

Load Xpert™ - Load Planning

User Guide



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SECTION 1: **Introduction**

Load Xpert™ - Load Planning software is a very powerful and easy-to-use software that automatically suggests loading configurations for transporting paper rolls, pallets, skids and boxes via trailers, railcars and containers.

This user manual is intended to give a general overview and to provide guidelines on how to use the software.

1.1 **Features of Load Xpert™ - Load Planning software**

Load Xpert™ – Load Planning software uses a very unique optimization method to do the load planning.

Some of the main features of **Load Xpert™ – Load Planning** are:

- Maximizes payload carried in a vehicle
- Complies with axle load limits for trailers
- Complies with center of gravity height limits for railcars
- Creates load plans with minimum securement needs
- Automatically inserts risers, void fillers, air bags and straps
- All suggested load plans comply with industry best practices for cargo securement

1.2 **Getting Started**

Please make sure the software protection key (HASP key) is inserted in the USB or Parallel port before you open the software.

Login:

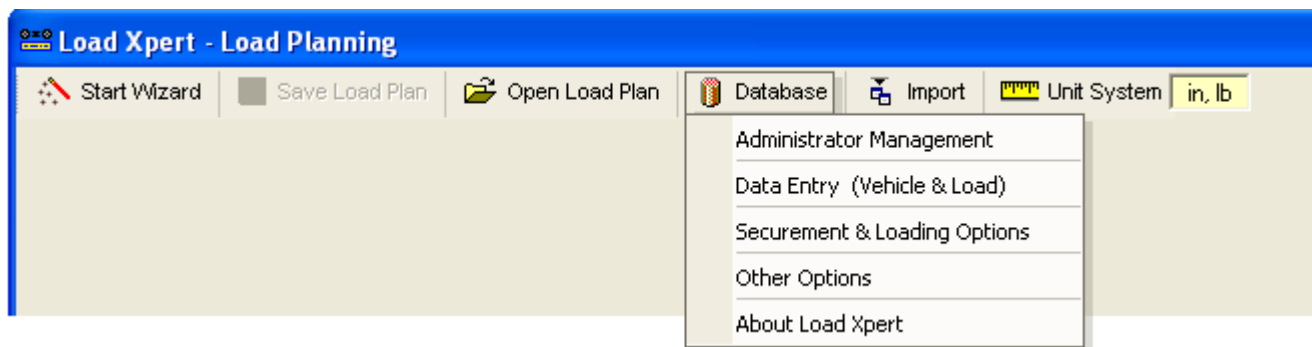
Before you could use **Load Xpert™** software you need to login into the software with a password.

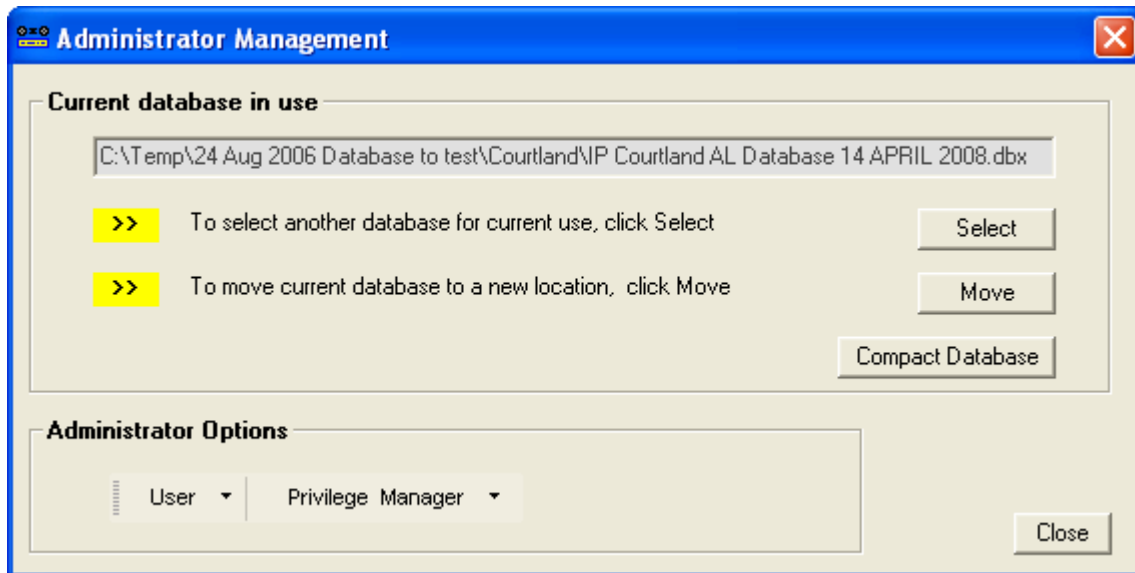
Contact your administrator to get your password.

SECTION 2: **Instructions for Administrator**

Administrators have full privilege to assign user accounts and to create, edit, rename and delete entries in the database. Follow the instructions below:

1. After login, click “**Database**” in main menu.
2. Click “**Administrator Management**” and click on the “**User**” menu to create all new user accounts.





Make sure you verify first the location of the current database in use. If you wish to select a different database or move the database to another location in your computer, click “**Select**” or “**Move**” and follow instructions.

There are three types of user categories beside Administrator:

- **Supervisor**
- **Operator**
- **Viewer**

The main difference between these user categories is the privileges they have for accessing the database and for changing Load Plan Options. **NOTE: Administrator has full privilege**

3. Click “**Privilege Manager**” to assign privileges to **Supervisors and Operators**. Privileges can be assigned to any of the following four options:
 - Trailer and Container (Road only)
 - Trailer and Container (Intermodal)
 - Trailer and Container (Road only - Mix)
 - Railcar
 - General Options

Privilege Manager: Trailer and Container (Road Only)

Check appropriate boxes to assign privileges to Supervisors and Operators.

Paper Rolls **Pallets / ...**

Description	Administrator	Supervisor	Operator
Edit Securement Options (Paper Rolls)			
D1 (overlap)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D2 (fit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D3 (spacer width)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D4 (blocking height)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D5 (riser height)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forward acceleration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rearward / Sideways acceleration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Edit Loading Options 1 (Paper Rolls)			
Void space from nose or front wall	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Void space from rear door	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Void space from each side wall	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Void space from the ceiling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Front Gap	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load identical rolls together (No swapping)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lateral weight distribution	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Edit Loading Options 2 (Paper Rolls)			
Load 1st row (at the front wall)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loading 1st roll	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load 1st row of rear load group	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Edit Loading Options 3 (Paper Rolls)			
Pattern Preference	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximum # of rolls stacked in last row (rear)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Update Close

For example if you click **“Trailer and Container (Road Only)”**, the following will appear on the screen. Click the tab to select Paper Rolls or Pallets and assign editing privileges. In the same way, you can assign appropriate editing privileges for **“Trailer and Container (Intermodal)”** and for **“Railcar”**, Railcar Options are shown below:

Privilege Manager: Railcar

Check appropriate boxes to assign privileges to Supervisors and Operators.

Paper Rolls **Pallets / ...**

Description	Administrator	Supervisor	Operator
Edit Securement Options 1 (Paper Rolls)			
D1 (overlap)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D2 (fit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D3 (spacer width)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D4(a) (blocking height)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D4(b) (blocking height in percentage)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Edit Securement Options 2 (Paper Rolls)			
D5 (riser height)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
# of risers allowed under a pile (except door area)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
# of risers allowed under a pile (in door area)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minimum void allowed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximum void allowed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D6 (Maximum height difference allowed for piles on each side of air bag)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Min. blocking height for diameter greater than or equal to 58"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Edit Securement Options 3 (Paper Rolls)			
Strapping Option 2 (refer to the example in securement option 3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allow Strapping at an angle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allow Loading plan with strapping in door area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Edit Securement Options 4 (Paper Rolls)			
Blocking of incomplete layer with center roll only for patterns with 3 vertical air bags	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Edit Loading Options 1 (Paper Rolls)			
Maximum C.G. Height	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load identical rolls together (No swapping)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Update Close

By clicking **“General Options”** you can assign privileges related to Vehicle to Load data, Add/Delete Securement Options, Import Load List, etc., as shown below.

Privilege Manager: General Options

Check appropriate boxes to assign privileges to Supervisors and Operators.

Description	Administrator	Supervisor	Operator
General Options			
Enter Data (Vehicle/Load)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overwrite/Delete Saved Load Plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Add/Delete Securement Options	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create New Loads	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Import Load List	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enter Production Diameter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Language selection for View / Print	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Company Logo 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Company Logo 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Company Logo 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximum # of Load Plan solutions to display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modify Default comments for Trailer (Road Only)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modify Default comments for Trailer (Intermodal)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modify Default comments for Container (Road Only)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modify Default comments for Container (Intermodal)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modify Default comments for Railcar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Save Load Plan Vehicle By Shipping Reference	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allow Planning Mode for Load Optimizing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Select Delimiter for Import / Export	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modify Load Plan with mouse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Top View Scale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Update Close

NOTE: Click the Compact Database to compact your current database in use

SECTION 3: Instructions for Supervisors & Operators

Depending on the privileges assigned to you by the administrator, you may be able to access under “**Database**”:

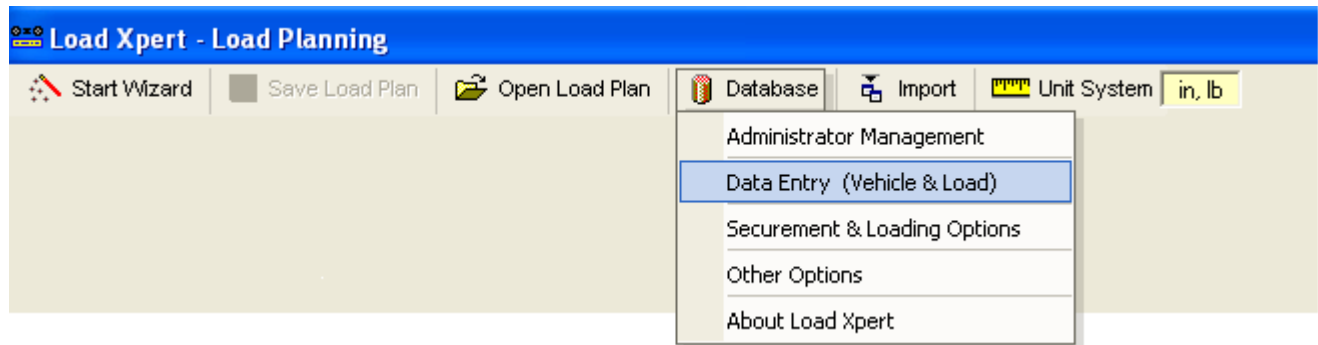
- “**Data Entry (Vehicle & Load)**” to create, edit, rename and delete Vehicle & Load (see details in **Section 4**)
- “**Securement & Loading options**” to create, edit, rename and delete securement and loading option set
- “**Other Options**” (see details in **Section 4**)

SECTION 4: Database - Enter Data (Vehicle & Load)

Depending on the privileges assigned to you by the administrator, you may be able to access “**Data Entry (Vehicle & Load)**” to create, edit, rename and delete Vehicle & Load data.

To enter data on **Vehicle & Loads**:

1. Make sure you select the appropriate unit system you wish to work with. In the main menu next to “**Unit System**” the current unit system active in the software is displayed. If you wish to change this unit system, click “**Unit System**” and select US (in, lb) or metric (mm, cm, m, kg) units of your choice.



2. Click **“Database”** in the main menu and select **“Data Entry (Vehicle & Load)”**.
3. Enter data for **Trailer, Railcar, Container or Load**.

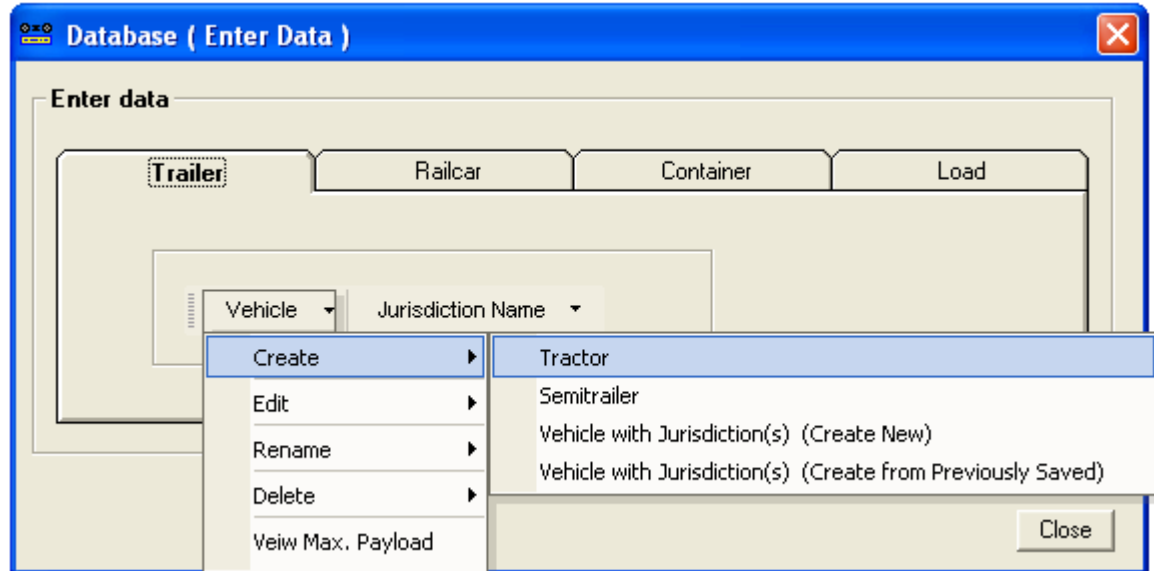
NOTE: Make sure you verify first the location of the current database in use. If you wish to select a different database or move the database to another location in your computer, click “Select” or “Move” and follow instructions.

4.1 TRAILER

There are two “Tabs” to enter data: **“Vehicle”** and **“Jurisdiction Name”**.

Click **“Vehicle”** and there are five drop-down items to Create, Edit, Rename, Delete and view Max. Payload:





4.1.1 Vehicle - Create




a) Creating Tractors:

Click Tractor and select a Tractor Configuration (tractor # 1 to # 4).

Select a Tractor Configuration

 <input type="radio"/> Tractor # 1	 <input checked="" type="radio"/> Tractor # 2	 <input type="radio"/> Tractor # 3
 <input type="radio"/> Tractor # 4		

Note :  = Lift Axle

For example, if a tandem drive tractor is selected, a typical screen will be as shown below.

Now you have two ways of creating a new tractor.

Method #1: Enter Tractor ID and all other information. Then click “**Finish**”.

Create a new Tractor

Tractor Information

Select from database:

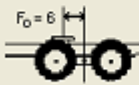

Tractor ID (e.g. Tractor 101):

Dimensions

Wheelbase: (in) **WB**
WB is the distance between center of Steer axle group to center of Drive axle group

Drive Axle Group Spread: (in) **S**

9th Wheel Position: (in) **Fo**
(Refer to drawing below to enter +ve or -ve for **Fo**)

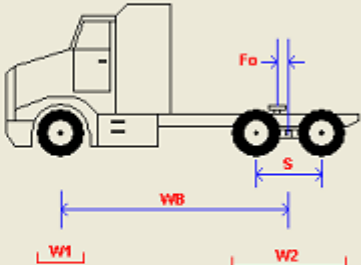
Tare (empty) weight of Tractor (includes fuel & driver)

Steer Axle: (lb) **W1**

Drive Axle: (lb) **W2**

Viewing Option

☒ Is Sleeper present ?

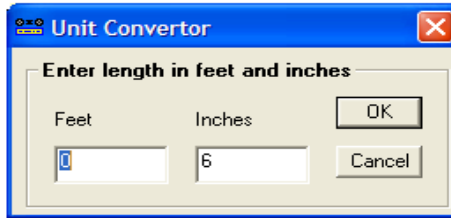


Unit System Cancel << Back Finish

Method #2: Select a previously saved tractor by clicking the combo box “**Select from database**”. All previously created and saved tractors will be listed and you can select the tractor of your choice. When you choose a tractor, all data including Tractor ID will be displayed. You can edit any data including the Tractor ID.

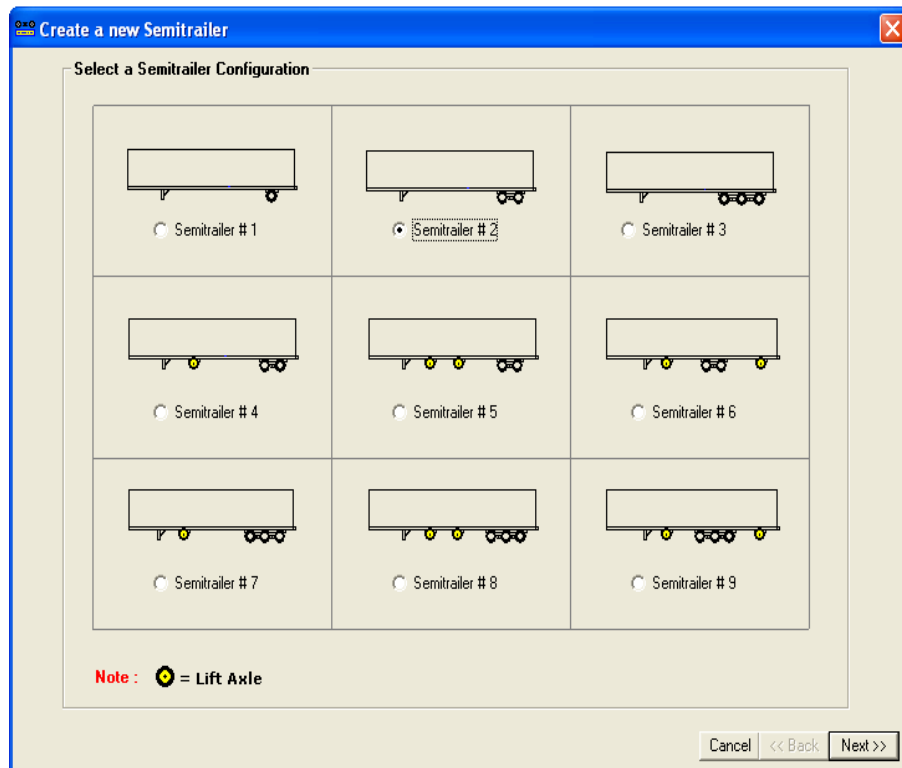
If you wish to enter data in a different unit system, click “**Unit System**” button to change.

NOTE: If you are using US Unit system and wish to enter dimensions in ft-in, double click mouse button when you are ready to enter a dimension. A pop-up box as shown below will appear for you to enter data.



b) **Creating Semitrailers / Flatbed:**

Click Semitrailer and select a configuration (Semitrailer # 1 to # 9)



For example, if a tandem trailer (Semitrailer # 2) is selected, a typical screen will be as shown below. Enter Semitrailer ID and other information.

If you wish to create new Semitrailer from a previously created Semitrailer, click “**Select from database**”, enter a new Semitrailer ID and then edit data as required.

Select the Closed Van to create a Semitrailer and Flatbed to create a Flatbed

Create a new Semitrailer

Semitrailer Configuration

Select from database: <Select>

Semitrailer ID (e.g. Semitrailer 101):

Interior Dimensions

Interior Length: IL 576 (in)

Interior Height: IH 108 (in)

Interior Width: IW 100 (in)

Front Wall Thickness: WT 2 (in)

Dimensions

Kingpin Setback: SB 36 (in)

Wheelbase: WB 486 (in)

Axle Spread: S 54 (in)

Tare weight of Semitrailer

Tare (empty) weight of Semitrailer: WE 5896.7 (kg)

Tare weight on Rear Axle: W1 3931.13 (kg)

Unusable Area(s)

☒ Closed Van ☐ Flatbed

Rear Axle

Is the Rear Axle Slidable? ☒ Yes ☐ No

Running Gear Weight: WR (kg)

Note: This is not axle load.
Running Gear Weight = Weight of sub-frame + axles + suspension + tires

Minimum distance of axle group center to kingpin: X1 486 (in)

Maximum distance of axle group center to kingpin: X2 486 (in)

Sliding axle increment: DX 0 (in)

Unit System Cancel << Back Finish

NOTE: Enter the unusable area for Semitrailer by clicking the “Unusable Area(s)” tab.

c) **Creating Vehicle with Jurisdiction(s) (Create New)**

Use this menu, if you are creating Vehicle + Jurisdiction(s) for the first time.

Create a new Vehicle + Jurisdiction(s) Info

STEP 1 : Select Tractor

Sample Fleet Tractor_xx

Sample Tractor_1

sample Tractor_2

sample Tractor_2_190" 54"

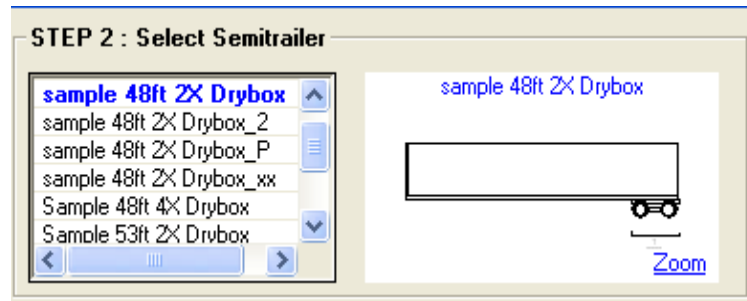
Sample Tractor_3

Tractor 2 190" 54"

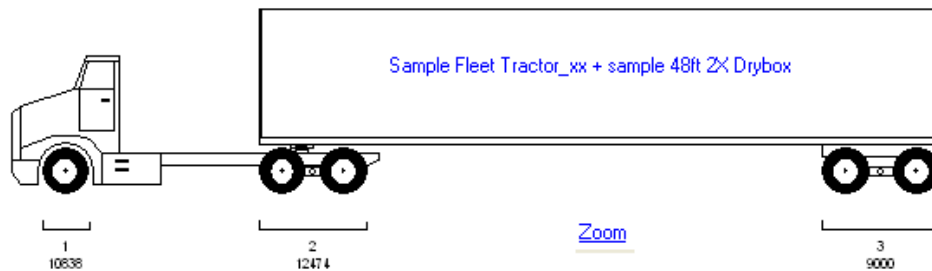
Zoom

STEP 1: Select a Tractor from the list of Tractors previously created and saved in the database. A small drawing of your selected tractor will appear on the right side. Click “**ZOOM**” to view the selected Tractor with its tare weights and axle loads.

STEP 2: Select a Semitrailer from the list of Semitrailers previously created and saved in the database. A small drawing of your selected Semitrailer will appear. Click “**ZOOM**” to view the selected Semitrailer with its tare weights and axle loads.



As soon as STEP 2 is completed, an assembled Tractor - Semitrailer with a default name (Tractor name + Semitrailer name) will be displayed along with its tare axle loads. As before click “**ZOOM**” to view the vehicle with its tare weights and axle loads.



STEP 3: Here you first select all Jurisdictions (States or Provinces) where your selected vehicle may travel and then enter your vehicle's desired GVW (Gross Vehicle Weight) and Axle Load limit for each Axle Groups for each of these jurisdictions.

To select the Jurisdiction from the drop-down list, you must have these Jurisdiction names saved previously in the database.

To save Jurisdiction names in the database, click “**Add Jurisdiction Name**” tab, enter and save. In the case of U.S. Interstate Jurisdiction (Federal Bridge Formula), it is programmed in the software as a default and can be selected from the Jurisdiction drop-down list in **Step 3 as “U.S. Interstate”**. Therefore there is no need for you to enter data for U.S. Interstate.

A typical example is shown below:

STEP 3 : Select all Jurisdiction(s) where vehicle may travel, and enter desired GVW + Axle Loads

Vehicle ID (Name) :

	Jurisdiction	Desired (GVW) (lb) :	Axle Group # 1 (lb) :	Axle Group # 2 (lb) :	Axle Group # 3 (lb) :	Axle Group # 4 (lb) :
1	US Interstate	80000 lb	US	US	US	
2	QC Dégel	72000	12000	32000	32000	
3						

d) **Creating Vehicle with Jurisdiction(s) (from Previously Saved)**

Use this menu, if you wish to modify Jurisdiction(s) information (i.e., Jurisdiction name, Desired GVW and Axle Load limits) for a previously created tractor-semitrailer combination vehicle.

In Step 1, as shown below, select the vehicle.

Create Vehicle + Jurisdiction(s) Info (from existing)

STEP 1 : Select Vehicle

- ACI_Alma_2X53 + ACI_Alma_2X53
- Sample 48ft 2X Drybox
- Sample 48ft 4X Drybox
- Sample 53ft 2X Drybox
- Sample 53ft 3X Drybox
- Sample Fleet Tractor + sample 48ft 2X Drybox P

STEP 2 : Select Tractor

STEP 3 : Select Trailer

The selected vehicle will be highlighted along with the Tractor and Trailer as shown below. Other previously saved tractors and trailers will also be listed as shown. If you wish to have different combination of tractor and trailer, select from the combo-box under Step 2 or Step 3.

Create Vehicle + Jurisdiction(s) Info (from existing)

STEP 1 : Select Vehicle

- Sample 53ft 3X Drybox
- Sample Fleet Tractor + sample 48ft 2X Drybox_P
- Sample Fleet Tractor + Sample 53ft 2X Drybox
- Sample Fleet Tractor_xx + sample 48ft 2X Drybox_xx**
- sample Tractor_2 + sample 48ft 2X Drybox
- Sample Tractor_3 + sample 48ft 2X Drybox

STEP 2 : Select Tractor

- Sample Fleet Tractor
- Sample Fleet Tractor_xx**
- sample Tractor_2
- sample Tractor_2_190" 54"
- Tractor_2_190" 54"
- Tractor 9000 4000

STEP 3 : Select Trailer

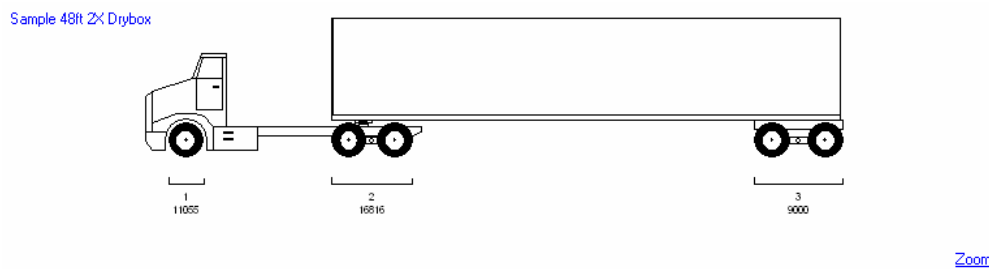
- sample 48ft 2X Drybox
- sample 48ft 2X Drybox_2
- sample 48ft 2X Drybox_P
- sample 48ft 2X Drybox**
- Sample 53ft 2X Drybox
- Sample 53ft 2X Drybox 2

STEP 3 : Select all Jurisdiction(s) where vehicle may travel, and enter desired GVW + Axle Loads

Vehicle ID (Name) : **Sample Fleet Tractor_xx + sample 48ft 2X Drybox**

	Jurisdiction	Desired (GVW) (lb) :	Axle Group # 1 (lb) :	Axle Group # 2 (lb) :	Axle Group # 3 (lb) :	Axle Group # 4 (lb) :
▶						
2						
3						
4						

The selected tractor and trailer will be assembled and the new vehicle will be displayed along with its axle loads.



Now in Step 4, if you wish, you can edit and save Vehicle ID (Name) and other Jurisdiction Info. (i.e., Jurisdiction name, Desired GVW and Axle Load limits).

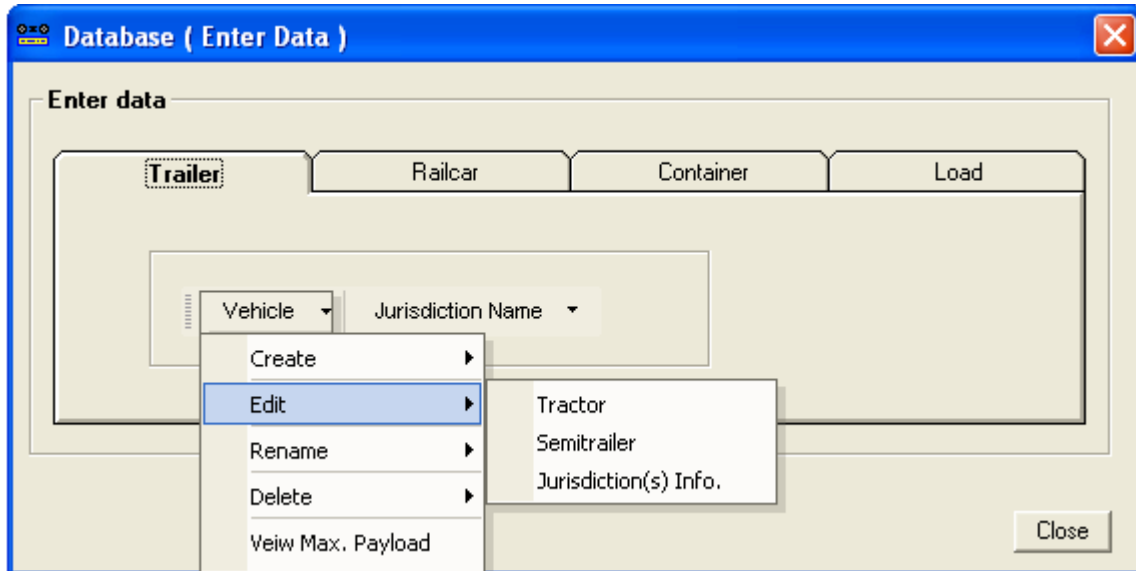
STEP 4 : Select all Jurisdiction(s) where vehicle may travel, and enter desired GVW + Axle Loads

Vehicle ID (Name) : **Sample 48ft 2X Drybox**

	Jurisdiction	Desired (GVW) (lb) :	Axle Group # 1 (lb) :	Axle Group # 2 (lb) :	Axle Group # 3 (lb) :	Axle Group # 4 (lb) :	Axle Group # 5 (lb) :	Clear
▶								
▶	US Interstate	80000 lb	US	US	US			
2	qc	91491	19841	39683	39683	0	0	
3	QC Dégel	91491	19841	34171	34171	0	0	
4								

4.1.2 Vehicle - Edit

“Edit” menu allows editing Tractor, Semitrailer or Jurisdiction(s) Info.



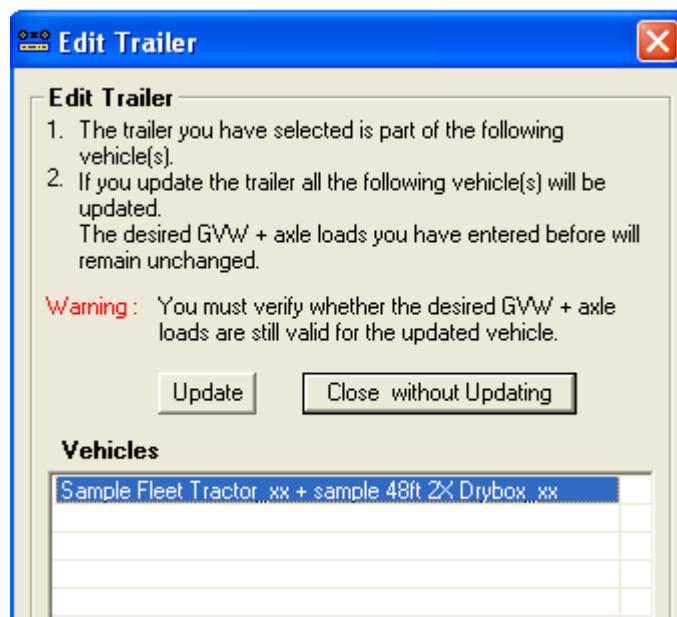
For Tractor and Semitrailer you can edit all information except the name or ID. To change the name or ID, use “Rename” menu.

CAUTION:

If you edit a Tractor or a Semitrailer, the following message box will appear with a warning. It is important that you follow the instructions.

For example, if you edit a Trailer and update it, all previously assembled vehicles with this trailer will also be updated. The Jurisdiction info (i.e., desired GVW and axle load limits), however, will remain unchanged.

It is important to verify whether the desired GVW and axle load limits are still valid for the updated vehicle.



If the Jurisdiction Info. requires editing, click **“EDIT”** and then **“Jurisdiction(s) Info.”** and update desired GVW and axle load limits for each one of the updated vehicles.

If you edit Jurisdiction(s) Info., the tractor and trailer for the selected vehicle will be displayed along with the Jurisdiction info. The Jurisdiction name can't be edited. However, the desired GVW and the axle load limits can be edited.

To add a new Jurisdiction, first click **“Add Jurisdiction Name”** and add. Then enter desired GVW and axle load limits.

4.1.3 Vehicle - Rename

“Rename” menu allows renaming Tractors, Semitrailers or Vehicles.

If you rename a Vehicle, all associated Jurisdiction Info. (Desired GVW and axle load limits) with the old vehicle will now be associated with new vehicle.

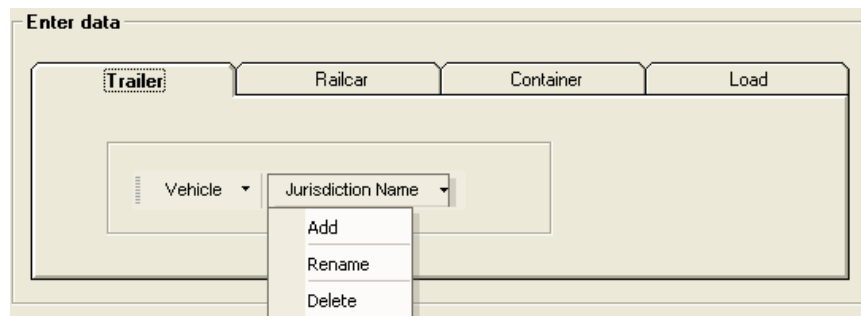
4.1.4 Vehicle - Delete

“Delete” menu allows deleting Tractors, Semitrailers or Vehicle + Jurisdiction(s). When a vehicle + Jurisdiction(s) is deleted, all Jurisdiction Info. (Desired GVW and axle load limits) associated with that vehicle will also be deleted.

CAUTION: When you delete a tractor or a trailer, the change will be propagated, and all the vehicles which have the deleted tractor or trailer as a part, will also be deleted from the database. If you have a load plan saved with any deleted vehicle, then that load plan, although viewable, can no longer be edited.

4.1.5 Jurisdiction Name

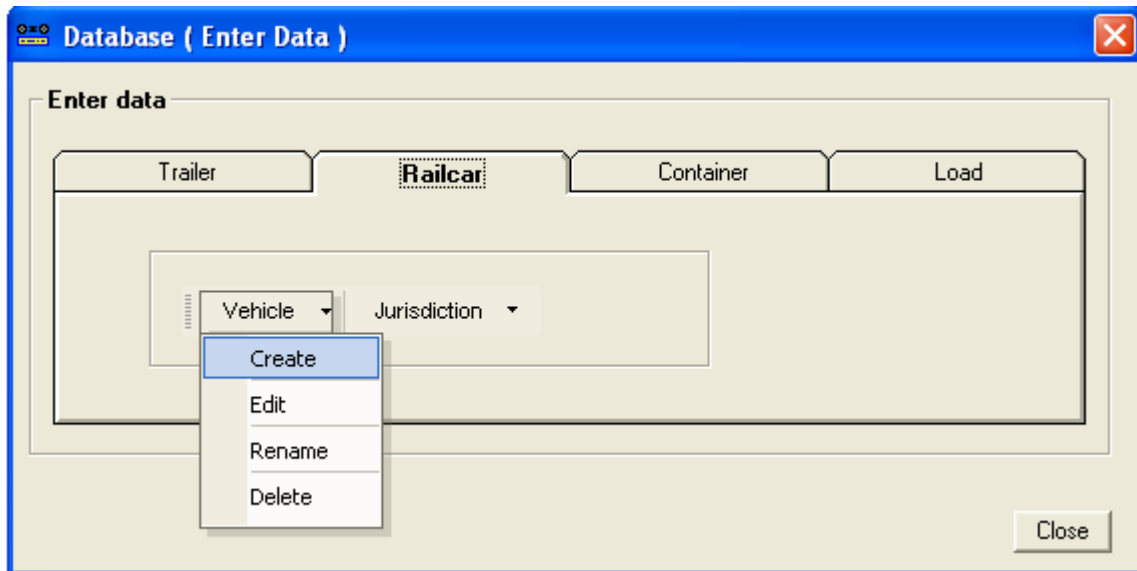
Click **“Jurisdiction Name”** to add, rename or delete and follow appropriate instructions.

The image shows a software interface titled "Enter data". At the top, there are four tabs: "Trailer", "Railcar", "Container", and "Load". The "Trailer" tab is currently selected and highlighted. Below the tabs, there is a large rectangular area containing two dropdown menus. The first dropdown menu is labeled "Vehicle" and has a small downward arrow. The second dropdown menu is labeled "Jurisdiction Name" and also has a small downward arrow. This second menu is currently open, displaying three options: "Add", "Rename", and "Delete".

4.2 Railcar

There are two “Tabs” to enter data: **“Vehicle”** and **“Jurisdiction”**.

Click **“Vehicle”** and there is four drop-down items to Create, Edit, Rename and Delete:



4.2.1 Vehicle - Create

Click create and enter data as required.

If you wish to create new Railcar from a previously created vehicle, click **“Select from database”**, enter a new Railcar ID and then edit data as required.

If you wish to enter data in a different unit system, click **“Unit System”** button to change.

4.2.3 Vehicle - Rename

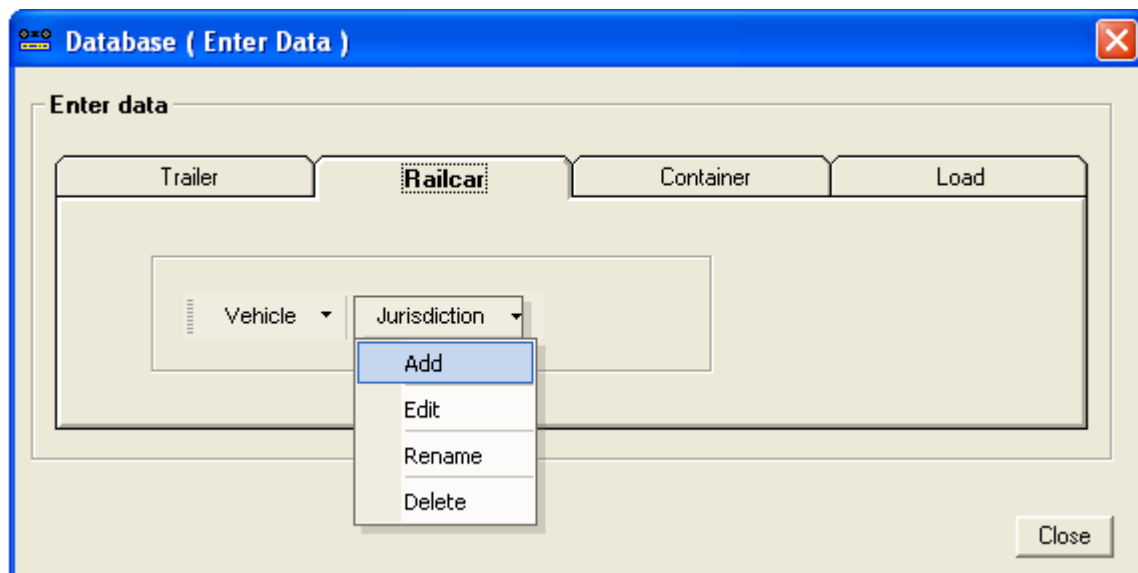
“Rename” menu allows renaming Railcars.

4.2.4 Vehicle - Delete

“Delete” menu allows deleting Railcars from database

4.2.5 Jurisdiction

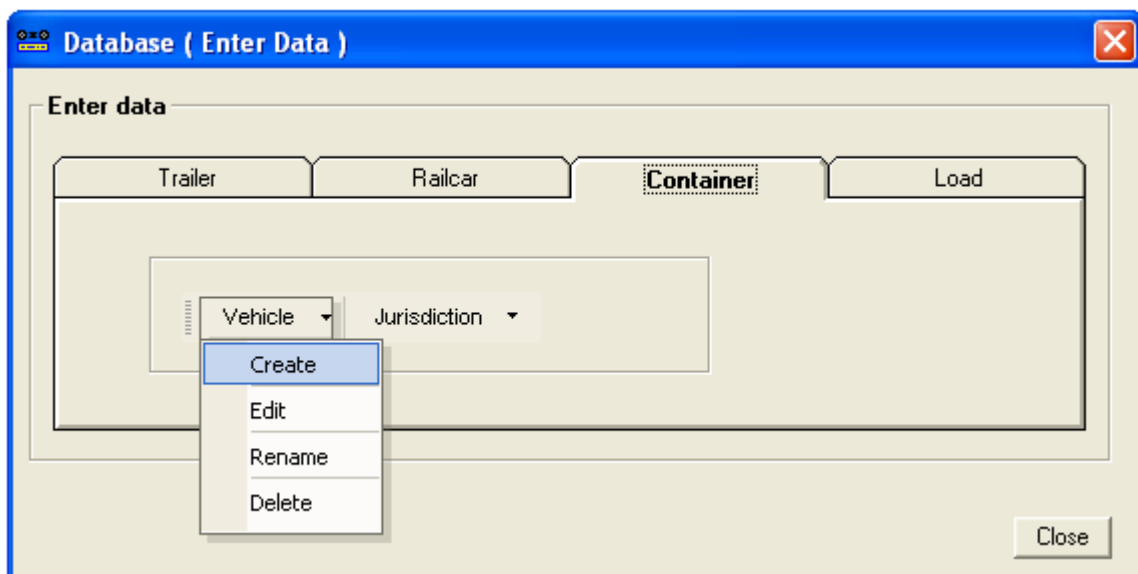
Click “Jurisdiction” to add, edit, rename or delete and follow appropriate instructions.



4.3 Container

There are two “Tabs” to enter data: “Vehicle” and “Jurisdiction”.

Click “Vehicle” and there is four drop-down items to Create, Edit, Rename and Delete:



4.3.1 Vehicle - Create

Click create and enter data as required.

The screenshot shows a software window titled "Create a new Container". It contains two tabs: "Container Configuration" and "Unusable Area(s)". The "Container Configuration" tab is selected and displays the following fields:

- "Select from database": A dropdown menu with "<Select>" as the current selection.
- "Container ID (e.g. Container101)": An empty text input field.
- "Interior Dimensions": A section containing three rows:
 - "Interior Length": IL 473 (in)
 - "Interior Height": IH 94 (in)
 - "Interior Width": IW 92 (in)
- "Other Data": A section containing one row:
 - "Load Limit": LD LMT 45000 (lb)

To the right of the "Container Configuration" tab is the "Unusable Area(s)" tab, which shows a diagram of a rectangular container. The diagram has a horizontal dimension line labeled "IL" and a vertical dimension line labeled "IH".

At the bottom right of the window are three buttons: "Unit System", "Cancel", and "Finish".

If you wish to create new Container from a previously created vehicle, click “**Select from database**”, enter a new Container ID and then edit data as required.

If you wish to enter data in a different unit system, click “**Unit System**” button to change.

NOTE: Enter the unusable area for Container by clicking the “**Unusable Area(s)**” tab.

4.3.2 Vehicle - Rename

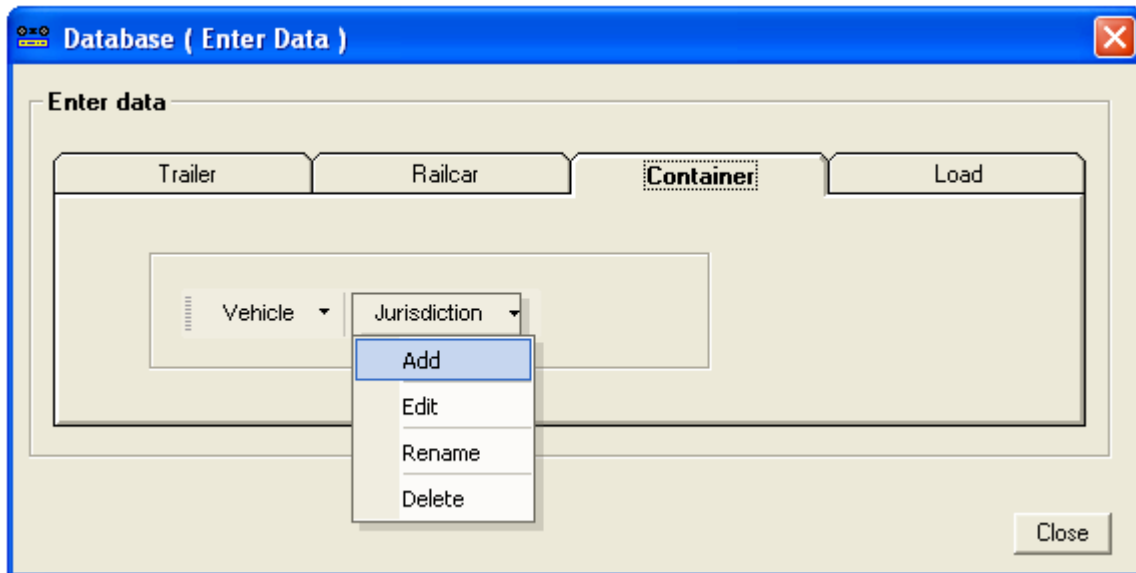
“**Rename**” menu allows renaming Containers.

4.3.3 Vehicle - Delete

“**Delete**” menu allows deleting Containers from database

4.3.4 Jurisdiction

Click “**Jurisdiction**” to add, edit, rename or delete and follow appropriate instructions.

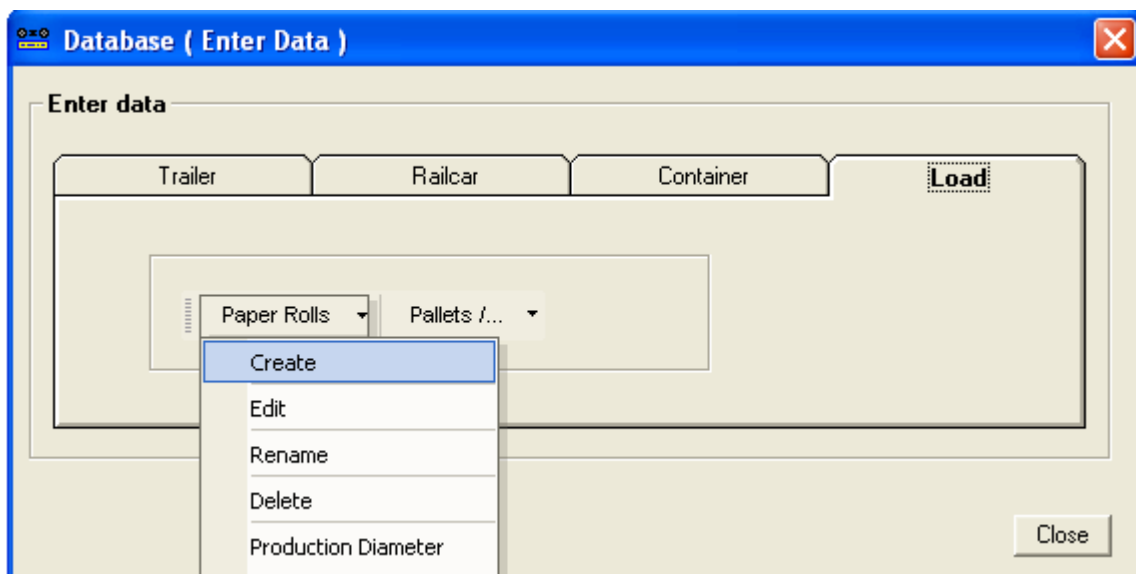


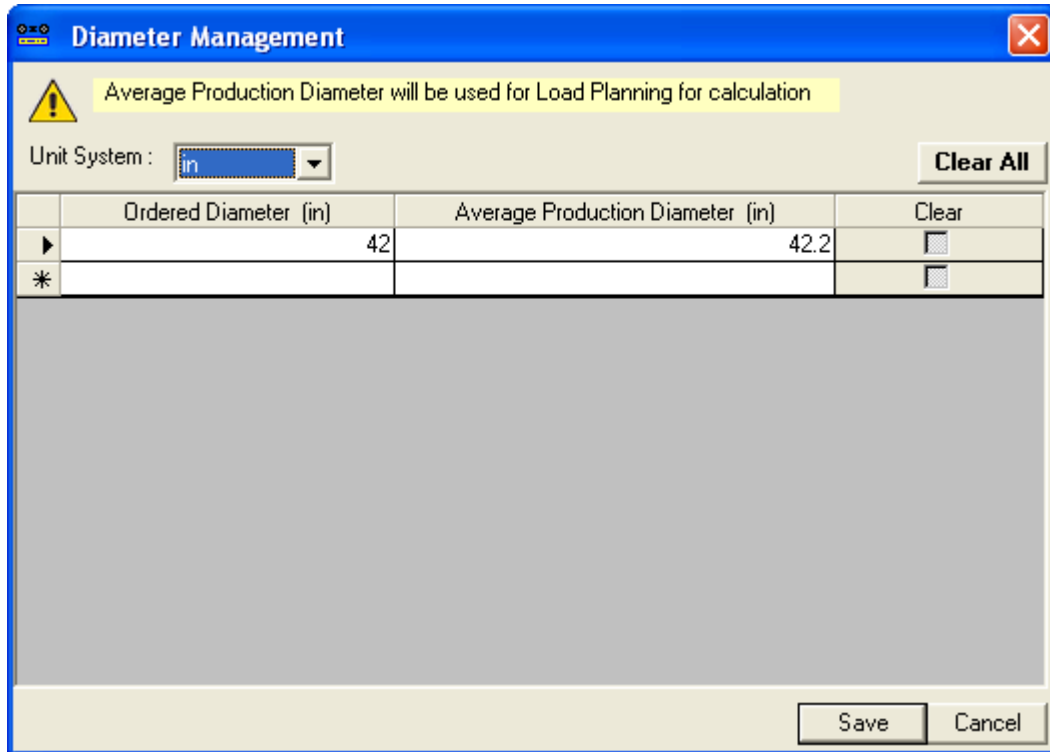
4.4 Load

To enter Cargo (Load) data, click **“Load”**.

Choose cargo type by clicking **“Paper Rolls”** or **“Pallets/..”** and then create, edit, rename or delete loads.

NOTE: Use **“Production Diameter”** to specify average production diameter to be used by software for calculation for paper rolls.





Diameter Management

⚠ Average Production Diameter will be used for Load Planning for calculation

Unit System : in Clear All

	Ordered Diameter (in)	Average Production Diameter (in)	Clear
▶	42	42.2	<input type="checkbox"/>
*			<input type="checkbox"/>

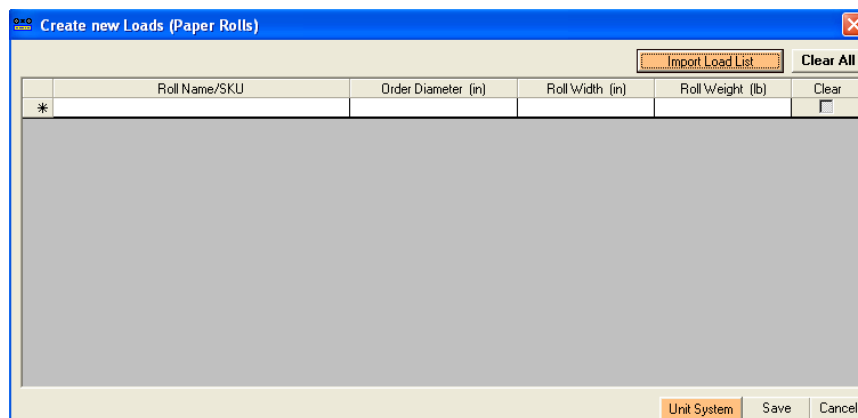
Save Cancel

4.4.1 Create new Loads (Paper Rolls)

To create new Loads (Paper Rolls), there are two ways: Manual and Import.

Manual:

For manual data entry, enter data in the table as shown below. If you wish to enter data in a different unit system, click “**Unit System**” button to change.



Create new Loads (Paper Rolls)

Import Load List Clear All

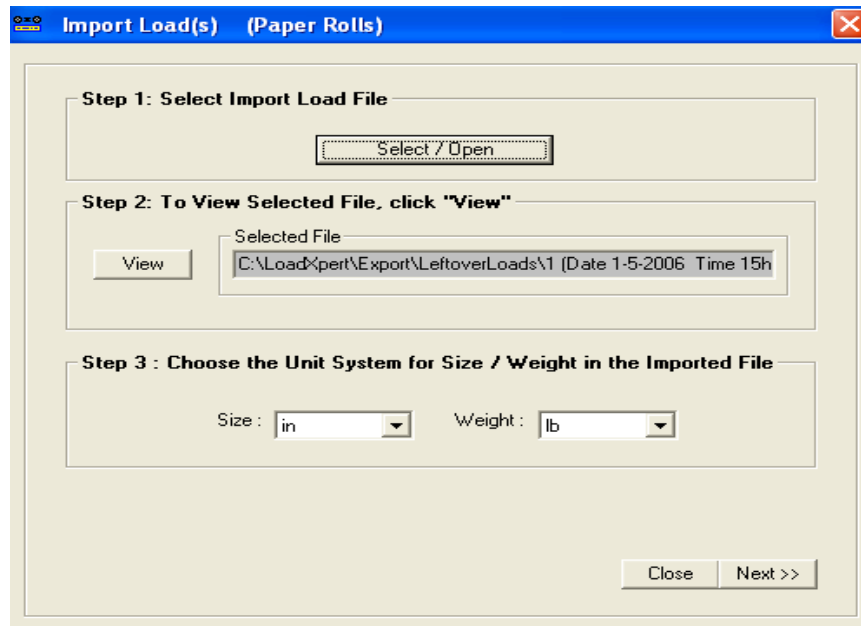
	Roll Name/SKU	Order Diameter (in)	Roll Width (in)	Roll Weight (lb)	Clear
*					<input type="checkbox"/>

Unit System Save Cancel

Import:

Load Xpert™ allows user to import data from delimited text files.

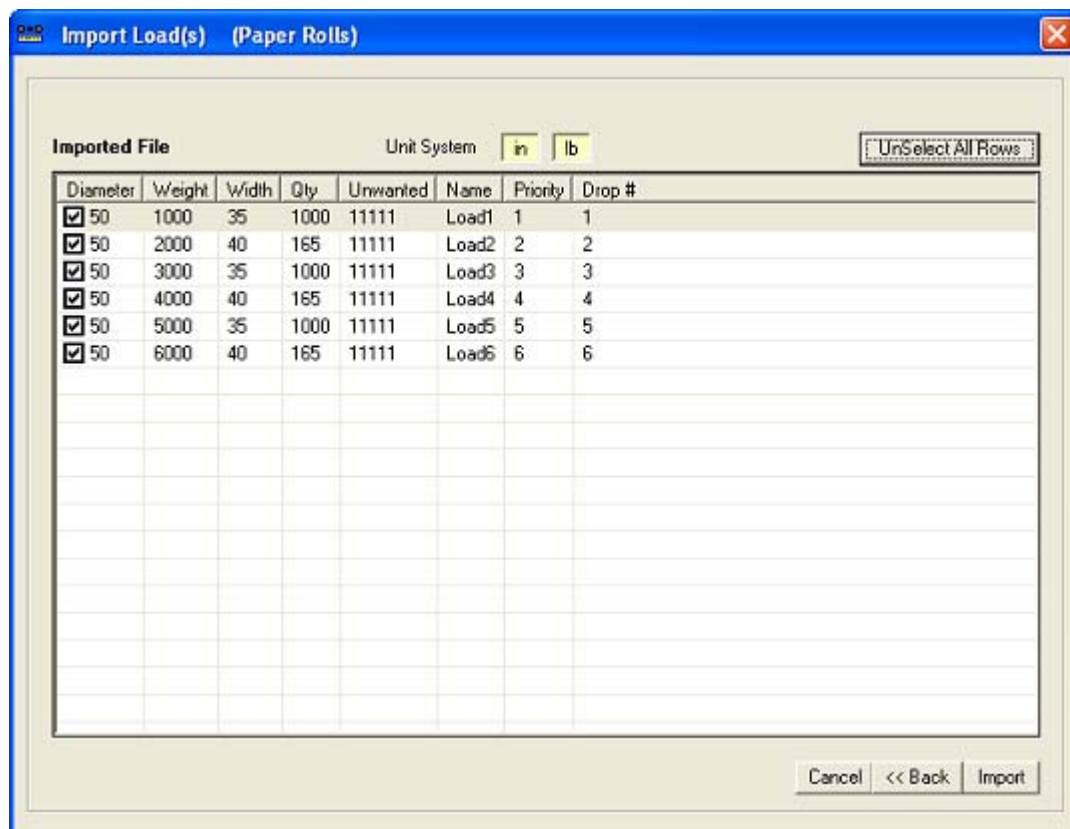
For importing data, click “**Import Load List**”. Then Select Import Load File (**Step 1**).



In **Step:2**, the location of the selected file will be displayed on the right side box. If you wish, however, to view the text file that was imported, click “**View**” button.

In **Step 3**, choose the unit system to correspond to the data in import file, and click “**Next**”.

The next screen will appear, as pictured below. Select the rows that you would like to import and click **"Import"** to finish.



NOTE: For more information and File format on this topic please contact CIE-TECH Inc.

4.4.2 Edit Loads (Paper Rolls)

To edit already existing loads click '**Edit**' under '**Load**' drop-down menu. A list of all available loads from the database will appear in a list. Choose the load to be edited.

All information (except Load ID (Name)) can be modified. Once necessary changes have been done, click "**Update**" button to save the modified load in the database.

4.4.3 Rename or Delete Loads (Paper Rolls)

Click "**Rename**" or "**Delete**" and follow instructions.

4.4.4 Production Diameter (Paper Rolls)

Click "**Production Diameter**" under "**Paper Rolls**" menu to assign Average Production Diameters corresponding to each of the "**Ordered Diameters**". Enter data only if Average Production Diameter is different from the Ordered Diameter.

NOTE: Load planning calculations will be solely based on Average Production Diameters.

The screenshot shows a dialog box titled "Diameter Management". It has a "Unit System" dropdown set to "in" and a "Clear All" button. A yellow warning box states: "Software will use Average Production Diameter for Load Planning". Below this is a table with three columns: "Ordered Diameter (in)", "Average Production Diameter (in)", and "Clear". The first row shows an ordered diameter of 42 and an average production diameter of 41.5. The second row is marked with an asterisk and is currently empty.

	Ordered Diameter (in)	Average Production Diameter (in)	Clear
▶	42	41.5	<input type="checkbox"/>
*			<input type="checkbox"/>

4.4.5 Create new Loads (Pallets / ..)

To create new Loads (Pallets), there are two ways: Manual and Import.

The screenshot shows a dialog box titled "Database (Enter Data)". It has tabs for "Trailer", "Railcar", "Container", and "Load". The "Load" tab is selected. Inside the "Load" tab, there is a "Paper Rolls" dropdown menu and a "Pallets /..." dropdown menu. The "Pallets /..." menu is open, showing options: "Create", "Edit", "Rename", and "Delete". A "Close" button is at the bottom right.

Create new Load (Pallets/...)

Required Data		Optional data	
Pallet Name/SKU	<input type="text"/>	 	
Length	L <input type="text"/> (in)		
Width	W <input type="text"/> (in)		
Height (including skid/Slip sheet if any)	H <input type="text"/> (in)		
Weight (including skid/Slip sheet if any)	<input type="text"/> (kg)		
Can be loaded 4-way (rotated)?	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Max. weight that can be stacked on top	<input type="text"/> (kg)		
Draw product loaded on	<input type="text" value="Nothing"/>		
Color	<input type="text" value="Auto"/>		
<input type="checkbox"/> Product is unstable and must be secured			
<input type="button" value="Import Load List"/>		<input type="button" value="Clear"/> <input type="button" value="Unit System"/> <input type="button" value="Save"/> <input type="button" value="Close"/>	

Create new Load (Pallets/...)

Required Data		Optional data	
Partial Load Data (Enter only if you have partial Loads)			
Weight of Base	<input type="text"/> (kg)		
Height of Base BH	<input type="text"/> (in)		
Total number of Case per layer	<input type="text" value="1"/>		
Number of layers	<input type="text" value="1"/>		
<input type="button" value="Import Load List"/>		<input type="button" value="Clear"/> <input type="button" value="Unit System"/> <input type="button" value="Save"/> <input type="button" value="Close"/>	

Manual:

For manual data entry, enter data in the table as shown above. If you wish to enter data in a different unit system, click “**Unit System**” button to change.

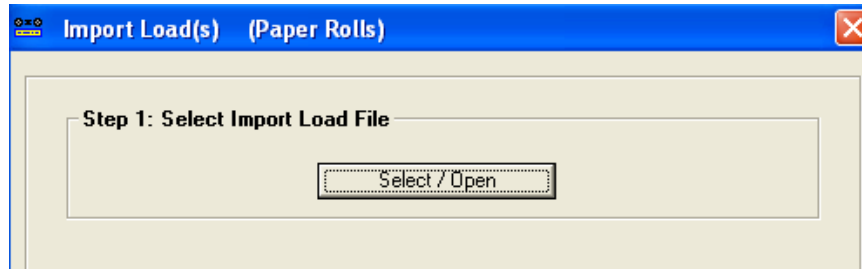
Optional data:

Enter partial Load data, if needed

Import:

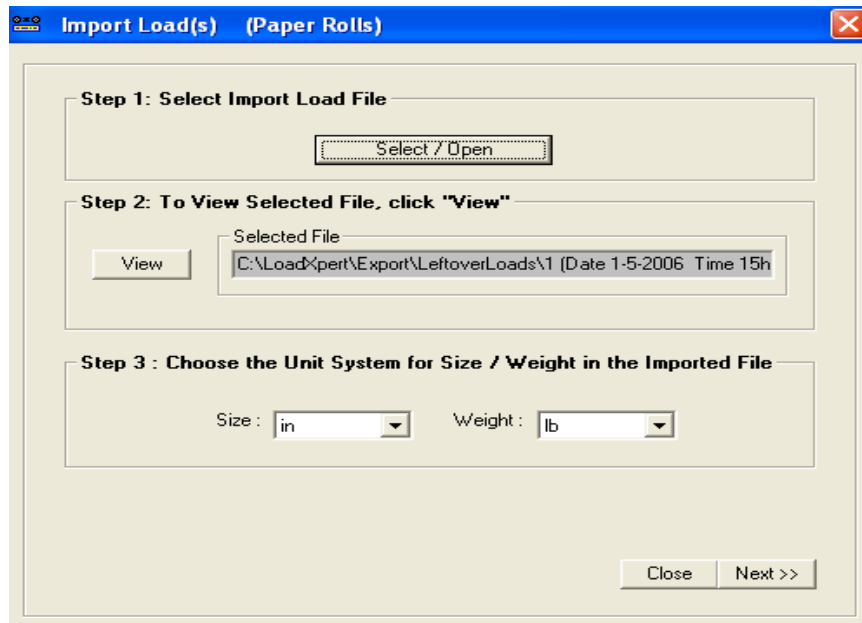
Load Xpert™ allows user to import data from delimited text files.

For importing data, click “**Import Load List**”. Then Select Import Load File (**Step 1**) as shown below.



Choose the file to be imported. The screen pictured above will change as the one shown below:

In **Step 2**, the location of the selected file will be displayed on the right side box. If you wish, however, to view the text file that was imported, click “**View**” button.



In **Step 3**, choose the unit system same as the imported file, and click “**Next**”. The next screen will appear, as pictured below. Select the rows that you would like to import and click ‘**Import**’ button to finish.

4.4.6 Edit Loads (Pallets)

To edit already existing loads click 'Edit' under 'Load' drop-down menu. A list of all available loads from the database will appear in a list. Choose the load to be edited.

All information (except Load ID (Name)) can be modified. Once necessary changes have been done, click **"Update"** button to save the modified load in the database.

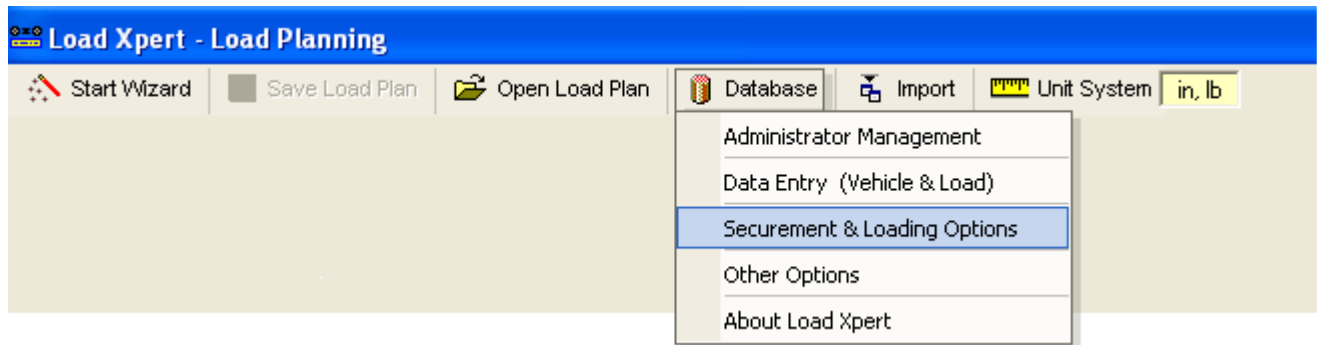
4.4.7 Rename or Delete Loads (Pallets)

Click **"Rename"** or **"Delete"** and follow instructions.

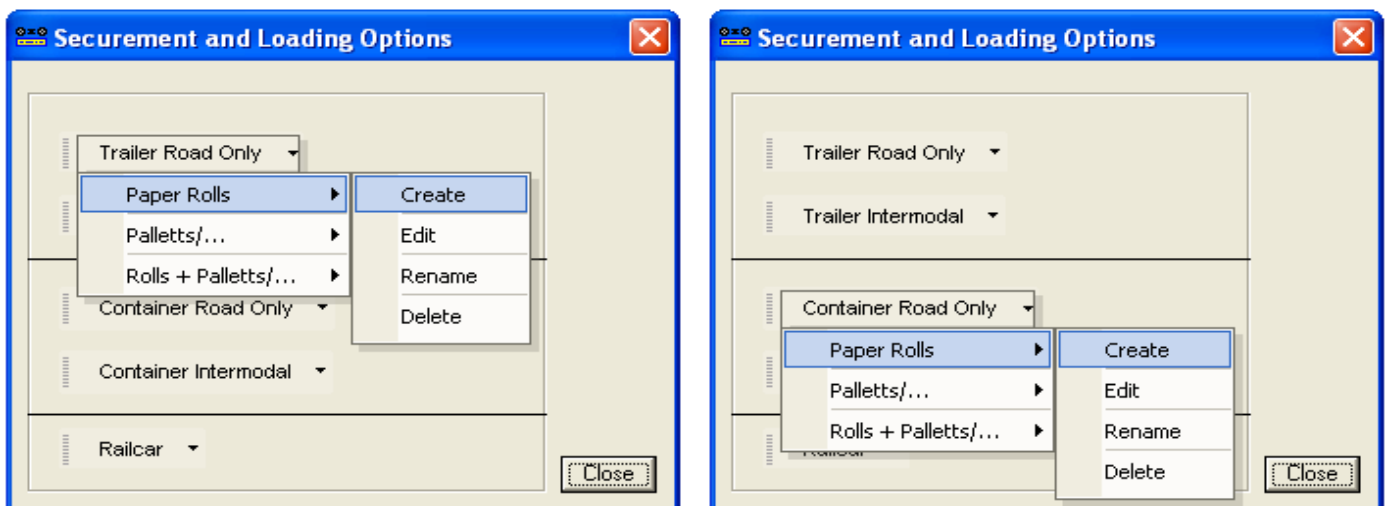
4.5 Securement Options

4.5.1 Securement Options

Click **"Securement & Loading Options"** under **"Database"** menu to enter securement data for Paper Rolls and Pallets/Skids.



a) For Trailer/Container (Road Only) Paper Rolls



Under the Trailer/Container Road Only Select Paper Rolls, Create. Securement Options tab will display as follows.

Create Securement and Loading Options : Trailer (Closed) (Road Only) / Paper Rolls - Sample

Option Name

Option Name

Step 1: Select from Database an Option previously saved
Step 2: Enter "Option Name" as desired
Step 3: Click "Next" to edit securement and loading options

Select from Database:

Option Name:

Unit System < Back Next > Cancel

Create Securement and Loading Options : Trailer (Closed) (Road Only) / Paper Rolls - Sample

Securement Loading 1 Loading 2 Loading 3 Bilge Loading

D1 (overlap)

D1 = minimum overlap distance between two rolls to prevent them from squeezing between side walls (in)

D2 (fit) and D3 (spacer width)

D2 = minimum space needed for easy unloading (in)

D3 = width of spacer block used (in)

D4 (blocking height) and D5 (riser height)

D4 = minimum blocking height needed to prevent rolls from moving forward (in)
 Industry Recommended Practice = min 1.5" (3.81 cm)

D5 = height of riser block used (in)

Cargo securement to resist

Forward acceleration g Rearward / Sideways acceleration g $g = 9.8 \text{ m/s}^2 \text{ or } 32 \text{ ft/s}^2$

Industry Recommended Practice = minimum 0.8 g (forward) & 0.5 g (rear/side)

Unit System < Back Finish Cancel

Select an existing Securement Option from database, enter a new name for Securement Options you want to save and click Next

Securement and Loading options will be displayed in several tabs. Go through each tab and modify values if required.

Create Securement and Loading Options : Trailer (Closed) (Road Only) / Paper Rolls - Sample

Securement **Loading 1** Loading 2 Loading 3 Bilge Loading

Void Space (Space unused for loading Cargo)

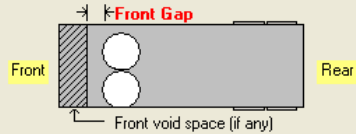
Void space from nose or front wall **VF** 0 (in) Void space from each side wall **VS** 0 (in)

Void space from rear door **VR** 0 (in) Void space from ceiling **VC** 0 (in)

Front Gap

☐ Front gap allowed

☒ Front gap not allowed




Load identical rolls together (No swapping)

☒ No preference ☐ No swapping ☐ Allowed only for blocking

Lateral weight distribution

☒ Check lateral weight distribution



Maximum weight variation allowed (between left and right side) 0 (kg)

Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Closed) (Road Only) / Paper Rolls - Sample

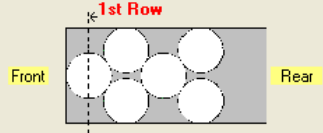
Securement Loading 1 **Loading 2** Loading 3 Bilge Loading

Load 1st row (at the front wall)

☐ Never start with a single roll


☒ I don't mind starting with a single roll when there is no other way

☐ No preference

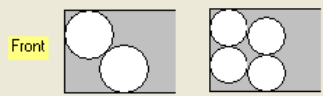


Loading 1st roll

☒ Start loading from left (driver's) side

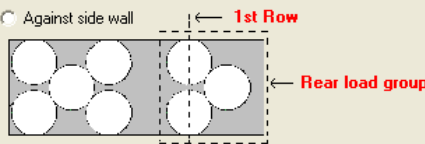


☐ Start loading from right side

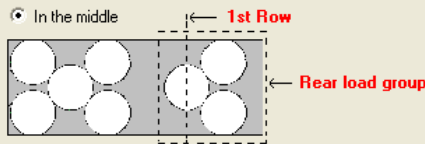


Load 1st row of rear load group

☐ Against side wall



☒ In the middle

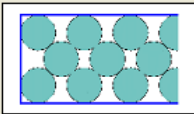
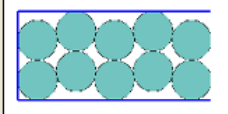


Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Closed) (Road Only) / Paper Rolls - Sample

Securement | Loading 1 | Loading 2 | **Loading 3** | Bilge Loading

Pattern Preference

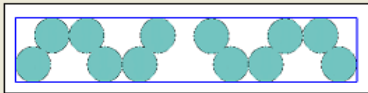

☒  ☐  ☐ No Preference

☐ Limit # of rolls that can be stacked in last (rear) row

☐ Favor Load Plans with better weight distribution over Load Plans with less securement needs

☐ Favor Load Plans in two sections with less dunnage over load plans in one section

☐ Favor spread pattern for 2 sections loading

Spread pattern  Normal pattern 

Optimization for :

☐ Best load plan based on maximum weight or maximum volume ☐ Maximum weight

☒ Combination of weight & volume ☐ Maximum volume

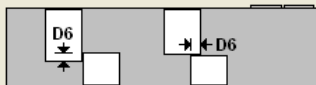
Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Closed) (Road Only) / Paper Rolls - Sample

Securement | Loading 1 | Loading 2 | Loading 3 | **Bilge Loading**

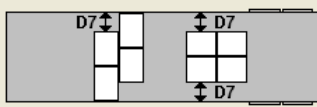
D6 (overlap)

D6 = minimum overlap (blocking) to prevent loads from forward, rearward, or sideways movement

6 

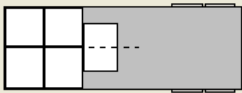
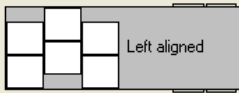
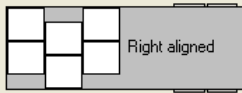
D7 (critical unused lateral space)

D7 = critical unused lateral space in a row (if unused space is larger than D7, securement is required)

8 

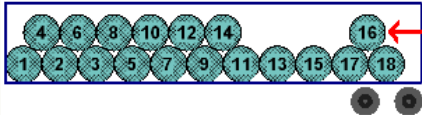
Preference for bilge loading (eye crosswise)

☒ Center aligned ☐ Try to use Offset Pattern (Left / Right aligned)

2 layers bilge loading

☒ Favor Load Plans with a roll in the last well

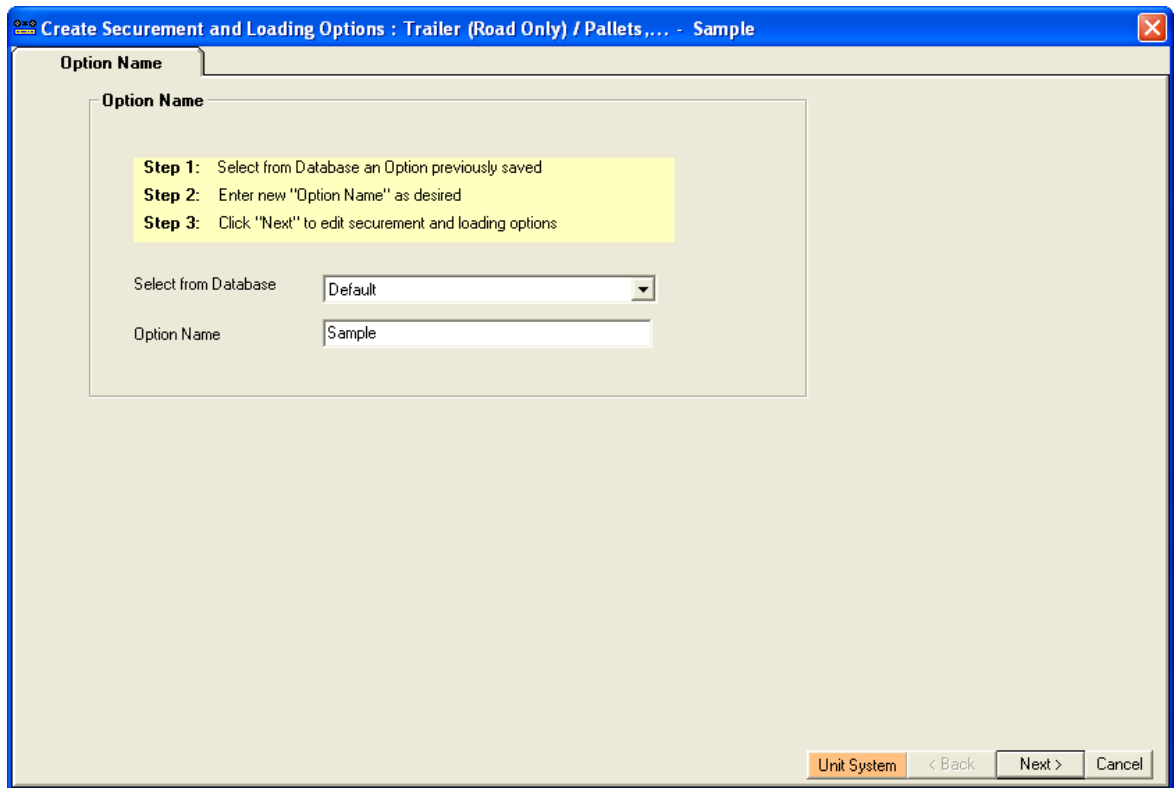
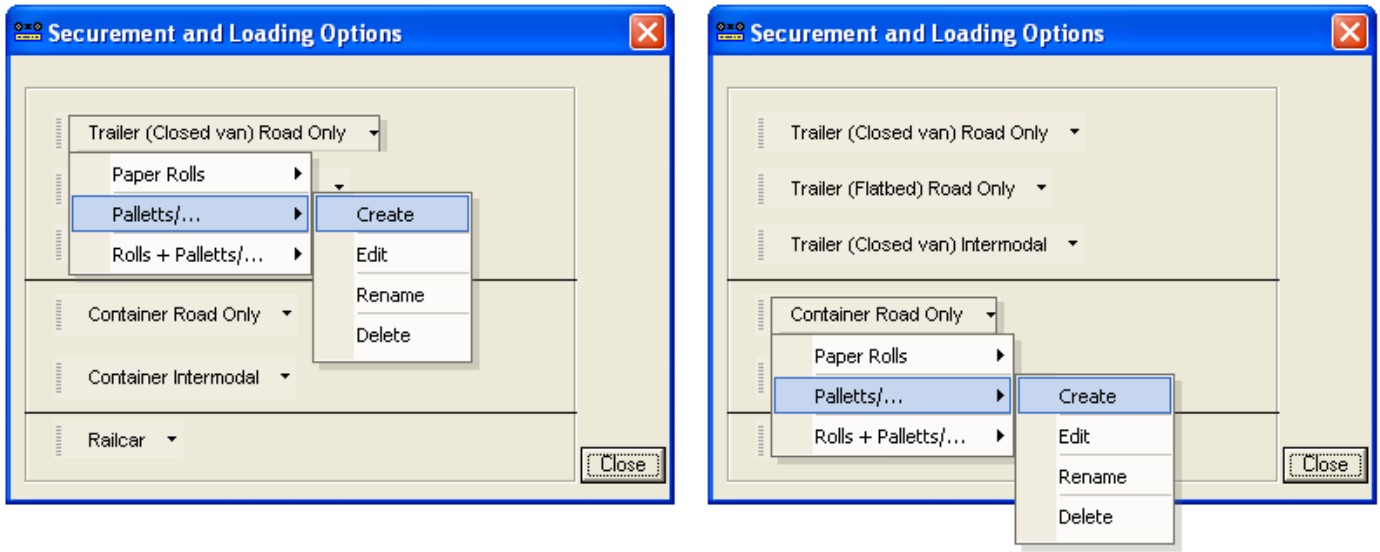
 Roll in last well

Unit System < Back Finish Cancel

Click Finish to save the Securement Options to the database

b) For Trailer/Container (Road Only) Palletts/...

Under the Trailer/Container Road Only Select Palletts/..., Create. Securement Options tab will display as follows.



Select an existing Securement Option from database, enter a new name for Securement Options you want to save and click Next

Securement and Loading options will be displayed in several tabs. Go through each tab and modify values if required.

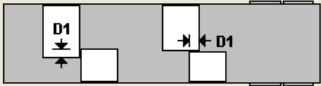
Create Securement and Loading Options : Trailer (Road Only) / Pallets,... - Sample

Securement 1 Securement 2 Loading 1 Loading 2 Loading 3

D1 (overlap)

D1 = minimum overlap (blocking) to prevent loads from forward, rearward, or sideways movement

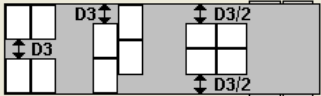
1.5 (in)



D3 (critical unused lateral space)

D3 = critical unused lateral space in a row (if unused space is larger than D3, securement is required)

8 (in)



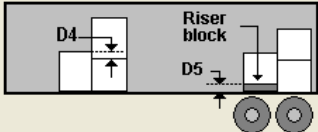
D4 (blocking height) and D5 (riser height)

D4 = minimum blocking height needed to prevent loads from moving forward

1.5 (in)

Industry Recommended Practice = min 1.5" (3.81cm)

D5 = height of riser block used



Cargo securement to resist

Forward acceleration 0.8 g Rearward / Sideways acceleration 0.5 g g = 9.8 m/s² or 32 ft/s²

Industry Recommended Practice = minimum 0.8 g (forward) & 0.5 g (rear/side)

Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Road Only) / Pallets,... - Sample

Securement 1 **Securement 2** Loading 1 Loading 2 Loading 3

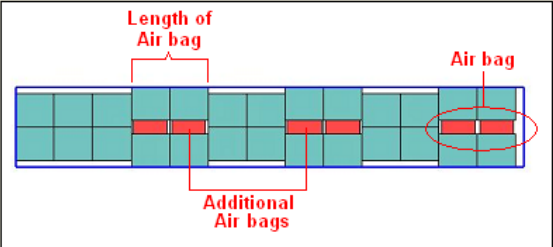
Rear End Securement

☒ Secure ends of loading with air bag

Number of Additional air bags 0

Number of pallets/skids that air bags are covering 0

☐ Block incomplete upper layer with air bags

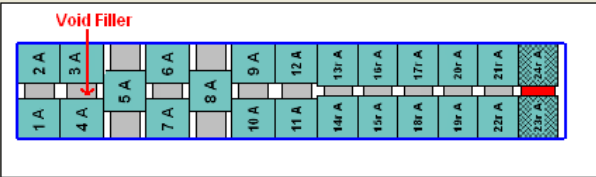


Void Spaces

☒ Secure all lateral voids bigger than D3 critical distance with void fillers

Void Fillers Position

☐ Fill lateral void space using void filler in between skids



Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Road Only) / Pallets,.... - Sample

Securement 1 Securement 2 **Loading 1** Loading 2 Loading 3

Void Space (Space unused for loading Cargo)

Void space from nose or front wall **VF** 0 (in) Void space from each side wall **VS** 0 (in)

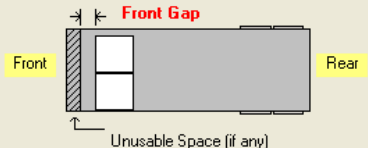
Void space from rear door **VR** 0 (in) Void space from the ceiling **VC** 0 (in)

Front Gap

☒ Front gap allowed

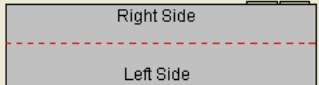
☐ Front gap not allowed

☐ Favor load plans in one section with a front gap over load plans in two sections



Lateral weight distribution

☒ Check lateral weight distribution



Maximum weight variation allowed (between left and right side) 0 (lb)

☐ Favor piling identical items (this may reduce payload)

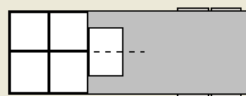


Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Road Only) / Pallets,.... - Sample

Securement 1 Securement 2 Loading 1 **Loading 2** Loading 3

Loading Preference

☒ Center aligned ☐ Try to use Offset Pattern (Left / Right aligned)

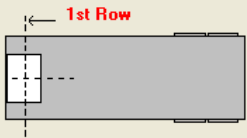




For Offset Pattern or No Preference

☒ Left aligned ☐ Right aligned

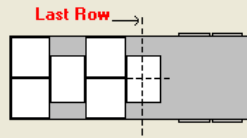
1st row (at the front wall) preference

☐ Try not to begin with a single load ☒ No preference



End row preference

☐ Try not to end with a single load ☒ No preference



☐ Favor Load Plans with better weight distribution over Load Plans with less securement needs

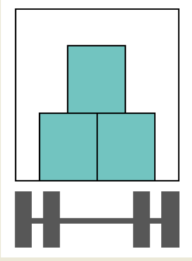
☐ Favor Load Plans in two sections with less dunnage over load plans in one section

Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Road Only) / Pallets,... - Sample

Securement 1 Securement 2 Loading 1 Loading 2 **Loading 3**

☒ Allow loading as shown below (pyramid)



Optimization for :

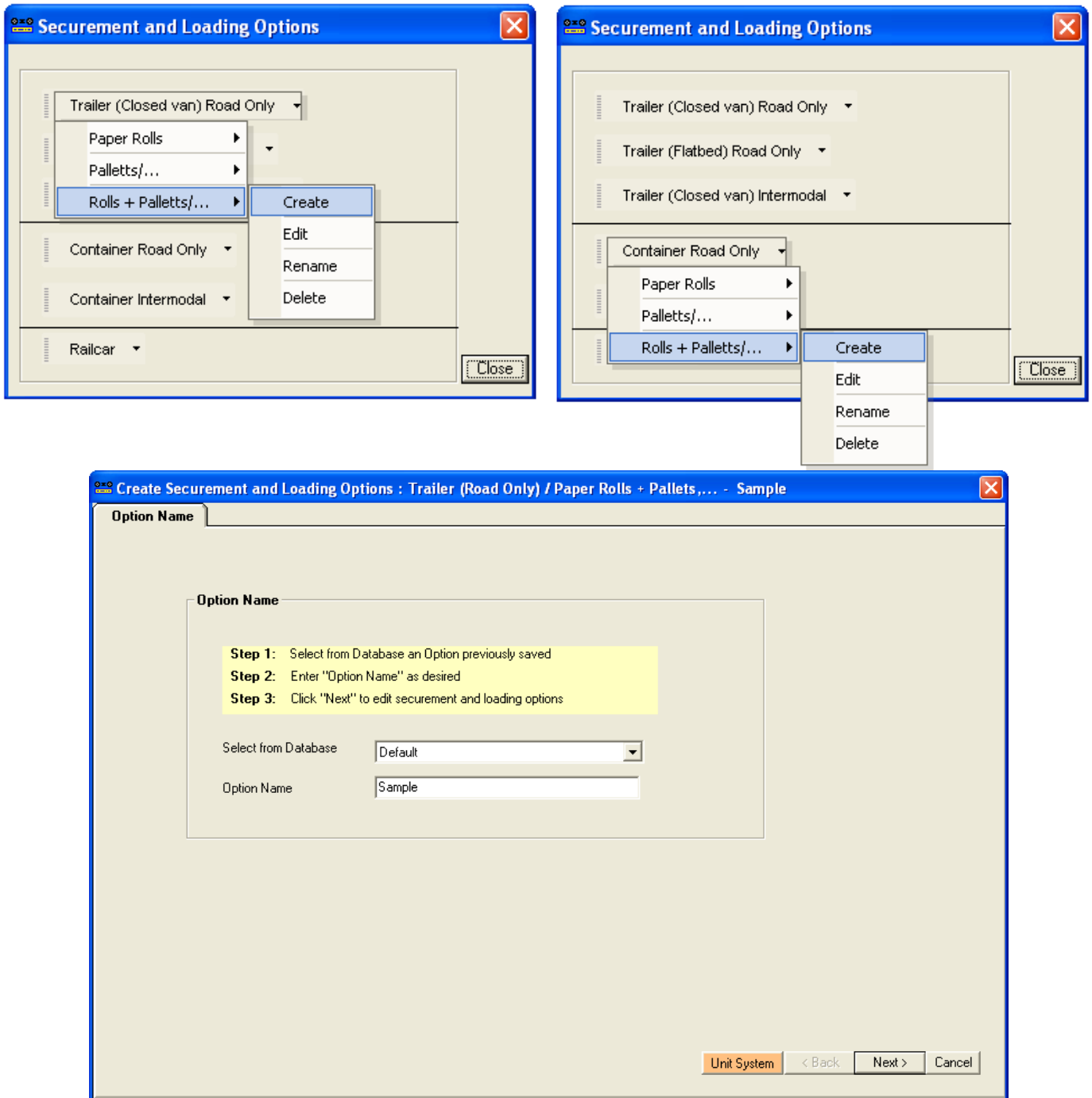
- ☒ Best load plan based on maximum weight or maximum volume
- ☐ Combination of weight & volume
- ☐ Maximum weight
- ☐ Maximum volume

Unit System < Back Finish Cancel

Click Finish to save the Securement Options to the database

c) For Trailer/Container (Road Only) Paper Rolls + Palletts/...

Under the Trailer/Container Road Only Select Paper Rolls + Palletts/..., Create. Securement Options tab will display as follows.



Select an existing Securement Option from database, enter a new name for Securement Options you want to save and click Next


Securement and Loading options will be displayed in several tabs. Go through each tab and modify values if required.

Create Securement and Loading Options : Trailer (Road Only) / Paper Rolls + Pallets ,... - Sample

Securement 1 | Securement 2 | Securement 3 | Loading 1 | Loading 2 | Loading 3 | Loading 4

D1 (overlap)

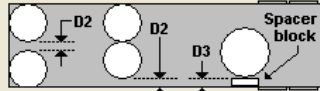
D1 = minimum overlap distance between two rolls to prevent them from squeezing between side walls (in)



D2 (fit) and D3 (spacer width)

D2 = minimum space needed for easy unloading (in)

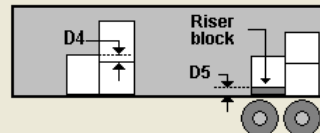
D3 = width of spacer block used (in)



D4 (blocking height) and D5 (riser height)

D4 = minimum blocking height needed to prevent rolls from moving forward
Industry Recommended Practice = min 1.5" (3.81 cm)

D5 = height of riser block used (in)



Cargo securement to resist

Forward acceleration g Rearward / Sideways acceleration g

g = 9.8 m/s² or 32 ft/s²

Industry Recommended Practice = minimum 0.8 g (forward) & 0.5 g (rear/side)

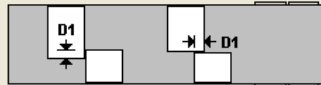
Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Road Only) / Paper Rolls + Pallets ,... - Sample

Securement 1 | **Securement 2** | Securement 3 | Loading 1 | Loading 2 | Loading 3 | Loading 4

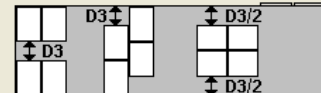
D1 (overlap)

D1 = minimum overlap (blocking) to prevent loads from forward, rearward, or sideways movement (in)



D3 (critical unused lateral space)

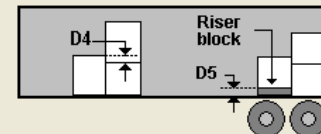
D3 = critical unused lateral space in a row (if unused space is larger than D3, securement is required) (in)



D4 (blocking height)

D4 = minimum blocking height needed to prevent loads from moving forward
Industry Recommended Practice = min 1.5" (3.81 cm)

D5 = height of riser block used (in)



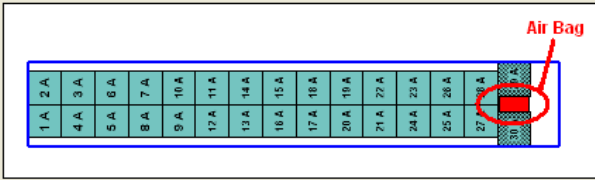
Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Road Only) / Paper Rolls + Pallets ,... - Sample

Securement 1 Securement 2 **Securement 3** Loading 1 Loading 2 Loading 3 Loading 4

Rear End Securement

☐ Secure rear of trailer /container with air bag

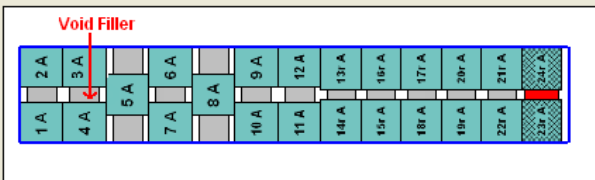


Void Spaces

☒ Secure all lateral voids bigger than D3 critical distance with void fillers

Void Fillers Position

☐ Fill lateral void space using void filler in between skids



Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Road Only) / Paper Rolls + Pallets ,... - Sample

Securement 1 Securement 2 Securement 3 **Loading 1** Loading 2 Loading 3 Loading 4

Void Space (Space unused for loading Cargo)

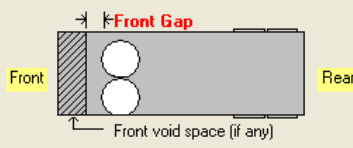
Void space from nose or front wall 0 (in) Void space from each side wall 0 (in)

Void space from rear door **VR** 0 (in) Void space from ceiling 0 (in)

Front Gap

☐ Front gap allowed

☒ Front gap not allowed




Load identical rolls together (No swapping)

☒ No preference ☐ No swapping ☐ Allowed only for blocking

Lateral weight distribution

☒ Check lateral weight distribution



Maximum weight variation allowed (between left and right side) 0 (lb)

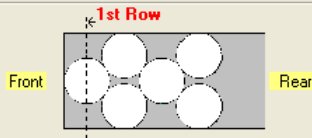
Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Road Only) / Paper Rolls + Pallets,.... - Sample

Securement 1 Securement 2 Securement 3 Loading 1 **Loading 2** Loading 3 Loading 4

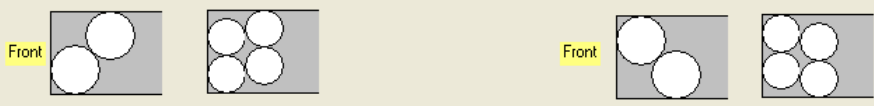
Load 1st row (at the front wall)

☐ Never start with a single roll
☒ I don't mind starting with a single roll when there is no other way
☐ No preference




Loading 1st roll

☒ Start loading from left (driver's side)
☐ Start loading from right side



Load 1st row of rear load group

☐ Against side wall
☒ In the middle

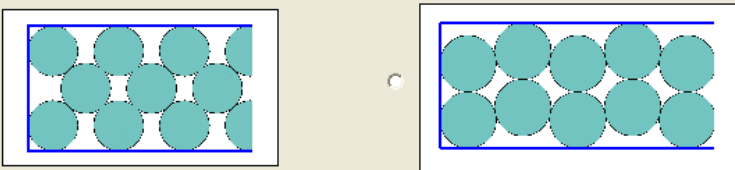


Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Road Only) / Paper Rolls + Pallets,.... - Sample

Securement 1 Securement 2 Securement 3 Loading 1 Loading 2 **Loading 3** Loading 4

Pattern Preference



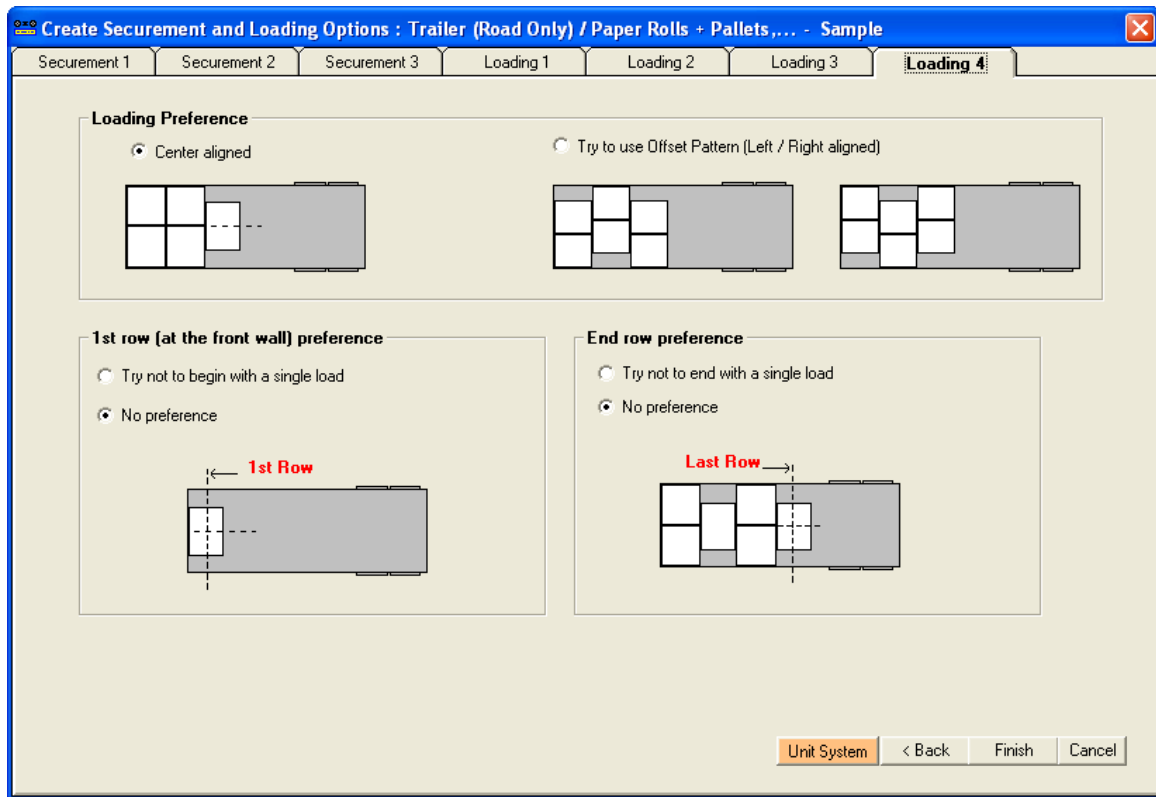
☒ No Preference

☒ Limit # of rolls that can be stacked in last (rear) row Maximum # of rolls stacked in last row (rear) 0

Optimization for :

☒ Best load plan based on maximum weight or maximum volume
☐ Combination of weight & volume
☐ Maximum weight
☐ Maximum volume

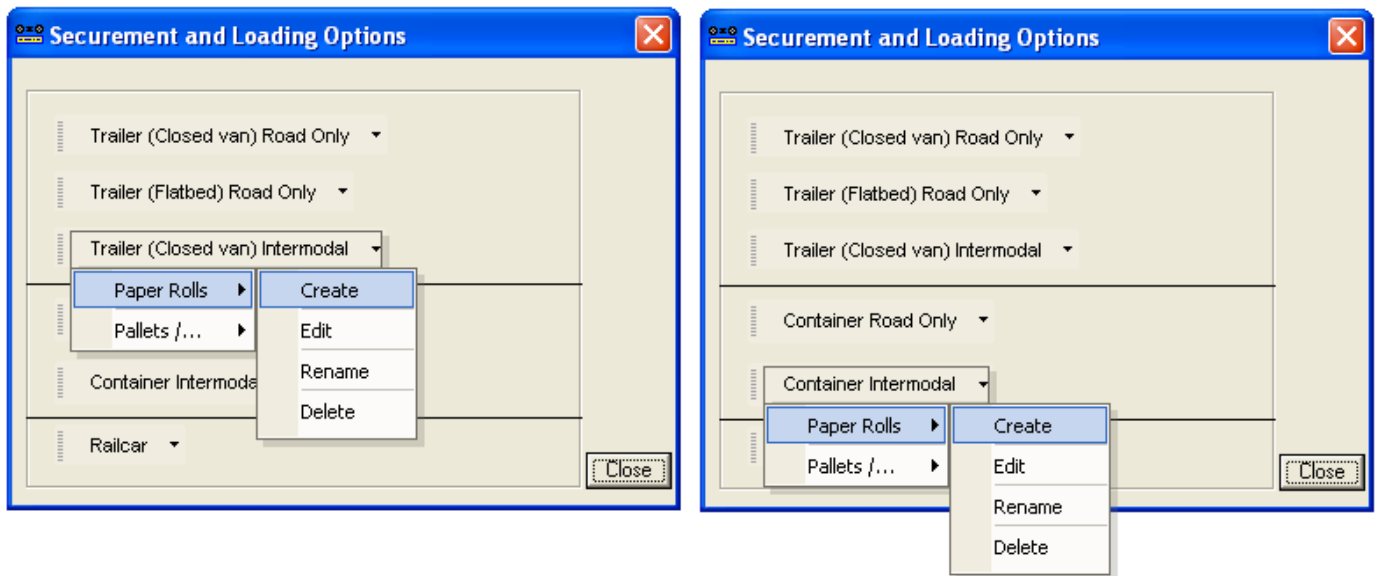
Unit System < Back Finish Cancel



Click Finish to save the Securement Options to the database

d) For Trailer/Container (Intermodal) Paper Rolls

Under the Trailer/Container Road Only Select Paper Rolls, Create. Securement Options tab will display as follows.



Create Securement and Loading Options : Trailer (Intermodal) / Paper Rolls - Sample

Option Name

Option Name

Step 1: Select from Database an Option previously saved
Step 2: Enter new "Option Name" as desired
Step 3: Click "Next" to edit securement and loading options

Select from Database:

Option Name:

Unit System < Back Next > Cancel

Select an existing Securement Option from database, enter a new name for Securement Options you want to save and click Next

Securement and Loading options will be displayed in several tabs. Go through each tab and modify values if required.

Create Securement and Loading Options : Trailer (Intermodal) / Paper Rolls - Select

Securement Loading 1 Loading 2 Loading 3

D1 (overlap)

D1 = minimum overlap distance between two rolls to prevent them from squeezing between side walls (in)

D2 (fit) and D3 (spacer width)

D2 = minimum space needed for easy unloading (in)

D3 = width of spacer block used (in)

D4 (blocking height) and D5 (riser height)

D4 = minimum blocking height needed to prevent rolls from moving forward (in)
 Industry Recommended Practice = min 6" (15.24 cm)

D5 = height of riser block used (in)

Cargo securement to resist (for road portion)

Forward acceleration g Rearward / Sideways acceleration g $g = 9.8 \text{ m/s}^2 \text{ or } 32 \text{ ft/s}^2$

Industry Recommended Practice = minimum 0.8 g (forward) & 0.5 g (rear/side)

Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Intermodal) / Paper Rolls - Select

Securement **Loading 1** Loading 2 Loading 3

Void Space [Space unused for loading Cargo]


Void space from rear door **VR** (in) Void space from ceiling **VC** (in)

Load identical rolls together (No swapping)

☒ No preference ☐ No swapping ☐ Allowed only for blocking

Lateral weight distribution

☒ Check lateral weight distribution



Maximum weight variation allowed (between left and right side) (lb)

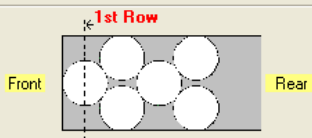
Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Intermodal) / Paper Rolls - Select

Securement Loading 1 **Loading 2** Loading 3

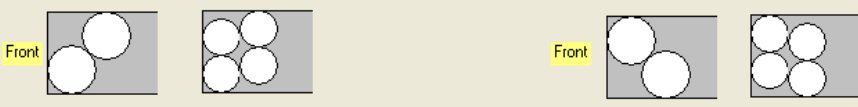
Load 1st row (at the front wall)

☐ Never start with a single roll
☒ I don't mind starting with a single roll when there is no other way
☐ No preference



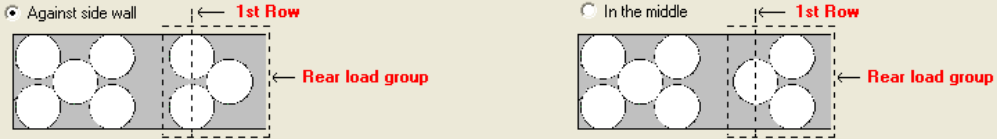
Loading 1st roll

☒ Start loading from left (driver's side) ☐ Start loading from right side



Load 1st row of rear load group

☒ Against side wall ☐ In the middle

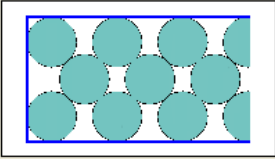
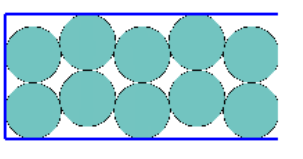


Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Intermodal) / Paper Rolls - Sample

Securement Loading 1 Loading 2 **Loading 3**

Pattern Preference

☒  ☐  ☐ No Preference

☒ Limit # of rolls that can be stacked in last (rear) row Maximum # of rolls stacked in last row (rear)

☐ Favor Load Plans with better weight distribution over Load Plans with less securement needs

☐ Favor Load Plans in two sections with less dunnage over load plans in one section

☒ Enforce strict intermodal loading rules

Optimization for :

☒ Best load plan based on maximum weight or maximum volume

☐ Combination of weight & volume

☐ Maximum weight

☐ Maximum volume

Click Finish to save the Securement Options to the database

e) For Trailer/Container (Intermodal) Pallets/...

Under the Trailer/Container Intermodal Select Palletss, Create. Securement Options tab will display as follows.

Securement and Loading Options

Trailer (Closed van) Road Only ▾

Trailer (Flatbed) Road Only ▾

Trailer (Closed van) Intermodal ▾

Paper Rolls ▸

Pallets /... ▸ **Create**

Edit

Rename

Delete

Container Intermodal ▾

Railcar ▾

Securement and Loading Options

Trailer (Closed van) Road Only ▾

Trailer (Flatbed) Road Only ▾

Trailer (Closed van) Intermodal ▾

Container Road Only ▾

Container Intermodal ▾

Paper Rolls ▸

Pallets /... ▸ **Create**

Edit

Rename

Delete

Create Securement and Loading Options : Trailer (Intermodal) / Pallets,... - Sample

Option Name

Option Name

Step 1: Select from Database an Option previously saved
Step 2: Enter new "Option Name" as desired
Step 3: Click "Next" to edit securement and loading options

Select from Database: Default

Option Name: Sample

Unit System < Back Next > Cancel

Select an existing Securement Option from database, enter a new name for Securement Options you want to save and click Next

Securement and Loading options will be displayed in several tabs. Go through each tab and modify values if required.

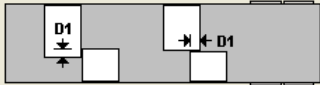
Create Securement and Loading Options : Trailer (Intermodal) / Pallets,... - Sample

Securement 1 Securement 2 Loading 1 Loading 2 Loading 3

D1 (overlap)

D1 = minimum overlap (blocking) to prevent loads from forward, rearward, or sideways movement

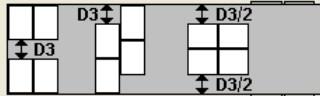
6 (in)



D3 (critical unused lateral space)

D3 = critical unused lateral space in a row (if unused space is larger than D3, securement is required)

8 (in)



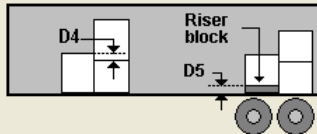
D4 (blocking height) and D5 (riser height)

D4 = minimum blocking height needed to prevent loads from moving forward

6 (in)

D5 = height of riser block used

(in)



Cargo securement to resist

Forward acceleration: 0.8 g Rearward / Sideways acceleration: 0.5 g $g = 9.8 \text{ m/s}^2$ or 32 ft/s^2

Industry Recommended Practice = minimum 0.8 g (forward) & 0.5 g (rear/side)

Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Intermodal) / Pallets,.... - Sample


Securement 1 Securement 2 **Loading 1** Loading 2 Loading3

Void Space (Space unused for loading Cargo)

Void space from rear door **VR** 0 (in) Void space from the ceiling **VC** 0 (in)

Lateral weight distribution

☒ Check lateral weight distribution



Maximum weight variation allowed (between left and right side) 0 (lb)

☒ Favor piling identical items (this may reduce payload)

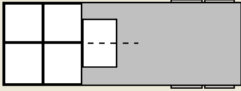
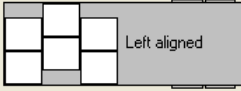
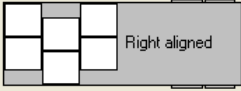
Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Intermodal) / Pallets,.... - Sample

Securement 1 Securement 2 Loading 1 **Loading 2** Loading3

Loading Preference

☒ Center aligned ☐ Try to use Offset Pattern (Left / Right aligned)

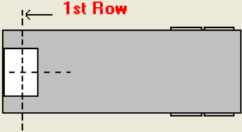




For Offset Pattern or No Preference

☒ Left aligned ☐ Right aligned

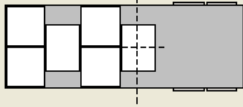
1st row (at the front wall) preference

☐ Try not to begin with a single load ☒ No preference



End row preference

☐ Try not to end with a single load ☒ No preference

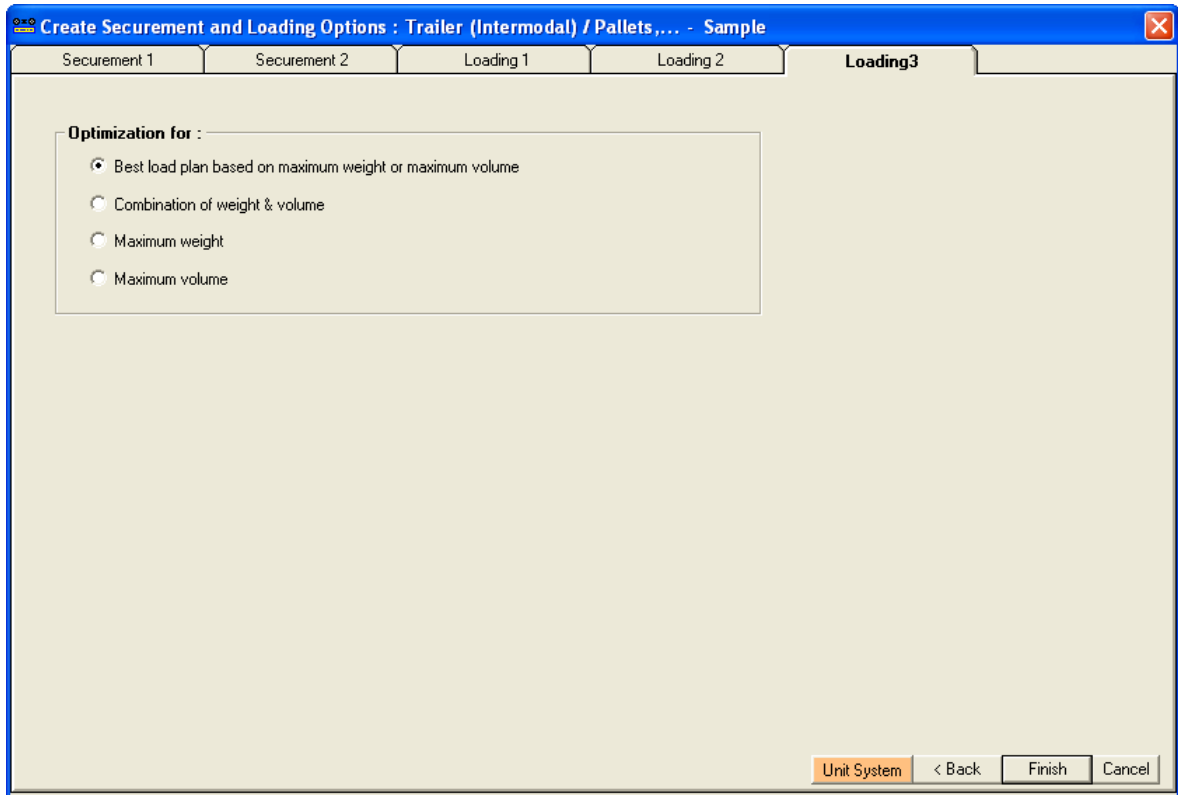


☐ Favor Load Plans with better weight distribution over Load Plans with less securement needs

☐ Favor Load Plans in two sections with less dunnage over load plans in one section

☐ Enforce strict intermodal loading rules

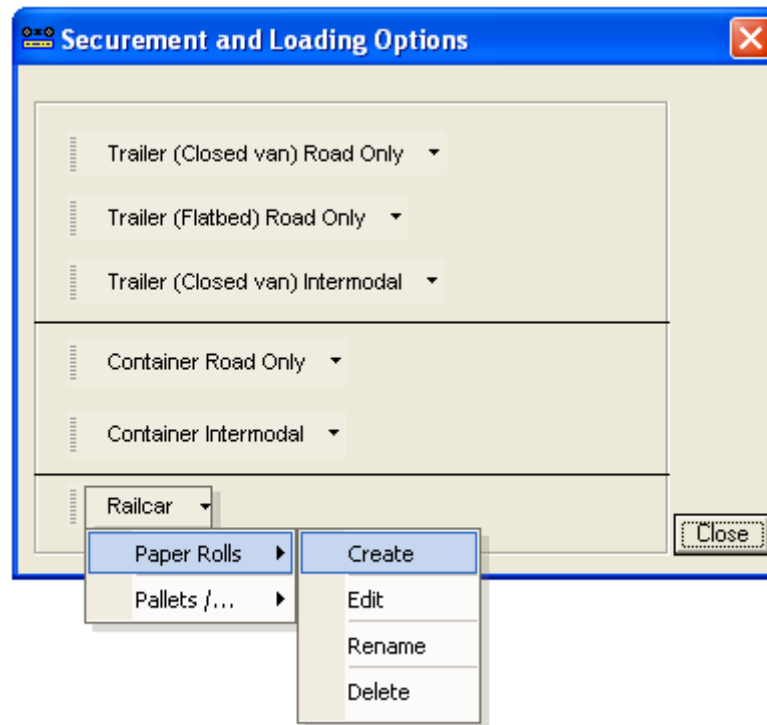
Unit System < Back Finish Cancel



Click Finish to save the Securement Options to the database

f) For Railcar Paper Rolls

Under the Railcar Select Paper Rolls, Create. Securement Options tab will display as follows.



Create Securement and Loading Options : Railcar / Paper Rolls - Sample

Option Name

Option Name

Step 1: Select from Database an Option previously saved
 Step 2: Enter new "Option Name" as desired
 Step 3: Click "Next" to edit securement and loading options

Select from Database: Default

Option Name: Sample

Unit System < Back Next > Cancel

Select an existing Securement Option from database, enter a new name for Securement Options you want to save and click Next

Securement and Loading options will be displayed in several tabs. Go through each tab and modify values if required.

Create Securement and Loading Options : Railcar / Paper Rolls - Sample

Securement 1 Securement 2 Securement 3 Securement 4 Loading 1 Loading 2 Multi - Diameter T - Loading

D1 (overlap)

D1 = minimum overlap distance between two rolls to prevent them from squeezing between side walls

2 (in)

D2 (fit) and D3 (spacer width)

D2 = minimum space needed for easy unloading

4 (in)

D3 = width of spacer block used

3 (in)

D4 (blocking height)

D4a = minimum blocking height needed when blocked rolls are strapped together

Industry Recommended Practice = min 6" (15.24 cm)

6 (in)

D4b = minimum blocking height (in percentage) needed when no strap is used

Industry Recommended Practice = min 50%

50 % of height of blocked roll

Unit System < Back Finish > Cancel

Create Securement and Loading Options : Railcar / Paper Rolls - Sample

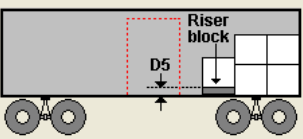
Securement 1 | **Securement 2** | Securement 3 | Securement 4 | Loading 1 | Loading 2 | Multi - Diameter | T - Loading

Risers

D5 = height of riser block used (in)

of risers allowed under a pile (except door area) **N1**

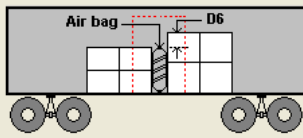
of risers allowed under a pile (in door area) **N2**



D6 (height difference)

D6 = Maximum height difference allowed for piles on each side of air bag (in)

Industry Recommended Practice = 0 (Zero)



Lengthwise Void

Minimum void allowed **Vmin** (in)

Maximum void allowed **Vmax** (in)

Note: Void to be filled by inflatable dunnage air bags + contour pads + void fillers

Min. blocking height for diameter greater than or equal to 58"

☒ Blocking height specified in inches ☐ Blocking height specified as percentage

Minimum blocking height needed when no strap is used **BH58** (in)

Industry Recommended Practice = min 6" (15.24 cm) for pulpboard

Minimum blocking height (in percentage) needed when no strap is used **BH58** % of height of blocked roll

Industry Recommended Practice = min 50%

Unit System < Back Finish Cancel

Create Securement and Loading Options : Railcar / Paper Rolls - Sample

Securement 1 | Securement 2 | **Securement 3** | Securement 4 | Loading 1 | Loading 2 | Multi - Diameter | T - Loading

Strapping Option 1

☒ Use risers up to the maximum # specified by you to avoid strapping, otherwise allow strapping with minimum # of risers

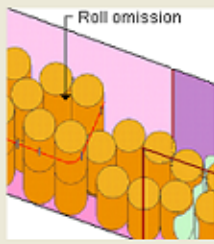
☐ Allow strapping with minimum # of risers

☐ Strapping not allowed

Make sure that you specify (in Securement Option 2) enough risers under a pile. Otherwise entire top layer may be removed

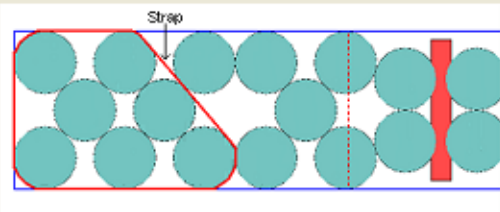
Strapping Option 2

☒ For the case shown in picture, allow strapping in top layer, even if the pile in the middle is omitted



Strapping Option 3

☒ Allow Strapping at an angle (like example in picture below)



Strapping Option 4

☐ Allow Loading plan with strapping in door area (instead of air bag)

Unit System < Back Finish Cancel

Create Securement and Loading Options : Railcar / Paper Rolls - Sample

Securement 1 Securement 2 Securement 3 **Securement 4** Loading 1 Loading 2 Multi - Diameter T - Loading

Blocking of incomplete layer with center roll only for patterns with 3 vertical air bags

Blocking incomplete layer using B roll only instead of using A, B & C rolls (see picture below)

☐ Not Allowed Industry Recommended Practice = Not Allowed
☒ Allowed only when top layer is strapped May cause some edge damage
☐ Always allowed May cause some edge damage

Blocking of end rolls for 58" rolls

Block using : ☒ End Spacers ☐ Side Spacers

Small diameter rolls

☐ Allow X-key handling door area configuration like shown below

Unit System < Back Finish Cancel

Create Securement and Loading Options : Railcar / Paper Rolls - Sample

Securement 1 Securement 2 Securement 3 Securement 4 **Loading 1** Loading 2 Multi - Diameter T - Loading

Maximum C.G. Height

Combined C.G. of railcar and contents measured above top of rail CG 98 (in)
 Industry Recommended Practice = maximum 98" (248.92 cm)

Load identical rolls together (No swapping)

☒ No preference ☐ No swapping

Load 1st row (at the front wall)

☐ Never start with a single roll
☒ I don't mind starting with a single roll when there is no other way
☐ No Preference

Void Space / Clearance (Space left unused for easy loading)

Void Space / Clearance from ceiling VC 0 (in) Void Space / Clearance from door top (in door area) VD 0 (in)
 Void space from each side wall VS 0 (in) ☒ Height restriction in door area for loading/unloading
 Max. loading height in door area DB 0 (in)

Strata Line

☐ Break ☐ Break only if it doesn't reduce payload ☒ Don't Break

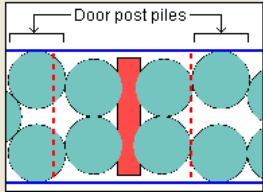
Unit System < Back Finish Cancel

Create Securement and Loading Options : Railcar / Paper Rolls - Sample

Securement 1 Securement 2 Securement 3 Securement 4 Loading 1 **Loading 2** Multi - Diameter T - Loading

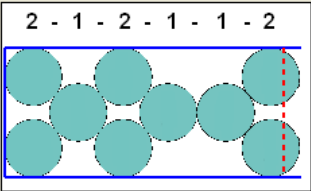
Maximum height for door post piles

☒ No height restriction for door post piles
☐ Apply door area height restriction to door post piles
☐ Apply door area height restriction to door post piles on one side of airbag and no height restriction on the other side



2-1-2-1-1-2 pattern

☐ Allow 2-1-2-1-1-2 pattern as shown



Optimization for :

☒ Best load plan based on maximum weight or maximum volume
☐ Combination of weight & volume
☐ Maximum weight
☐ Maximum volume

☐ Allow ends of car to be stacked lower than door area
☐ Place smaller roll at bottom of pile for easier unloading

Unit System < Back Finish Cancel

Create Securement and Loading Options : Railcar / Paper Rolls - Sample

Securement 1 Securement 2 Securement 3 Securement 4 Loading 1 Loading 2 **Multi - Diameter** T - Loading

Which Diameter do you want in the centre (door area) of Railcar ?

☐ Largest Diameter always in Centre of Railcar
Note : may compromise Payload carried

☒ No Preference
Note : Maximum Payload will be carried. Any Diameter may be in the centre of Railcar

☐ I can compromise upto % of my Payload in order to have the Largest Diameter in the centre of Railcar
 Enter X % : %

Note : If no solution is found with the largest Diameter in the centre of Railcar, Load Plans with "No Preference" will be presented.

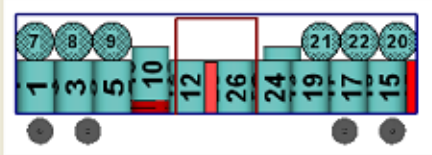
Unit System < Back Finish Cancel

Create Securement and Loading Options : Railcar / Paper Rolls - Sample

Securement 1 Securement 2 Securement 3 Securement 4 Loading 1 Loading 2 Multi - Diameter **T - Loading**

T - Loading

☐ Allow T - Loading



Chock Type

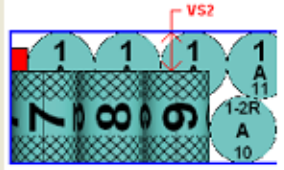
☒ Regular chock. (14" x 14" x 8.5", double sided tape)

☐ Temporary chock. (requires higher blocking rolls)

D7 = height of riser block used for T - Loading (in)

Void space / clearance from ceiling **VC2** (in)

Minimum space required between bilge rolls and side walls **VS2** (in)



Unit System < Back Finish Cancel

Click Finish to save the Securement Options to the database

g) For Railcar Pallets/..

Under the Railcar Select Pallets/.., Create. Securement Options tab will display as follows.

Securement and Loading Options

Trailer (Closed van) Road Only ▾

Trailer (Flatbed) Road Only ▾

Trailer (Closed van) Intermodal ▾

Container Road Only ▾

Container Intermodal ▾

Railcar ▾

Paper Rolls ▸

Pallets /... ▸

Create

Edit

Rename

Delete

Close

Create Securement and Loading Options : Railcar / Pallets, ... - Sample

Option Name

Option Name

Step 1: Select from Database an Option previously saved
Step 2: Enter new "Option Name" as desired
Step 3: Click "Next" to edit securement and loading options

Select from Database:

Option Name:

Select an existing Securement Option from database, enter a new name for Securement Options you want to save and click Next

Securement and Loading options will be displayed in several tabs. Go through each tab and modify values if required.


Create Securement and Loading Options : Railcar / Pallets, ... - Sample

Securement 1 | Securement 2 | Loading 1 | Loading 2 | Loading 3

D1 (overlap)

D1 = minimum overlap (blocking) to prevent loads from forward, rearward, or sideways movement

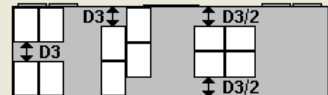
(in)



D3 (critical unused lateral space)

D3 = critical unused lateral space in a row (if unused space is larger than D3, securement is required)

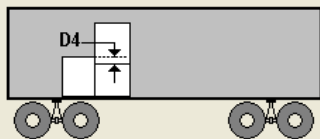
(in)



D4 (blocking height)

D4 = minimum blocking height needed to prevent loads from moving forward

(in)



Create Securement and Loading Options : Railcar / Pallets, ... - Sample

Securement 1 **Securement 2** Loading 1 Loading 2 Loading 3

Void Spaces

☒ Secure all lateral voids bigger than D3 critical distance with void fillers

Void Fillers Position

☒ Fill lateral void space using void filler in between skids

Void Filler

Unit System < Back Finish Cancel

Create Securement and Loading Options : Railcar / Pallets, ... - Sample

Securement 1 Securement 2 **Loading 1** Loading 2 Loading 3

Maximum C.G. Height

Combined C.G. of railcar and contents measured above top of rail **CG** 98 (in)

Industry Recommended Practice = maximum 98" (248.92 cm)

Lengthwise Void

Minimum void allowed **Vmin** 3 (in)

Maximum void allowed **Vmax** 40 (in)

Note: Void to be filled by inflatable dunnage air bags + contour pads + void fillers

D6 (height difference)

D6 = Maximum height difference allowed for piles on each side of air bag 18 (in)

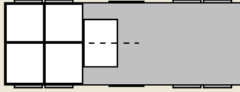
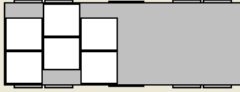
Unit System < Back Finish Cancel

Create Securement and Loading Options : Railcar / Pallets, ... - Sample

Securement 1 Securement 2 Loading 1 **Loading 2** Loading 3

Loading Preference

☒ Center aligned ☐ Try to use Offset Pattern (Left / Right aligned)

Void Space / Clearance (Space left unused for easy loading)

Void Space / Clearance from ceiling **VC** (in) Void Space / Clearance from door top (in door area) **VD** (in)

☒ Height restriction in door area for loading/unloading

Max. loading height in door area **D8** (in)

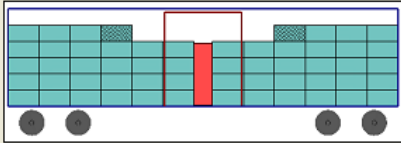
☐ Favor piling identical items (this may reduce payload)

Unit System < Back Finish Cancel

Create Securement and Loading Options : Railcar / Pallets, ... - Sample

Securement 1 Securement 2 Loading 1 Loading 2 **Loading 3**

☐ Incomplete top layer not allowed (i.e. some items are not longitudinally blocked by at least D4)



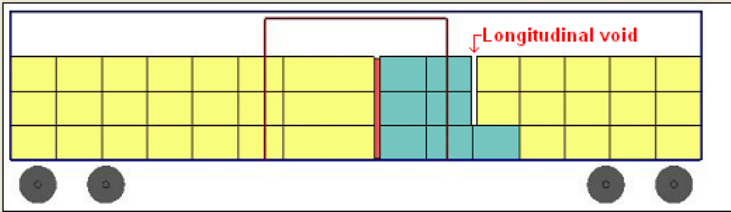
Optimization for :

☒ Best load plan based on maximum weight or maximum volume ☐ Combination of weight & volume

☐ Maximum weight ☐ Maximum volume

☒ Allow longitudinal void caused by stacking items of different sizes. (You should secure the void with void fillers)

Maximum void per line: (in)

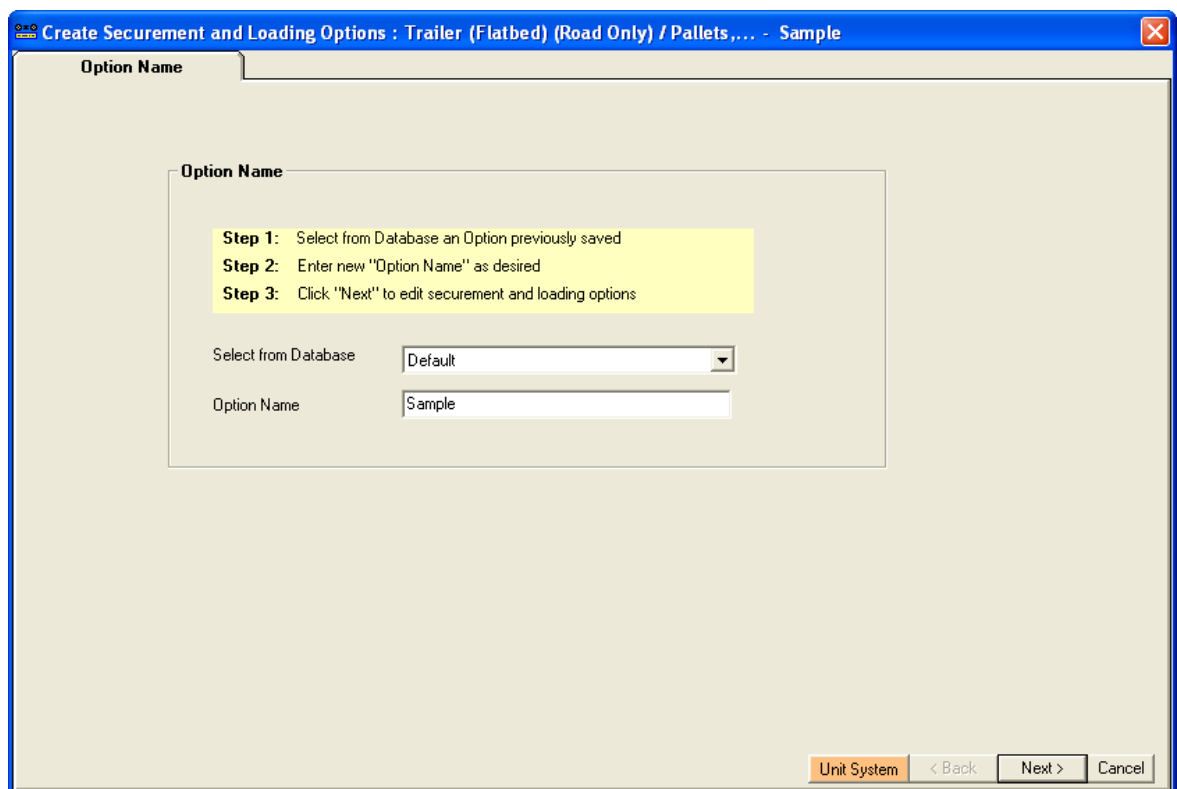
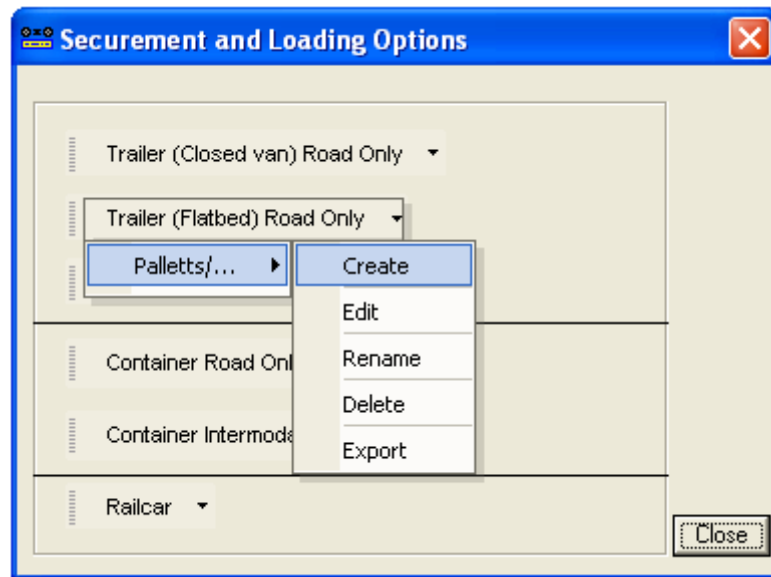


Unit System < Back Finish Cancel

Click Finish to save the Securement Options to the database

h) For Flatbed Pallets/..

Under the Trailer (Flatbed) Road Only Select Pallets/..., Create. Securement Options tab will display as follows.



Select an existing Securement Option from database, enter a new name for Securement Options you want to save and click Next

Securement and Loading options will be displayed in several tabs. Go through each tab and modify values if required.

Create Securement and Loading Options : Trailer (Flatbed) (Road Only) / Pallets,.... - Sample

Loading 1 Loading 2 Loading 3

Void Space (Space unused for loading Cargo)

Void space from nose or front wall **VF** (in) Void space from each side **VS** (in)

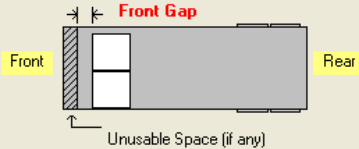
Void space from rear of trailer **VR** (in)

Front Gap

☒ Front gap allowed


☐ Front gap not allowed

☐ Favor load plans in one section with a front gap over load plans in two sections



Lateral weight distribution

☒ Check lateral weight distribution



Maximum weight variation allowed (between left and right side) (lb)

☐ Favor piling identical items (this may reduce payload)

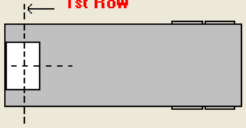
Unit System < Back Finish Cancel

Create Securement and Loading Options : Trailer (Flatbed) (Road Only) / Pallets,.... - Sample

Loading 1 **Loading 2** Loading 3

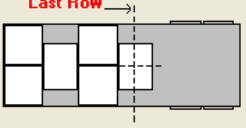
1st row (at the front wall) preference

☐ Try not to begin with a single load ☒ No preference



End row preference

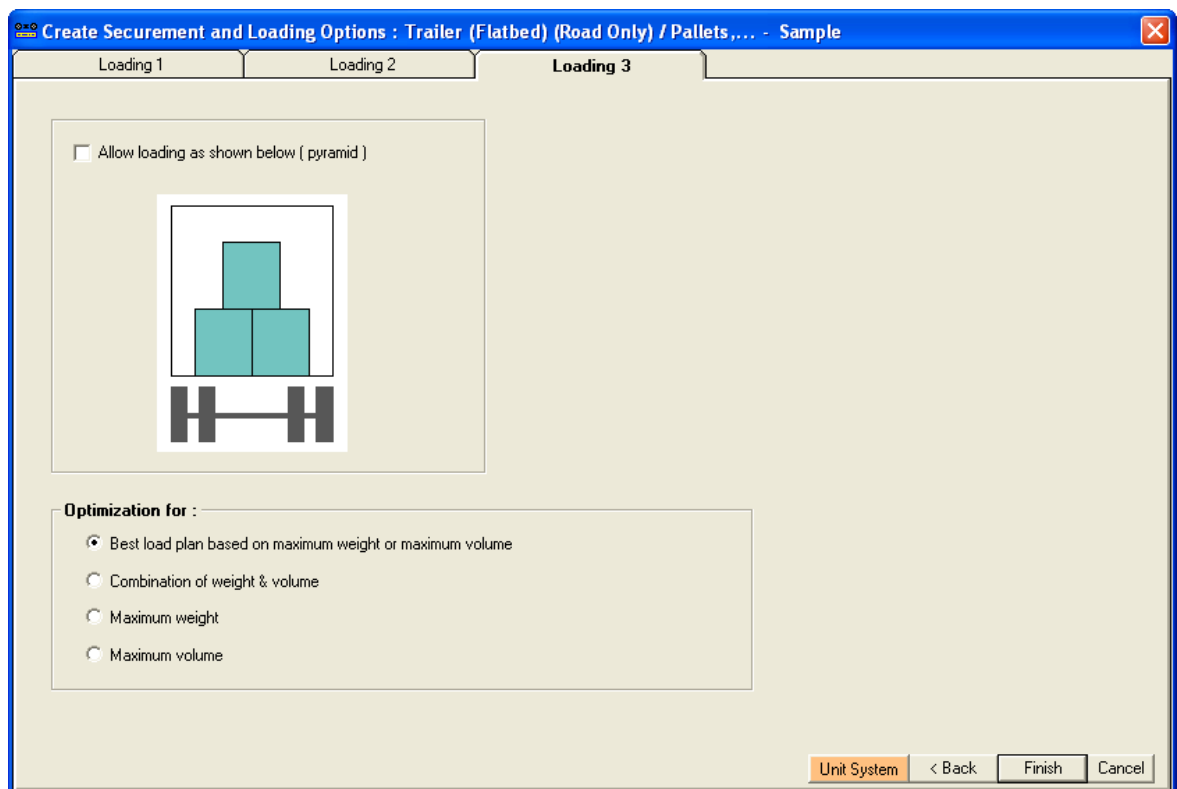
☐ Try not to end with a single load ☒ No preference



☐ Favor Load Plans with better weight distribution over Load Plans with less securement needs

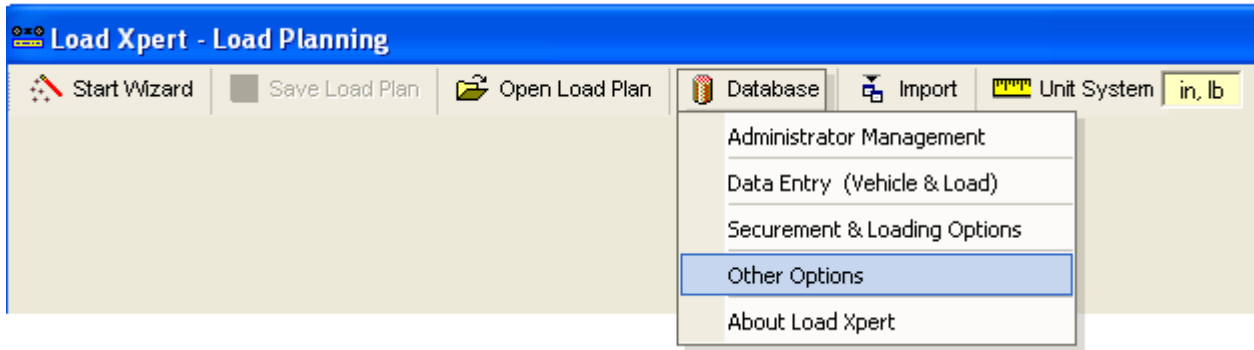
☐ Favor Load Plans in two sections with less dunnage over load plans in one section

Unit System < Back Finish Cancel

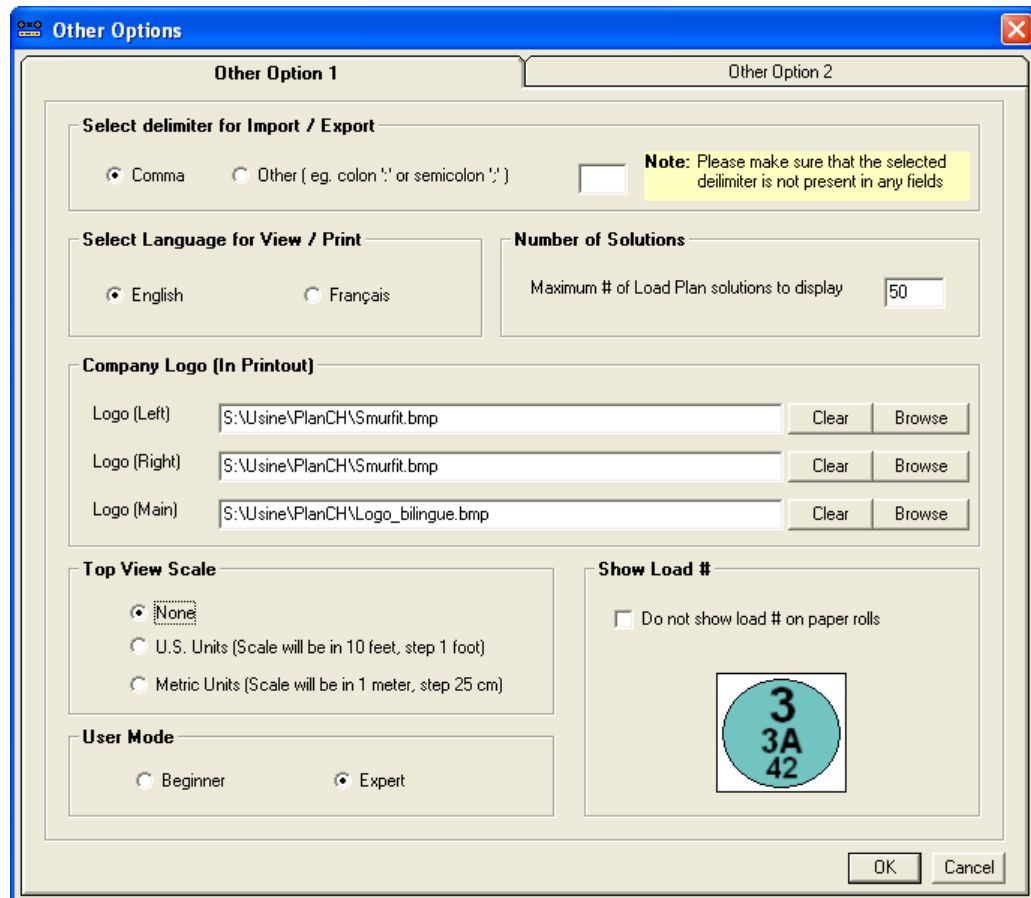


Click Finish to save the Securement Options to the database

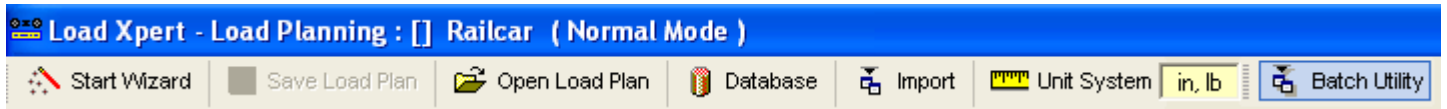
SECTION 5: Database - Other Options



1. Click **“Other Options”**, to select Import/Export options, Language, Number of Load Plan solutions to display, Company Logo and Top view scale.
2. Select Other Option 2 tab to enter Default Comments to appear in the Printouts for a selected vehicle type.



SECTION 6: Import (Manual/Batch Mode)



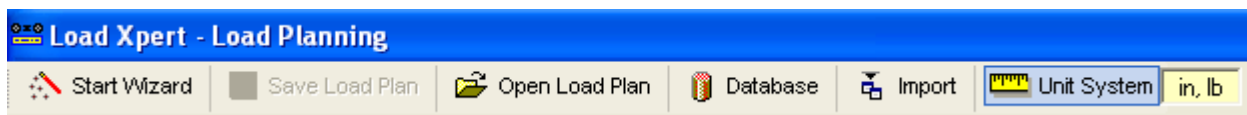
The concept behind the “**Import**” is to allow generating, saving (as image file) and printing Load Plans without using the Start Wizard, where user have to Select the Unit System, Vehicle Type, Load Type, Mode of Operation, Load information, Securements and Load Plan Options, Jurisdiction, and Vehicle.

An ASCII file is created as per the format required by the software where all the above mentioned information is provided by the user for example, Jurisdiction Name, Vehicle Name, Securement and Load Plan Options Name, Load Information and the software will generate Load Plans. If manual, then one file at a time is used, and if Batch then all files in a specified folder is used to create different load plans one after the other.

NOTE: For more information and File format on this topic please contact CIE-TECH Inc.

SECTION 7: Unit System

Load Xpert - Load planning software allows user to work with US (in, ft-in, lb) or metric (mm, cm, m, kg) unit system. Before entering data for doing load planning, it is advisable to select the appropriate unit system you wish to work with.



In the main menu next to “**Unit System**” the current unit system active in the software is displayed. If you wish to change this unit system, click “**Unit System**” and select US (in, ft-in, lb) or metric (mm, cm, m, kg) units of your choice.

SECTION 8: Doing Load Planning

8.1 Main Menu

Once you login to the software, the main menu appears. The main menu has *five* active menu buttons namely

- 1) Start Wizard
- 2) Open Load Plan
- 3) Database
- 5) Import
- 6) Unit System

Start Wizard:

Allows you to create new load plan.

Save Load Plan:

Allows you to save a load plan on the screen for future use. e.g. viewing or editing

Open Load Plan:

Allows you to open an already existing load plan for viewing or editing.

Database: See details in **Section 4**

Import: See details in **Section 6**

Unit System: See details in **Section 7**

8.2 Using Wizard to do Load Planning

NOTE: Example is done for Paper rolls. However, the same methodology applied to pallets/skids.

Click “**Start Wizard**”.

STEP 1: Start Load Planning wizard

1. Enter “**Load Plan Title**”.
2. Verify whether you wish to continue with the Current Unit System displayed. If not, click “**Change Unit System**” and select unit system of your choice.
3. Choose “**Vehicle Type**” and “**Load Type**”.
4. **Select Mode of Operation:** Normal Mode or Planning Mode

Normal Mode:

Choose Normal Mode if you wish to do load planning for a fixed or specific consignment. This is the mode you normally will be using for load planning.

The screenshot shows a software window titled "STEP 1 - Load Planning Wizard : Trailer (Closed) (Road Only) / Paper Rolls". It contains several input fields and radio button options. At the top left is a "Load Plan Title" field with "Sample" entered. To the right is a "Current Unit System" dropdown set to "in , lb" with a "Change Unit System" button below it. Below the title field are two columns of radio button options. The "Vehicle Type" column includes: "Trailer (closed) Road only" (selected), "Trailer (flatbed) Road only", "Trailer (closed) Intermodal (road + rail)", "Railcar", "Container Road only", and "Container Intermodal (road + rail)". The "Load Type" column includes: "Paper Rolls" (selected), "Pallets / Skids Crates / Boxes", and "Mix Loads (Rolls + Pallets)". Below these is a "Select Mode of Operation" section with two radio buttons: "Normal Mode (Use this mode for loading a specific Consignment)" (selected) and "Planning Mode (Use this mode to estimate how many vehicles are needed to ship several days of Production or Production Sequences)". At the bottom right are "Cancel", "<< Back", and "Next >>" buttons.

Planning Mode:

Planning Mode is used if you wish to estimate the number of vehicles needed to ship several days of production. Click "**Enter Info for Planning Mode**" and enter info for Planning Mode in the pop-menu shown below.

The screenshot shows a software window titled "Enter info for Planning mode". It contains a message: ">> You can do load planning for a total of 100 Production Sequences". Below this is an "Enter" section with a text input field containing the number "1". The text reads: "To do load planning for your entire Production Sequences, Specify up to how many Production Sequences can be loaded together ?". Below the input field is a yellow box with an "Example:" stating: "If you have a total of 15 Production Sequences, and if you have entered 3 above, it means you can do load planning for all 15 Production Sequences by combining Cargo from up to any 3 consecutive Production Sequences". Below the example is a checkbox with the text: "During load planning, if any of the vehicle(s) is partially filled, I do not mind adding cargo from Subsequent Production Sequences, to fill any partially filled vehicle(s)". At the bottom is a yellow warning box with a triangle icon and the text: "Please make sure you enter for each cargo a Production Sequence # from 1 to 100 in STEP 2 (in the wizard)". At the bottom right are "OK" and "Cancel" buttons.

For example, let us assume that you are interested in loading cargo from several days of production, say 15 production sequences. Here production sequences can be interpreted as 15 days of production or 15 consecutive production shifts, etc.

Now if you wish to restrict loading cargo together inside a vehicle from any 3 out of 15 consecutive production sequences, then “**Enter 3**” in the box above. Then the software will perform load planning and present vehicles needed to carry cargo from all 15 production sequences but combining loads from any 3 consecutive production sequences. That is no vehicle will have cargo from more than 3 consecutive production sequences.

Upon completion of the load planning if any of the vehicle(s) is partially loaded, you have the option to redo the planning by including loads from subsequent production sequences by checking the check box.

The # of production sequences selected and the box if checked will be displayed for your convenience adjacent to the button “**Enter Info for Planning Mode**”.

STEP 2: Select list of items to be carried and set securement and loading option if needed

Note: This example is for a railcar carrying Paper Rolls

Rolls to be loaded in the vehicle can be selected in two ways. Either through the manual selection using the drop-down menu of existing rolls in the database or by importing the loads through “**Import Load List**” button.

If “**Diameter List**” is clicked, the following screen will appear.

Order Diameter (in)	Avg. Production Diameter (in)
<input type="checkbox"/> 40	40
<input type="checkbox"/> 42	42
<input type="checkbox"/> 45	45
<input type="checkbox"/> 50	49.5
<input type="checkbox"/> 60	60
<input type="checkbox"/> 72	72

Create New Diameter Edit Production Diameter

Note: Avg. Production Dia will be used in calculation

Select All Close OK

Diameters of all rolls saved in the database will be displayed. This allows you to select which diameters will be displayed in the drop-down list of SKUs. If in case no data has been entered previously, you can create new diameter by clicking the button “**Create New Diameter**”. The steps involved are as described in Section 4.3.1 (Manual).

To enter the production diameter click “**Edit Production Diameter**”. The steps involved are as explained in Section 5. Note that the load planning will be solely based on Average Production Diameter.

Next step will be to select from the database the rolls you want to load by clicking the drop-down menu in the Table. Only rolls corresponding to diameters previously selected in “**Select Diameter**” list will be available. As soon as you select, the row will be filled with information on Roll Name / SKU, Order Diameter, Roll width, and Roll weight. The information filled is read only and will be shaded in light beige color.

STEP 2 - Select Load(s) : Railcar / Paper Rolls

Select Diameter:

	Roll Name/SKU	Diameter (in)	Roll Width (in)	Roll Weight (lb)	# of Rolls	Rolls per Pack	# of Packs	Total Weight (lb)	Color	Clear
1	Diam. 50" x Width 50"	50	50	2040	85	1	85	173400	Auto	<input type="checkbox"/>
.	Diam. 50" x Width 25"	50	25	1020	50	1	50	51000	Auto	<input type="checkbox"/>
*										<input type="checkbox"/>

Orientation: ☒ eyes vertical (standing up) ☐ eyes crosswise

Securement and Load Plan Options: Select

Total Cargo: 224400 (lb)
Total Volume: 6249.55 (ft3)

You can enter # of Rolls and Rolls per Pack. Software will calculate the # of Packs and will be displayed as a read only info in the subsequent column. Total cargo entered in the table will be displayed highlighted in yellow color.

You have a choice of either selecting the color for the roll or leave auto color selection by the software for displaying. There are 100 rows in the grid, and each row can have different rolls.

At any time if you wish to remove a particular cargo from the load plan, check the clear button and the selected row (cargo) will be deleted. If you wish to remove the entire cargo list from the table, click **"Clear All"**.

The next step is to select the orientation of the paper roll.

Final step in this sequence is to select Securement and Load Plan Options by clicking **"Select/View"** button. Details of how to enter data is described in Section 4.1.7.

For Importing Load List

If you import loads through **"Import Load List"** button, then follow instructions outlined in Section 4.3.1 (Import).

NOTE STEP 2 for Trailer/Container

STEP 2 - Select Load(s) : Trailer (Road Only) / Paper Rolls

Select Diameter:

	Roll Name/SKU	Diameter (in)	Roll Width (in)	Roll Weight (lb)	# of Rolls	Rolls per Pack	# of Packs	Total Weight (lb)	Priority #	Drop #	Color	Clear
1	Diam. 50" x Width 50"	50	50	2040	12	1	12	24480	1	1	Auto	<input type="checkbox"/>
2	Diam. 50" x Width 25"	50	25	1020	20	1	20	20400	1	1	Auto	<input type="checkbox"/>
*												<input type="checkbox"/>

Total Cargo: 44880 (lb)
Total Volume: 1249.91 (ft3)

Orientation: ☒ eyes vertical (standing up) ☐ eyes crosswise

Securement and Load Plan Options: Select: Default

In addition to the data for the Railcar in **STEP 2** Trailer and Container also has the Priority # and Drop #.

Priority # : Setting a Priority for a load item indicates the order in which Loads must be loaded in the vehicle, if you have a list of loads with different Priorities the loads with smaller priority will be loaded first.

Drop # : Setting a Drop # for a load item indicates the order in which Loads must be unloaded from the vehicle, if you have a list of loads with different Drops the loads with smaller Drop will be loaded last.

IMPORTANT: You cannot use multiple Priority and Drop at the same time.

Once the rolls to be used for the load plan are selected, and the Securement and Load Plan Options are set, click the 'Next' button. The next screen appears, as pictured below.

STEP 3: Selecting the vehicle(s) that will be used for the load plan

First step is to "**Select Routes (Jurisdiction)**". All previously entered Routes (Jurisdiction) in the database will be displayed for your selection. If no data appears, you must follow steps outlined in Section 4.2.5 to enter Routes (Jurisdiction).

STEP 3 - Select Vehicle : Railcar / Paper Rolls

Select Routes (Jurisdiction)

263 000

<Select Jurisdiction>

263 000

270 000

286 000

Select Vehicle

	Cargo Allowed (lb)
CNA STD50x96	197100
Sample High Cube 50ft	189000
Sample High Cube 50ft 12	189000
Sample High Cube 50ft Ken	189000
Sample High Cube 52ft	189000
Sample High Cube 62ft	183600
Sample STD 9-2	201000
Sample STD 9-4	201000
Sample STD 9-6	201000

Add >>

<< Remove

Selected Vehicle(s)

Total Cargo to Carry (lb) 224400

Vehicle ID (Name)	Cargo Allowed (lb)
Sample STD 9-6	201000
2 Sample STD 9-4	201000
3	
4	
5	
6	
7	
8	
9	
10	
Unused Weight in Vehicle(s) (lb) 177600	

Note: Vehicle and Options from the database will be used for Optimization

Cancel << Back Finish

The next step is to select the vehicles associated with the selected the jurisdiction. That is all vehicles that may travel in the selected jurisdiction. You will notice all vehicles previously entered in the database and are associated with the selected jurisdiction will be displayed as shown above. For all vehicles their corresponding cargo capacity (allowed) will also be displayed.

Select the vehicle of your choice for load planning and click “**Add**” to add to the table on the right side (Selected Vehicle List).

If you wish to review the dimensions and tare weight of the vehicle you have selected, click the yellow button “**View Selected Vehicle**”.

STEP 3 - Select Vehicle : Railcar / Paper Rolls

Select Routes (Jurisdiction)

263 000

Max. Gross Vehicle Weight (lb) 263000

Select Vehicle

	Cargo Allowed (lb)
CNA STD50x96	197100
Sample High Cube 50ft	189000
Sample High Cube 50ft 12	189000
Sample High Cube 50ft Ken	189000
Sample High Cube 52ft	189000
Sample High Cube 62ft	183600
Sample STD 9-2	201000
Sample STD 9-4	201000
Sample STD 9-6	201000

View Selected Vehicle

Add >>

<< Remove

Selected Vehicle(s)

Total Cargo to Carry (lb) 224400

Vehicle ID (Name)	Cargo Allowed (lb)
Sample STD 9-6	201000
2 Sample STD 9-4	201000
3	
4	
5	
6	
7	
8	
9	
10	
Unused Weight in Vehicle(s) (lb) 177600	

Note: Vehicle and Options from the database will be used for Optimization

Cancel << Back Finish

All vehicles you have selected for carrying the cargo will be listed in the table with its corresponding cargo capacity (allowed). Total cargo to be carried as indicated in Step 2 will also be displayed at the top of this table. If the total cargo to carry is more than the sum of all cargo capacities of the vehicles you have selected, then the cargo left to

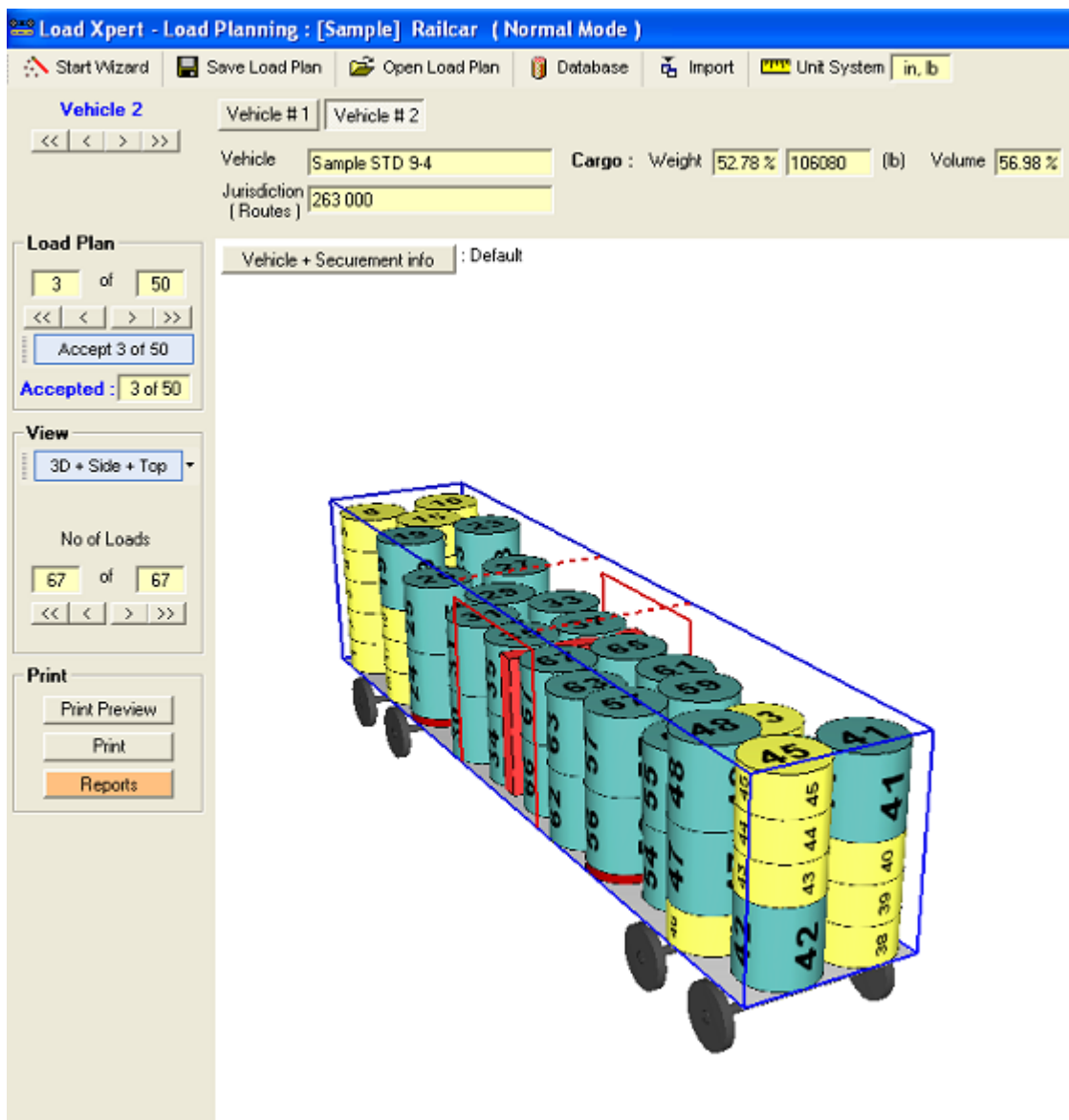
carry will be displayed at the last row in this table. This means that you have not selected sufficient number of vehicles to carry all the cargo to be carried. You may decide to add one or more vehicles to the selected list before continuing the load plan solution.

In the selected vehicles you have a choice of selecting several different vehicles. Either select from the list or alternatively select one vehicle and check the box **“Use Identical Vehicle(s) for entire Cargo”** to allow the software to select as many number of your selected vehicle to load the entire cargo you wish to carry.

Currently the software will allow up to 100 vehicles for doing the load planning.

Once you are done choosing the vehicles, press the ‘Finish’ button to do the optimization. The optimized load plan will be displayed.

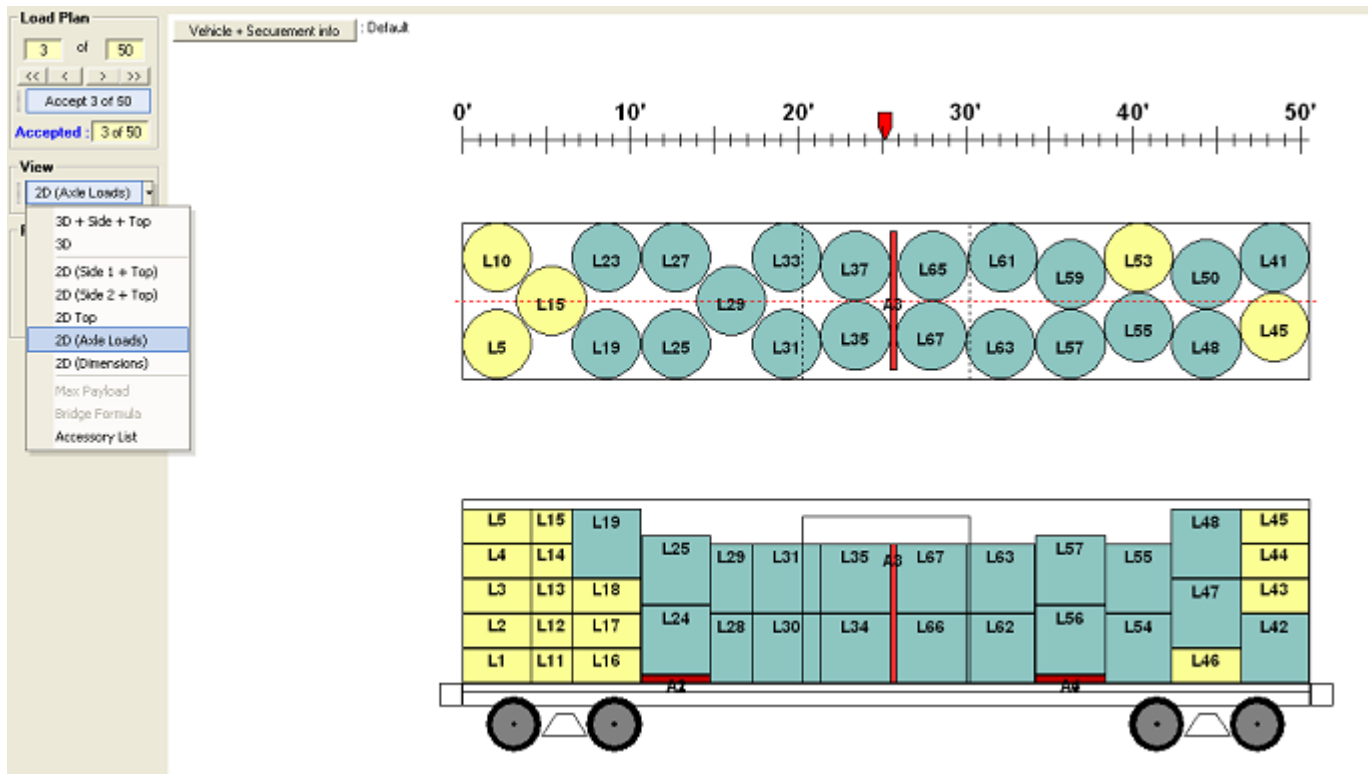
Refer to the to Vehicle tab to view all vehicles one by one by clicking Vehicle # 1, Vehicle # 2 respectively. For a quick reference of the selected vehicle the Vehicle Name, Jurisdiction (Routes) traveled, Weight and Volume percentage of the cargo loaded on the vehicle and the Options and Vehicle dimensions used for the Load Plan are available on the mail screen.



Use the “**Load Plan**” arrow to view the next possible load plan for the selected vehicle and click Accept 3 of 50 in this case to select the solution you like the most as per your requirement.

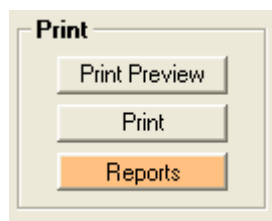
NOTE: Accepted load plan will be saved in the database on clicking “Save Load Plan”. The first load plan is always the accepted one by default.

Click “**View**” to change the view of the selected vehicle



NOTE: Click “Vehicle + Securement Info” for a quick view of the “Vehicle” and the “Securement and Loading Options” used for the vehicle on your screen.

Click Print Preview under “**Print**” to preview the print for a selected “**View**” and to print the vehicle on the screen.



To print multiple views for multiple vehicles in one shot along with the captions use the Print button

Click Report to get a summary Report for the Vehicle information, Cargo information, Detailed report (vehicle by vehicle) including Cargo loaded, Securement Options used for each vehicle and the Picking order report.

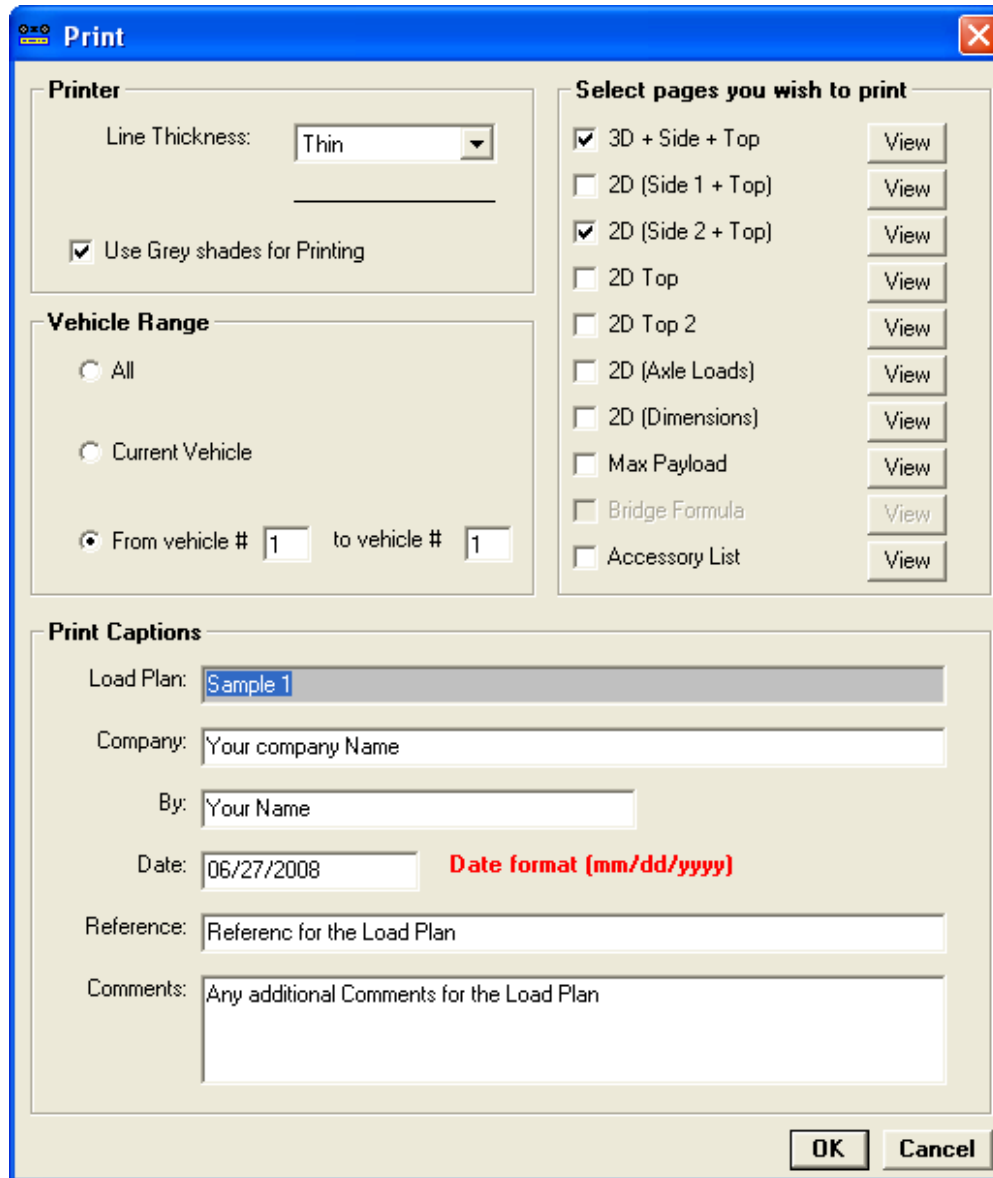
NOTE: You can also print the Report

8.3 Printing a Load Plan

Following screen appears on clicking Print button, select the options and the pages you want to print and click OK.

The regular Print Screen will appear after clicking OK, where you can select the Printer you want to print to.

NOTE: You can also view the page by clicking the View button in order to know and see what will be printed.

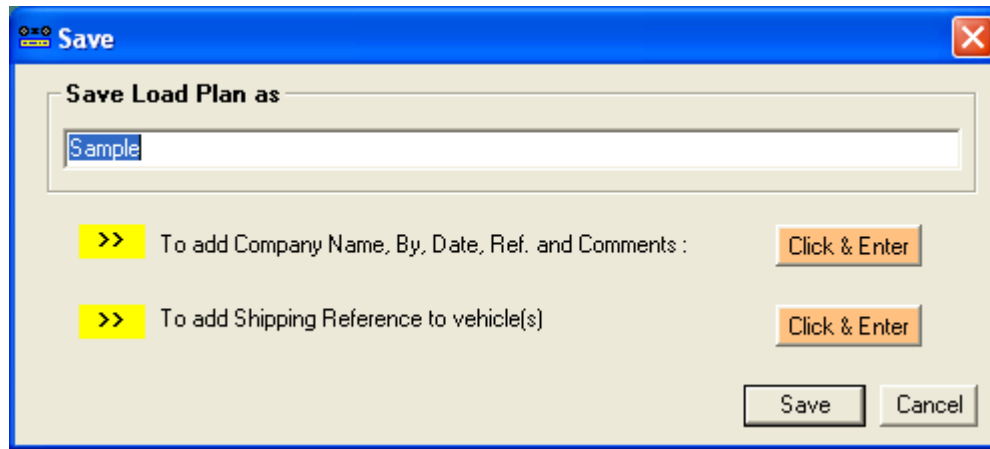


The image shows a 'Print' dialog box with a blue title bar and a close button. It is divided into three main sections: 'Printer', 'Vehicle Range', and 'Print Captions'. The 'Printer' section includes a 'Line Thickness' dropdown set to 'Thin' and a checked checkbox for 'Use Grey shades for Printing'. The 'Vehicle Range' section has three radio button options: 'All', 'Current Vehicle', and 'From vehicle # 1 to vehicle # 1', with the last one selected. The 'Print Captions' section contains text boxes for 'Load Plan' (Sample 1), 'Company' (Your company Name), 'By' (Your Name), 'Date' (06/27/2008), 'Reference' (Referenc for the Load Plan), and 'Comments' (Any additional Comments for the Load Plan). A red text label 'Date format (mm/dd/yyyy)' is positioned next to the date field. To the right of the 'Print Captions' section is a 'Select pages you wish to print' area with a list of items and 'View' buttons: '3D + Side + Top' (checked), '2D (Side 1 + Top)', '2D (Side 2 + Top)' (checked), '2D Top', '2D Top 2', '2D (Axle Loads)', '2D (Dimensions)', 'Max Payload', 'Bridge Formula', and 'Accessory List'. At the bottom right are 'OK' and 'Cancel' buttons.

Select pages you wish to print	
<input checked="" type="checkbox"/> 3D + Side + Top	View
<input type="checkbox"/> 2D (Side 1 + Top)	View
<input checked="" type="checkbox"/> 2D (Side 2 + Top)	View
<input type="checkbox"/> 2D Top	View
<input type="checkbox"/> 2D Top 2	View
<input type="checkbox"/> 2D (Axle Loads)	View
<input type="checkbox"/> 2D (Dimensions)	View
<input type="checkbox"/> Max Payload	View
<input type="checkbox"/> Bridge Formula	View
<input type="checkbox"/> Accessory List	View

8.4 Saving a Load Plan

Click Save Load Plan button to save a Load Plan



Save

Save Load Plan as

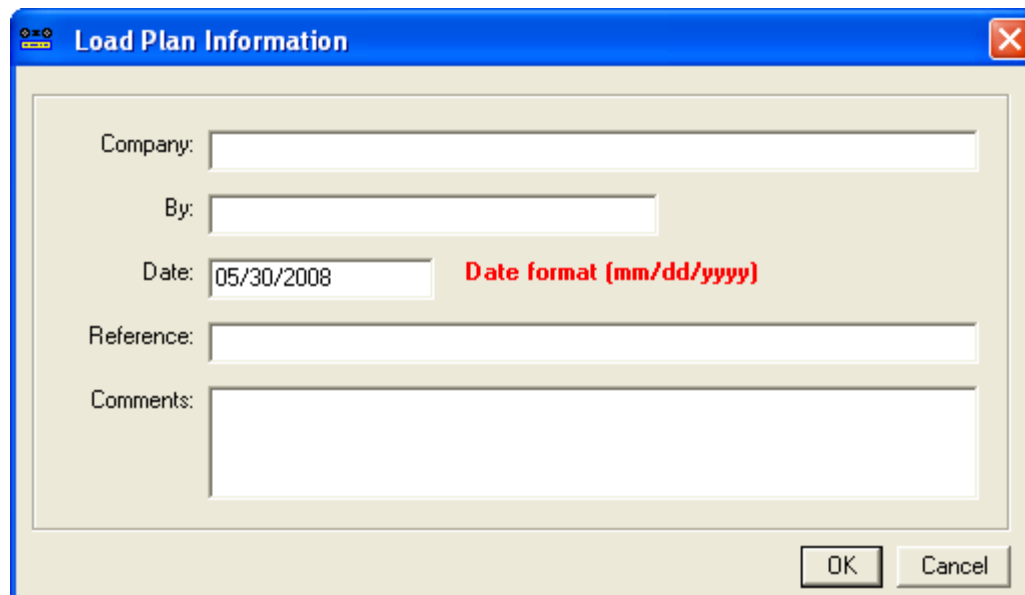
Sample

>> To add Company Name, By, Date, Ref. and Comments : Click & Enter

>> To add Shipping Reference to vehicle(s) Click & Enter

Save Cancel

Click “**Click & Enter**” to enter Company Name, By, Date, Reference, Comments for the Load Plan



Load Plan Information

Company:

By:

Date: 05/30/2008 **Date format (mm/dd/yyyy)**

Reference:

Comments:

OK Cancel

Click “**Click & Enter**” to save Load Plan by shipping reference (Allows to tag each vehicle to identify the difference e.g. Loading Zone, Loading Dock #, or Shipper Name, etc.)

Shipping Reference

Note: Shipping Reference can be viewed as Loading Zone, Loading Dock #, or Shipper Name, etc.

Enter Shipping Reference

Vehicle #	Vehicle ID (Name)	Shipping Reference
1	Sample STD 9-6	Destination A
2	Sample STD 9-4	Destination B
*		

OK Cancel

NOTE: This is an optional information. Enter only if needed.

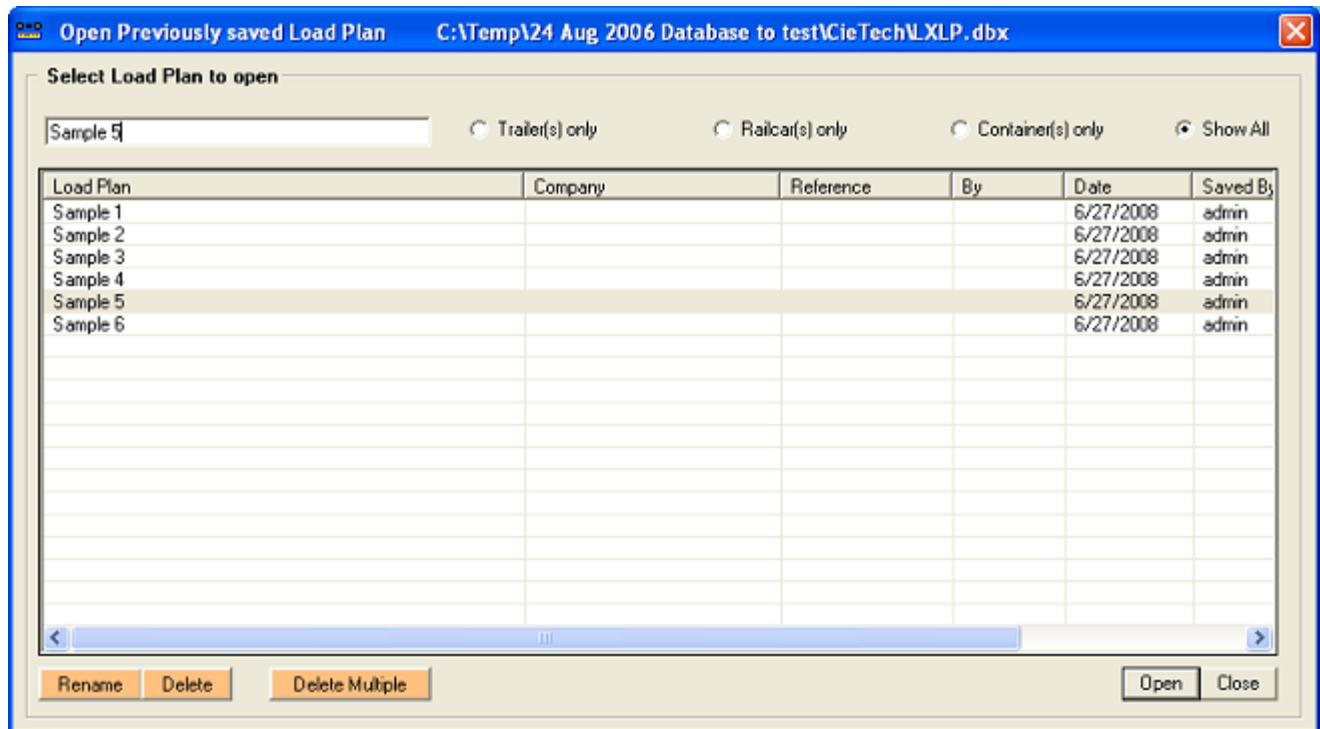
Click Save to finish saving Load Plan.

8.5 Opening a Load Plan

Click “**Open Load Plan**” and “**Select All Load Plans**”

Click “**Open Load Plan**” and “**Load Plans with Shipping Reference only**” if you saved the Load Plan with Shipping Reference

Select Load Plan you want to Open by scrolling through the List, and click Open or Double click on the selected Load Plan



You can also narrow your search by either typing the Load Plan Name or selecting the vehicle type.

NOTE: You also have the option to **Rename**, **Delete** or **Delete Multiple** Load Plan(s).

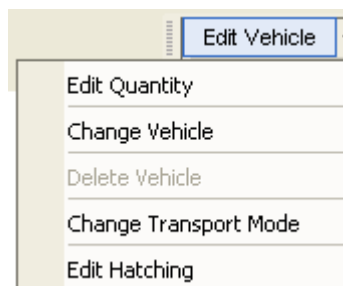
8.6 Editing a Load Plan

You have two ways to edit a Load Plan

Click **“Back to Edit”** to modify a Load Plan by selecting a different vehicle, Jurisdiction, Loads, Securement Options, Mode of operation or Unit System.

Or

You can use the **“Edit Vehicle”** menu



8.6.1 Edit Quantity

Edit Quantity is a useful tool in case some **Loads** are damaged during loading or the **“Density”** of a Roll happens to be different than what was provided by the production team.

NOTE: It allows re-optimizing just a selected vehicle rather than re-optimizing all the vehicles

Edit Quantity Vehicle # 1

Add New Load(s) Import Load List

	Roll Name/SKU	Diameter (in)	Roll Width (in)	Roll Weight (lb)	Roll Qty	Rolls per Pack	# of Packs	Add Packs (Qty)	Remove Qty Damaged Leftover	Qty Not Loaded Damaged Leftover
1	Diam 50" x Width 50"	50	50	2040	48	1	48	0	2	0
1	Diam 50" x Width 25"	50	25	1020	20	1	20	0	1	0

Note: Vehicle and Options from the database will be used for Optimization

Re-Optimize Close

8.6.2 Change Vehicle

“Change Vehicle” allows selecting a different vehicle and transfers all loads from the selected vehicle to this new vehicle and re-optimize with a new solution for the new vehicle

Change Vehicle

Current Vehicle

Sample STD 9-6

Total Cargo to Carry (lb) 118320

Select Vehicle

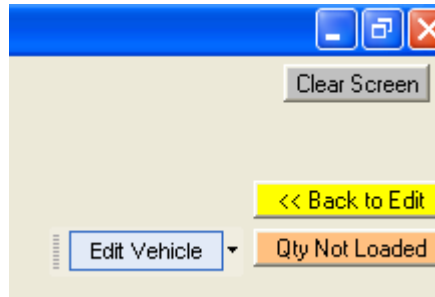
Vehicle ID (Name)	Cargo Allowed (lb)
CNA STD50x96	197100
Sample High Cube 50lt	189000
Sample High Cube 50lt 12	189000
Sample High Cube 50lt Ken	189000
Sample High Cube 52lt	189000
Sample High Cube 62lt	183600
Sample STD 9-2	201000
Sample STD 9-4	201000
Sample STD 9-6	201000

Note: Vehicle and Options from the database will be used for Optimization

Re-Optimize Close

8.6.3 Delete Vehicle

Delete a selected vehicle from a Load Plan and moves all the Loads in to the “**Quantity Not Loaded**”. This option is available only if you have more than one vehicle for a selected Load Plan.



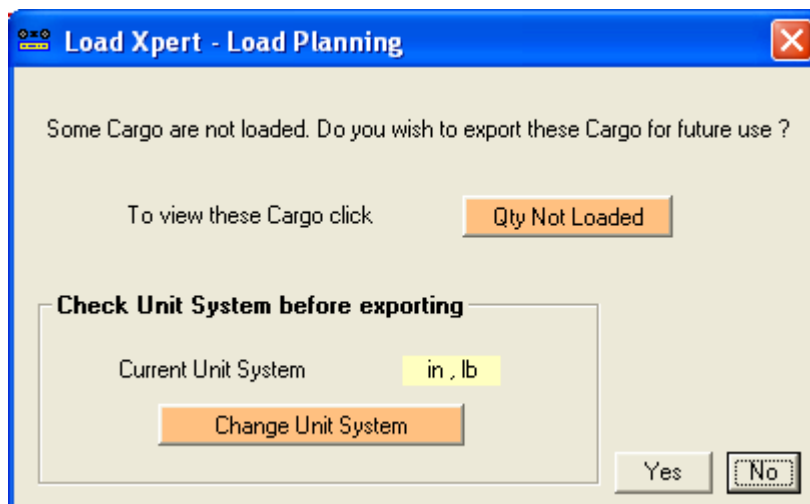
Qty Not Loaded shows you the list of the Loads that are part of the Load Plan but are not loaded on any vehicle for the reason that these Loads are **Damaged** or **Leftover** or there was not enough vehicle to carry the entire cargo.

You have 2 Options to use these Loads

Option # 1: Export the Leftover or Damaged Quantity by clicking the “**Qty Not Loaded**” button. In order to use them in another Load Plan using Import Load (Refer to the 4.4.1 Create new Loads (Paper Rolls) or 4.4.5 Create new Loads (Pallets / ..))

Option # 2: On saving the Load Plan if you have a “**Qty Not Loaded**” following screen will appear, click “**Qty Not Loaded**” button to repeat **Option # 1** or Click “**Yes**” to Export them for future use.

NOTE: If you click “**No**” all the Loads in “**Qty Not Loaded**” will be lost.



8.6.4 Change Transport Mode

Allows changing the transportation mode for a Load Plan.


Example, If you had a Load Plan done for a Railcar and for some reason this load cannot be sent by a Railcar you can change the Mode of Transportation and re-optimize.

8.6.5 Edit Hatching

You can change the “Hatching” on any of the Loads by clicking the **Edit Hatching**.

Change “Hatching Type” for any load and click OK to update.

Edit Manual Hatching

	Hatching Type	Item #	SKU/Name
1	No Hatching	1	Name
2	No Hatching	2	Name
3	Cross Hatching	3	Name
4	Cross Hatching	4	Name
5	No Hatching	5	Name
	No Hatching	6	Name

No Hatching

Cross Hatching

Line Hatching

☐ No Hatching

☒ Cross Hatching

☐ Line Hatching

Clear Hatching

OK

Cancel

NOTE: “Edit Hatching” is only available for the Load Plan that is in the “Manual Mode”.

8.7 Manual Mode

The screenshot shows a software interface with a 'View' section containing a dropdown menu set to '3D + Side + Top'. Below this is a 'No of Loads' section with two input boxes, both containing the number '6', separated by the word 'of'. There are also four navigation buttons: '<<', '<', '>', and '>>'. Below these is a 'Print' section with three buttons: 'Print Preview', 'Print', and 'Reports'. At the bottom of the interface is a large yellow button labeled 'Manual Mode'.

You can modify a Load Plan by clicking the “**Manual Mode**” and following the steps below:

- 1 Clicking “**Manual Mode**” switches the software to the “**2D (Axle Loads)**” view.
- 2 Click and drag any **Load item** to a different position or **delete** it.
- 3 Click and drag the **axle** and/or **Fifth-wheel** position for a semitrailer combination.
- 4 Change Hatching for the selected load using “**Edit Hatching**”
- 5 Save Changes in the database.

NOTE: Any deleted loads will be lost permanently.

NOTE: “Manual Mode” is allowed only for a single vehicle, which is not part of a Load Plan done using “Shipping Reference”.

NOTE: “Manual Mode” button will not appear on re-opening a Load Plan saved as “Manual Mode” as the Load Plan is already in the “Manual Mode”.