

# 2013 NMRA Convention – Atlanta, GA.

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## Walthers 72' Center beam flatcar Weathering/Cabling/Loading

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### A LITTLE ABOUT THIS PROJECT:

Center beam cars are some of the most versatile cars on the railroad. I have seen them loaded with wrapped lumber, drywall, ties, pipe, and rolls of wire. When they are empty, they still look really neat with all the cables that are connected to the center beam.

If you don't have a lumber mill or a lumber yard on your layout, you still can have this car as a run through. If you have a team track, you now have a new industry that you can serve.

### REQUIRED ITEMS:

Walthers 72' Centerbeam flatcar

Pin vise

#80 drill bit (several)

Jaeger lumber load (optional)

Black thread, polyester

Super glue (Beauty Secrets Nail glue from Sally's Beauty Supply)\*

Super glue activator (All Seasons Bio-Set resin Activator from Sally's Beauty Supply)\*

Testors #1240 Brown paint (spray)

Testors #1260 Dull Coat (spray)

Testors #1185 Rust paint (brush on)

Model Master #2015 Flat Clear Finish (brush on)

Model master #1705 Insignia Red

Weathering chalks

Proto 2000 flat back 33" wheels (optional)

RustAll

Transparent tape

1/64" Chart tape (black) – Grafstick Tape & label Co. ( [www.grafsticktapeandlabel.com](http://www.grafsticktapeandlabel.com) )

\*NOTE: The nail glue is a purer form of super glue, and has better bonding characteristics than regular super glue. The applicator has a small tip that is great for this kind of modeling. After you have everything aligned the way that you want it, one spray of the activator makes this super glue set up instantly.

### **Tools:**

North West Short Lines Chopper (optional)  
Scrap plastic sheeting  
Contact cement (Walthers GOO)  
X-Acto knife with sharp #11 blade  
Kadee Coupler height gauge  
Exxact Socket tool  
Small postal scale  
Lead sheet for weight  
NMRA Gauge

### **A BRIEF HISTORY OF THE CENTER BEAM LUMBER CAR:**

For years lumber and lumber products were shipped on flatcars, exposed to the elements. As the distances the lumber products were shipped increased, the amount of exposure increased. Customers that wanted their lumber “clean and dry” had to ship the product in a boxcar. Boxcars are really not suited to shipping lumber in lengths longer than eight feet, and they were hard to load and unload.

The next advancement was the Thrall door (all door sides) boxcars. Lumber longer than eight feet could be easily loaded and unloaded. The Thrall door cars could also be loaded with dimensional lumber, i.e. 2X4s, 2X6s, 4X4s, etc.; and sheet products such as plywood, but there were several problems with these cars. The doors were hard to open and close so most receivers used forklifts to move the doors, causing damage to them. Plus, the doors were a “plug” design, which added weight to the car. A good loading crew could get more weight in a 50 foot boxcar than in the 50 foot Thrall door car.

The first “center partition” car, TTZX 68500, was put into service in the early 1980s. The cars were 60 feet long and could be loaded easily with any length lumber. There was still a problem with the early center partition cars; the tare weight (empty weight) of the car was high. Again, a good crew could get more lumber products, by weight, in a boxcar the same length.

In 1986, Cascade Warehouse Co. purchased the first 72' 6" “center partition” cars. This was the first center partition car that could be loaded with more product than an equivalent sized boxcar. Today, the modern center partition car carries almost 200,000 pounds of lumber. The car that Cascade Warehouse Co. purchased is the prototype that the Walthers car is based on.

With the invention of the large sheet plastic wraps to protect both dimensional and sheet lumber products, the stage was set for the center partition cars to be the preferred car for lumber shipments.

## **GETTING STARTED:**

Remove the trucks from the car. Remove the wheel sets from the trucks and paint the trucks with the Testors #1240 brown paint and set aside to dry. Paint the outside wheel web with the Testors #1185 Rust paint. Be careful not to get the paint on the wheel tread or the axle point. Keep the paint off of the lip of the wheel; this will leave a shiny rim that makes the wheel look like it has been through the retarders in the hump yard many times. After the brown paint on the truck has dried, spray the truck with Dull Coat and set aside to dry. Use the Exxact Socket tool to ensure that the truck has the correct shaped “point” for the axle of the wheel sets. This also gets any paint overspray out of the area where the axle rides. I have found that by using this tool I have improved the rolling qualities of my rolling stock. Check the wheel sets with the NMRA gauge to make sure the wheels match the gauge. When the trucks are dry, install the wheel sets.

## **MODIFICATIONS TO THE CAR:**

Here comes the fun part, drilling the holes. At this point, you have to decide if the car is going to be loaded or not. If the car is going to be loaded, drill holes in the dimples on the top cross beam on the car as shown in figure 1.



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Figure 1

If the car is going to be empty, drill holes in the dimples in the center beam as shown in figure 2. Regardless if the car is empty or loaded, drill holes in the side sill at the cable reels as shown in figure 3 on the next page. Remove any plastic shavings from around the holes at this time.

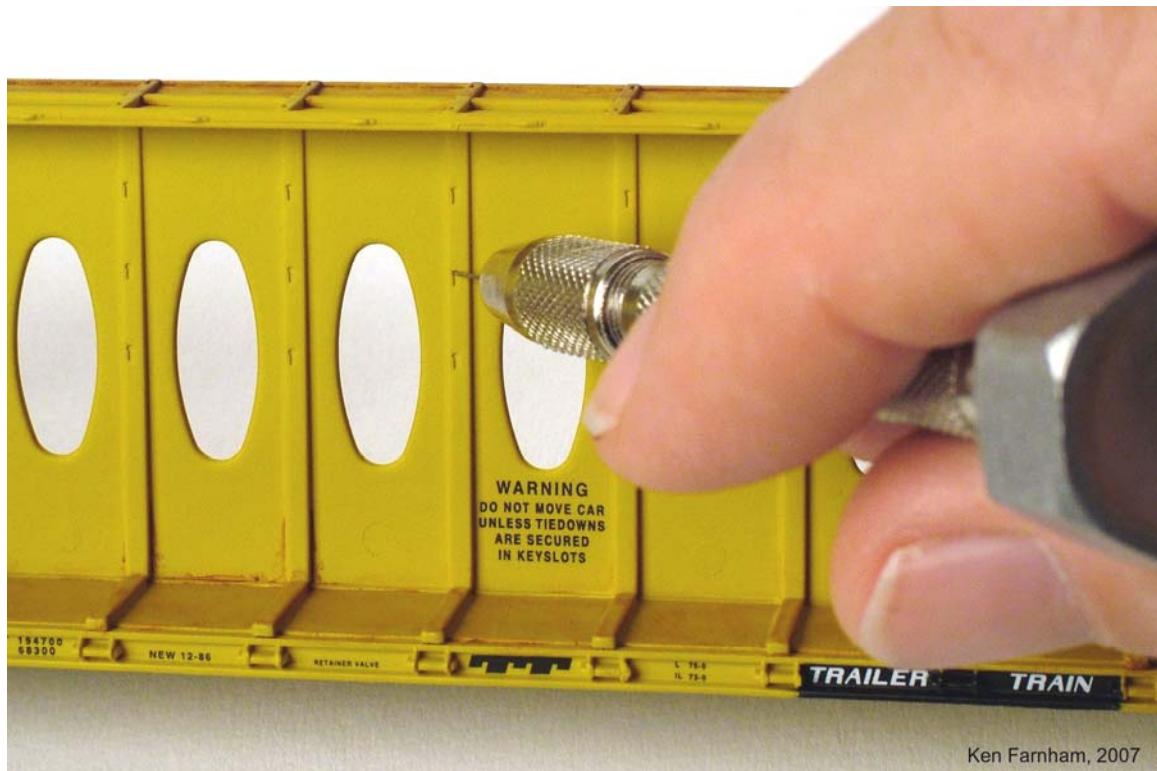


Figure 2

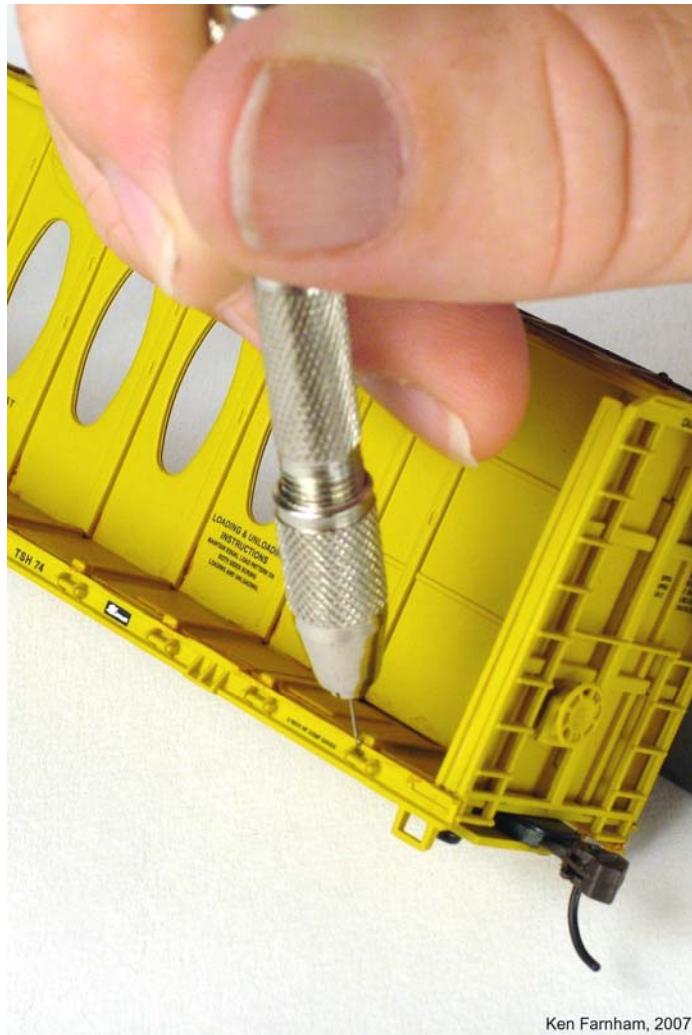
Note: Drill the holes straight through the center beam. Drill in picture at angle is to show where to drill the holes.

### **WEATHERING THE CAR:**

Give the car a coat of RustAll. Make sure that you leave an area, about 3/8 inches, down from the top of the center beam "unrusted." Set the car upright and let it dry (about 10 minutes). The RustAll will tone down the bright paint on cars like the Trailer Train car; however, it will not really show up at first on a dark car. Dark cars will require several coats of RustAll. If the car is going to be empty, put more RustAll on the deck. This time put on a "heavy" coat (put it on heavy and DON'T mess with it). Keep the car upright while doing this. Set the car aside to dry. After the RustAll has dried, use Dull Coat to seal the RustAll and prepare the car for weathering with the chalks.

After the Dull Coat has dried it is time to weather the car with chalks. On the lighter colored cars, use browns and black chalks to really bring out the rusty look. Work around the area on the deck, using the pattern that the RustAll created as a guide. You want to darken the area inside where the RustAll was the heaviest. Use several different brown colors to get the look of rusted metal. Once you like the look that you have

achieved, spray the car with several coats of Dull Coat to seal in the chalks. Let the car dry over night.



Ken Farnham, 2007

Figure 3

### **ASSEMBLING THE LOAD:**

While the car is drying is a good time to start on the load. When you look at all the little blocks of wood and all the wrappers that have to be cut out and attached to the blocks, you may think that this will be a pain in the rear. Well, it really is not. You can get this task done in several hours. Cut out the wrappers along the heavy line printed on the wrapper. Do all of the cutting first. There are several extra wrappers just in case you make a mistake doing the cutting.

To wrap the load, fold the long sides first, and then fold the ends down. Each fold must be as tight as possible, and try to get a good crisp, sharp fold for each long side of the block. When you have the wrapper folded around the block, put a small piece of transparent tape on the bottom of the block to hold the wrapper. See figure 4.



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Figure 4

After all of the blocks are wrapped, it is time to band them. Use the 1/64" chart tape for the banding. The banding goes on both ends of the wrapped blocks, about 1/4 inch from the ends. Start on the bottom of the block; wrap the banding around the block, trying to keep the banding parallel to the end of the block. Cut the banding so that it does not overlap. If the banding overlaps, it will keep the wooden supports from sitting squarely under the blocks. See figure 4. After then banding is attached to the block, using a very small brush to paint on the red "crimp clamp" as shown in figure 5.

The directions that come with the load tell you to band the first row of wrapped lumber to the second row, then band the third row to the first two and so on. This is not prototypical for this car. Each bundle of wrapped lumber is banded to keep it together, but it is not banded to any other bundle of lumber. This makes unloading the car faster and easier.

Set up the chopper to cut the supplied wood into supports just under 1/2 inch long. (I set up my Chopper using one of the unwrapped blocks.) Set 12 of the wrapped lumber blocks aside, these go on the bottom row of the load, and do not get the wooden supports. Glue two wooden supports to the bottom of the wrapped lumber, below the banding. Set the loads aside to dry over night.

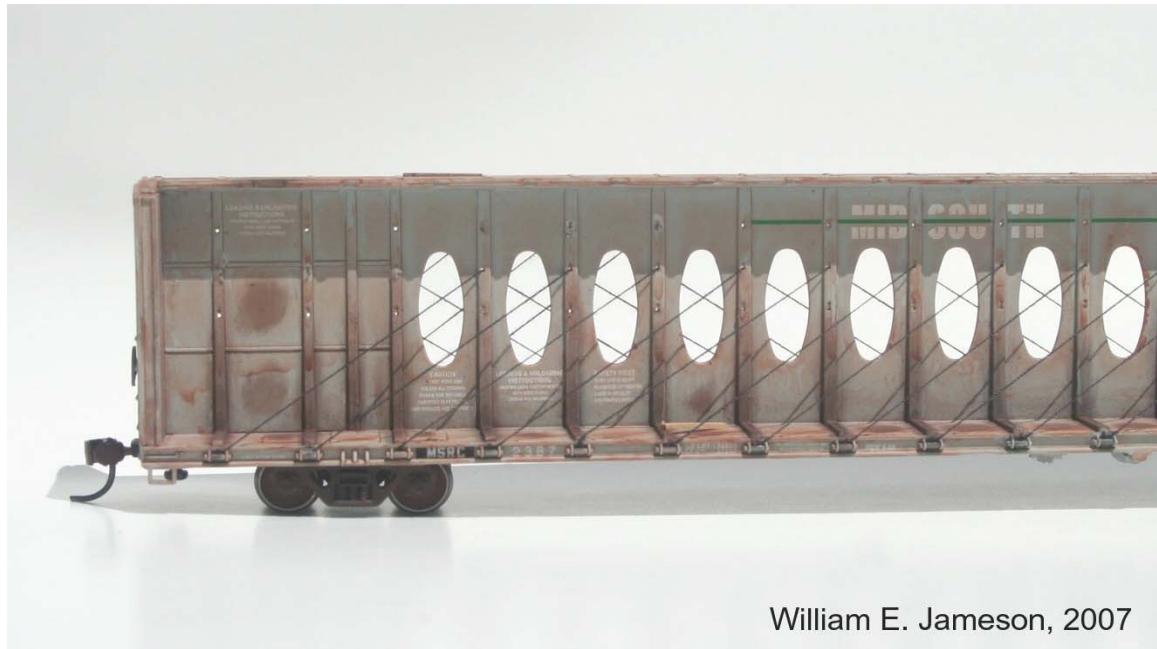
#### PREPARING THE CABLING:

Cut several pieces of thread about six inches long. Put a short line of Super Glue on a piece of scrap plastic sheeting. Pull the end of the thread (about  $\frac{1}{4}$  inch) through the super glue. Spray the end of the thread that you pulled through super glue with the super glue activator. This will “set” the super glue instantly. Cut off the tip of the glued area to give a good “clean” end. This will help with threading the “cabling” through the holes in the car.

#### **INSTALLING THE CABLING ON AN EMPTY CAR:**

With the car upside down, starting on the end of the car to your left; thread the cable through the hole in the side sill from the inside of the sill until only about  $\frac{1}{8}$  inch of cable is left under the car. Put a small drop of super glue on the cable and the car. Spray with super glue activator. Thread the cable through the second hole from the top in the fourth upright of the centerbeam from the left end of the car as shown in figure 5 below. Turn the car around, so the cable through the centerbeam is on the right side. Thread the cable through the hole in the side sill that is four cable reels to the left of the upright that the thread came through. Turn the car upside down and pull the cable tight. While holding pressure on the cable put a drop of super glue on the cable and car, then spray with super glue activator. Cut the cable from under the car at the point where the cable comes out from the super glue joint. Repeat this procedure until you have three holes left on the right end of the car.

The same procedure is used for the last three holes on the right end of the car, with the following exceptions. Start on the hole closest to the right end of the car. Thread the cable from the inside of the sill and attach it as before. This time, go to the fourth upright to the left and thread the cable through the top hole in the upright. Turn the car around. While pulling the cable tight put a drop of super glue on the cable where it comes through



William E. Jameson, 2007

Figure 6

the car, then spray on the super glue activator. Trim the cable flush with the centerbeam. Repeat this step until all remaining cables are attached to both sides of the car. Using the Model Master flat finish and small brush, paint any areas on the car where the super glue is shiny. These areas are on the centerbeam and the cable reels.

Install the trucks and check the coupler height with the Kadee coupler height gauge. The empty car weighs about 4 ounces. It needs to have 2 1/4 ounces of weight added to bring it up to the NMRA recommended weight for a car this long (one ounce plus 1/2 ounce per inch of car). I use sheet lead from a plumbing supply store and cut it to fit between the framing on the bottom of the car. I secure the lead sheet pieces to the car with Walther's GOO. (NOTE: I was only able to get the weight of the car up to 5 ounces; there is just no place under the car to hide it, so the car will be a little light by the weight standards.) The car is now ready to be placed in service on your railroad.

#### **INSTALLING THE CABLING ON A LOADED CAR:**

Cut several pieces of thread about six inches long. Put a short line of super Glue on the piece of scrap plastic sheeting. Pull the end of the thread (about 1/4 inch) through the super glue. Spray the end of the thread that you pulled through super glue with the super glue activator. This will "set" the super glue instantly. Cut off the tip of the glued area to give a good "clean" end. This will help with threading the "cabling" through the holes in the car.



Figure 7

Thread the cable up from under the cross beam on the top of the car as shown in figure 6 until only about 1/8 inch of cable is left under the cross beam. Put a small drop of super glue on the cable and the car, spray with activator. After the glue has set, cut the cables flush with the bottom of the cross beam. Install all cables on one side of the car.

Lay the car on its side, starting at one end of the car stack the bundles of lumber four high. Remember that the bundles without the wooden supports go on the bottom row. Thread all the cables over the load and through the cable reels. Turn the car upside down. Starting on the left side, pull the cables tight (make sure they are straight over the load). While holding pressure on the cable put a small drop of super glue on the cable and car, spray on the super glue activator. Trim the cable at the point that the cable comes out of the super glue on the bottom side of the car. Repeat this step until all cables on the side are attached as in figure 7. Repeat this process on the other side of the car. Using the Model Master flat finish and small brush, paint any areas on the car where the super glue is shiny. These areas are on the cross beam and the cable reels.



Figure 8

Install the trucks and check the coupler height with the Kadee coupler height gauge. The loaded car weights almost seven ounces, about 3/4 of an ounce over the NMRA recommended weight for a car this long (one ounce plus 1/2 ounce per inch of car). The car is now ready to be placed in service on your railroad.

If you have any questions about building the model of the center beam car, feel free to e-mail us at [b-n-ferrco@cfl.rr.com](mailto:b-n-ferrco@cfl.rr.com) or visit our web site at [www.b-n-ferrco.com](http://www.b-n-ferrco.com)