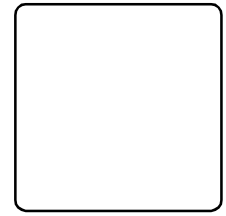


ROAD CONSOLIDATION



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Road cargo consolidation is when several small shipments are combined into one trailer load and forwarded to the same destination. In general, it is a multi-stop trailer load shipment with many consignments that are picked up in a consolidation store house or distribution center and remain in the same trailer until it reaches the final destination. LTL refers to less-than-truckload where several shippers' freight is on the same truck rather than having a single firm's freight exclusively on an individual truck. Several LTL consignments are combined into one trailer to fill it as close to capacity as possible. This is a great alternative for shipments that are among one and six pallets.



LEARNING OUTCOMES

After reading this lesson the learner-

- explains the basic concept of road consolidation;
- lists the merits of road consolidation;
- outlines the procedure of consolidation;
- identifies the various domestic containers;
- lists the road consolidation documents.

12.1 BASIC CONCEPTS OF ROAD CONSOLIDATION

1. **Meaning and definition:** Transportation of cargoes comprises loading and unloading at origin and destination. It also integrates selecting the right form of transportation (air, land, or sea), choosing the appropriate carrier or freight

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shipping agents, and considering several other features for speedy and cost-efficient transportation. When it comes to road transportation, the trucking sector is accountable for most of the overland freight movement in the nation.

Truck consignments can be generally categorized into two groups, i.e., FTL (Full Trailer load) and LTL (Less than trailer load). The former makes up a gigantic 46.4%, whereas the latter position at 11.3% of the market share. Both the shipping techniques are used to deliver a high point of customized service to consignors.

Definition : Surface shipping is an imperative part of several business operations. It is defined as the procedure of shipping goods or commodities by surface. It can also be defined as the cargoes shipped by trailer or by train.

2. **Road shipment classification:** Any consignment that exceeds the beneath criteria are considered freight and require to be transported as such.
 - ❖ Packages beyond 150 lbs
 - ❖ Packages beyond 165 inches in length and width combined
 - ❖ Packages bigger than 108 inches in length
3. **Types of freight shipments :** There are three important forms of road shipments: full trailer / truckload (FTL), Less than trailer / truck load and partial truckload (PTL). There also exists intermodal freight as well as express freight.



Fig. 12.1: Full truck load

4. **Full trailer / truckload (FTL):** Full truckload comprises of moving bulk or pallet consignments that are huge enough to justify the use of a complete semi-trailer, normally more than 15,000 pounds. Full trailer / truckload can be more cost efficient and decrease the opportunity for freight harm with less handling than LTL.

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5. **Less than trailer /truckload (LTL):**LTL is the shipping of relatively small freight. The options to LTL carriers are package carriers or full trailer load carriers. Package carriers generally handle less packages and freight that can be segregated down into units less than 150 pounds. Full trailer consignment carriers shift freight that is stuffed into a semi-trailer. Semi-trailers are usually among 26 and 53 feet and need a substantial quantity of freight to make such shipping economical.



Fig. 12.2: Small packages

6. **Partial trailer / truckload (PTL):** A partial trailer / truckload (PTL) consignment is among 6 and 12 pallets with a entire weight of over 5000 pounds.
7. **Intermodal:** Intermodal transportation generally refers to shipping with a mixture of rail and trailer. However, it can include a variety of transportation methods comprising rail, trailers or vessels to streamline the shipping procedure. By integrating the rail in a firm freight shipping can decrease the fuel use, lower charges and provide a reliable technique of shipping.
8. **Expedited:** Expedited freight generally refers to time-critical consignments in which freight has to be distributed quickly. Expedited freight is most often shipped by trailer or air.
4. **What is the difference between FTL and LTL?**

FTL- Full truckload /trailer load or FTL shipping is an ideal choice for large consignments or large volumes of cargoes that take up the entire truck. The truck carries consignment only from the respective company. A firm can still book a complete truck even if their shipment doesn't take up the entire capacity. Most organizations do this to make sure that their cargoes or goods transportation doesn't get jammed with other cargoes.

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LTL- Less than trailer load / truckload or less than load is when one truck carries freight from several consignors rather than from an individual organization. In LTL, several shipments are loaded in one trailer to utilize its capability as near as feasible. Small businesses normally prefer this sort of trucking load with lesser shipping obligations and budget constraints.

FTL Shipping :Full Trailer Load shipping is a great alternative if you have high valued goods. FTL shipping means that a firm consignment will have a dedicated trailer that consists only what they are shipping. Because of this, however, FTL consignments can cost significantly more than LTL shipments. FTL consignments are well suited to handling sensitive or high value goods, as there is as least possible handling of the consignments.

Are there any advantages of FTL Shipping? Yes, some of the advantages of FTL consignment are: 1. Decreased handling times 2. Distribution more timely than other distribution types 3. Can be more cost efficient if they have several pallets to ship and 4. More precise and faster rate quotes when shopping around and evaluate carriers

5. Working method of FTL and LTL

FTL operates on a point-to-point delivery model. In this method, the consignor loads their FTL goods onto the trailer, which straight away drives to the final destination without stopping.

LTL or less than trailer / truckload operates on a hub-and-spoke supply chain model. At first, LTL freights are received from several shippers from a particular province or area. After that, these consignments are brought together to a provincial hub or center and stuffed into one trailer. The truck then directs towards the final destinations with several distribution stops.

6. Difference between FTL and LTL shipping

FTL and LTL have one thing in general, i.e., both these shipping techniques move a firm shipment or freight across the surface. However, there are several differences among LTL and FTL shipping. Let us find out what they are.

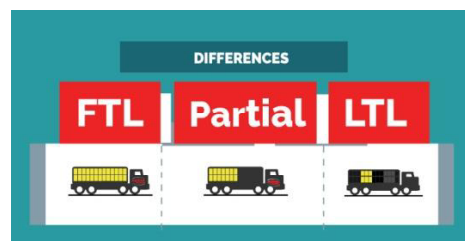


Fig. 12.3: FTL/Partial/LTL shipping

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- ❖ **Cost :** LTL is cost-efficient when a consignor ships a few pallets at a time, as they have to pay for the space they are using instead of paying for the total trailer capacity. Less than trailer load shipping agents ensure the safety of a manufacturer's pallets by filling the goods with other cargoes that require to be transported towards the same location. Full trailer / truckload services or FTL shipping need booking an entire truck, which is more expensive than LTL shipping.
- ❖ **Transit time :** It is the time needed for a consignment to be distributed after picking it up from the spot of departure. In the method of less than trailer / truckload, a shipment doesn't move straight away to the final destination as LTL trailer has to distribute several shipments. The real LTL freight shipping time might differ from the estimated distributed time. After picking up the consignment, the truck moves straight to the destination and reaches within the expected time. In the method of full trailer / truckload service, the consignment pick-up time is generally fixed.
- ❖ **Safety of cargoes :** In less than load consignment, a consignor's cargoes might be stuffed and unloaded many times, to load cargoes from other consignors, before the distribution. It increases the handling and exposure that additionally increase the possibility of damage, particularly if the goods are fragile and sensitive. In FTL freight a consignor guarantees entire safety of the consignment because once it is stuffed the truck is sealed, and the driver goes straight away to the destination.

7. Merits of FTL and LTL

FTL and LTL have their own set of merits. LTL can facilitate a firm by saving an important amount of price as they don't have to reserve the complete truck. It is especially appropriate for small consignments with only less pallets at a time. FTL is suitable for shipping high-valued and sensitive goods or consignments. Also, it assures on-time pick-ups and distributions. FTL is a just right option for wholesalers and producers who hold raw materials, valuable cargoes, sensitive or dangerous materials.

8. How to select LTL or FTL?

When it comes to transportation, the most general question among the consignors is, "Should they utilize FTL freight or LTL freight?" Choosing between LTL and FTL shipping may differ from situation to situation. However, there are a few pointers that can assist a firm to decide.

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Sl. No.	LTL	FTL
1.	transporting less than 12 pallets at a time	Need to ship more than 12 pallets at one time
2.	Cargoes don't require special handling	Are shipping fragile or sensitive goods
3.	Have flexibility with shipping and distribution time	Need timely pickups and deliveries
4.	Need to save money	Budget is not a constraints

9. Cost of Ship Freight

The rate to ship freight is dependent on several aspects. While selecting which freight carrier to utilize for transportation, a firm should review and evaluate cost that each organization offers. The main features that determine freight shipping rates are- 1.Dimensions 2.Method of transportation 3.Density 4.Weight 5.Stowability 6.Liability 7.Freight class 8.Packaging 9.Facility form at consignment's origin and destination and 10.Time sensitivity



INTEXT QUESTIONS 12.1

1. Full Trailer Load shipping is a great alternative if you have low valued goods. - True / False
2. FTL stands for _____.
3. _____ shipping is an imperative part of several business operations
4. LTL is _____ when a consignor ship a few pallets at a time.

12.2 ROAD CONSOLIDATION BENEFITS

Shipping is costly. That is why several small firms are opting to enhance their bottom line by switching from their present shipping technique to less-than-truckload (LTL) freight after reviewing how road consolidation transportation can save small trades money while reforming the logistics at the same time.

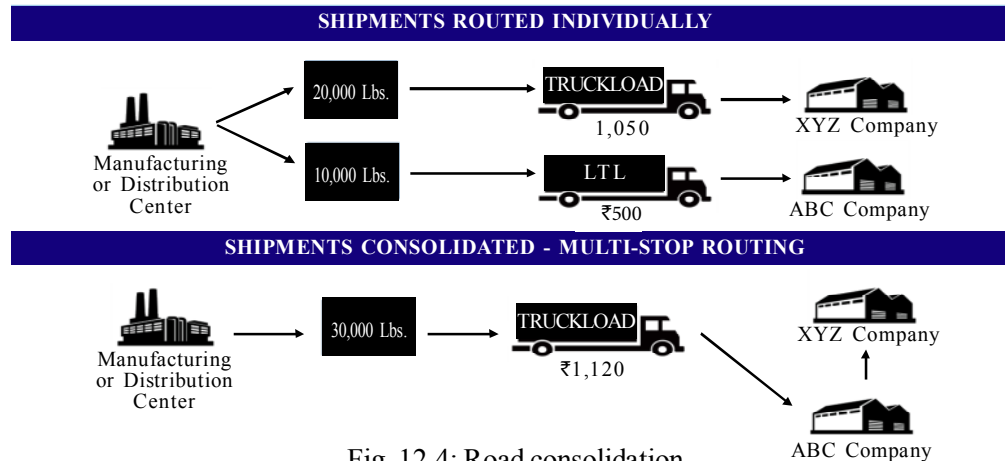
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Fig. 12.4: Road consolidation

- 1) **Need not pay for unused cargo space :** There is no need to waste money on paying to run half-filled delivery trailers. With LTL shipping, a firm's consignment will be pooled with other deliveries. So, a firm could save funds without having to handle the logistics.
- 2) **Decrease warehouse charges:** Since a firm can send more shipments when they use LTL shipping, they won't require to stockpile as many cargoes at one time. This decreases a firm's warehousing needs and construct additional savings each month for their company.
- 3) **Access to professional skill :** Most of the small trades lack dedicated in-house shippers. When small trade owners use LTL shipping, they can acquire full merit of the smart logistics professionals working at these firms to enhance their practices.
- 4) **Support during problems :** Although no one expects to have damaged goods to reach their consumers, LTL consignors can help by offering the information required to file an insurance claim or send a replacement product to their customer.
- 5) **Better shipping rates :** The economical rates are normally reserved for the largest shippers. But when trades use LTL freight through a consolidator, even the smallest firm can obtain a good shipping quote.
- 6) **Decreased environment impact ;** Sharing space with other consignments drastically lowers the company's carbon footprint and helps to hold the planet healthier.
- 7) **Faster delivery times :** In several instances, LTL shipping might actually be a quicker method for shipping their cargoes. When a firm uses LTL freight, they need not have to wait for consumers to place adequate orders to fill up a complete trailer load before shipping products out.

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- 8) **Shipment security** : LTL shipping firms take security very seriously. Once a firm hands over their shipment to a professional LTL shipper, they can feel confident that their package will stay secure until it reaches its final location.
- 9) **Easy to locate shipment** : Most LTL consignors have top-of-the-line tracking structures so a firm and their customers can keep their eyes on the progress of the consignment. So a firm can forget about dealing with the hassle of keeping track of their deliveries.
- 10.) **Access to sophisticated shipping technology** : Several LTL shippers use the sophisticated and best shipping technology. A firm trade can gain advantage from these without additional expenses.
- 11) **Provide customers a variety of supply chain services** : Most LTL freight services offer a variety of different distribution options to meet the requirements of themselves and their customers.



INTEXT QUESTIONS 12.2

1. Define Road Consolidation.
2. LTL stands for ____ .
3. Most LTL consignors have _____ tracking structures.
4. The economical rates are normally reserved for the _____ shippers.

12.3 DEMERITS OF ROAD CONSOLIDATION

In general, the LTL shipping is a reliable, cost-efficient way to transport a small quantity of cargo. Most transporters maintain 97% or better on-time distribution rate. But trade owners should be conscious of both good and terrible possible outcomes. A firm should be prepared to deal with one of these constraints when using LTL:

- 1) **Losing the entire shipment** : One of the disadvantages of shipping through an LTL carrier is that during transit ,there is a chance that the entire shipment will not arrive to its final destination on time or is lost . On the other hand, if shipped via a package CWT program then a firms have a higher possibility that most of their order will arrive in the scheduled transit time. However, a complete LTL consignment is contained in a single trailer and anything that holdsup or damages that single trailer will also delay or harm the complete pallet of merchandise.

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- 2.) **Higher risk of cargo damage** : In spite of the fact that there is less handling of the consignment, the risk of cargo damage is really higher with LTL providers. LTL carriers utilize forklifts to handle and stuff the freight, frequently double-stacking pallets in a truck as well, making a firm's consignment more susceptible to damage. Suitable packaging and the correct use of dunnage, as well as blocking and bracing methods, are important to guarantee a damage-free distribution.
- 3) **Financial Drawbacks** : Finally, LTL quantities don't mechanically contribute to package income based incentives, only if a firm has negotiated this into their parcel contract. Unless a firm's intermediaries agreement particularly states so, the profits tendered to the LTL carrier will not throw in to the incentive obtained from the parcel carriers . Though LTL transportation will normally save a firm money, don't take it as an assurance in every case.

Other constraints include 1.Higher cost consignments, especially when there are only 1 or 2 pallets 2.Carriers may not be able to offer value added services such as handling etc. 3.Limited flexibility for commodity movement and 4.No prospects for smaller quantity shipments.

**INTEXT QUESTIONS 12.3**

1. LTL shipping is a way to transport a small quantity of cargo - True / False.
2. LTL carriers utilize _____ to handle and stuff the cargoes.
3. The risk of cargo damage is really _____ with LTL providers.
4. LTL transportation will normally save a firm _____.

12.4. ROAD CONSOLIDATION PROCESS

The road consolidation process is as follows-

Step 1: Arrange and package freight

When it comes to making the most of a firm's less-than-truckload shipping financial plan, this step is the most important. Without proper packaging if a firm arranges their freight for pick-up it can be harmful to the final condition of their consignment. As new cargoes are picked up and stuffed throughout a firm trailer's journey, LTL freight is subject to regular handling during transit. As such, the more a firm can do to moderate their goods' risk for damage, the better off a firm will be in the end. To perform this, a

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firm should ensure to package their cargoes in a way that will secure them from jarring, bumping and crushing during their LTL voyage.

Labeling LTL Freight

Once a firm's cargoes are neatly packaged in expectation of transport, the next thing a firm does is to mark their freight with all suitable labels and notations. Generally LTL carriers will have a lot of data on their plate. The most overbooked trailers can have a cluster of different goods utilizing their trucks. Each of these cargoes has a different consignor, destination and set of handling directions. As a firm might imagine, it can be complicated for the truckers in charge of all of these moving parts to keep in mind what's needed for each package. To make sure that nothing gets forgotten or mishandled during shipping, make sure to label a firm's product with any unique instructions a firm would like to make plainly clear. Labels instructions like "This Side Up", "Do Not Stack", "Handle With Care", and "Fragile" will assist the individuals charged with handling your freight do so safely.

Step 2: Get a Quote

Once a firm have their freight packaged in a way that will make for smooth stuffing / de-stuffing, promote its secure transportation and have it correctly labeled, then the firm is ready to obtain a quote for their LTL shipment. To obtain a precise price that will make the job done, it is important that the firm must include the subsequent information when soliciting with shipping agents for a truck: 1. Firm's entire product weight 2. The precise dimensions of firm freight (Height ,Length, Width, Pallet count (if applicable)) 3. A detailed description of what the firm's commodity is 4. All accessorial needs of their freight (Lift-gate service, White-glove services (pick-up/distribution)) 5. All Pin Codes with Pick up and Drop spots. and 5. Ideal pick-up and distribution time frames.

Step 3: Book Your Load

The next phase in LTL shipping path is to book a firm's shipment with the carrier they select. As long as a firm transparently communicated the precise dimensions of their freight, their anticipations for pick-ups, drops and any sort of LTL services required, booking their consignment with confidence should arrive easily. Make sure to pick a firm with a demonstrated history of shifting LTL freight successfully. In current history, though, trucking firms have started employing LTL freight tracking to fight this problem, through the use of a tracking code and attentive upkeep on the driver's behalf, good service providers can assist their consumers to achieve a bit higher visibility over their consignments.

Step 4: Load and Track Your Shipment

Once the firm has properly packaged their freight, chosen the right service provider from the field and when the trailer has arrived, it's time to stuff the freight. Trailer drivers are subject to a stringent set of legislative rules and regulations that dictate the amount of time they're permitted to spend behind the wheel. These rules are referred to as a trailer's hours of service and specify that a driver can only be aggressively "on-duty" for nearly 14 hours within a 24-hour period. Since trucking firms, and their drivers, only make cash whilst their wheels are turning, they're extremely motivated to exploit their HOS clock.

Since transit timing and guaranteed distribution timeframes on LTL freight can be so complex to forecast, in such cases tracking number should become a firm's best friend. A firm should also verify their freight frequently and touch base with their importer to make sure that everyone is on the same page for their freight's arrival. Should the freight arrive at an vacant spot because the buyer wasn't aware it was coming, in such cases extended delays may crop up. So a firm should share their tracking code with whoever is in-charge of handling the commodity upon arrival.

Step 5: Note Any Damage On The Bill of Lading (BOL)

Communication is essential to make sure that this step is done properly. After a firm's freight has made its voyage and has arrived at the buyer's door, verify for external damage as soon as possible. Ensure that the buyer identifies any damage on the bill of lading before accepting it. Commodity claims sometimes occur and successfully filing a claim will be far more complex without an appropriately noted BOL. Note, LTL consignors normally have nine months after their consignment delivers to file a claim. As such, communicate with a firm's receiver to make sure they don't accept any damaged cargoes without making a note of it on the bill of lading.

Step 6: Keep the bill of lading for Record-Keeping

Once a firm's load has been successfully distributed, a firm's commitment to it isn't quite completed. Sometimes, consignors throw away their bill of lading without understanding the long-term damage this may do. The benefits of holding onto this file far outweigh the price of sacrificing the space required to do so. Whether it's for accounting intention, to weigh future consignment price against, as a lead to a firm's freight class and NMFC codes or to utilize when filing a freight claim, a firm can probably use it in the future. As such, the final phase is to hang onto BOL for future use.

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How to identify an LTL shipping agent

The largest feature impacting a firm's less-than-truckload transport success is the trustworthiness and history of the transportation service provider they use. Several LTL consignments go wrong simply because a consignor placed their reliance with the wrong firm. Whether their consignment fails or their budget suffers, transportation service provider choice mistakes can come back to trouble the consignors that make them. Always look for an eminent shipping intermediary who treats a firm's freight, deadlines and their goals as their own.



INTEXT QUESTIONS 12.4

1. The second step of road consolidation process is to get _____.
2. Once a firm cargoes are neatly packaged, the next thing is to mark their products with all suitable _____.
3. Crating a cargo where applicable is the finest way to make sure its _____ during voyage.
4. _____ drivers are subject to a stringent set of legislative rules and regulations

12.5. TYPES OF DOMESTIC CONTAINERS

Most of the commodities are now being transported from factory through either rail or by road. So there exists the need for certain containers so that trailers and shipping agents can provide a comprehensive door to door intermodal service. The agents should render the services that are 'Client-focused' which are the backbone of this segment. Each service is tailor-made to suit the specific needs of the client concerned. The agents normally operate through a network of terminal/hubs. As a subject of policy, most of the new terminals being commenced are now being planned as pooled domestic/international terminals.

The key asset in which domestic goods is carried is the standard 20ft container. CONCOR's fleet of TEUs in nation service is presently at roughly 20000 TEUS. These are generally owned and few are brought in on short or long term lease based on the demand needs. Further, container corporation also use the conventional ISO (international) containers by offering unique Cabotage tariffs for empty movements. In this method, containers that would otherwise move as empty are 'borrowed'/leased on a short-term basis (generally for a single trip) for domestic goods movement, thereby raising the carrying capability for domestic commodities as a whole. Widespread movement of shipping-line blank containers is carried out by CONCOR to balance

Senior Secondary

the discrepancy levels of exports and imports in the nation. By “Cabotaging” these containers, CONCOR can provide a considerable discount to both shipping lines and the prospective domestic client.

A. TYPES OF CONTAINERS

1. 20 foot General Purpose Container



Fig. 12.5: 20 ft general purpose container

The standard 20ft transporting container is popular owing to its ease of maneuverability and lesser weight. Generally, the 20ft containers are more economical than their corresponding 40ft option, their cost per square foot is in reality more expensive. We could sometimes see the goods vessel capacity or business volumes stated in TEU’s. This refers to twenty-foot equivalent unit, and merely refers the volume of freight that could outfit in containers just like this.

Table 12.1

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	19ft 10in long; 8ft wide; 8ft 6in high [6.05m long; 2.44m wide; 2.59m high]	19ft 4in long; 7ft 8in wide; 7ft 10in high [5.90m long; 2.35m wide; 2.39m high]	7ft 8in wide; 7ft 6in high [2.34m wide; 2.29m high]	4,960 lbs tare; 62,240 lbs max load [2,250 kg tare; 28,230 kg max load]

2. 20 foot General purpose High Cube Container : These type of containers are similar to standard 20ft but with the additional room of an additional 12 inches of height. This makes it simpler to have interior insulation and light fixtures although still maintain a usual ceiling height. It also opens up the entire design, and often times higher ceilings will assist to make the complete interior feel much larger overall.



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Table 12.2

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	19ft 10in long; 8ft wide; 9ft 6in high [6.05m long; 2.44m wide; 2.89m high]	19ft 4in long; 7ft 8in wide; 8ft 10in high [5.90m long; 2.35m wide; 2.70m high]	7ft 8in wide; 8ft 6in high [2.34m wide; 2.59m high]	5,070 lbs tare; 62,130 lbs max load [2,300 kg tare; 28,180 kg max load]

3. **20 foot Refrigerated Container :** It is sometimes referred as a reefer container, the 20ft refrigerated transport container is a regular 20ft container with the added advantage of insulation.

Table 12.3

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	19ft 10in long; 8ft wide; 8ft 6in high [6.05m long; 2.44m wide; 2.59m high]	17ft 10in long; 7ft 6in wide; 7ft 5in high [5.44m long; 2.28m wide; 2.26m high]	7ft 6in wide; 7ft 5in high [2.28m wide; 2.26m high]	6,400 lbs tare; 60,800 lbs max load

4. **40 foot General Purpose Container :** 40ft transporting containers are the most widespread containers manufacturing units will find. They are huge enough to permit more cargoes. Like the general use 20-foot transport containers, their lower ceiling height could be an obstacle for those that need interior insulation though still having a reasonable ceiling height.

Table 12.4

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	40ft long; 8ft wide; 8ft 6in high [12.19m long;	39ft 6in long; 7ft 8in wide; 7ft 10in high	7ft 8in wide; 7ft 6in high [2.34m wide;	8,333 lbs tare; 58,863 lbs max load [3,780 kg

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2.44m wide; 2.59m high]	[12.04m long; 2.35m wide; 2.39m high]	2.29m high]	tare; 27,600 kg max load]
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5. **40 foot General Purpose High Cube Container** : If a firm prefer a 40ft container but require a bit more vertical space, a 40 ft high cube container provides the same size with the extra one foot of overhead room.

Table 12.5

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	40ft long; 8ft wide; 9ft 6in high [12.19m long; 2.44m wide; 2.89m high]	39ft 6in long; 7ft 8in wide; 8ft 10in high [12.04m long; 2.35m wide; 2.70m high]	7ft 8in wide; 8ft 6in high [2.34m wide; 2.59m high]	8,750 lbs tare; 58,450 lbs max load [3,968 kg tare; 26,512 kg max load]

6. **40 foot Reefer Container** : With a 40ft reefer or refrigerated cargo container, a firm will obtain the advantages of the 40ft shipping container competence beside with built-in insulation.

Table 12.6

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	40ft long; 8ft wide; 8ft 6in high [12.19m long; 2.44m wide; 2.59m high]	38ft long; 7ft 6in wide; 7ft 5in high [11.58m long; 2.28m wide; 2.26m high]	7ft 6in wide; 7ft 5in high [2.28m wide; 2.26m high]	10,780 lbs tare; 56,420 lbs max load [4,900 kg tare; 25,645 kg max load]

7. **40 foot Refrigerated High Cube Container** : If a firm is carrying perishable cargoes in such case the 40ft container will be ideal. In this sort of container it will have insulation of a refrigerated container.

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Table 12.7

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	40ft long; 8ft wide; 9ft 6in high [12.19m long; 2.44m wide; 2.89m high]	38ft long; 7ft 6in wide; 8ft 5in high [11.58m long; 2.28m wide; 2.57m high]	7ft 6in wide; 8ft 5in high [2.28m wide; 2.57m high]	10,490 lbs tare; 64,470 lbs max load [4,760 kg tare; 29,240 kg max load]

8. **45 foot General Purpose High Cube Container :**The 45-foot cargo containers are a bit different from what we've discussed so far. They have the standard container corner castings 40 ft apart, except that they have two equal ~2.5ft extensions on every end of the container. These expansions also have corner castings at the definite corner extents of the container. Having several sets of corner castings permits 45ft containers to be stacked with 40ft cargo containers.

Table 12.8

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	45ft long; 8ft wide; 9ft 6in high [13.72m long; 2.44m wide; 2.89m high]	44ft 6in long; 7ft 8in wide; 8ft 10in high [13.56m long; 2.35m wide; 2.70m high]	7ft 8in wide; 8ft 6in high [2.34m wide; 2.59m high]	10,580 lbs tare; 56,620 lbs max load [4,800 kg tare; 30,480 kg max load]

12.5.2 OTHER COMMON CONTAINERS

The transport cargo containers in this group are definitely less common than those above but are still somewhat extensively available in certain areas.

1. **48 foot General Purpose High Cube Container:** A 48ft cargo container is wider than all containers formerly mentioned. With an extra 6in of width, a 48ft container is 6.25% wider than a 40ft or 45ft container.

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Table 12.9

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	48ft long; 8ft 6in wide; 9ft 6in high [14.63m long; 2.59m wide; 2.89m high]	47ft 6in long; 8ft 2in wide; 8ft 10in high [14.48m long; 2.49m wide; 2.70m high]	8ft 2in wide; 8ft 6in high [2.49m wide; 2.59m high]	10,920 lbs tare; 56,280 lbs max load [4,953 kg tare; 25,527 kg max load]

2. **53 foot General Purpose High Cube Container :** The 53ft cargo container is the biggest mass-produced container. Similar to a 48ft container, it is also 6in wider than a 40ft container. And like a 48ft container, a 53ft container has corner castings at 40ft, followed by two equivalent extensions that fetch the length out to 53ft. till the extensions on a 53ft cargo container are about 6.5ft long each. More significantly, 53ft containers have limited accessibility and are mainly used in North America.

Table 12.10

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	53ft long; 8ft 6in wide; 9ft 6in high [16.15m long; 2.59m wide; 2.89m high]	52ft 6in long; 8ft 2in wide; 8ft 10in high [16m long; 2.49m wide; 2.70m high]	8ft 2in wide; 8ft 6in high [2.49m wide; 2.59m high]	11,070 lbs tare; 56,130 lbs max load [5,020 kg tare; 25,460 kg max load]

3. **40 foot General Purpose Pallet Wide High Cube Container:** Pallet wide cargo containers are merely a bit wider (roughly 2in) than standard width containers but not as wide as 48ft and 53ft containers. The extra width is to hold 'euro pallets'. In the United States and some other nations the standard pallets are 48in (1219mm) by 40in (1016mm). the Euro pallets, in contrast, are 800mm (2ft 7.5in) by 1200mm (3ft 11.2in). The somewhat wider dimension of a pallet-wide 40ft container permits it to hold 30 euro pallets, while a standard 40ft container can only accommodate 25.

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Table 12.11

S. No	External Measurements	Internal Measurements	Door Opening Measurements	Weight
1	40ft long; 8ft 2in wide; 9ft 6in high [12.19m long; 2.49m wide; 2.89m high]	39ft 6in long; 8ft wide; 8ft 10in high [12.04m long; 2.44m wide; 2.70m high]	8ft wide; 8ft 6in high [2.44m wide; 2.59m high]	8,636 lbs tare; 63,015 lbs max load [3,917 kg tare; 28,583 kg max load]

B. Shipping cargo container moving features

One must keep the following things in mind when operating a shipping container:

1. Weight (cargo weight plus container weight)
2. Size and dimensions of the cargo container to understand the space needed
3. The storage cargo container distribution options
4. Overhead hindrances
5. Insurance
6. Outsourcing
7. Logistical charges
8. Maneuver clearance and
9. Voyage distance

C. Methods to Move a Shipping Container

Truck : Shipping the cargo container by surface transport is the most common process used. Other popular sorts of trucks utilized in shipping the cargo containers are-

1. Tilt-bed or rollback trailer: Rollback trailers, also referred to as flatbed tow trucks, are an excellent transport alternative when the container isn't too heavy. This truck has a distinctive design that permits one to use the inclined plan to slide the container onto the ground.
2. Step-deck trailer: This trailer has a flat platform on which the container is set.



INTEXT QUESTIONS 12.5

1. CONCOR refers to _____.
2. TEU stands for Twenty Equivalent Unit - True / False
3. CONCOR is also offering services from CRTs and _____ Sidings.
4. Rollback trailers are also referred to as _____ tow trucks.

12.6 IDENTIFICATION OF DOMESTIC CONTAINERS

1. Marking of containers

The marking on the containers comprises of letters and numerals of the owner code, equipment type identifier, serial number and verification digit shall be not less than 100 mm (4 in) high.

All characters shall be of proportionate width and thickness, they shall be strong and in a colour distinct from that of the container.

The ISO container size and type codes: In 1995 there was an ISO contract concerning container marking codes to describe the length, height and category of cargo container in a simple to read sequence. This sequence is comprises of four letters or digits that generally come out right under the container identification series.

- The first character is connected to the length of the container
- The second nature is relative to its width and height.
- The remaining two factors of the sequence recognize the container form and other characteristics connected to its type.

2. Different types and sizes of containers

Table 12.12

S.No	Length	Height	Type
1	2 - 20 Feet	2 - 8 Feet 6 Inches	G1 - General Purpose Container
2	4 - 40 Feet	5 - 9 Feet 6 Inches "High Cube"	R1 - Refrigerated Container

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3	L - 45 Feet	U1 - Open Top Container
4	M - 48 Feet	P1 - Platform Container
5		T1 - Tank Container



INTEXT QUESTIONS 12.6

1. In a given container if it is marked as 4 5 G1 then the 4 denotes _____.
2. G1 stands for _____.
3. The marking in the containers comprises of letters and numerals of the owner code, _____, serial number and verification digit.
4. Verification digit shall be not less than _____ high.

12.7 DOCUMENTS FOR ROAD CONSOLIDATION

A. Documentation For Transportation

1. GST - E way bill- E- way bill is an electronic document carried by a person who is carrying any consignment of cargoes of value exceeding Rs.50000/- as mandated by the Government. It is created from the E-way common portal by the registered persons or transporters who cause movement of goods of consignment before the commencement of such movement. Under GST, transporters should carry an e-way bill when they are shifting the cargoes from one place to another when certain conditions are fulfilled. E-way bill being an electronic way bill when goods are progressed in such situation this to be generated on the e-way bill portal.

A GST registered person cannot transport cargoes in a vehicle whose worth exceeds Rs. 50,000 (Single Invoice/bill/delivery challan) without an e-way bill that is generated on ewaybillgst.gov.in. Alternatively, E-way bill can also be generated or cancelled through SMS , Android App and by site-to-site integration through API.

When an e-way bill is generated, a unique E-way Bill Number (EBN) is allocated and is accessible to the supplier, recipient, and the transporter.

Purpose of E-way Bill

E-Way Bill is a method to make sure that goods being transported abide with the GST Law and is an efficient tool to track movements of goods and check tax evasion. It has two components:

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1. Part A- Details of the recipient. and 2. Part B- Transporter details.

Information to be provided in Part A of Form GST EWB -01 : 1.GSTIN of Supplier 2.Place of Dispatch 3.GSTIN of Recipient 4.Place of Delivery 5.Document Number 6.Document Date 7.Value of Goods 8.HSN Code and 9.Reasons for transportation etc.

Part-B of Form GST EWB-01 : 1. Vehicle Number for Road.2. Transport Document Number/ Defenses Vehicle no./ Temporary Vehicle Registration No / Vehicle Registration No.

If the distance between the exporter or consignee and the transporter is less than 50 Kms and transport is going to take place within the same state in such condition, Part B of e-Way Bill is not required.

Criteria to Generate an e-Way Bill

- **Registered Person :** E-way bill must be generated when there is a progress of goods of more than Rs 50,000 in value to or from a registered person. A Registered person or the transporter may choose to generate and bear e-way bill even if the value of goods is less than Rs 50,000.
- **Unregistered Persons:** Unregistered persons are also required to generate e-Way Bill. However, where a supply is made by an unregistered person to a registered person, the receiver will have to make certain all the compliances are met as if they were the supplier.
- **Transporter:** Transporters who carry commodities by road, air, rail, etc. also require to generate e-Way Bill if the supplier has not generated an e-Way Bill.

Issuance of e-Way Bill

E-Way bill will be generated when there is a faction of goods in a vehicle/ conveyance of price more than Rs. 50,000 (either each Invoice or in cumulative of all invoices in a vehicle/conveyance) - a)In relation to a 'supply' b)For certain reasons apart from a 'supply' (say a return) c)Due to inward 'supply' from an unregistered person

For this reason, a supply may be either of the following:

- A distribution which is done for a consideration (payment) in the course of trade
- A distribution which is done for a consideration (payment) which might not be in the course of trade



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- A distribution without any consideration (without payment) In easy terms, the term 'distribution' generally means a:
 1. Sale - sale of goods and payment made
 2. Transfer - division transfers for instance
 3. Barter/Exchange - where the payment is by goods instead of in cash

Therefore, e-Way Bills must be generated on the general portal for all these types of movements. For assured specified Goods, the e-way bill needs to be generated mandatorily even if the value of the consignment of Goods is less than Rs. 50,000:

1. Inter-State movement of Goods by the Principal to the Job-worker by Principal/registered Job-worker***,
2. Inter-State shipment of Handicraft commodities by a dealer exempted from GST registration

Documents required with Driver during transportation of goods under GST

The driver in charge of the truck should carry the following documents:

1. Documents such as Invoice, bill of supply, delivery challan as needed
2. A copy of E-way bill, E-way bill number or E-way bill mapped to a Radio Frequency Identification Device, RFID

Note- An E-way bill mapped to RFID will not be applicable in case the commodities are transported by means of rail, airway or a vessel. Moreover, it is also significant to note that if cargoes are shipped by rail, the cargoes shall be distributed to the buyer only on producing a valid E-way bill.

2. **RFID and compliance requirements :** In situations where a dealer prepares an Invoice Reference Number (IRN) by uploading the required Form GST INV-01, the transporter does not need to carry a physical invoice. If they mention the IRN to the scrutinizing executive it would suffice. Few category class of transporters is needed to obtain an RFID embedded in their truck. Such type of transporters to be informed by the Commissioner. When the RFID is embedded, an E-way bill has to be mapped to the RFID before the commencement of progress of goods. As of now, this notification has not yet been issued.

In case E-way bill is not required, the documents required

In certain circumstances, which are yet to be notified, the Commissioner may require the transporters to carry the subsequent documents as an alternative of an E-way bill:

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1. Documents such as invoice, bill of supply or bill of entry or
2. In cases where movement of cargoes is for other than distribution, transportation of job work, transportation of liquid gas etc a Delivery Challan (DC) to be given. The DC should be issued in triplicate and in accordance with rules of the Act.

The procedure of document verification

An authorized officer may intercept any vehicle carrying cargoes during their movement. On the journey, the transporter has to offer the documents which he is carrying for authentication. This comprises a verification of all the above spotlighted documents. For vehicles with embedded RFID, the RFID will be read by a reader and details of E-way bill mapped will be matched with the goods that the transporter is carrying.

12.8 IMPACT OF RULES ON TAXPAYERS AND TRANSPORTERS

By going through the above regulations, we could take a stand that there is something for everyone: 1. For traders and transporters who have not yet gone digital, they can still carry a physical invoice and an E-way bill, whereas, for traders who are digital, they can use the IRN and EBN. They should make sure that when there is any technical breakdown there should be a substitute path that the dealers could opt for. 2. But for small-time transporters, this digital process might disrupt their business. They may think the RFID installation could be costly and eventually may not be able to withstand the competition which is existing from big transport organizations. In connection to Micro and Small Enterprises earlier schemes, the Government had planned to offer a subsidy/ financial help for installing RFID. Whether these sort of schemes will move forward and will really help the dealers is something one has to wait and watch. 3. Carrying multiple invoices and E-way bill may be cumbersome for the transporter. Even a small delay like a break-down of the vehicle might put the transporter in a difficult situation. IRN and E-way bill in electronic form helps. 4. Carrying valid document is a must. The person in charge of carrier will have to check the validity of the E-way bill and in case the goods are being shifted to another vehicle, the E-way bill required to be updated with the new truck details.



INTEXT QUESTIONS 12.7

1. E-way bill is an _____ document.
2. RFID stands for _____.

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3. In case the goods are being shifted to another vehicle, the E-way bill required to be _____.
4. For traders who are digital, they can use the IRN and _____.



WHAT YOU HAVE LEARNT

- Transportation of cargoes comprises loading and unloading at origin and destination; selecting the right form of transportation (air, land, or sea); choosing the appropriate carrier or freight shipping agents, and considering several other features for speedy and cost-efficient transportation.
- LTL is the shipping of relatively small freight. The options to LTL carriers are package carriers or full trailer load carriers. Package carriers generally handle less packages and freight that can be segregated down into units less than 150 pounds
- FTL- Full truckload / trailer load or FTL shipping is an ideal choice for large consignments or large volumes of cargoes that take up the entire truck.
- There are also various types of general containers and unique containers such as Open Top, Side Doors, Tanks, Ventilated, Reefer and 22ft/high cube containers to outfit to special sorts of commodities like bulk, perishable, fruits & vegetables etc.
- The marking in the containers comprises of letters and numerals of the owner code, equipment type identifier, serial number and verification digit shall be not less than 100 mm (4 in) high.
- E- way bill is an electronic document carried by a person who is carrying any consignment of cargoes of value exceeding Rs.50000/- as mandated by the Government. It is created from the E-way common portal by the registered persons or transporters who cause movement of goods of consignment before the commencement of such movement.



TERMINAL EXERCISE

Explain the following briefly.

1. Intermodal
2. Purpose of e-way bill
3. Step deck trailer

4. FTL merits
5. Twenty Foot Container
6. Write a note on ship freight costing.
7. List the demerits of road consolidation
8. Spotlight the features of shipping cargo container
9. How do you identify domestic containers?
10. Highlight the criteria to generate an e-Way Bill
11. Distinguish between FTL and LTL.
12. Spotlight the benefits of road consolidation
13. Sketch the different types of containers
14. Explain the process of road consolidation.
15. Describe the issuance of E-way bill.



Notes



ANSWERS TO INTEXT QUESTIONS

12.1

1. False
2. Full Truck / Trailer load
3. Surface
4. Cost-efficient

12.2

1. It refers to a consolidator combines individual LCL shipments from various shippers and create a full truck load.
2. Less than a Truck / Trailer load
3. Top-of-the-line
4. Big

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1. True
2. Forklifts
3. Higher
4. Money

12.4

1. A quote or quotation
2. Labels
3. Safety
4. Trailer

12.5

1. Container Corporation of India Limited
2. True
3. Private
4. Flatbed

12.6

1. Height
2. General purpose container
3. Equipment type identifier
4. 100 mm

12.7

1. Electronic
2. Radio Frequency Identification Device
3. Updated
4. EBN