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Load Securement Manual

June - 2022

Chief Carriers Safety-Securement Statement

Chief Carriers not only holds all safety practices to a high standard for every employee, driver, and lease operator, but also for the processes that contribute to the day-to-day functioning of the company. A strong awareness and commitment to the best practice policies outlined in the Carriers Driver Handbook, Securement Manual, and the Chief Industries Employee Handbook, will guarantee the success and safety of each employee and the integrity of Chief Industries.

Load securement is an essential job function for each driver. Therefore, it is important to understand that while there are many proper ways to secure material on a flatbed trailer, Chief Carriers has specific securement requirements for every driver to follow. Drivers need to keep the following details in mind for each load secured and hauled while representing Chief Carriers:

- ♦ Reference new hire orientation training for proper securement methods in accordance with the Chief standard. Rich Svitak or other terminal staff are available for additional training or advice on securement.
- ♦ Drivers may encounter special circumstances where adjustments must be made to secure a load. Communication to Operations, Safety, or the Driver's Supervisor is imperative when changes occur or need to be made to a load.
- ♦ Load issues at a shipper need to be addressed before the driver accepts the bill of lading(BOL).
- ♦ Any damages must be reported as soon as possible.
 - Write description of damage on the BOL, with signature of shipper or receiver, and take pictures with securement still on the load.
- ♦ Finally, Drivers are encouraged to contact any office team member (*see contact on page 3*), if there is a concern with a load or equipment.

TABLE OF CONTENTS

Grand Island & Rensselaer Terminal Contact Information.....	3
J.J. Keller Cargo Securement Handbook for Drivers-Excerpts.....	4-12
Carriers' General Securement Requirements.....	13
Specific Load Type Securement Details.....	14
Improper Dunnage Examples.....	15
Load Examples Requiring Re-arrangement by Shipper	16
Miscellaneous Load Examples with Securement.....	17-22
<u>Load Securement Images and information for:</u>	
Chief Buildings Plant.....	23-28
Deeter Foundry.....	29-33
Chief Agri-Environmental.....	34-39
Metal Sheeting-Slinky Coils.....	40-46
Side Kits.....	47-50
Proper Tarping.....	51-53

Chief Carriers, Inc. Terminal Locations

Chief Carriers, Inc.

2405 S. North Road

Grand Island, NE 68803

P.O. Box 2078 Grand Island, NE 68802 (For Mail Only)

Chief Carriers, Inc.

1225 E Maple Street

Rensselaer, Indiana 47948

Grand Island, Nebraska

Terminal/ Office Hours: 7:00am to 5:00pm Monday thru Friday

OPERATIONS:

Philip Burt, Driver Business Leader/Supervisor	308-389-7402 Office
Sherri McCormick/Brittany Carter, NE Load Planner/CSR	308-389-7437 Office
Christina Shearer, Load Planner/CSR	308-389-7445 Office
Sam Duncan, Load Planner/CSR	308-389-7404 Office

SAFETY:

Brett Kleier, Safety Manager:	308-389-7439 Office	308-379-3797 Cell
Kelsey Witte Safety/HR Coordinator:	308-389-7433 Office	
Rich Svitak, Driver Trainer/Safety Specialist	308-383-7124 Cell	

MAINTENANCE:

Tim Zigler, Maintenance Manager	308-389-7411 Office	308-380-5594 Cell
Rod Hanquist, OTR Breakdown Support	308-389-7419 Office	308-380-3338 Cell
Jay Otto, Service Writer & Parts Coordinator	308-389-7413 Office	

Rensselaer, Indiana

Terminal/ Office Hours: 7:00am to 4:00pm Monday thru Friday

Emily Wright, Load Planner/CSR	219-206-7011 Office
Frank Johnson, Safety Specialist	219-206-7023 Office

****Emergency After-Hour Phone Numbers****

Business Office	308-389-7250
Maintenance Shop	308-389-7410
Driver Toll-Free	800-845-1765
General Fax	308-389-7487
Safety Fax	308-385-4647
After Hours (Dispatch)	800-845-1765, Dial 1, Dial 8
After Hours (Safety)	800-845-1765, Dial 2, Dial 3
	308-379-3797
Day Time and After Hours (Shop)	800-845-1765, Dial 6

Cargo Securement Handbook for Drivers

Due to the constantly changing nature of government regulations, the following website will be used to keep you informed of any critical updates affecting the *Handbook*:
JJKeller.com/445h



2.2 The securement system and it's components

Pg. 14

Tiedown construction and maintenance

Tiedowns and/or their associated connectors or attachment mechanisms (except for steel strapping) must be designed, constructed, and maintained so that the driver can tighten them.

All components of each tiedown must be in proper working order, with no defects that reduce the working load limit:

- No knots, cracks, cuts or other obvious damage that would adversely affect performance.
- No distress.
- No weakened parts.
- No weakened sections.

Pg. 15

Inspect your chain links for gouges, cuts, chips, abrasion, bends, and twists. Use only approved repair links (such as clevis-type) to repair chains.

On binders, check for worn pins, bent tongues, open or bent hooks, bent couplers, bent eye bolts, and badly worn threads.

Pg. 16

Strapping

Make sure straps, hooks, and tensioning devices are strong enough for the cargo, and not damaged.

- Check for knots, crushed areas, cuts, burns, holes, splices, severe abrasion, and broken load-bearing strands.
- Use edge protectors when required, to protect the straps.

Tiedown Use

Each tiedown must be attached and secured so that it does not become loose or unfastened, open, or release during transit.

Because rub rails are designed to protect the securement system, tiedown and other securement components used on a vehicle equipped with rub rails should be located behind (inboard of) the rub rails whenever possible, though this is not required.

Edge Protection

Edge protection must be used if a tiedown could be cut or torn when touching an article of cargo. This is especially important for potentially abrasive or sharp cargo, like bricks and steel. The edge protection itself must also resist crushing, butting, and abrasion.

Edge protection is also useful for protecting cargo or dunnage that is much softer than the tiedown, to prevent damage from crushing.

Blocking and Bracing

The material used for blocking or bracing and as chocks and cradles must be strong enough to withstand being split or crushed by the cargo or tiedowns.

This requirement also applies to any material used for dunnage.

"Dunnage" is any loose material used to support and protect cargo.

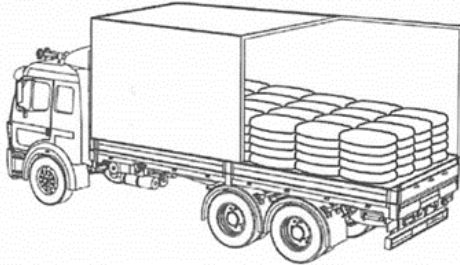
If wood is used

- Hardwood is recommended.
 - It should be properly seasoned.
 - It should be free from rot or decay, knots, knotholes, and splits.
- The grain should run lengthwise when using wood for blocking or bracing.

2.3 Containing, Immobilizing, and Securing Cargo

If the cargo is contained in a sided vehicle, the vehicle structure must be strong enough to withstand the forces described in chapter 2.1:

- Forward force: 0.8 g (80%)
- Rearward force: 0.5 g (50%)
- Sideways force: 0.5 g (50%)



Your personal safety is at stake if loose articles are not contained within the trailer. The cargo could shift during transportation and end up resting against the doors. When you unlatch the doors or open them, the cargo could fall out, and onto you.

Take precautions:

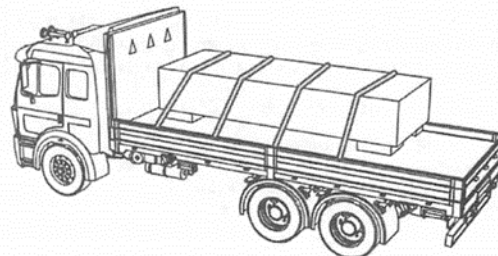
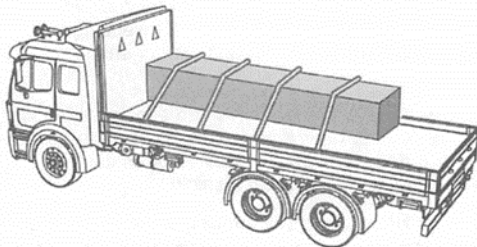
- Make sure all cargo is strapped down, secured using a load bar or webbing, secured to a side wall, and/or shrink-wrapped.
- Always use caution when opening the trailer doors. Unlock and open one door at a time and stand behind each door as it opens, using the door as a shield.
- Never try to catch falling cargo.



23

2.3 Containing, Immobilizing, and Securing Cargo

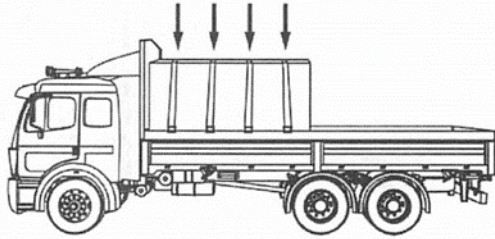
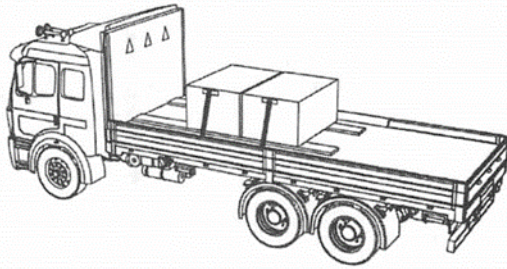
- Condition 2 — Cargo is **immobilized by structures** of adequate strength or a combination of structure, blocking, and bracing to prevent shifting or tipping to such an extent that vehicle stability or handling is adversely affected.



- Condition 3 — To prevent shifting or tipping, cargo is **immobilized or secured on or within a vehicle** by tiedowns along with:
 - Blocking
 - Bracing
 - Friction mats
 - Other cargo
 - Void fillers
 - A combination of these

24

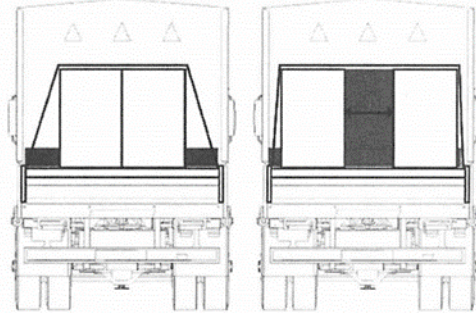
2.3 Containing, Immobilizing, and Securing Cargo



Loading the cargo properly

For articles of cargo placed beside each other and secured by side-to-side (transverse) tiedowns, either:

- Place them in direct contact with each other, OR
- Prevent them from shifting towards each other in transit by using blocking or by filling the space with other cargo. Vehicle motion can cause cargo to compress and fill any open spaces, thereby causing the tiedowns to become loose.



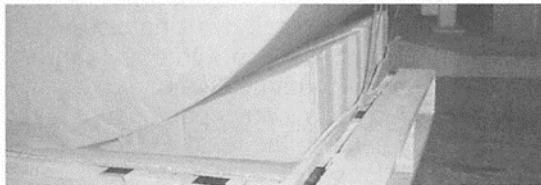
25

Pg. 26

2.3 Containing, Immobilizing, and Securing Cargo

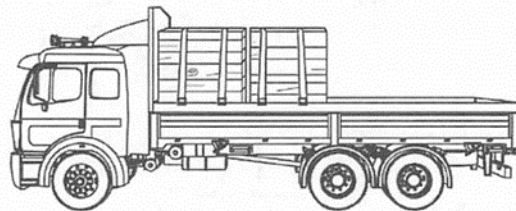
Some articles have a tendency to roll. To prevent rolling, provide more than one point of contact:

- Lift the cargo off the deck; AND/OR
- Use chocks, wedges, a cradle, or other equivalent means to prevent rolling. These **must** be secured to the deck.



The method used to prevent rolling must not become unfastened or loose while the vehicle is in transit.

For articles that have a tendency to tip, prevent tipping or shifting by bracing the cargo. A "brace" is a structure, device, or another substantial article placed against an article of cargo to prevent it from tipping. Braces may also help prevent cargo from shifting.



Remember to distribute the load evenly to avoid exceeding vehicle or axle weight limits, and keep the heaviest freight on the bottom.

How many tiedowns do I need?

1. When tiedowns are used as part of a cargo securement system, the Number of tiedowns needed depends on:
2. Whether the cargo is prevented from moving forward.
3. The length and weight of the cargo, AND
4. The strength of the tiedowns.

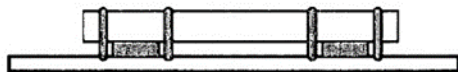
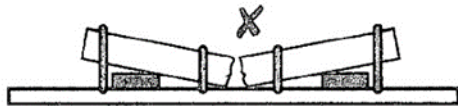
The minimum number of tiedowns needed depends on the first two factors. Additional tiedowns must be added, however, when the minimum number of tiedowns is not enough, based on their strength, to secure the cargo adequately.

Go beyond the minimum: provide some redundancy so the cargo remains secure even if one component of the securement system fails.

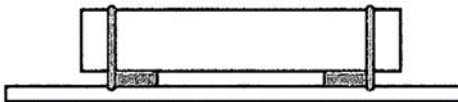
2.3 Containing, Immobilizing, and Securing Cargo

Tiedown placement

Unless the cargo prevents it, tiedowns should be positioned as symmetrically as possible over the length of the article(s). Position the tiedowns to preserve the integrity of the article(s).



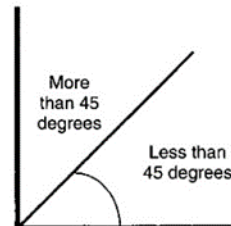
When spacers are used, tiedowns should be placed as close as possible to the spacers.



Direct tiedowns

Tiedowns attached to the cargo, or with both ends attached to the same side of the vehicle, work by counteracting the forces acting on the cargo.

When possible, the angle where the tiedown attaches to the vehicle should be shallow, not deep (ideally less than 45°).



2.4 Inspection Requirements

Pg. 39

The driver is responsible for the following cargo securement inspections activities.

Action	Pre-Trip	Within first 50 miles	When duty status changes	Every 3 hrs or 150 miles, whichever comes first
Inspect cargo and securing devices	<u>Required</u>	<u>Required</u>	<u>Required</u>	<u>Required</u>
Inform carrier if packaging is not adequate	<u>Required</u>			
Adjust cargo and/or securing devices	<i>As necessary</i>	<i>As necessary</i>	<i>As necessary</i>	<i>As necessary</i>
Add additional securing devices	<i>As necessary</i>	<i>As necessary</i>	<i>As necessary</i>	<i>As necessary</i>

Page 40

Driver securement inspection checklist

Pre-trip

- Make sure that cargo is properly distributed and adequately secured (according to the regulations).
- Make sure that the securement equipment and vehicle structures are in good working order and used consistent with the capability.
- Stow vehicle equipment
- Make sure that nothing obscures front and side views, or interferes with the ability to drive the vehicle or respond in an emergency.

3.2 Dressing Building Material

Page 54

Positioning and securing bundles

- Choose one of two options for positioning bundles placed side by side on a platform vehicle:

Option #1: Place bundles in direct contact with each other.

Option #2: Provide a means (such as dunnage or blocking) to prevent the bundles from shifting towards each other.

Bundles in one tier

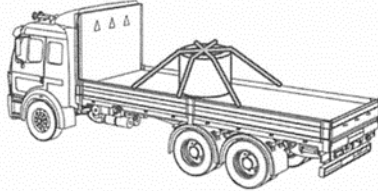
- Secure bundles in accordance with general cargo securement requirements.
- Web tiedowns are often used to secure building materials.
- On lumber loads, place dunnage on tail end of trailer then put lumber on that dunnage. --- **special requirement by Chief Carriers**

3.3 Metal Coils

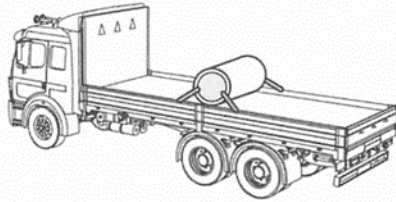
Orientation of coil

There are generally three ways to orient coils on a vehicle, with specific securement requirements for each:

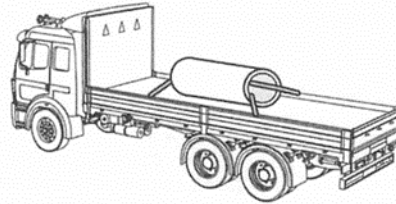
- Eyes vertical



- Eyes crosswise



- Eyes lengthwise



Type of vehicle

The securement rules are for metal coils transported:

- On flatbed vehicles.
- In sided vehicles with or without anchor points.
- In intermodal containers with or without anchor points.

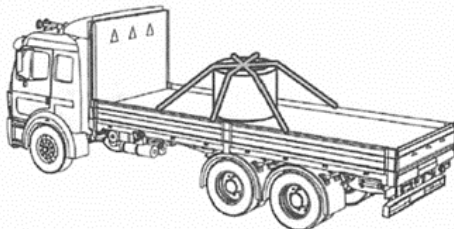
62

3.3 Metal Coils

Coils transported with eyes vertical on a vehicle with anchor points

If the coil is mounted on a pallet:

- Coil must be fastened to pallet so it cannot move on the pallet.
- Pallet must be strong enough to not collapse under Performance Criteria forces.
- Use a friction mat between pallet and deck.



Requirements for securing a single coil

- To prevent the coil from tipping, arrange tiedowns to include the following:
 - Attach at least one tiedown diagonally across eye of coil from left side of vehicle to right side of vehicle.
 - Attach at least one tiedown diagonally across eye of coil from right side of vehicle to left side of vehicle.
 - Attach at least one tiedown over eye of coil from side-to-side.
 - To prevent forward movement, use one of these:
 - Blocking
 - Bracing
 - Friction mats
 - A tiedown passed around front of coil

63

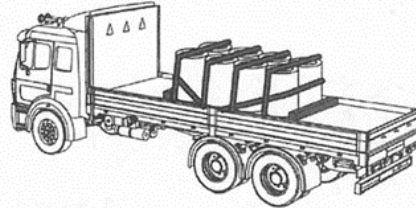
3.3 Metal Coils

Requirements for securing a row of coils

When coils are grouped and loaded side by side in a transverse or longitudinal row, each row of coils must be secured by the following:

- Attach at least one tiedown against front of row of coils to restrain against forward motion.
 - If possible, the angle between tiedown and deck should be less than 45° when viewed from the side of the vehicle.
- Attach at least one tiedown against rear of row of coils to restrain against rearward motion.
 - If possible, the angle between tiedown and deck should be less than 45° when viewed from the side of the vehicle.

- Attach at least one tiedown over top of each coil or side-by-side row of coils to restrain against vertical motion.
 - Tiedowns going over top of coil(s) must be as close as possible to eye of coil.
- Arrange tiedowns, blocking, or bracing to prevent shifting or tipping in all directions.



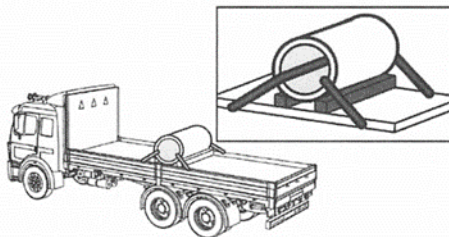
64

3.3 Metal Coils

Transporting coils with eyes crosswise on a vehicle with anchor points

There are three requirements for coils transported with eyes crosswise:

1. Prevent the coil from rolling.
2. Attach one tiedown forward.
3. Attach one tiedown rearward.




Requirements for securing a single coil

To prevent the coil from rolling:

- Support the coil.
 - Use timbers, chocks, or wedges held in place by coil bunks or

similar devices to prevent them from coming loose.

- Use a cradle (for example, two hardwood timbers and two coil bunks) that is restrained from sliding by:
 - Friction mats under the cradle.
 - Nailed wood blocking or cleats.
 - Placing a tiedown around the front of the cradle.
- The support must:
 - Support the coil just above the deck.
 - Not become unintentionally unfastened or loose in transit.

 The use of nailed blocking or cleats as the sole means to secure timbers, chocks or wedges, or a nailed wood cradle, is prohibited.

65

SEE PAGE 40-46, for a Chief Load example on proper securement of slinky coils.

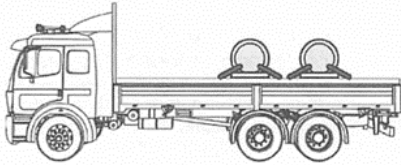
3.3 Metal Coils


Forward tiedown:


- Attach at least one tiedown through the eye of the coil to restrain against forward motion.
 - If possible, the angle between the tiedown and the deck should be less than 45°.

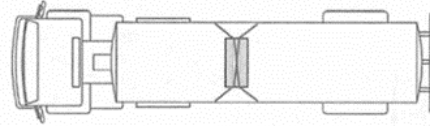
Rearward tiedown:

- Attach at least one tiedown through the eye of the coil to restrain against rearward motion.
 - If possible, the angle between the tiedown and the deck should be less than 45°.



 If a tiedown is used around the front of the cradle, it does not count towards the aggregate WLL for tiedowns through the eye of the coil.

 Attaching tiedowns diagonally through the eye of a coil to form an X-pattern when viewed from above the vehicle is prohibited when eyes are crosswise.



prohibited X-pattern

Requirements for securing a row of coils

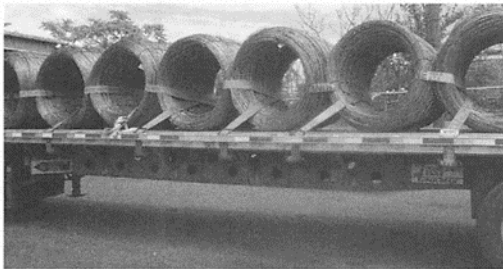
NOTE: The following requirements only apply to coils grouped in rows with eyes crosswise and the coils in contact with each other in the longitudinal direction. These requirements are based on a temporary U.S. exemption that was issued on April 14, 2011,

66

4.1 Frequently Asked Questions (FAQs)

Does coiled wire have to be secured according to the rules for metal coils?

In the U.S., yes, all coiled, rolled, or wrapped metal objects must be secured according to the rules for metal coils. In Canada, the rules for metal coils apply only to coils of rolled sheet metal.



Are lever-type binders acceptable?

Yes. The rules do not specify the types of binders that may be used.

Do I have to secure my spare tire, spare chains, landing gear crank, and other vehicle equipment?

Yes. The tailgate, tailboard, dunnage, doors, tarps, spare tire, straps, chains, binders, wood blocks, and other equipment used in the vehicle's operation must be secured.

Does my vehicle have to have a headerboard/bull board/headache rack?

No. But if your cargo is in contact with a front end structure, then that structure must comply with certain specifications. In the U.S. regulations, refer to 49 CFR 393.114.

Can a bungee cord or tarp strap be used as a primary means of securing cargo and does it need to be rated and marked with a working load limit (WLL)?

Bungee cords and tarp straps are not suitable for use as tiedowns, but they can be used as supplementary restraints for light-weight cargo and equipment.

130

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J. J. Keller & Associates, Inc.
3003 Breezewood Lane, P.O. Box 368
Neenah Wisconsin 54957-0368
Phone: (800) 327-6868
Fax: (800) 727-7516

JJKeller.com

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Carriers' General Securement Requirements

1. All drivers must complete a 10-15 minute pre-trip at beginning of each work day and a 5-10 minute post-trip at the end of each day.
2. Drivers are required to inventory securement equipment on their truck, to ensure that they have the right amount of straps and chains for proper load securement at all times. Drivers also need to confirm that securement equipment is not damaged.
 - Drivers should inspect securement equipment for: cut in straps, bad chains, and damaged ratchet binders. Drivers also need to make sure there is a proper amount of dunnage and tarps (2-lumber & 3-Steel) that are in good condition on their truck.
3. Personal Protective Equipment (PPE) gear is to be worn at all times while securing a load.
 - PPE Gear includes: hard hat with chin strap or bump cap, safety vest, steel toed boots, gloves, hearing protection, and eye protection. *(customer may have specific PPE requirements)*

All drivers are expected to maintain and utilize appropriate PPE for their own personal safety to meet all company, customer and federal policies and standards. Drivers are issued gloves, hardhat with chinstrap and bump cap, safety glasses, hearing protection, and florescent safety vest during the orientation process. All non-company issued PPE must meet the ANSI standards as required by OSHA. Please contact safety for further guidance or questions. ***Driver Handbook, Section 6.0 Safety, subsection 6.1 Pg.31***

4. Chief Steel On Steel policy – Steel chains, perlines, and angle iron are required securement on all steel beam loads.
5. Straps are required on loads containing c-channels and crates, boxes, doors, and windows.
6. Straps on trim boxes and gutter boxes need to be snug but not to the point of crushing the box the material is contained in.
7. Edge protection is required on all sharp edges where each strap meets load material.
 - Edge protection can be cardboard, carpet, and/or formal plastic edge protectors.
 - 24 units of edge protection are issued to each driver, additional edge protection can be obtained from the shop.
8. Yard tarps (noted in pink) on each Rensselaer Building Plant load need to be removed and re-tarped with the driver's tarp.
9. Best Practice to reference equipment gauges for proper load weight:
 - Pressure gauges on tractor drive axels should read no more than 60 PSI. Trailers vary, but no more than 77-78 PSI, with brakes disengaged for trailers that have gauges.

Specific load types – best practice securement details

Round Rod – Tightly constrict with a strap around both the front and back ends of the load.

Pipe – Must have straps positioned over the top of the pipe and belly strapped over each top strap.

Black Coils – Should be arranged either in suicide or shot gun formation on the trailer. There also needs to be a minimum of two chains through the middle of each coil, one strap over the top of each coil, and a tarp over coil(s).

Painted coils – Each coil must be arranged on one pallet in a vertical position on the trailer.
Secure as follows:

1. Use edge protection.
2. Three crisscrossed straps on the front coil and back coil.
3. Break chain or strap positioned around the front coil and back coil.
4. One or two strap(s) need to be placed on the coil in middle of the load.
5. **Painted coils have to be tarped.**
6. Must have break chains crisscrossing the front of the load and back of the load, with straps in between, and edge protection.

Bar stock – Requires *Bulk Head- three 4x4 wood planks stacked on top of each other with chain securing planks down*. The bulk head is constructed in front of the load and at the rear of the load on the trailer. Along with the right amount of straps needed to secure the load, plus edge protection.

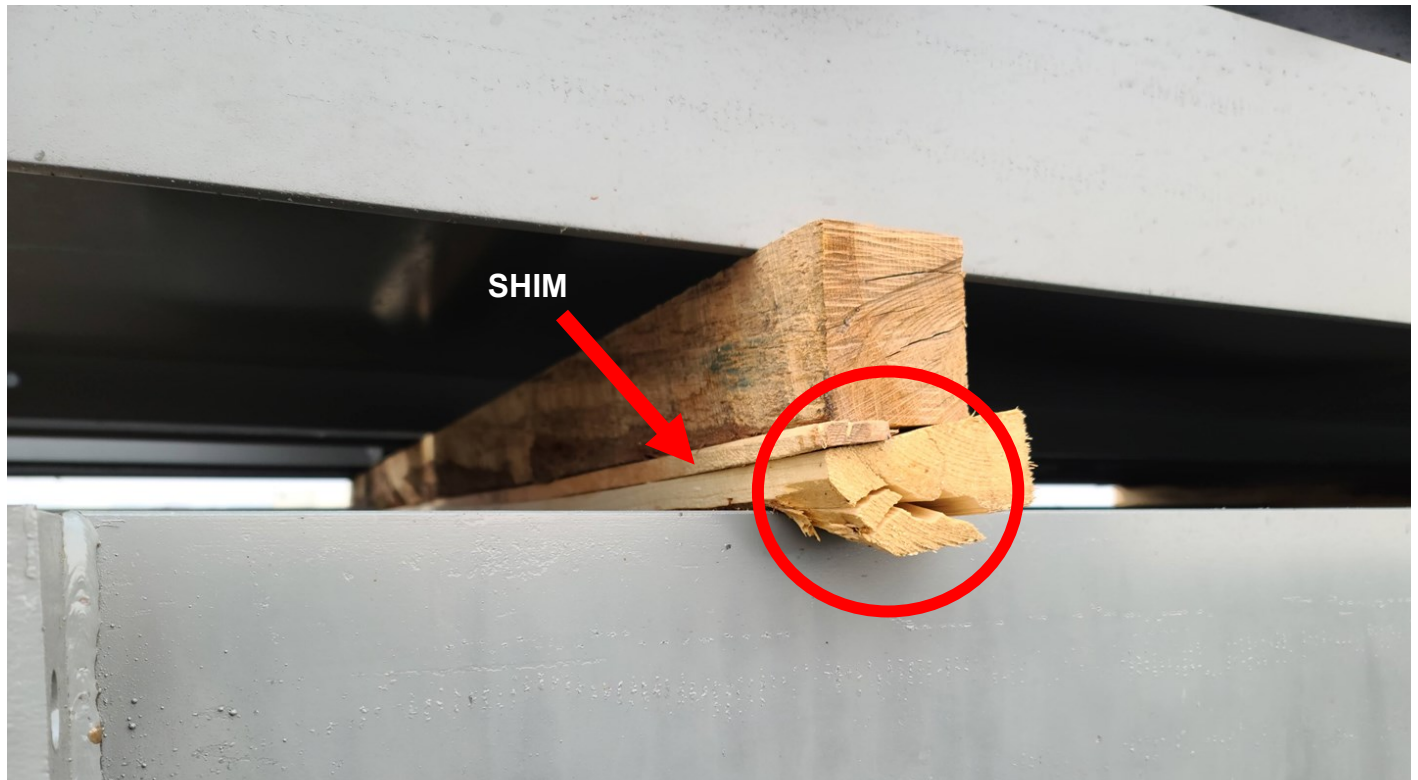
All raw steel, coil, flat sheet, bar stock, etc. – Must be tarped with padding between product. The tarp needs to be bungeed down tight to keep the tarp from getting torn or wind wiped, and preventing any moisture or road grim from getting on the material.

Roof loads – Place at least two straps on every layer close to dunnage points at the front of the load and the back of the load. Also place straps over the top at every dunnage point on the trailer.

EXAMPLE – Three layers of roof sheet — securement straps need to be placed as follows: 1 strap on the front and 1 strap on the rear of the first row. Then repeat the same pattern of strapping on the second row and third row. Finally, put straps over the top of all material at every dunnage point. - **see image on page 27**

Refer to load example images - See Load Type in Table of Contents

Improper Dunnage Example - Steel Beams



The image above depicts shims placed between wood dunnage plank and the steel load beam. As the load was secured down the shim piece gave way, splintered, and caused the load to shift.

All loads need to be inspected for proper dunnage before securing. If any load is noted to have shims with dunnage, contact the dispatcher of the load immediately in order to have the load re-loaded with proper dunnage and no shims.

Improper Dunnage Example - Bar Stock



The bar stock shown in the image to the left must have blocks between each bundle of bar stock.

Examples of loads that need to be re-arranged by Shipper



Image 1: A Grout Channel is placed in the middle of longer pieces of material on this load. There is no proper way to secure this item. As a result, the trailer will need to be taken back to the shipper plant to have the piece re-arranged on the trailer in order to properly secure.

Image 2: A bundle of Angle Dew has been set between two boxes on this load. To properly secure this item on the trailer, the bundle of Angle Dew must be placed on top of the boxes or in another position on the trailer, to have direct contact with a chain or strap. Again, this would be another instance that the load would be rearranged by the shipper.



Securing boxed windows and Doors

- ◆ Straps only need enough pressure to keep the boxes from moving or shift.
- ◆ It is important to be mindful of not over tightening the straps to cause major dents in the box that may result in damaged material



Properly secured lumber

- ◆ This type of lumber load shown in the image below requires 2 straps within the first four feet of the load and then a strap every 10 feet, depending on how the lumber is loaded on the trailer.



Properly secured pipe



Properly secured Centrifuge

- ◆ To properly secure this load, placed one chain on the front, two straps in the middle, and one chain on the back using the eyelets attached to the centrifuge. Both load objects must be tarped when being transported back to either Chief Ethanol or Chief Agri after being refurbished.



Chain Link Fencing



The lower level is secured by straps over the top. The upper level is secured by straps constricting securely around them to prevent rolling off.

Flat metal sheeting



The image above is not properly secure. An X-chain formation needs to be placed on the front and the back of this load to prevent the flat sheets from sliding. Edge protection must be placed under each strap between the load material and the strap.

Lights

The images depict the proper securement method for each unit on the trailer and how the back of the trailer needs to be secured.



Transformers



Transformers are secured on pallets by the shipper with black banding and 2x4s nailed to the pallets. Drivers are responsible for running straps over the top of the 2x4s and pallets across the trailer.

- No securement is required over top of transformers.



Pivot Loads - properly secured



Chief Buildings Plant Loads

Load Type: Beam load - Improper Securement

Image 1: This beam and bundle load does not have enough securement. The bundle on the top of the load is a high risk shift item with the current chain placement. The arrows indicate where additional chains need to be placed in order to properly secure the load.



Image 2: Edge protection needs to be placed (*indicated by the arrows*), between the strap and the material on the trailer.

Beam Loads - Proper Securement

Beam Load **A** is an Excellent Example of Securement.



Beam Load **B Front** - Properly secured



Beam Load **B Back** - Properly secured



Beam loads Continued.....

Image 1: Depicts another correct way to secure beam loads, with a chain placed over the top beam of the load material at every dunnage point on the trailer. Along with a chain placed through the middle of the stack of beams (referred to as the “belly”) at the dunnage points.



Below are two more examples of correct securement on a beam loads.



Roof Sheeting - Proper Securement

- This image displays proper securement on a roof sheeting load.



- ♦ The two images below show another type of roof sheeting load.
- green lines indicating where strap securement needs to be placed to properly secure the load.



Roof Sheeting & Beam Load

The images below depict the proper way to secure a beam/roof sheeting combo load.



The additional two images below are a closer view of the full trailer picture listed above .



Deeter Foundry Loads

Manhole Pieces

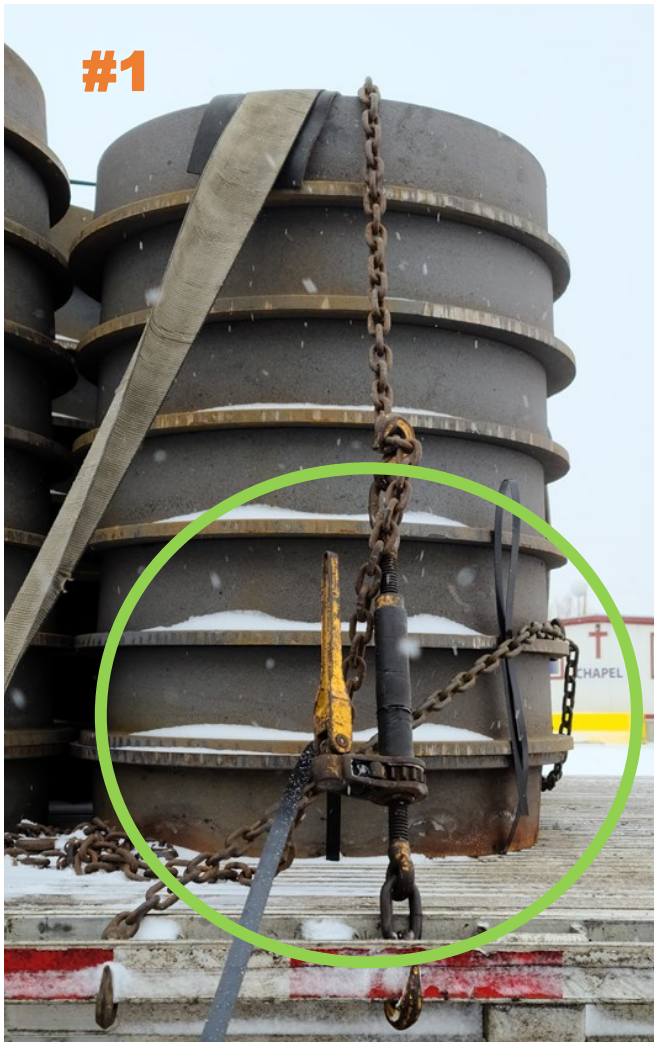


Image 1: Depicts an example of where to put the brake chains on the front and back of a load of manhole pieces.



Image 2: Shows one way to secure center columns of manhole pieces by using chains.

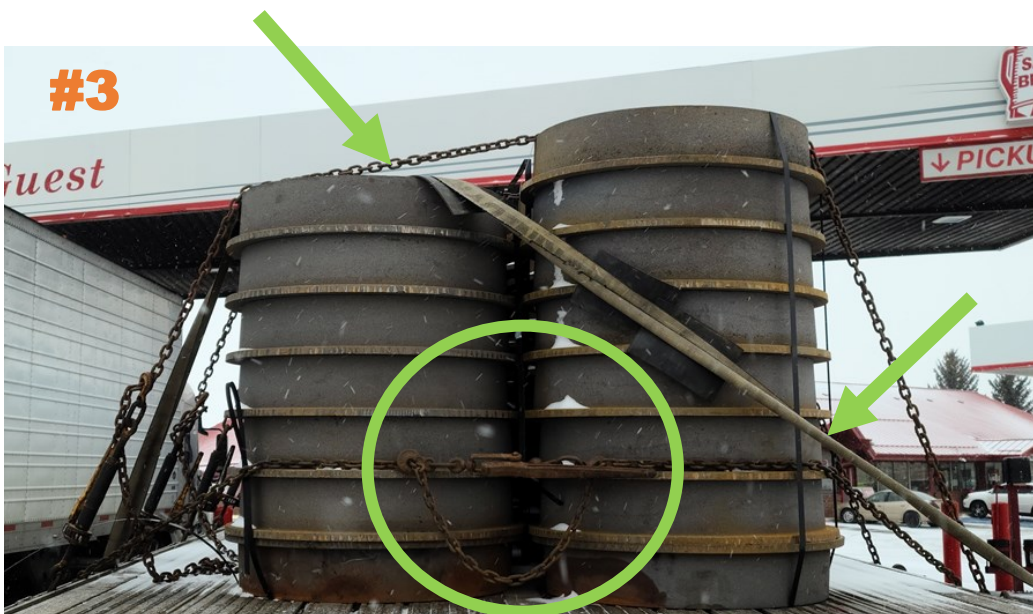


Image 3:

If there is an uneven stack of manhole pieces, place a strap across the front of the taller stack, and over the top of the lower stack. Also add a brake chain across the front of the two stacks.

Manhole Pieces



The images are example of properly secured manhole pieces using straps rather than chains. Keep in mind that edge protection is required when using straps for this type of load, and a brake strap specifically placed on the front of the load.



Additional Deeter loads with proper securement



Image 1:

Is a good example of proper securement by using a combination of straps with edge protectors, chains, and placing a break chain on the front to prevent sliding.



Image 2:

Shows the rear view of the same load in *image 1*. A break chain is also placed on the rear end of the load for proper securement.



Image 3:

This image is a close up front view of *image 1*, that shows the proper way to secure the brake chain on the front of the load.

Image 4:

This type of Deeter load is correctly secured by the use of pallets, straps and edge protectors.



Additional Deeter loads with proper securement



This Deeter load is properly secured utilizing edge protection and pallets placed on top of the wrapped steel lids, with straps run through the pallets. A bulkhead is also constructed at the front of the load to prevent load material from sliding forward.



Chief Agri - Environmental Loads

Chief Agri and Chief environmental produce a variety material ranging in shape and size. The following details apply to each Agri or environmental load:

- ◆ Edge protection must be used on sharp edged material but not round edged material.
- ◆ Be mindful not to cause indentions in load objects, from too much tension on the material by the strap.
- ◆ Tall load objects require a twist in each strap to eliminate strap vibration during transport.



Continued on next page....

Environmental loads



The top & middle image depict proper securement of an Environmental load using chains and straps.



The bottom image is another Environmental load that only requires straps and edge protection.
- *green lines indicate where straps need to be placed for proper securement.*



Environmental Load

- requires straps only for securement with edge protection on all sharp edges and ruff surfaces.

Front half of trailer - **Side A**

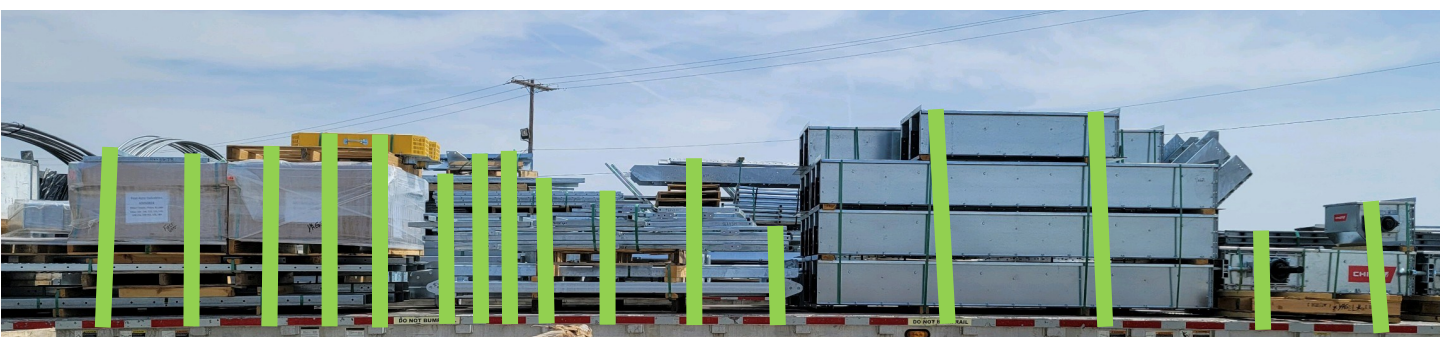


Back half of trailer - **Side A**



- green lines indicate where straps need to be placed for proper securement.

Full view of trailer - **Side B**



Environmental or Agri Load

- The load shown below is sent from either Chief Agri or Environmental on a side kit trailer to Atkinson, Nebraska to be galvanized and transported back to Chief Ag.



- Black side kit straps are ok to use for securement, but only for these instances.



Agri auger Load - Front half of trailer - Side A 1. Use only Straps.



Front half of trailer - Side B 2. Place edge protection between all straps and load material.



Full Back half of Trailer Green lines indicate where straps must be placed with edge protection.



Metal Sheeting- Slinky Coil Loads

Load Type: Coils - Improper Coil Rack Placement



Image 1: Coil racks were not placed correctly under this coil.



Coil racks must be placed closer together to ensure the strength of the dunnage and not create weak points (*image 2*). See figures below.

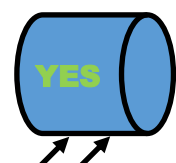
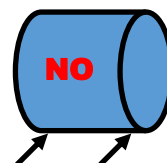


Image 2: Due to the coil racks being placed too far apart, the dunnage plank cracked. It may not seem like it but in the instance of a hard break this will allow enough movement for the coil to roll off of the trailer.

Improper Coil Rack Placement *Continued.....*



Image 1: displays another example of incorrect placement of coil racks. For these types of narrow coils, racks should be placed in the center of each coil, along with a dunnage plank.

○ = incorrect placement of coil racks → = Where coil racks should be placed



Image 2: Painted coils on skids should not be placed on the trailer side by side. These types of coils need to be placed in a single file line, going down the center of the trailer.

Load Type: Coils - Proper coil rack placement & securement



Continued on next page....

The image below depicts the correct placement of coil racks

- ◆ This type of coil is always placed in this formation.
- ◆ Coil racks are placed at center points of each coil.

-Black banding is a good indicator of the center on each coil



Slinky Coils - Properly secured



When securing slinky coil loads, each front and end coil must be secured by an inter-cradle strap configuration, as shown properly in the image above.

See page 11 for additional explanation to properly secure slinky coils.

Continued on next page....

Slinky Coils - Properly secured *Continued.....*



Side Kits



Drivers are required to inspect each side kit for proper installment by checking the following details on each trailer:

- ◆ All panels and bows are aligned and properly placed.
- ◆ Each rope and bungee cord is tightly tied to the trailer to secure tarp down.
- ◆ Check to make sure all straps are tight.





Left side

Drivers also need to make sure that the two chains at the back of the side kit trailer are tight and arranged correctly, as shown in the left two images.



Right side

Continued on next page....



To continue, on the back side of each side kit, drivers also need to ensure the following:

- ◆ Tarp flap is tightly secured down to avoid being caught by the wind.
- ◆ Chain is ran tightly across the back of the tails boards through the right and left chain post angles, to keep the whole side kit secure and prevent tail boards from falling out.
- ◆ Tail boards are correctly arranged in the post channel.



The image on the left shows the proper way to store a side kit once it has been disassembled.

*Please refer to the video on the Samsara tablet, for more instructions on how to take down a side kit and properly store the pieces.

Proper Tarpping

These images display the proper way to secure a tarp on a lumber or sheet rock load.

*See special instructions below for securing tarps.



On the front of the load.....

1. Be sure to fold the two small side flaps of the tarp in first.
2. Then fold the large flap over each of the small side flaps.
3. Secure large flap with bungee cords to prevent catching in the wind or moisture reaching the load material.



On the back of the load.....

4. The Large flap of the tarp comes down first.
5. The small flaps are then folded over the large flap.
6. Bungee cords are used to secure the tarp.



These images show properly tarped coils. The front and back ends of the coil load must be tarped out, with dunnage strapped down over the top of each tarp end. Bungee cords are also used on the side to keep the tarp tight during transport and eliminate catching in the wind.



