipments let you share the space and cost of shipping with others, and are ideal for shipments that won't fill a whole trailer. And since you don't have to wait till there is a full truckload to ship, it can also reduce shipping times.
- **Simplifying scheduled pickups.**
- **Tracking and reporting shipments and delays.**
- **Taking the guesswork out of determining freight class.**

If you have questions about how to prepare your goods for shipping, the best shipping companies can also provide packing tips to ensure your shipment makes it on time and in one piece.



Medium-sized Businesses

If you're the owner or logistics manager for a medium-sized business, chances are you've already ironed out the shipping strategy that works best for your business.

But no matter how streamlined your process is, sometimes there are items or orders that require special consideration, or which can't be transported by a normal shipping company, such as:

- Medical equipment like chiropractor tables or X-ray machines.
- Artwork. Many freight companies won't ship artwork because they can't insure it. If you are shipping artwork, we can help!
- Machinery, such as printers or manufacturing equipment.
- Engines.

On Friday, Rhonda contacted TSI to ship an X-ray machine from Jacksonville, Florida to Dallas, Texas. Rhonda requested same or next day pickup, as the X-ray machine was needed in Dallas no later than the following Wednesday. While a shipment of this nature would normally take about five business days from pickup to delivery, we were able to coordinate with our network of contractors and arrange for two drivers to operate the vehicle in shifts. Rhonda's X-ray machine arrived on time.

Put simply, a freight shipping company can help your medium-sized business manage shipments that require special consideration, and will ensure that your goods or equipment are transported safely and according to your individual needs.

Large Businesses

Large businesses often have their own shipping divisions, but freight shipping providers like TSI can be especially helpful in the event of emergency or expedited shipping, such as:

- Hospitals sending medical equipment to other facilities in their network
- Offices sending furniture or other equipment to other locations

- Donations of equipment and supplies to areas affected by natural disaster
- Lease returns like 3D printers and fax machines
- Last-minute shipments of manufacturing materials
- Sending replacement items or equipment in the event of breakdown, damage, or service reparations

Jared is the logistics manager for a company that manufactures bullet-proof modular office spaces. He had trouble finding a reliable, cost-effective shipping partner who could help his company ship their unique product to buyers around the country. Using our expansive network of logistics professionals, we were able to help Jared create a flexible shipping plan that works for his business, as well as for his customers.

Shipping Your Business's Special Items & Equipment

When you're shipping items that require special care like artwork, medical equipment, automotive parts, or other high-value items, it's especially important to prepare and package your shipment before pickup.

To help make sure your fragile or high-value items make it to their destination safely, we've put together some tips for packaging some of the most commonly shipped special care items, including:

- Artwork
- Medical equipment
- Engines

PRO TIP: If you have the ability to crate your shipment, always crate. Crates provide more protection than any other form of packing, which makes them ideal for fragile or high-value shipments.



Artwork

Theresa is a sculptor based in Brooklyn, New York. A national corporation recently commissioned her to create a series of large sculptures to display in their offices located around the country. Theresa wasn't sure about the best way to ship these fragile sculptures to their destination, so she called us. We helped Theresa create a shipping plan that lets her focus on her sculptures - our artwork shipping professionals take care of crating the fragile and bulky sculptures and ship them safely to their final destination.

If you own or are in charge of managing shipments for an art gallery, ensuring that artwork is properly packaged is of utmost importance. Your clients have trusted you with a high-value purchase, and there's nothing quite as disappointing as patiently awaiting the arrival of a new piece of art only to find it damaged as a result of shoddy or ineffective packaging.

The specific procedures for shipping art will vary based on the specific piece being shipped, as well as the policies and protocols worked out by your gallery.

Shipping Paintings

- **Measure the artwork** carefully so you can choose the right size box. Opt for a box that provides a minimum of 2" clearance on all sides. If necessary, you may wish to prioritize box height and width over depth.

- **Wrap artwork in thin muslin or acid-free cloth** to protect it from packing materials and prevent any discoloration. Packing materials like bubble wrap can leave an imprint if it comes into direct contact with the surface of the artwork.

- **Plastic wrap creates a protective coating** against scratches and scuffs. Make sure the plastic doesn't come into direct contact with the surface of the artwork, and cut small slits in the back of the plastic wrap so the artwork can breathe.

- **Large, flat sheets of cardboard can add extra padding**, and greatly reduce the likelihood of something piercing or scuffing your artwork. It will also help absorb shock if the box is dropped. Leave a few inches of buffer around the entire edge of the frame, then tape the edges together to form a triangle.

- You can't package art too securely. **Bubble wrap** adds another layer of protection—in addition to cushioning the artwork, it also fills the empty spaces in your box, which prevents unwanted movement or shifting. Larger 1" bubbles are ideal. Don't allow bubble wrap to touch the art—it can stick to the varnish and leave an imprint.

- **Never use packing peanuts to pack paintings**—they will shift and settle to the bottom of the box during shipment. They're also harder on the environment, and they're messier, which doesn't exactly create a great experience for your customer when they're unboxing their new acquisition.

- **Only use high-quality packing tape.** It may cost more, but you'll need less of it, and it'll be easier to use. Tape all seams, including the short seams at the edge of each flap. There's no such thing as too much tape.

- **If you're shipping artwork behind glass**, tape an "X" (or fully cover the glass surface) to control damage. This will prevent shards of glass from destroying the art.

Shipping Sculpture

- **Wrap particularly fragile spots** with extra bubble wrap or foam. **Wrap detachable parts** separately.

- **Secure wrapping in place using packing tape**, taking care to ensure that tape doesn't come into contact with the sculpture.



- **Always crate** sculpture.
- **Fill the bottom of your crate with packing peanuts,** or some other form of cushioning. The bottom layer should be about 2-3 inches deep.
- **Place the sculpture upright into the box or crate,** then secure with 2-3 inches of packing material on each side. This will help protect against shifting and vibration in transit.

Medical Equipment

Medical equipment is complex, delicate, and expensive. And because each piece of equipment is unique, moving laboratories or specialized medical equipment between locations requires its own special considerations when shipping.

The most commonly shipped pieces of medical equipment include:

- X-ray and ultrasound machines
- Chiropractic tables
- Surgery tables
- Centrifuges
- Laser systems
- Flow cytometers



When you're shipping medical equipment, there are three main dangers to protect your equipment from:

1. Moisture
2. Shock
3. Vibration

The best way to protect against these sources of damage is to ensure that your equipment is properly packaged for shipment. Custom crating and double-wall corrugated containers are the safest options:

- **Custom crating offers the best protection,** but is also more difficult and expensive to move.
- **Corrugated containers are easier to move,** but they provide less protection.



You may also wish to consider shipping your equipment using a truck with air-ride suspension - this will help reduce vibration and the risk of shock.

Christine oversees operations at a hospital in Denver, CO. When one of the machines at her hospital began malfunctioning, Christine decided to send it to the original manufacturer in Seattle for calibration. Not wanting to take any risks transporting this million-dollar piece of equipment, Christine contacted us to help her ship the machine. We helped her find a shipper who could supply an air-ride suspension truck, along with a team of drivers who would stay with the equipment in order to ensure it made it back to her hospital safe and sound.

Medical equipment assembled in a cleanroom will need to be shipped according to special protocols, such as using special packaging to prevent contamination, cleanroom foams for cushioning, or cleanroom foil packages to block particulates. Some equipment can also only be packaged using supplies and techniques approved by the FDA to ensure that the equipment

doesn't become contaminated.

Other special considerations when shipping medical equipment include:

- Safely packaging and transporting equipment that is **of abnormal length or height**.
- **Equipment in multiple parts.** In these instances, some people opt to create a custom crate for the more expensive parts, and send other elements using standard shipping services. It can also be cheaper to design a custom crate that can house your primary equipment, as well as other items needed to successfully install equipment upon arrival. The advantage of creating a custom crate is that everything is guaranteed to arrive at the same time.
- **Excessive weight.** Equipment weighing more than 1,000 lbs may require specially reinforced heavy-duty skids.
- **Balance.** Top-heavy equipment can be difficult to move because it poses danger to both the machine and the people moving it. If balance is an issue, your shipment may require custom bracing at the top to ensure equipment stays upright.

Here are some additional tips to keep in mind when shipping medical equipment:

- When possible, remove all batteries and make sure all devices are turned off.
- Purchase additional shipping insurance to protect your equipment in case of damage in transit.
- Consider the facilities available at your final destination so your packaging can be specially designed to match the conditions it will meet upon delivery. For example, not all medical facilities have loading docks designed to handle special equipment. If this is the case, you may need to adjust your packaging accordingly.

Engines and Other Automotive Parts

Whether you're having an engine rebuilt, are selling

automotive parts, or are buying a new part for your car, engines and automotive parts are often heavy or irregularly shaped, which makes them difficult to ship.

Engines

Engines require special considerations that other automotive parts like bumpers or hoods don't. Because they are heavy and are considered hazardous materials, engines can't be shipped using the USPS or other courier services. For this reason, engines are commonly shipped via LTL freight.

Nolan collects and restores vintage cars. He recently started restoring a rusty old Chevrolet Bel Air at his home garage just outside of Kansas City, but the closest engine he could find was located in Miami. The seller, who typically only sells parts to other Florida-based car enthusiasts, called us to help transport the engine to Nolan. We worked with the seller to properly package the vintage engine for safe transport, and with a bit of elbow grease, Nolan got the new engine running and is now the proud owner of a completely restored Bel Air.

There are two ways to pack engines: in a crate, or on a pallet. Crate and pallet shipments both have different freight classifications, and will therefore incur different costs. Let's take a look at these options:

1. Crate

Freight Class: 70

When crating an engine, the engine must be properly secured inside the crate to prevent it from shifting around in transit. This can be done using appropriate packing materials, such as engineered foam enclosures.



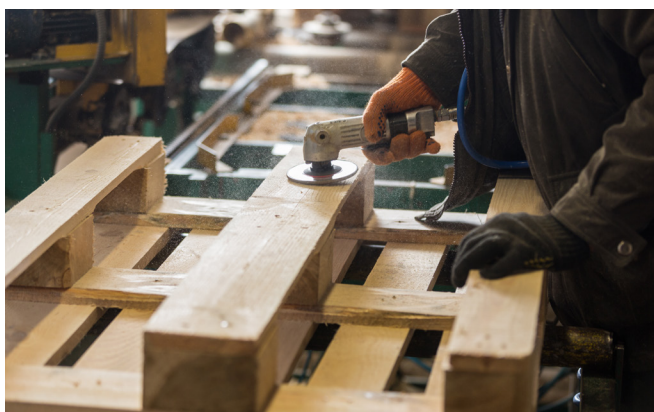
Crating is more secure than palletizing an engine, and will reduce the likelihood of damage, but crates can be more difficult to handle and may be more expensive to produce.

2. Pallet

Freight Class: 85

Palletizing is more popular than crating because of its affordability and ease of handling compared to crates, but it requires more effort when it comes to securely packing and preparing your shipment.

When palletizing an engine, the engine must be placed in the center of the pallet, then secured into place using ropes, chains, or ratcheting straps. The engine must then be entirely concealed: start by covering the engine with cardboard or other insulating material, then wrap the entire thing, including the pallet, in shrink wrap. Make sure you leave open access to the fuel intakes when covering your engine—your LTL carrier will check these intakes to ensure fluids are removed.



Drain the Fluids

Regardless of whether you choose to crate or palletize your engine, you'll have to drain all fluids before you ship. Fluids such as oil and even water can pose serious danger in transit, and they can also cause packaging materials to deteriorate.

Other Automotive Parts

Bumpers: Bumpers are bulky and cumbersome, but they are relatively easy to ship. The hardest part is finding a box that will fit your bumper. Once you find one, add a protective layer to the bottom of the box, place your bumper inside, and fill any empty spaces with packing materials to support the bumper's spine and prevent it from shifting in transit.

Hoods: Like bumpers, it can be hard to find a box that will fit a hood, but once you find a correctly sized box, preparing a hood for shipment is largely a matter of packing it properly and selecting the right shipping service. If you can't find a box, the best option is to crate the new hood. When packing, wrap the hood in bubble wrap, and take special care around the corners. Ensure the hood is sufficiently cushioned inside the box and that it doesn't shift when moved.



Grills: Grills are more delicate than other automotive parts. To keep them safe and prevent damage, wrap them in a couple inches of bubble wrap (at least 2.5 inches on all sides). Make sure you protect the corners and provide enough cushioning inside your box or crate.

Hubcaps: Hubcaps are easy to package. Choose an appropriately sized box, and follow general packing tips to keep them safe—wrap them individually, and provide adequate cushioning inside the box.

Tires: Tires are heavy but durable. Use a separate box for each tire, select a strong box, and use sufficient internal packing materials.



Packing Materials

For lighter parts like bumpers or hoods, air pillow packing, and kraft paper are good packing materials.

For heavier automotive parts like engines, use spray filler foam, foam-in-place, or engineered foam enclosures.



How can TSI help your business?

If you run a small or medium-sized business and you don't have a dedicated shipping division, TSI can help get your goods where they need to go safely and on time. If you manage shipping or receiving for a large business, we can help you coordinate any last-minute, emergency, or expedited shipments.

Our nationwide network of contractors gives us the flexibility to coordinate just about any shipment. We are equipped to handle specific or specialized shipping situations that USPS, UPS, FedEx, and other freight shipping providers often can't manage, including:

- High value items
- Items with specific needs that can't be filled by other freight providers, such as sealed trailers
- Time-critical shipments

We can also help businesses of any size plan and undertake office or employee relocations.

Call us 866-328-4191 for an instant quote or visit us online at www.tsishipping.com to learn more.