

Freight Brokers Academy

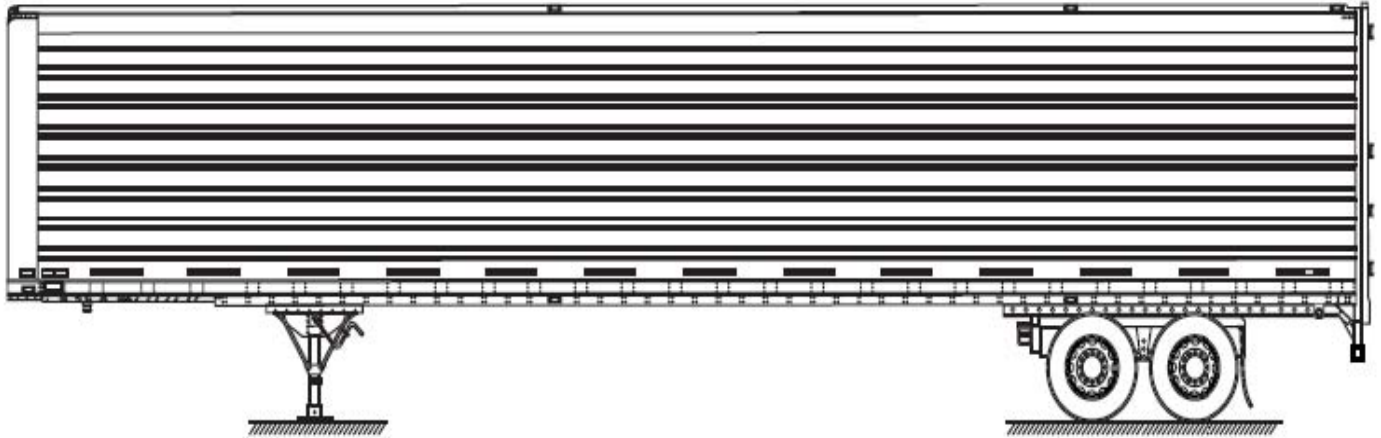
Training Manual



# Freight Broker Basics Online Course:

## **Module 2: Types of Carrier Equipment**

## Common Equipment Types



### Dry Van – Box Trailer

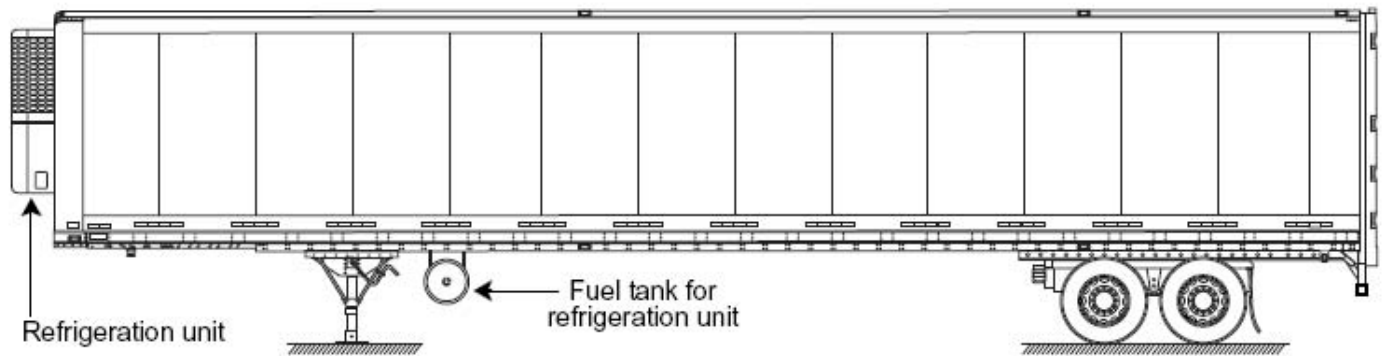
Freight trailers (also called dry vans or simply "boxes") are designed to carry virtually any kind of boxed, crated, or palletized freight.

#### Configurations

Standard lengths: 28', 32', 36', 40', 42', 43', 45', 48' and 53'. Standard widths: 96"-102" Maximum weight loaded: 46,000 lbs. Standard heights: 12.5'-13.5' overall. Shorter trailers are typically used for local deliveries or in tandem "truck trains." Standard axle/wheel configuration: 2-axle/8-wheel.

#### Features and Options

- Rear swing doors or roll up doors. One or two side doors, rollerbeds.
- When used for produce "Produce Vents" are added and insulated with Fiberglass, Wood or Tin roofs.



### Reefer (Refrigerated Trailer)

#### Use

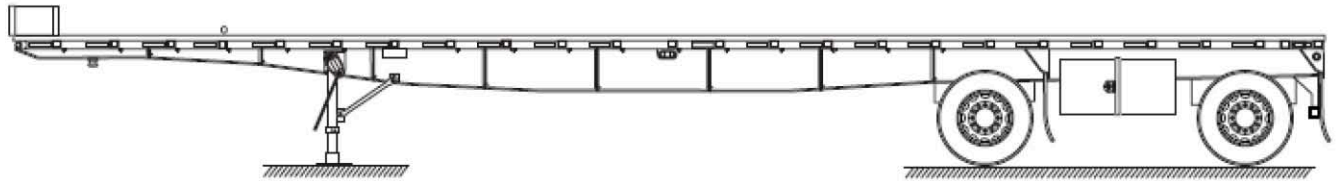
Reefers are insulated and refrigerated trailers designed to transport perishable items. Commodities transported include vegetables, fruits, milk, juices, meats and poultry

#### Configurations

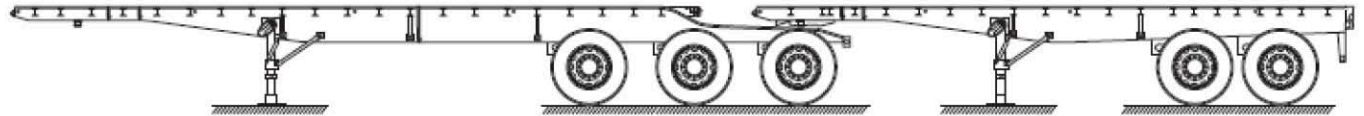
- Standard lengths: 28', 32', 36', 40', 48' and 53'.
- Standard widths: 96"-102".
- Standard heights: 12.5'-13.5' overall.
- Shorter trailers are typically used for local deliveries or in tandem "truck trains."
- Standard axle/wheel configuration: 2-axle/8-wheel. For heavier loads: 3-axle/12-wheel or 4-axle/ 1 wheel configurations are also available.

#### Features and Options

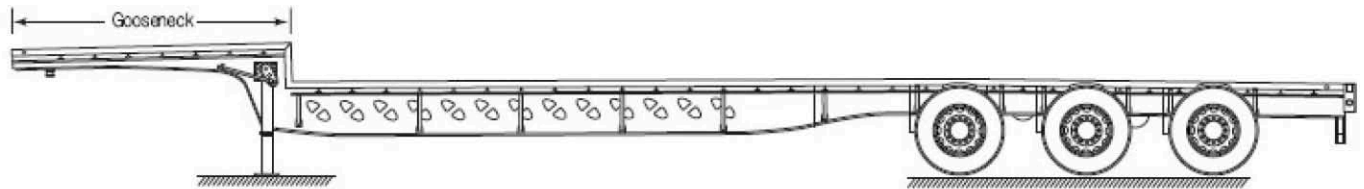
- Rear swing doors or roll up doors.
- One or two side doors.
- Moveable bulkheads, liftgates, and temperature recording and monitoring systems.
- Single or multi-temperature models.



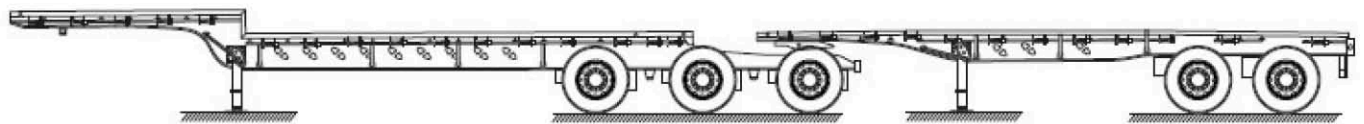
Side View



Tandem Side View



Single Drop Deck Trailer  
Single



Single Drop Deck Trailer  
Tandem

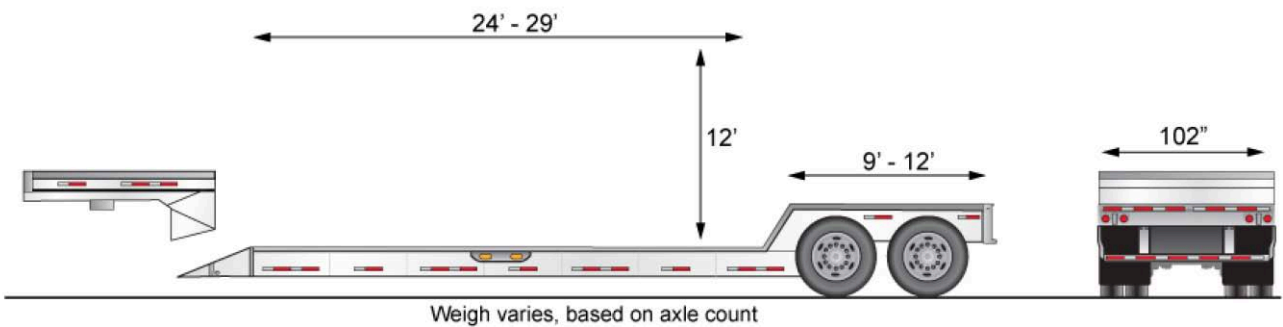
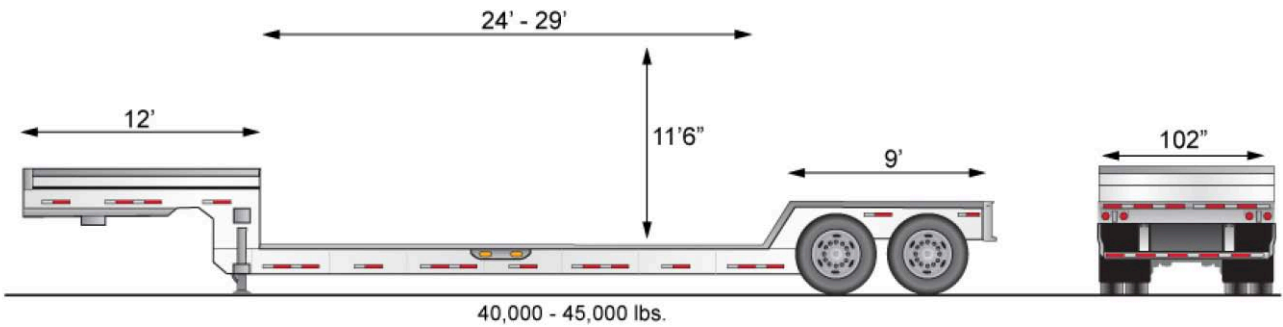
## Use

### Flatbeds and Single Drop Decks (Step Decks)

- Platform (flat bed) trailers are designed to transport oversize cargo that normally would not fit into standard freight trailers.
- Platform trailers are used especially for the transport of goods that must be loaded from the side or top of the trailer.
- Standard cargo for platform trailers includes: ocean freight containers, machinery, construction equipment, lumber, plywood, steel, pipe and rebar.

## Variations

- Standard lengths: 26', 40', 42', 45', and 48'.
- Extended Lengths: 60', 65' and 70'



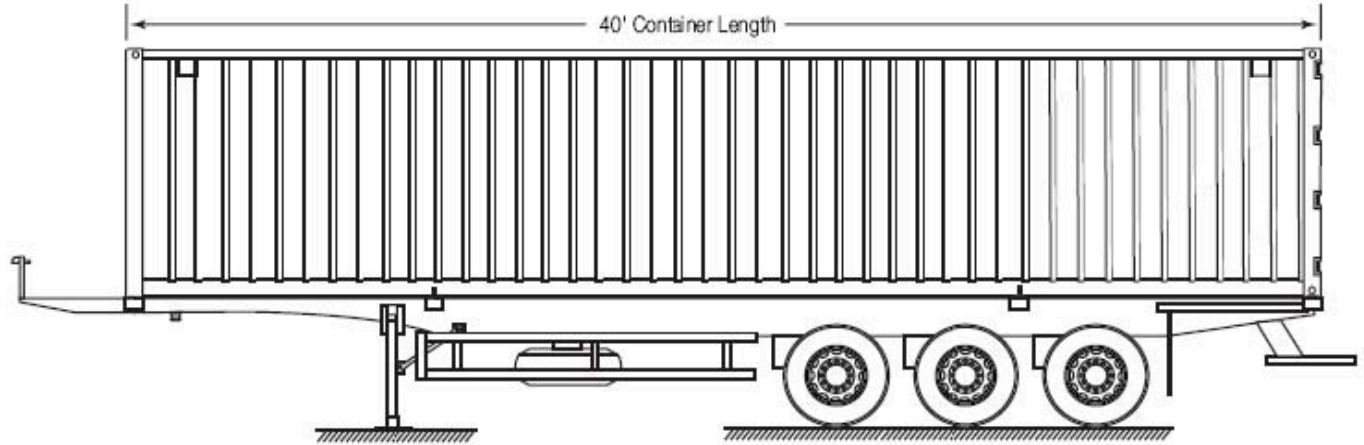
### Double Drop's and RGN's (Removable Goose Necks)

#### Use

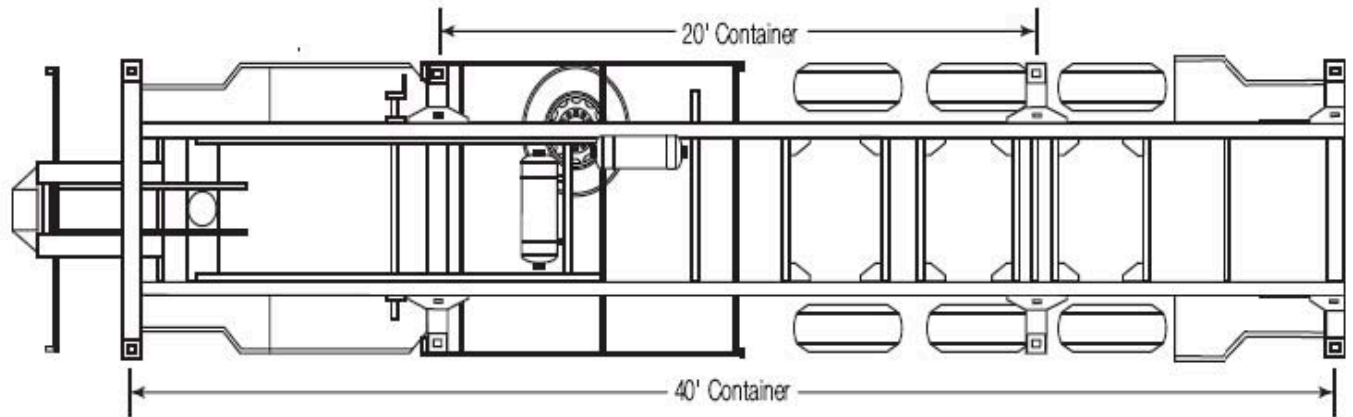
- Specialty trailers are designed to transport oversize cargo that normally would not fit onto standard freight trailers.
- Specialty trailers are used especially for the transport of goods that must be loaded from the top of the trailer.
- Standard cargo for specialty trailers includes: Heavy Equipment, Machinery, Farm Equipment, Windmills, Transformer's etc.

#### Variations

- Standard lengths: 48' and 53'.
- Extended Lengths: 60', 65' and 70'
- Weight allotted for hauling determined by Axle's included on trailer and configurations.



Side View - With 40' container mounted on top



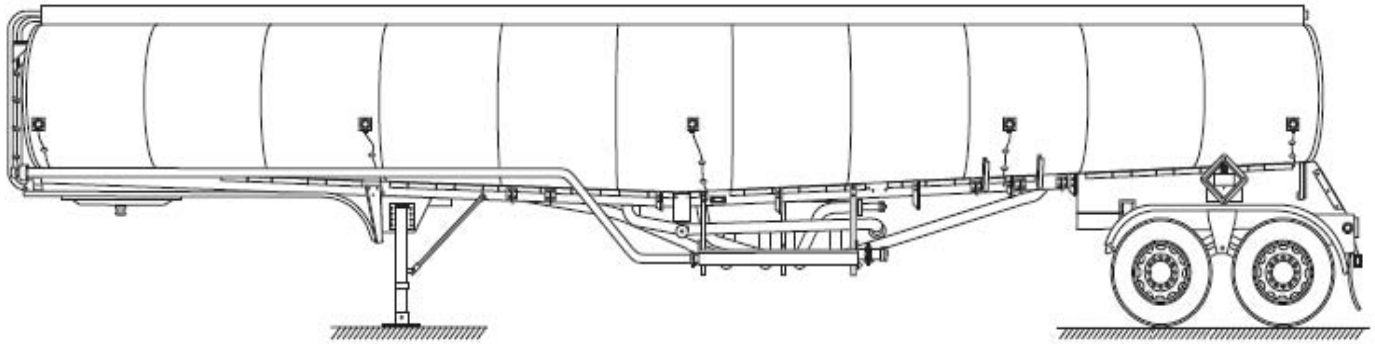
Top View (Note positioning for 20' and 40' containers)

### Containers (Skeletal Carrier / Drayage)

- Container carriers are designed to transport standard international cargo containers of 20'--45'.
- Some models are able to transport non-standard and oversize containers.

### Configurations

- Models designed to transport a single specific size container (20', 40', 45', etc.)
- Models designed in adjustable ("zoom") configurations to work with a range of different sized standard and non-standard containers.
- Standard axle/wheel configuration: 2-axle/8-wheel. For heavier loads: 3-axle/12-wheel configurations are also available.
- Specially designed brackets hold the container to the carrier.



### **Tankers (Food Grade / Chemicals / Petroleum)**

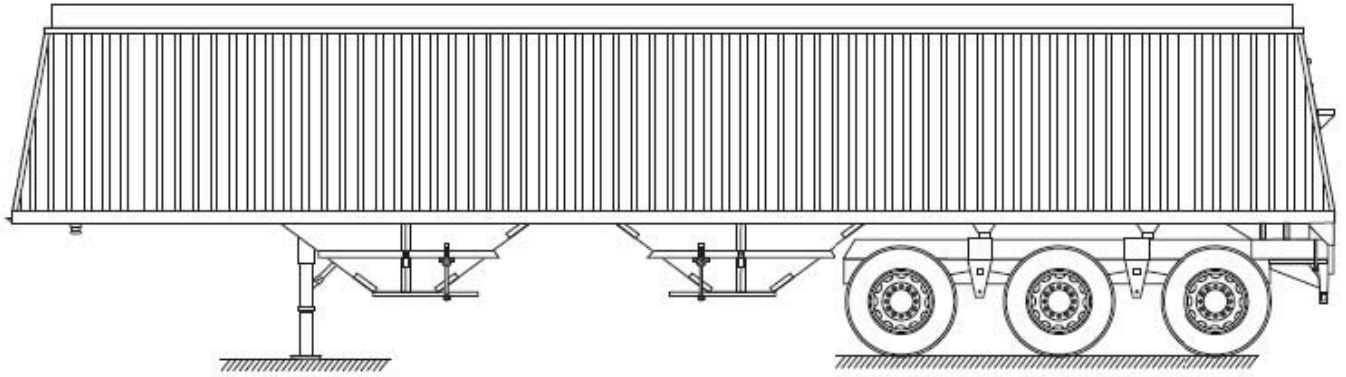
- Tanker trailers are designed to carry a wide variety of fluid cargo.
- Standard cargo for tankers includes: refined gasoline, heating oil, natural gas, acids, industrial chemicals, caustic soda, clay slurry, cooking oils, corn syrup, orange juice, milk, and other foodstuffs. Some fluid cargo requires specially designed tanker trailers. For example, tankers designed to transport caustic soda and certain acids require sidewalls, exterior paint and fittings that will withstand the corrosive effects of the cargo.

#### **Variations**

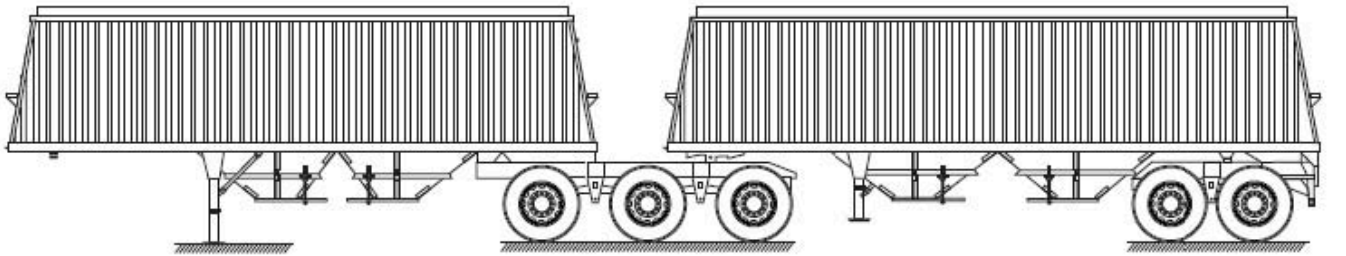
- Standard lengths: 40', 42', 43', 45', 48' and 53'.
- Standard axle/wheel configuration: 2-axle/8-wheel. For heavier loads: 3-axle/12-wheel or 4-axle/16-wheel configurations are also available.

#### **Features and Options**

- Multiple Compartments (1-7)
- Discharge Pumps
- Metering Equipment
- Insulated Tanks
- Pressure Tanks
- Ladders
- Walkways
- Hose Carriers
- Belly cabinets



Dry Bulk (Grain) Trailer - Single



Dry Bulk (Grain) Trailer - Tandem

**Dry Bulk Trailer (Hopper)**



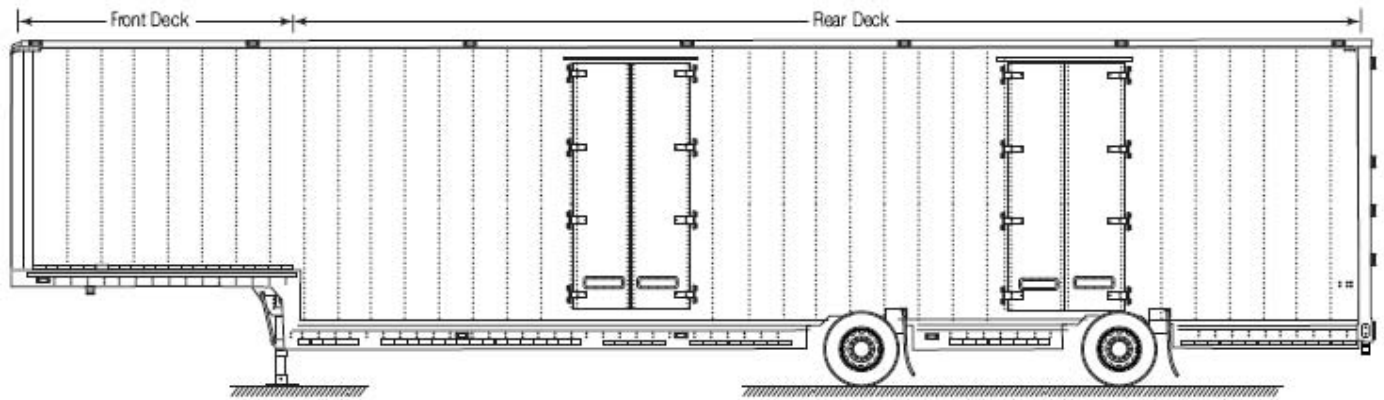
rice, beans, gravel, limestone (loose and pulverized), and sand.

### **Variations**

- Standard lengths: 26' to 42'.
- Standard widths: 96"-102".
- Hopper configurations: single, double and triple.
- Open and closed end configurations.
- Steel and Aluminum models.
- Available as singles, tandems, and three trailer truck "trains".

### **Notes**

- Dry bulk trailers use rolled tarpaulin tops rather than rigid tops.
- Typical dry bulk trailers use hoppers to unload, however, others empty conveyor systems.
- Different trailer manufacturers worldwide produce a variety of models designed for different freight configurations.



### **Deep Drop Furniture/Logistics Van**

#### **Use**

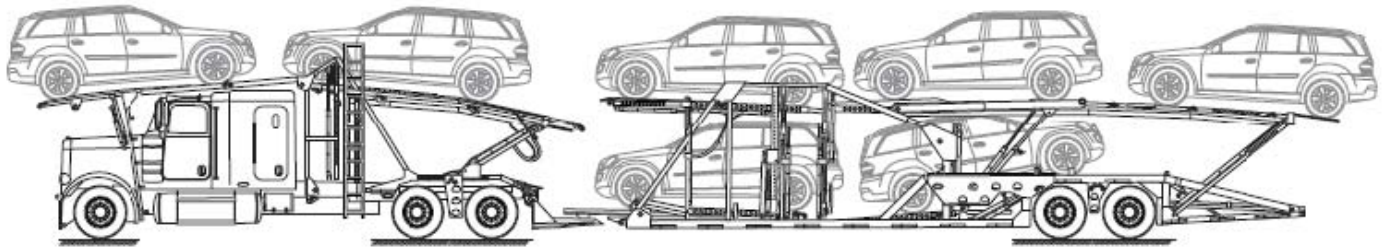
- Deep drop vans are specially designed to transport large, bulky and relatively light cargo (weight to volume).
- Deep drop vans are used especially in the transport of furniture, household goods and electronics.

#### **Variations**

- Standard lengths: 45', 48' and 53' overall.
- Standard heights: 13' 6" overall.
- Standard widths: 96"-102" overall.
- Rear door(s): Swing doors are standard.
- Side doors: 1 or 2 side swing doors.

#### **Features and Options**

- Lower rear deck to facilitate loading.
- Air ride suspensions to protect fragile cargo.
- Lockable belly compartments and Ramps.



## **Auto Transport Tractor Trailer**

### **Use**

Auto transport tractor trailers are designed to transport automobiles, sport utility vehicles, and small vans, from manufacturing plants to distributors, from manufacturing plants to ports, but most commonly from seaports (Ro-Ro vessels) to inland distributors.

### **Variations**

Auto transporters come in two general configurations:

- 1 Truck tractor trailer combinations where the truck tractor transports up to three vehicles and the trailer transports up to six vehicles.
- 2 Trailers designed to transport up to nine vehicles pulled by a standard truck tractor.

Specially designed covered auto transport trailers are available for the transport of high value automobiles.

### **Notes**

- A substantial market has emerged for the transport of private party automobiles in household relocation and the transport of specialty and high value vehicles domestically and internationally.
- Different trailer manufacturers worldwide produce a variety of models designed for different freight configurations.
- Dimensional, weight and capacity data are a function of cargo requirements, trailer manufacturer, trailer model and national, state and provincial roadway requirements.

## General Guidelines

**Permitted) Width:** 96 inches **Width:** (Designated Highways) : 102 inches **Height:** 13 feet, 6 inches

**GVW:** (Gross Vehicle Weight): 80,000 lbs **Length of**

**Semitrailer:** 53 feet **Length of Semitrailer:** (Non Designated Highway): 50 Feet

**Length of Combination Tractor Trailer:** (With or Without Load) No Limitation

**Units Permitted in Train:** (2) Semitrailers or Truck and Semitrailer

- Truck-Tractor, Semitrailer and Trailer or Tractor and **Length of a Combination** of Tractor, Semitrailer, and Trailer or Tractor and (2) Semitrailers or truck and semitrailer of trailer with or without load or pickup truck, Semitrailer designed for recreational living purposes, and additional trailer or Semitrailer: 65 feet
  - **Semitrailers** longer than 50 feet shall have a wheelbase of 37 feet to 41 feet. This is measured from the kingpin coupling to the center of the axles or to the center of the tandem axle assembly if equipped with (2) axles.
  - Semitrailers longer than 50 feet are limited to 3 axles.
  - Semitrailers longer than 50 feet shall operate on designated highways only.
  - **Semitrailers and Trailers:** Shall be measured from the front vertical plane of the foremost transverse load supporting structure to the rearmost transverse load supporting structure. Length shall not include safety and energy conservation devices including, but not limited to, impact absorbing bumpers, rear view mirrors, turn signal lamps, marker lamps, steps and hand holds for entry and egress, flexible fender extensions, mud flaps or splash and suppressant devices, load induced tire bulge, refrigeration or heating units, or air compressors. A device shall be excluded from a determination of length only if it is not designed or used for the carrying of cargo.
- **Projection Beyond Front of Vehicles:** 3 feet
  - **Overhang beyond rear of vehicles:** Any amount is permissible if the legal length is not exceeded. However, if this overhang is 4 feet or more, there shall be displayed on the extreme rear of such a load a 12 -Inch red square flag in the daytime and a red light or lantern at night.

## Types of Freight

### Less than Truckload (LTL)

#### What is LTL Freight?

LTL shipments typically weigh between 151 and 20,000 lb (68 and 9,072 kg). Less than truckload carriers collect freight from various shippers and consolidate that freight onto enclosed trailers for linehaul to the delivering terminal or to a hub terminal where the freight will be further sorted and consolidated for additional linehauls. In most cases, drivers start the day by loading up and heading out to make deliveries first, then begin making pickups once the trailer has been emptied for return to the terminal for sorting and delivery next day; thus, most pickups are made in the afternoon and most deliveries are performed in the morning. \*

#### How does the LTL model work?

Pickup/delivery drivers usually have set routes which they travel every day or several times a week, so the driver has an opportunity to develop a rapport with his customers. Once the driver has filled his trailer or completed his assigned route, he returns to his terminal for unloading. The trailer is unloaded and the individual shipments are then weighed and inspected to verify their conformity to the description contained in the accompanying paperwork.

All LTL freight is subject to inspection for this purpose, though not all freight is inspected. Next, the freight is loaded onto an outbound trailer which will forward the freight to a breakbulk, a connection, or to the delivering terminal. An LTL shipment may be handled only once while in transit, or it may be handled multiple times before final delivery is accomplished.

Transit times for LTL freight are longer than for FTL. LTL transit times are not directly related only to the distance between shipper and consignee. Instead, LTL transit times are dependent upon the makeup of the network of Terminals and Breakbulks that are operated by a given carrier and that carrier's beyond agents and interline partners. For example, if a shipment is picked up and delivered by the same freight terminal, or if the freight must be sorted and routed only once while in transit, the freight will likely be delivered on the next business day after pickup. If the freight must be sorted and routed more than once, or if more than one linehaul is required for transportation to the delivering terminal, then the transit time will be longer. Also, delivery to beyond points or remote areas will almost always add days to the transit time.

The main advantage to using an LTL carrier is that a shipment may be transported for a fraction of the cost of hiring an entire truck and trailer for an exclusive shipment. Also, a number of accessorial services are available from LTL carriers, which are not typically offered by FTL carriers. These optional services include lift gate service at pickup or delivery, residential (also known as "non-commercial") service at pickup or delivery, inside delivery, notification prior to delivery, freeze protection, and others. These services are usually billed at a predetermined flat fee or for a weight based surcharge calculated as a rate per pound or per hundredweight.

## FTL and LTL Carrier Integration

Shippers with enough volume of LTL freight may choose to use a Full Truckload Carrier to move the freight directly to a break-bulk facility of an LTL carrier. For example, if a North Carolina shipper has a large quantity of shipments for Western US States such as CA, NV, OR, WA, and ID then the shipper can realize significant cost savings by having an FTL carrier, known as a Linehaul carrier, transport the freight to a breakbulk facility nearest the center of such shipments in terms of the carriers network. In this case the shipper may choose to send the freight to a break-bulk in CA. The use of an FTL carrier to transport this freight is a cost savings because the freight will travel fewer miles in the LTL carrier's network, and a further benefit is realized because the freight will not be unloaded and reloaded as many times. This reduces the incidence of loss and damage in transit.



## Freight Classes

### The Standard for Freight Identification and Classification

The National Motor Freight Classification (NMFC) is a standard that provides a comparison of commodities moving in interstate, intrastate and foreign commerce. It is similar in concept to the groupings or grading systems that serve many other industries. Commodities are grouped into one of 18 classes—from a low of class 50 to a high of class 500—based on an evaluation of four transportation characteristics: density, storability, handling and liability. Together, these characteristics establish a commodity's "transportability."

The four transportation characteristics were prescribed by the Interstate Commerce Commission (ICC) in 1983 and then mandated by its successor agency, the Surface Transportation Board (STB). Although the ICC no longer exists and the STB no longer regulates the classification process, by analyzing commodities on the basis of these characteristics and ONLY on the basis of these characteristics, the NMFC provides both carriers and shippers with a standard by which to begin negotiations and greatly simplifies the comparative evaluation of the many thousands of products moving in today's competitive marketplace.

### The Standard for Packaging, Rules and Bills of Lading

The NMFC specifies minimum packaging requirements to ensure that goods are adequately protected in the motor carrier environment and can be handled and stowed in a manner that is reasonably safe and practicable. It contains various rules that govern and otherwise relate to the classification and/or packaging of commodities as well as procedures for the filing and disposition of claims. It also contains the **Uniform Straight Bill of Lading** and the **North American Uniform through Bill of Lading**, including their Terms and Conditions.

### Resources

**National Motor Freight Traffic Association, Inc.**

<http://www.nmfta.org>

1001 North Fairfax Street, Suite 600 Alexandria, VA 22314 **Toll Free Phone:** (866)411-NMFC (6632) **Fax:** (703)683-6296

## Truckload (TL)

Truckload shipping is the movement of large amounts of cargo, generally the amount necessary to fill an entire semi-trailer or intermodal container. A truckload carrier is a trucking company that generally contracts an entire trailer-load to a single customer. This is as opposed to a less-than truckload (LTL) company that generally mixes freight from several customers in each trailer. One advantage Full Truckload carriers have over LTL carriers is that the freight is never handled en route, whereas an LTL shipment will typically be transported on several different trailers.

Full truckload carriers normally deliver a semi trailer to a shipper who will fill the trailer with freight for one destination. After the trailer is loaded, the driver returns to the shipper to collect the required paperwork (**i.e. Bill of lading, Invoice, and Customs paperwork**) and depart with the trailer containing freight. In most cases the driver then proceeds directly to the consignee and delivers the freight him or herself. Occasionally, a driver will transfer the trailer to another driver who will drive the freight the rest of the way. Full Truckload (FTL) transit times are normally constrained by the driver's availability according to Hours of Service regulations and distance

Because truckload carriers are asked to ship a wide variety of items, a truckload carrier will often specialize in moving a specific kind of freight. Some carriers will primarily transport food and perishable items, whereas others may specialize in moving poisonous and hazardous materials. Carriers will only transport specific freight because different equipment and insurance is needed for the different kinds. There are also federal laws stating which types of freight can be shipped together in the same trailer.





## General Freight

In the United States of America, shipments larger than about 7,000 kg (15,432 lb) are typically classified as “Truckload” (TL), given that it is more efficient and economical for a large shipment to have exclusive use of one larger trailer rather than share space on a smaller LTL trailer. The total weight of a loaded truck (tractor and trailer, 5-axle rig) cannot exceed 36,000 kg (79,366 lb) in the U.S. In ordinary circumstances, long-haul equipment will weigh about 15,000 kg (33,069 lb); leaving about 20,000 kg (44,092 lb) of freight capacity. Similarly a load is limited to the space available in the trailer; normally 48 ft (14.63 m) or 53 ft (16.15 m) long and 2.6 m (102.4 in) wide and 2.7 m (8 ft 10.3 in) high (13 ft 6 in/4.11 m high over all). While express, parcel, and LTL shipments are always intermingled with other shipments on a single piece of equipment and are typically reloaded across multiple pieces of equipment during their transport, TL shipments usually travel as the only shipment on a trailer and TL shipments usually deliver on exactly the same trailer as they are picked up on.

Truckload (TL) carriers usually charge a rate per kilometer or mile. The rate varies depending on the distance, geographic location of the delivery, items being shipped, equipment type required, and service times required. TL shipments usually receive a variety of surcharges very similar to those described for LTL shipments above. In the TL market, there are thousands more small carriers than in the LTL market; so the use of transportation intermediaries or “brokers” is extremely common.



Another cost-saving method is facilitating pickups or deliveries at the carrier’s terminals. By doing this, shippers avoid any accessorial fees that might normally be charged for lift gate, residential pickup/delivery, inside pickup/delivery or notifications/appointments. Carriers or intermediaries can provide shippers with the address and phone number for the closest shipping terminal to the origin and/or destination.

Shipping experts optimize their service and costs by sampling rates from several carriers, brokers, and online marketplaces. When obtaining rates from different providers, shippers may find quite a wide range in the pricing offered. If a shipper uses a broker, freight forwarder, or other transportation intermediary, it is common for the shipper to receive a copy of the carrier's Federal Operating Authority. Freight brokers and intermediaries are also required by Federal Law to be licensed by the Federal Highway Administration. Experienced shippers avoid unlicensed brokers and forwarders; because if brokers are working outside the law by not having a Federal Operating License, the shipper has no protection in the event of a problem. Also shippers normally ask for a copy of the broker's insurance certificate and any specific insurance that applies to the shipment.

There are many types of freight that move daily on America's interstates. It is your job as a freight broker to decide which type of freight will be the most profitable and easily placed by your brokerage. I will outline below the most common types that most freight brokerages will deal with on a daily basis.

## Produce



America's insatiable appetite for food and delicacies keep Reefer's running continuously from all parts of the country. Produce Warehouses, Wholesalers and Supermarkets need to replenish their inventories daily with fresh vegetables to keep up with the demand of the American consumer. Produce is in my opinion the easiest type of freight to get. Your customer will be the Grower, Packer, Produce Cooler, Produce Broker or the Consignee himself.

Produce loads are generally very competitive for pricing as the shipper needs to keep transportation cost minimal. Depending on the type of produce, shippers will require the carrier load minimum amounts or pay on weight. Shippers will do this so they can be assured that the carrier loads the maximum amount of product by law. I will outline below how most shippers will require the carrier to load for specific types of produce around the country.

- **Rates** -Overall rates for the transportation of produce are most generally low throughout the country. Unless you have access to a core group of carriers these types of loads will require a lot of work.
- **Claims** -To keep claims to a minimum, I suggest you use carriers with a great deal of experience in hauling produce. These carriers will have newer equipment that is maintained accordingly, temperature thermometers, and good insurance.
- **Detention** -Inexperienced carriers will often attempt to bill you for detention because of the long periods of wait time to load for produce. This caused by product unavailability, number of carriers loading or seasonal delays.
- **Carrier Fines** -Produce shippers and receivers are notorious for implementing fines for delays in delivery. These fines are incurred due to the receiver having to purchase his product at terminal markets in their area. Shippers will then impose fines for the difference in price to the carrier due to the delay.

### Great Link for Shippers

- <http://www.producemarketguide.com/theguide/shippers.asp>

## Produce



### Consigner Procedures

When produce or refrigerated freight is prepared for shipping it is most generally fresh from the field. When your carrier arrives for his scheduled pickup the product may or may not be ready due to product availability. He will then be waiting on line until the product arrives at the shipping location.

Produce must be cooled down prior

to being loaded on trucks or spoilage and damage will occur during transit. This will

occur because the out layers of produce that is palletized whether bagged, boxed or loose will cool down to the temperature of the trailer, however they will also serve as an insulation barrier against the product that is underneath the top layers. You should encourage your carrier to exercise some due diligence as produce shippers file the most insurance claims on freight because the profit margins on their products are so slim and freight charges are usually very high during peak seasons and areas.

### Consignee Procedures

When produce or refrigerated freight is delivered most generally consignees have a set of guidelines that are followed before receipt of the freight. If these guidelines are not followed the load could be rejected and a claim situation could arise. Here is an example of a consignee receiving procedures.

- 1 The condition of the trailer is examined. If there is any evidence of insect or rodent infestation, the load is rejected. If the floor of the trailer is dirty, the load is rejected.
- 2 Pulp temperatures of product is taken and recorded from each pallet removed from the trailer. (Industry standard is tail, middle, and nose of the trailer.) These recorded temperatures are then compared to tolerant temperatures for the product.
- 3 Product quality is examined on each pallet.

### Resources & Links

- Produce Marketing Association – <http://www.pma.com>

## Refrigerated

When you are transporting refrigerated loads there are several variables you need to be aware of prior to the loading of cargo and during the lifecycle of the load. Below is a list of items you need to be aware of that your carrier will go through while transporting your freight and also that will happen if a problem occurs once delivered.



- 1 Your carrier must arrive **Clean & Dry** to load your cargo
- 2 Your carrier must arrive at the consignee **Pre Cooled** to the specified temperature for the load.
- 3 When your cargo is loaded your carrier will need to make sure that the cargo is not loaded above the danger line in his trailer. If this happens the cool air will not circulate properly and your load could be damaged.
- 4 When your cargo is loaded your carrier will need to make sure the air chute in the trailer is not blocked as the air will not circulate and the load will run at inconsistent temperatures.
- 5 Most shippers will require the load to run at consistent temperatures during transport.
- 6 When your load delivers whether it is produce or other food grade products the consignee will inspect the freight before acceptance to make sure the load was transported correctly. If there has been evidence of a problem such as thawing, discoloration or wilting of your products the consignee will likely reject the load. The carrier at this point does have the option of contacting the U.S.D.A. and requesting an on-site inspection of the cargo. This is at the carrier's expense. The cost of this inspection will generally range from \$200 - \$250.00. If the U.S.D.A. determines that load has not been compromised or that the evidence of spoilage is not the fault of the carrier then the consigner has no legal authority to reject the freight.
- 7 If the freight has evidence of spoilage and the load is rejected the consignee has to notate this on the "**Bill of Lading**".
- 8 Once this happens your shipper will then want to possibly move the freight to another location in the area if he can find a buyer for the product depending upon the condition of the goods. In either case you and the carrier are now in charge and you re-negotiate the new freight rate for the load to the new location or back to the original consigner of the product.
- 9 If the carrier has been found at fault generally the load will be rejected by the consignee. The carrier will then be responsible for disposing the freight. A claim will be filed by the shipper to the carrier's insurance company and they will instruct the carrier on how to dispose of the contents of the trailer.



## Flatbed / Step Deck (Open Top)

### Steel & Machinery

One of the largest facets of the transportation industry is industrial freight. This freight will typically consist of many types of steel products and/or machinery. Your loads could move as little as 65 miles and up to 3000 miles depending upon your customer. This type of freight is typically very easy to move as there are rarely any claims involved with it. Rates

loaded on trailers such as Flatbeds, Step Decks, and Double Drops etc.

These carriers will have to carry the tools of the trade to haul these loads which is called “**Dunnage**”. I have listed several different types of “**Dunnage**” below.

### Lumber / Agriculture

The agriculture industry provides a great deal of cargo for freight brokerages to make available to carriers. This type of freight is generally seasonal and also regional. You will find these loads will most typically have a Linehaul of 500 miles or less. This type of freight is transported by a number of different trailers. Please see the table below for the specific commodity and trailer type needed.

The majority of machinery such as lathes, press brakes, augers etc. is transported on Flatbeds and Step Decks across America. These loads can be full truckloads to partials. In my opinion this is the type of freight to work consistently for profit and stability.

**Remember:** When you are moving this type of freight always get dimensions and details in this order from your shipper, the truck will require them to give you an accurate quote.

- **Length x Width x Height • Tarping Required – Yes/No**
- **Gross Commodity Weight • Driver Assistance Required – Yes/No**



## Overweight -Over Dimensional Freight

Shipping over dimensional and overweight freight poses special challenges. Over sized shipments require specific knowledge of government regulations and the needed trucks and trailers to accommodate the freight that you are moving. Over dimensional freight requires permits and special routing through cities and frequently have to be escorted by pilot cars. The trucks can only travel certain hours of the day for safety reasons.



### Get the Information

When considering movement of an “**Over Dimensional Load or Oversized Load**” you will need to get very specific information for the carrier to give you an accurate quote. The general information required is typically:

- **Origin & Destination • Equipment Required**
- **Length -Width -Height • Trip Insurance**
- **Make & Model Of Machinery • Escorts**
- **Exact Weight • Rigging Charges**
- **Specifications & Drawings Permits**

A permit for your freight is typically required if vehicle dimensions or weights exceed:

## Over Dimensional / Overweight Loads



### Requirements

#### Escort Vehicles

When transporting Over Dimensional or Overweight Loads you will often incur the usage of escort vehicles. This is an additional cost or “**Accessorial Charge**” that will generally be included over and above the original transportation charge.

These could include but not be limited too;

- 1 **Pilot Cars / Chase Cars** -This is an escort vehicle which will display signage on its front and rear bumper of an impending Oversize / Overweight load that is approaching or passing. These are required as part of the permitting process in individual states and cities. These vehicles are generally in the front of the load approximately **(1)** mile, and on occasion if required by jurisdiction a chase car will also be required in the rear of the load.
- 2 **Pole Cars** -This is an escort vehicle that has a pole affixed to the front of the bumper for measuring the height of a load. This required on loads generally over **14’3”** tall but can be also required for less depending on the specific Department of Transportation laws where the load is travelling through. The use of this vehicle will insure the load will be able to travel under bridges and overpasses safely without obstruction.
- 3 **State Police Escorts** – The assistance of State Police is often required on “**Super Loads**” as part of the permit process when the load has exceeded “**Maximum**” dimensions or weights by state.

#### Frost Laws

Frost Laws are seasonal restrictions on road traffic weight limits and speeds.

- In climates that experience below freezing temperatures, frost leaving damage to roads has led to many states to enact laws. The State of Michigan, for example, during the months of March, April and May reduce legal axle weights of vehicles by up to 35%. Some areas also require heavy vehicles to travel a maximum of 35 miles per hour, regardless of the posted limit. Frost laws have a significant impact to the excavation and construction industries.



## Route Surveys

A Route survey is conducted by either mapping out the route to be travelled for an overweight or over dimensional load. There are **(2)** types of surveys that can be performed. The type of survey needed depends on the type of load moved and each state or province's specific transportation laws. This is an additional cost or "**Accessorial Charge**" that will generally be included over and above the original transportation charge.

- **Digital Survey** – This is performed by a Topographer and involves "**Mapping**" the route and factoring in the conditions and obstructions involved in the trip.
- **Physical Route Survey** -This is only valid when the surveyor verifies the noted route will allow safe travel and sufficient clearance for the noted dimensions of the load. These surveys are usually performed by State Licensed Escort Vehicles.

## General Conditions;

- 1 **1'0"** on each side of vehicle/load;
- 2 **1'0"** under load clearance;
- 3 **6"** under trailer/semi-trailer clearance;
- 4 **6"** clearance under overhead obstacles. Axle weights and gross vehicle weight must not exceed highway and/or structural weight postings for routes shown. All roads and highways must be shown for route continuity.

## Utility Assistance

Utility Assistance is often required on "**Super Loads**". This will require the carrier to seek the assistance of local power and gas companies to temporarily divert services while the load is being transported through certain areas or jurisdictions. This is an additional cost or "**Accessorial Charge**" that will generally be included over and above the original transportation charge.

## Bonds

Municipalities, State Governments and the Federal Government require surety bonds to cover the cost of possible damage to highways. These can be attained from any insurance company or surety bond company.

## Resources & Links

**Specialized Carriers & Rigging Association** -The Specialized Carriers & Rigging Association (SC&RA) has over 1200 members in over 40 countries. The goal of the SC&RA is to help improve the safety and quality of its members and end users of crane rental, heavy lifting equipment and services.

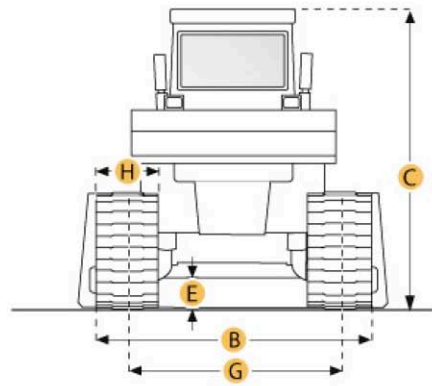
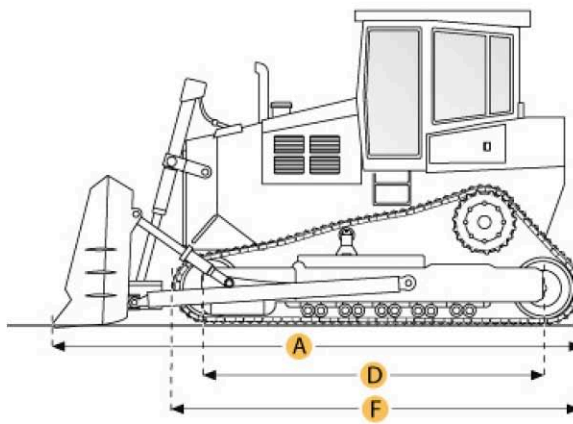
- <http://www.scranet.org>

## Heavy Haul Action Plan / Check List

I must caution any new freight broker or agent prior to moving any over dimensional shipment. I myself only let my most experienced agents undertake these loads as you could easily lose more than what you would gain in profit. You must possess a basic knowledge of heavy equipment transport. These loads are transported by specialized carriers with the equipment needed.

### Steps

- 1 Calculate the Length, Width, Height and overall Weight of the commodity you will transport. Know the specific location of pick-up and delivery, and have detailed directions to these locations.
- 2 Determine the equipment necessary for the load.
- 3 Make the “**Riggers**” the responsibility of the shipper or carrier. You are a freight broker not a carrier or rigging company. They specialize in this you will only muddy the waters if you get involved.
- 4 Find the carrier necessary for the load. Check his references and insurance if you have not used him before. When issuing the rate confirmation and load details make sure this is an “**All In**” rate for the load. If this does not happen, you could be in for a ton of “**Accessorial Charges**” when the invoice comes for the transport of the freight.
- 5 Communicate with the trucking company to determine how long it takes to acquire heavy equipment hauling permits, if your load is overweight or oversize. A permit is required for every state through which the load travels. The transporting must take place during daylight hours with exception to a few cities to limit you to night time transport because of traffic congestion. You are also set within a restricted number of days because of your permits.
- 6 Plan the pick-up and delivery dates accordingly, and allow additional time for limited driving time for oversize and overweight loads.



## Sample Heavy Equipment Specifications Sheet

Resources & Links Ritchie Brothers Heavy Equipment Specifications -<http://www.ritchiespecs.com>

## HAZMAT Freight

### Hazmat (Hazardous Materials)

Each person who transports or offers for transport hazardous materials (hazmat), is a hazmat employer or employee. The Federal Hazardous Materials Regulations (HMR) [located in Title 49, Code of Federal Regulations (49 CFR)] require hazmat employers to train, test, and maintain records of this training for all their hazmat employees. This includes any employee that has responsibility for preparing hazmat for shipment or for transporting the shipment.



### Regulations for Freight Brokers

Freight Brokers & Forwarding Agents-When acting for a shipper of hazmat, the firm acting for that shipper is equally liable. Therefore, you must have adequate knowledge of DOT's HMR to make sure that your operation complies with the HMR. You must carry the same HAZMAT certifications as a carrier if you want to move this type of freight.

- **Know Your Shipper** -Are hazmat's shipped? If so, what kind and in what quantity? A broker must know when hazmat is being shipped. This involves more than just examination of documents. Is the material in DOT/UN authorized packages?
- **Verify Hazmat Descriptions** -Does it match the proper shipping name, hazard class or division, Identification Number, and Packaging Group listed in the Hazardous Material Table (HMT) in 172.101? Is there a conflict between the documentation and the package marking? Is there an emergency response telephone number on the shipping paper? Does emergency response information accompany the shipping paper?
- **Advise The Shipper Of Discrepancies.**
- **Make a Visual Inspection of Shipments** -Is the hazmat damaged? In conflict with the documentation? Improperly packaged? Other possible violations? To meet the requirements of the HMR, each hazmat shipment's packaging, marking, labeling, certification, and document should be seen and verified.
- **Provide Correct Documentation To The Carrier** -Keep in mind that you are assuming shipper responsibility for a hazmat shipment made by another party. You must rely on the shipper for correct documentation and packaging. When discrepancies are noted, it is your responsibility to be sure it is corrected PRIOR to offering the shipment for movement. The documentation you give is the only information that the carrier receives.

### HAZMAT Online Training

- <http://www.hazmatschool.com/>

## Intermodal Freight

Intermodal freight transport involves the transportation of freight in an intermodal container or vehicle, using multiple modes of transportation (rail, ship, and truck), without any handling of the freight itself when changing modes. The method reduces cargo handling, and so improves security, reduces damages and losses, and allows freight to be transported faster, reduced costs versus over road trucking is the key benefit for intra-continental use.

### Rail Transport

In North America, containers are often shipped by rail in container well cars. These cars resemble flatcars but the newer ones have a container-sized depression, or well, in the middle (between the bogies or "trucks") of the car. This depression allows for sufficient clearance to allow two containers to be loaded in the car in a "double stack" arrangement. The newer container cars also are specifically built as a small articulated "unit", most commonly in components of three or five, whereby two components are connected by a *single* bogie as opposed to two bogies, one on each car.

It is also common in North America to transport semi-trailers on railway flatcars or spine cars, an arrangement called "piggyback" or TOFC (*trailer on flatcar*) to distinguish it from *container on flatcar* (COFC). Some flatcars are designed with collapsible trailer hitches so they can be used for trailer or container service. Such designs allow trailers to be rolled on from one end, though lifting trailers on and off flatcars by specialized loaders is more common. TOFC terminals typically have large areas for storing trailers pending loading or pickup.

### Handling Equipment

Handling equipment can be designed with intermodality in mind, assisting with transferring containers between rail, road and sea. These can include:

- Transtainers for transferring containers from sea-going vessels onto either trucks or rail wagons. A transtainer is mounted on rails with a large boom spanning the distance between the ship's cargo hold and the quay, moving parallel to the ship's side.
- Gantry cranes also known as a straddle carrier which is able to straddle rail and road vehicles allowing for quick transfer of containers. A spreader beam moves in several directions allowing accurate positioning of the cargo.
- Grappler Lift which is very similar to a straddle carrier
- Reach Stackers are fitted with lifting arms as well as spreader beams and lifts containers to swap bodies or stack containers on top of each other.

### Intermodal Carriers

- [Union Pacific Railroad](#) • [Pacific Container, Inc.](#) • [Norfolk Southern Corp.](#)
- [CSX Intermodal Inc](#) • [BNSF Railway](#)

## Military Freight

### Military Surface Deployment and Distribution Command Freight Carrier Registration Program

Welcome to the Military Surface Deployment and Distribution Command's (SDDC) Freight Carrier Registration Program (FCRP). In order to transport DOD freight, carriers must comply with the requirements of the FCRP as well as requirements of Department of Transportation Title 49, Code of Federal Regulations (DOT 49 CFR) and SDDC Freight Traffic Rules Publications (MFTRP).

- The link for **MFTRP** is <http://www.sddc.army.mil/sddc/Content/Pub/8188/MFTRP1C.pdf>

Prior to approval, carriers must complete the following

(Note: in these instructions, "carrier" refers to all Transportation Service Providers):

- 1) All carriers wanting to do business with DOD must have a valid Standard Carrier Alpha Code (**SCAC**). The (**SCAC**) is a unique two-to-four letter code issued through the National Motor Freight Traffic Association (**NMFTA**) that is used to identify transportation companies. If you do not have a SCAC, use website [www.nmfta.org](http://www.nmfta.org) or contact NMFTA at 2200 Mill Road, Alexandria, VA 22314, Telephone # (703)838-1831. **Note:** Each mode of transportation (Motor, air, barge, ocean, pipeline and rail) requires a separate **SCAC** for filing tenders and submitting spot bid quotes.
- 2) **US Bank** – All companies must have an agreement with US Bank and be **PowerTrack** certified in order to receive electronic payment for transportation services. Power Track is available on the Internet at: [www.usbank.com/powertrack](http://www.usbank.com/powertrack) or by contacting US Bank PowerTrack, 1010 South Seventh St., Minneapolis, MN 55415, (800) 417-1844.
- 3) Complete the Carrier Registration Form <https://akita.eta.sddc.army.mil/ccp/jsp/CCPScac.jsp> and then click the **\*SUBMIT\*** button. You must be PowerTrack certified first. SDDC will review your registration form and send an e-mail notification of your status within three (3) working days. At this time you are responsible to obtain your performance bond as outlined below in item #4. The amount of the bond is determined on how you register and whether you're a small or large business.
- 4) **Performance Bond** – Instruct your bond Surety Company to forward your bond information only to: [mtfecarrierregistration@sddc.army.mil](mailto:mtfecarrierregistration@sddc.army.mil) by email. The subject line of the email must contain your company name and SCAC; in the body, provide the bond number, amount and effective date; Surety Company name, agent's name; address and telephone number. SDDC does not require the original or a copy of the bond form. Bond cancellation requests must be sent to the same e-mail address.

Once all requirements are met, SDDC will send an e-mail notification of your approval. In this approval you will receive instructions for obtaining an Electronic Transportation Acquisition (ETA) password that will allow you access to DOD transportation programs including tutorials and on-line training for help with Tender Entry and Spot Bid on the Web.

For questions on training:

- **e-mail:** [gfm-training@sddc.army.mil](mailto:gfm-training@sddc.army.mil)
- Additionally, upon approval, contact by e-mail, ([mtfenegotiations@sddc.army.mil](mailto:mtfenegotiations@sddc.army.mil)) SDDC's Negotiations Group and request to be included on their e-mailed solicitations for volume moves and special services. Remember to include your SCAC in all correspondence.

## **Performance Bond**

Carriers will be required to submit a Performance Bond. The amount of the bond is based on the size of your company and the number of states you intend to serve. Large companies may select (1)state for bond amount of \$25,000; 2 to 3 states - \$50,000; 4 or more states -\$100,000.

Carriers registered with the small Business Administration (SBA), <http://pro-net.sba.gov/>, may select up to 3 states with a Performance Bond of \$25,000, up to 10 states with a Performance Bond of \$50,000 and 11 or more states for \$100,000.

### **Note: Movements must begin and end in one of the selected states.**

- Carriers that have conducted business in their own name with DOD for 3 years or more will be required to submit a Performance Bond in the amount of 2.5% of their total DOD revenue for the previous 12 months, not to exceed \$100,000 and not less than \$25,000.
- Bulk fuel carriers are required to submit a \$25,000 Performance Bond.
- The bond amount is set at \$100,000 for Surface Freight Forwarders, Shipper Agents, Brokers, and Air Freight Forwarders due to the volume of traffic handled by these modes.
- Local drayage, commercial zone, barge, rail, sealift and pipeline carriers are exempt from the bond requirements.

The Performance Bond secures performance and fulfillment of carrier obligations to deliver DOD freight. It will cover any instance where a carrier cannot or will not deliver DOD freight tendered to them. This includes default, abandoned shipments, and bankruptcy by the carrier. The bond will not be utilized for operational problems such as late pickup or delivery, excessive transit times, refusals, no shows, improper/inadequate equipment or claims for lost or damaged cargo.

A listing of approved Surety companies can be found at:

- <http://www.fms.treas.gov/c570/index.html>.

Under "quick links" select "**Treasury Listing of Approved Sureties**".

**Note:** Trust funds are not accepted in lieu of the bond.

## Operating Authority

Carrier agrees to maintain valid operating certificates for its scope of operations. USDOT# is a mandatory field on the registration form. Your company's SCAC will automatically populate your DOT/MC number. If you are not operating as a motor carrier you will be responsible to fill in your operating identification number. The below websites will assist:

- **Motor** -[www.safersys.org](http://www.safersys.org)
- **Pipeline** -<http://ops.dot.gov/index.htm>
- **Barge** -[www.fmc.gov](http://www.fmc.gov)
- **Air** -<http://nasdac.faa.gov/main.htm>
- **Rail** -<http://safetydata.fra.dot.gov/officeofsafety>

## Inspections

Carrier agrees to permit unannounced safety and security inspections of its facilities, terminals, employees, and operational procedures by DOD civilian, military personnel, or DOD contract employees. Carrier further agrees to have visitor control procedures in place to verify individuals requesting access to or requesting information of DOD shipments.

Verifications can be made by contacting SDDC's Hotline at (800)526-1465. Carrier agrees not to disclose any information to unauthorized persons concerning the nature, kind, quantity, destination, consignee, or routing of any protected commodities tendered to them.

## Transportation Protective Services (TPS) and Arms, Ammunition and Explosives:

Carriers who wish to transport materials designated by DOD as protected or sensitive which require a TPS must be in an approved status of not less than twelve consecutive months and have satisfactory performance.

Additionally, a "satisfactory" safety rating must be on file and maintained with the Federal Highway Administration, Department of Transportation, and/or the appropriate state agency or commission in the case of intrastate transportation.

Safety ratings that are "**unsatisfactory**", "**conditional**", "**insufficient information**" or "**not rated**" will not be accepted.

Note that Brokers, Freight Forwarders, Shipper Agents and Logistic Companies are restricted from handling shipments requiring a TPS.



## **Trading Partner Agreement**

Following approval by SDDC, a Trading Partner Agreement (TPA) should be signed in order to send or receive electronic data interchange (EDI) transactions with any DOD system. A copy of the TPA can be obtained from:

<http://www.sddc.army.mil> .

Click on Freight Cargo, then New Visitor, then Carrier Qualification and then Trading Partner Guide. For assistance, please call 703-428-2933.

We appreciate your interest in providing freight transportation services to the DOD and if we can be of further assistance call (757)878-8742 or (757) 878-8702.

### **EDI -Electronic Data Interchange**

Electronic Data Interchange (EDI) is the computer-to-computer exchange of business information using a public standard. EDI is a central part of Electronic Commerce (EC), because it enables businesses to exchange business information electronically much faster, cheaper and more accurately than is possible using paper-based systems.

#### **Who Uses EDI?**

About fifty thousand private-sector companies in the United States are currently use EDI. Companies such as Federal Express, Eastman Kodak, American Airlines, Nike, Staples, NationsBank, JC Penney, and Prudential Insurance to name but a few.

EDI is widely used in manufacturing, shipping, warehousing, utilities, pharmaceuticals, construction, petroleum, metals, food processing, banking, insurance, retailing, government, health care, and textiles among other industries. According to a recent study, the number of companies using EDI is projected to quadruple within the next six years.

#### **Origins of EDI**

The Government did not invent EC/EDI; it is merely taking advantage of an established technology that has been widely used in the private sector for the last few decades. EDI was first used in the transportation industry more than twenty years ago.

It was used by ocean, motor, air, and rail carriers and the associated shippers, brokers, customs, freight forwarders, and bankers. The first set of industry EDI standards were developed by the Transportation Data Coordinating Committee (TDCC) and consisted of forty-five transaction sets for the transportation industry. ANSI X12 standards, the system currently used, were developed later and are based upon the TDCC syntax and format.

## Military Freight (Check List to Getting Paid)

Once you have performed all the required procedures for moving Department of Defense freight you will need to do the following before you can actually move any freight as a freight broker or trucking company.

You will need to “**Tender Your Freight Rates**” for Military Transportation Officers to view and contact you for moving loads. To learn how to submit these rates according to Department of Defense standards you will need to download the following, Publication of Revision and Consolidation of Military Freight Traffic Rules Publications (MFTRP) 1C-R (Motor), 10 (Rail), 30 (Barge), 6A (Pipeline), 4A (Tank Truck), Military Standard Tender Instruction Publication (MSTIP) 364D, Spot Bid Business Rules, and SDDC Military Class Rate Publication No. 100A to a Consolidation of Procurement Requirements for the Purchase of Commercial Transportation Services into the Military Freight Traffic Unified Rules Publication (MFTURP) No. 1.



You can access it here: <http://www.sddc.army.mil/sddc/Content/Pub/12706/364d.pdf> this publication will instruct you on how to successfully submit your freight rates to the Department of Defense and also provide general information to answer your questions. The publication provides a listing of commodity codes necessary to tender your rates with.

- 1) Once your freight has been tendered to the Department of Defense you are ready to go. You will then “**Log In**” with your User Name and Password as provided by the GFM Administrator.
- 2) Once you log into the system on the SDDC website you will then scroll to the bottom of the screen and select “**CAVS**” and then choose the option “**Costed Shipment Query**”. You will then enter the following information to view available freight. You will need to enter your **SCAC** code, **Date of Movement** and, **Trailer Type**.
- 3) Now it is time to move freight. If you see a load that meets your criteria for required lane and rate criteria you will need to contact the Transportation Officer to see if the load is available. If it is and your tender is competitive, he will then award you the load.
- 4) You will then have to provide the Transportation Officer your **Driver Information**, **Truck** and **Trailer** number and **SCAC** Code.
- 5) You will then give the Transportation Officer and Email address or FAX number so he can send you a “**CBL**” or Certified Bill of Lading. This is the information you will need to create your rate confirmation sheet for the carrier.
- 6) You will need to ask the “Transportation Officer” to set your company up with his perspective base as a “**Trading Partner**”. You simply provide him your company billing info and “**SCAC**” code again and this is complete once he enters it into the SDDC system.
- 7) Once your load has been delivered and you have a “**Signed CBL**”, you can now bill it to “**PowerTrack**”. You will need the “**GBLOC ID**” codes from the Base of Origin and Destination. Once all this information has been gathered simply submit the information requested and payment will be processed if all required information has been met.

## Canadian Shipping – Cross Border

In order to move freight into Canada, you will need to find a motor carrier that has Canadian Authority to transport commodities and goods. You will also need documentation from Customs Brokers of the load you are carrying. Canadian Officials will also require proper PARS documentation. I have provided information on it below.

### Pre-Arrival Review System (PARS)

The Pre-Arrival Review System (PARS) is a Canada Border Services Agency (CBSA) (formerly the Canada Customs Revenue Agency (CCRA)) border cargo release mechanism for those importers with RMD (Release on Minimum Documentation) privileges that expedites the release of commercial shipments to Canada.

The Canadian PARS system is similar to the U.S. Pre-Arrival Processing System (PAPS) system, but where PAPS applies to shipments from Canada to the U.S., PARS applies to shipments from the U.S. to Canada.

The key element of PARS is a bar-coded cargo control number, which the carrier or U.S. exporter applies to the top right-hand corner of the original CBSA invoice for each shipment. All other required documents must also be provided:

- Certificate(s) of origin
- Invoices
- Shippers export declarations, etc.

The PARS can process goods that require permits or certificates. A copy of the complete set of documentation, including the bar-coded invoice, is sent to the Canadian importer or broker by facsimile before arrival of the shipment in Canada. The importer or broker then submits their import request to CBSA. "**PARS**" must be clearly marked by the importer or customs broker on the PARS release package.

When the documentation is received by the CBSA, a Customs officer enters data into the automated CBSA computer system. A recommendation to release or refer is made in the Customs Commercial System (CCS). This recommendation will remain in effect for a limited period of time.

When the shipment arrives at the point of importation, the carrier/driver presents the bar-coded original release documentation to a CBSA inspector who scans the bar code into CBSA's automated system. The system displays the status of the shipment as "to release" or "to refer". If the status of the shipment is "to release", the CCRA inspector releases the goods to the driver. The customs inspector date-stamps the invoice copies and returns the stamped invoice photocopy to the carrier as proof of clearance. If the status is "to refer", the shipment will be referred to an inspector who will follow normal examination procedures

For more information, go to the Canada Border Services Agency Web site at: [www.cbsa-asfc.gc.ca](http://www.cbsa-asfc.gc.ca)

