

KMS LOADING 201 COURSE

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I. Introduction

Properly loading and securing a shipment is vital to avoid damage during transit, but it takes time to properly learn. This course will address some basic loading techniques. More advanced techniques are covered in Loading 301 and Loading 401.

Regardless of a shipment's content, the goal of loading should always be to achieve the following two things:

1. Maximum density
2. No damage

To achieve these goals, you must first learn how to successfully build tiers. You must approach each job systematically and carefully, one tier at a time.

II. General Procedure

To begin, always start with the heaviest pieces in a row across the floor of the van (from side to side, not front to back). These heavy pieces function as the tier base. Then build a second and third row on top of the first, and so on, until you reach the ceiling. When the first tier is complete to the ceiling, you will then begin the next tier in the same way you built the first tier.

If you were loading a shipment of identical boxes, it would be simple. Every tier would be square, vertical, and parallel with the one before it. However, with a shipment of household goods, the pieces are not identical. Even the cartons are different – either in weight or size or both.

However, building tiers allows you to simplify the load because you are breaking a full load into a number of smaller loads (tiers) where each piece of the tier has a common dimension. Each tier will have its own characteristics. By building tiers, you can take the potential mess out of loading and turn it into a science.

III. General Loading Techniques

The majority of smaller loads require only basic loading techniques.

- A. Floor loading is the simplest and fastest approach.
 1. Floor loading is typically used on smaller loads where there is plenty of space in the truck. You simply use the available floor space and load as efficiently as possible, making sure items are properly secured and padded using the draping method.
 2. Floor loading is much faster than tier loading because you don't have to take the extra time to load so tight; as a result, this technique is ideal for local moves that are being charged by the hour.
 3. When floor loading, do not load higher than you can reach without using a ladder.

B. Tier loading is the tightest approach, which leads to maximum density.

Loading with the tier system is the best way to load a truck as tightly as possible. Some of the basic principles to this technique are as follows:

1. Use heavy or strong items on the floor as the tier base. As you build the tier, higher items should get lighter.
2. Avoid stacking items that can gouge finished surfaces.
3. Although you want to load as quickly and efficiently as possible, make sure you're always thinking ahead and are aware of what you have to work with when building a tier.
4. Be aware of the estimated weight of the shipment and the available space on the truck.
5. Use decking when necessary over cars and other difficult items (garage items, large items and the like). See advanced loading course for instructions on loading when using decking.

IV. Five Common Tier Types

Depending on the items that you are loading, there are different types of tiers that you may need to build. The five most common types of tiers – standard, wide, overstuffed, appliance, and junk tiers – are described and explained below.

A. Standard (or 18") Tier

The most commonly built tier is the 18" tier and is often called the standard tier. Once you have built a few of them, they become extremely easy.

1. **Start with a base row:** A standard tier can be built with a dresser and a chest of drawers (or a long dresser and a dishpack) as base.
2. **Second row:** On top of this base row, load a second row of 18" pieces; ideally these pieces should be lighter than the first row but still heavy enough to support subsequent rows.
3. When loading any piece into a tier, consider the safety of the piece itself and also its effect on the tier as a whole, as well as its effect on adjacent sections of the previous and subsequent tiers. Make sure that padding is sufficient to (a) protect the piece and (b) protect whatever goes next to the piece.
4. Proceeding with the tier, an alternative to a second row of base is to load cartons up to 6' or 7' high. Start with heavier dishpacks on the bottom and continue up with 4.5 cubic foot or 3 cubic foot cartons. Make sure that the base pieces are stout enough to withstand the weight, particularly if you use heavy dishpacks in the second row.
5. **Top row:** On top of the tier, load kitchen or dining room chairs and other light or fragile furniture. Always load straight chairs high in the tier because they are fragile.

6. **Top few inches:** At this point, there may now be just a few inches between the top of the row of padded chairs and the ceiling of the van. Fill this space with long, light items such as skis, fishing rods, and bed rails, but make sure they are not too heavy for the chairs. Wrap these items and press them gently into place. Try to ensure a tight fit to prevent the tier from bouncing during transit, but don't force and cram the items.

B. Wide Tier

The wide tier, also referred to as a double tier, is named as such because you are working with item(s) that are more than 24" in depth. (In general, the term "wide" will be used, but "depth" could also be used as we are actually referring to deeper, not actually, wider items.) When a very large piece of base furniture is included in a shipment, it is necessary to build a wide tier. Items such as office desks, antique dining tables with fixed legs, and work benches may apply if the items are wider than 24".

1. A shipment rarely contains enough large pieces to build a complete tier the depth of the base, so you will have to stack smaller items two-deep (or more) to make the tier flush with the front of the base.
2. Examine the base pieces before you build on them.
 - a) You may be able to load other heavy or awkward pieces underneath.
 - b) The base piece itself may need some support so that you can build on it.

For example, the space under a deep base may be filled with dense material, such as book cartons. The knee hole of an office desk makes a perfect place for a large awkward item.

- c) When you come across a large fixed leg table which is not strong enough to use as base, you may load it higher in the double tier, but with the legs horizontal rather than vertical. Load between and around the legs in such a way that they are protected from anything loaded above.
3. You might also consider combining some overstuffed furniture with other large pieces in the wide tier (see the O/S Tier section). If the base is solid and is leveled off across the width of the van, you are faced with the same situation that you would be at floor level – only about three feet higher. A love seat or a two-cushion couch will probably stand on end on top of the base and can be filled in the manner described in the O/S Tier section.
 4. Another option is to turn suitable sized pieces sideways so that what would be width in another tier will become depth in this one. Therefore, you can take chests of drawers, book cases and even single mattresses, and turn them with their narrow side facing you and stand them up next to one another so that they look like books on a library shelf.

5. As you build the tier, keep it level from front to back as well as from side to side. Avoid tiers that are top heavy or leaning. If a tier must lean because of some strangely shaped piece, lean it towards the previous tier so that it does not fall on you while you are unloading.
6. As with other tiers, the top two feet or so can be filled with straight chairs, but align them front to back rather than side to side as you would with a standard tier. Bar stools would also fit well here.

C. O/S (OverStuffed) Tier

Although there are many irregularly shaped pieces such as round couches and sectionals that pose challenges, you can still make a tidy, safe tier using typical overstuffed furniture like couches, loveseats, chairs. By following a few basic rules, you can ensure that no damage occurs during shipping.



Do not load anything sharp into an O/S tier even if it is padded. Vibration during transportation can cause sharp edges to cut through pads.

1. Take the extra time required to measure the O/S pieces and to look them over, so you can form a plan to load the tier. This also gives a good impression to your customer.
 - a) When looking over the pieces, check the arms and the backs of the chairs and couches. Some are constructed with solid, padded sections under the fabric; in others, the fabric is stretched over a hollow frame.
 - b) If you load anything heavy on or against one of these hollow sections, the fabric will be permanently deformed, and we will be liable for a damage claim.
2. Load a hide-a-bed or couch first by loading it on end with the feet to the wall and the back to the previous tier by following these guidelines:
 - a) Pad the previous tier behind the couch since the upholstered back of the couch will be resting against this tier.
 - b) Pad the floor under the couch.
 - c) Pad and/or stretch wrap the O/S item to keep it clean.
 - d) If the couch has irregularly shaped ends, set it on a base of several folded pads to support the contour of the arm.
3. With the couch in position against the wall, there is 55" to 60" between the top of the neck and the opposite wall; fill this space with base items.
 - a) Two appliances side by side will usually fit precisely; if there are only two appliances in the shipment, this is a very good place to load them.
 - b) If there are three or more appliances, you may want to use them in a separate appliance tier rather than here on the O/S. In that case, select a solid dresser base or something that will fit snugly between the couch and the wall.

4. Load all O/S chairs as follows:
 - a) Pad and/or stretch wrap the O/S item(s).
 - b) Start with the heaviest O/S chair. If they are all the same weight, start with the most bulky.
 - c) Lay the padded chair on its back with the feet to the wall. Then kneel a second chair into the first. Depending on the shape of the chairs, the kneeling can be achieved either with the second chair an inverted mirror image of the first or with the legs of the second chair in the air.
 - d) To finish the tier, continue kneeling chairs into each other as high as you can go, filling the spaces with soft, light items.
5. Love seats are usually short enough that they can be loaded on top of the deep base section of the tier. Again, load the feet to the wall and the back to the previous tier. If there are two couches, or a couch and a hide-a-bed, load one against each wall and fill the middle with suitable base and cartons. There will still be plenty of space to load several O/S chairs between and on top of the couches.
6. It may have been necessary to remove the legs from the couch or loveseat either to get it through a narrow door or to gain a little width across the van. However, if you left the legs on the couch, there will be a gap between the bottom of the couch and the wall when the piece is in position. This gap is a convenient place to load long, narrow items that are wrapped.



Long, narrow items that are not wrapped can damage furniture.

D. Appliance Tier

When a foreman first arrives at a residence, he should find out which appliances are to be shipped and which are not; typical household appliances include refrigerators, freezers, washers, dryers, and stoves.

1. The three most common appliances are refrigerators, washers and dryers. These usually fit snugly, side by side, across the van to form the base of the appliance tier. When there are four or more appliances, make a second appliance tier. A couch placed upright will fit nicely here.
2. With the washer and dryer in position, side by side, it is necessary to protect the knobs on the control panels on top.
 - a) To protect the control panel, you may pad the appliances and then place a row of four book cartons on top. This will bring the tier up higher than the control panels.
 - b) Then fill the gap at the back with a loosely rolled rug or something similar. Having leveled off the tier above the washer and dryer, you can proceed with loading. The depth of the tier is usually about 24" to 26", so you can either continue building as described in the wide (24") tier or you can complete the tier with overstuffed furniture.

E. Junk Tier

The word *junk* has nothing to do with either the value or the condition of the items to be shipped. Instead, *junk* refers to pieces that do not fit into a furniture tier, pieces that are irregularly shaped, sometimes sharp, sometimes dirty, occasionally fragile, and usually in the garage, basement, or yard. So don't be misled into thinking that the junk tier is just thrown in the van. Often just as much care and thought are necessary to load the junk tier, as any other tier.

A brief list of junk items is given below:

Bicycles	Broken furniture
Swing sets	Lawn mowers
Barbecue grills	Wading pools
Kids' toys	Outdoor furniture
Weights	Exercise equipment
Wheelbarrows	Water softeners
Ping-pong tables	Shovels
Lawn chairs	Tool boxes
Rakes and brooms	Etc.

1. Follow these three common sense rules when building a junk tier:
 - a) Load light pieces on top of heavy pieces.
 - b) Start the tier as deep as necessary to accommodate the largest piece.
 - c) Do not mix household effects with junk.
2. Take care with household pieces such as folding tables and chairs, which – although they are typically stored in the garage to make more room in the house – are not considered junk and will not be handled as such.
3. The decision to disassemble applies to many junk pieces, and you must judge each piece on its individual merit.
 - a) If it will not come apart easily, keep it together and load around it.
 - b) Bicycles may be partly dismantled to make them easier load.
 - (1) To reduce their bulk, remove the pedals.
 - (2) To make the handlebars parallel to the frame, loosen the bolt in the center of the handlebars and turn the handlebars 90 degrees.
4. Use burlap to wrap and to separate metal pieces in the junk tier, as pads will often rub through on corners and edges. Do not assume that because a piece is badly scratched and worn that it does not need to be covered. Notice the adjacent piece and consider the effect of one on the other.
5. Set aside two or three of your oldest pads and a few burlap pads to use them specifically for wrapping dirty items such as lawn mowers and BBQ grills.

6. Beware of spillage.
 - a) Don't tip toolboxes upside down as all the nuts and bolts will spill out of their inside compartments.
 - b) Spillage from drawers is a problem that applies to household furniture more than it does to the junk tier, but it is worthwhile mentioning it here. It is better to load any item in such a way that nothing will spill from the drawers, but often the piece will travel better on its side or upside down. In this case, stuff the drawers well with packing paper or burlap. Remember that your aim as a mover is to deliver a load in the same condition as you received it.
7. Loading large toys.
 - a) Large toys are usually made of heavy plastic or steel. In either case, they are robust enough to be stacked on top of one another with minimal padding.
 - b) Wooden toys, however, and especially homemade toys like doll houses are more prone to damage and should be well wrapped and loaded high in the tier.
8. Other general considerations.
 - a) In general, look for ways that pieces can be interlocked with each other to conserve space.
 - b) Beware that junk items will likely be different weights, densities and sizes, so you cannot just pile them on top of one another and assume that they will not break.
 - c) Either build the junk tier at the beginning or end of the load to minimize the possibility of something sharp in the junk tier damaging something in an adjoining tier, either O/S or finished furniture.
 - d) Ideally, the junk tier should be built in such a way that there are no sharp protrusions; however, in the event that there are, follow these suggestions:
 - (1) Separate any sharp protrusions from the next tier with plywood or used empty mattress cartons.
 - (2) Double pad the next tier if you think there is any possibility of damage from the junk tier.

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