

Before Starting

PREPARING BRASS The easiest way to remove the brass parts from the sheet they are produced on, is to use rail nippers. The brass is soft and won't affect their future cutting ability. This will reduce or eliminate the amount of filing to smooth the edge. The next best way is with small sharp diagonal cutters that will fit into the small areas between the part and the sheet holding them. *You should always use a file to remove the balance of the tie. This will ensure a perfect fit.*

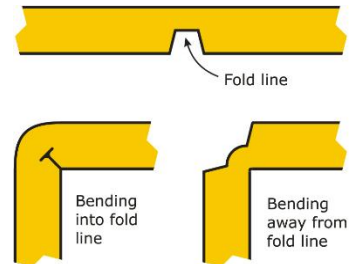
GLUING BRASS Instant super glues, Cyanoacrylate, CA for short, are very prominent in model building today. They will work perfectly with brass, and they are instant. We recommend a thick CA glue such as "Zap-A-Gap" from Pacer Technology. As I have also been building R/C airplanes for over 33 years, I have many airplanes built entirely with CA glue and I can tell you that the wood will break before the glue joint. So it is great stuff! Besides being almost instant, thick CA glues will help create a small fillet and fill small gaps when applied to the inside of joints. Using a toothpick to apply the CA glue works really well for getting the glue into the interior areas and controlling the amount of glue used.

PAINTING BRASS Wash your completed assembly in warm soapy water. If it is really messed up with flux etc. you can clean it with a lacquer thinner first. *Do NOT bake the model if you used CA glue for construction.* This will set the paint to the brass as well as allowing you to paint over parts of it without the first coat dissolving as you spread on the second coat. One nice thing about painting on brass, if you don't like the paint job you can use paint remover to get rid of it and start again without hurting the brass.

BENDING BRASS

To control where a fold will be, we have put a Fold or Bend line into the design. This line is a small slot that has been etched half-way through the brass sheet at the point of the bend. Normally, you fold into a bend line when the bend is less than 135 degrees. Notice how bend into the line creates a nice corner and the metal pinches together at the bend line.

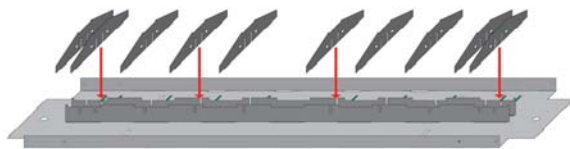
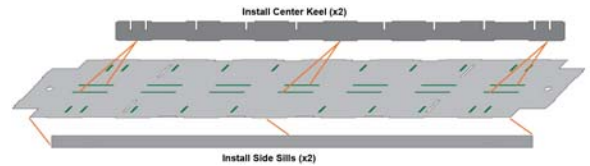
For bends of 135 to 180 degrees, you must bend against the bend line otherwise the two pieces of metal can not lay flat at the bend due to pinching each other. Other times, you bend outward for better positioning of the piece or better display. The ladder on this Caboose build is bent outward to expose and "pop out" the rungs.



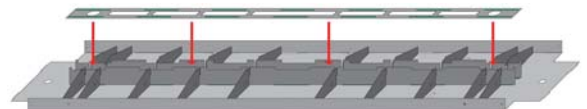
Step #1 – Building the Car Frame

Place the Floor on the building surface with the half etched slots facing upward. Install the two Keel Sides ensuring the tabs in the Keels are fully engaged into the half etched slots of the Floor. The Keels Sides should be perpendicular to the Floor.

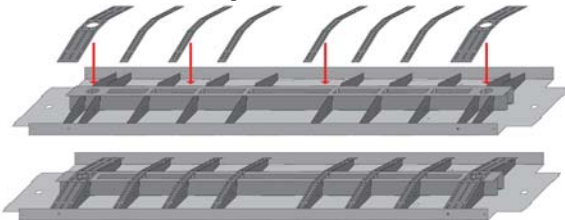
The Side Sills have a half etched slot that must be engaged into the tabs of the Floor. Add the Side Sills to the Floor.



Add the Ribs to the Frame ensuring the slots on the Ribs are fully engaged into the slots of the Keel Sides. The Ribs also have tabs that engage slots in the Floor. Secure all Ribs to the Frame assembly. Add .010" wire for piping through the holes in the Ribs.



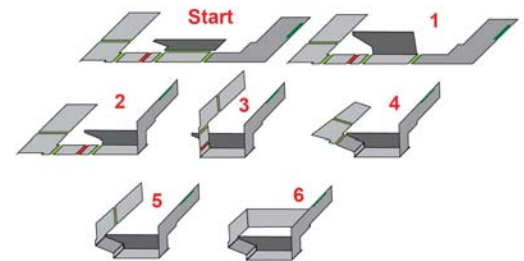
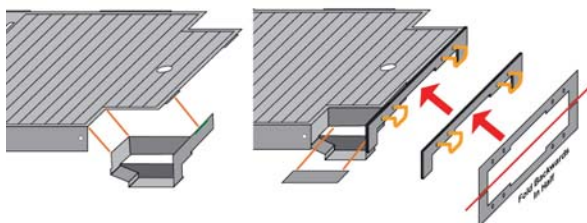
The long Cap is secured to the center of the Keel. The Keel Sides have tabs and the Capstrip has corresponding slots to properly align the Keel Sides and Capstrips. Secure the long Cap in the center and the two short Caps at the ends of the Keel.



Add the Rib Capstrips and note that there are two styles. The thinner Caps have two half-etched bend lines to accommodate the taper of the Rib. The wider Rib Capstrip is also the Bolster for the Truck. Secure all Rib Caps as shown. Test fit your choice of Truck at this time. The Transfer Caboose was designed for Mirco-Trains Z-Scale #905 body mounted couplers. The kit comes .010" plates to adjust the height of the Coupler to match the choice of Trucks.

careful to get them right. Place the Step assembly on the building surface with the five bend lines facing upward. If only one bend line is showing, turn the assembly over.

1) Bend the Step Back located in the center of the piece. Bend the Step Back 90 degrees *into* the top bend line. **2)** Bend the End Plate *into* the top bend line 90 degrees to the Step Bottom. Ensure that the End Plate is perpendicular to the Step Bottom, Step Back and the front of the Step. Secure the End Plate to the Step Back. If gluing the Step, wait until the glue is completely cured before proceeding. **3)** Bend the Interior Side *into* the top bend line 90 degrees to the Step Bottom. The fourth bend is the trickiest. **4)** Bend the Interior Side *into* the bottom bend line to match the angle of the Step Back. Secure the Interior Side to the Step Back. If gluing the Step, wait until the glue is completely cured before proceeding. **5)** Bend the remaining part of the Interior Side upwards *into* the top bend line until the Interior Side is parallel with the End Plate and perpendicular to the Step Back from bend #1. **6)** Finally, bend the Interior Side into the bend line 90 degrees to create the back of the Top Step. This is secured to the End Plate directly below the half etched notch in the End Plate. Ensure the Top Step Back is perpendicular to the End Plate, parallel to the Step Back and slightly below the half etched notch in the End Plate before securing to the End Plate.



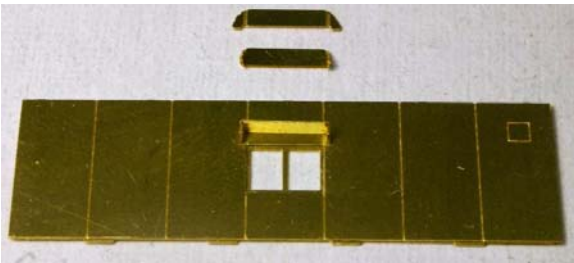
Test fit the completed Step onto the Car Frame as shown. The half etched notch of the End Plate fits onto the tab on the end of the Frame. The remainder of the step fits under the Frame Decking in the opening for the Step. When securing the Step to the Frame, ensure the End Plate is parallel to the end of the Frame when looking from above and level with the end of the Frame when viewing from the end. Add the Top Step to the Step assembly.

Remove the End Sill from the kit sprue and remove all tie remnants. Bend the End Sill *away* from the bend line 180 degrees to create a double thick End Sill. Bend a stainless Grab Iron (x2) 90 degrees as shown and secure it to the End Sill. Remember that stainless steel can not be soldered so CA glue is required for this step. Using a jewelers file, file off all extra pieces of the Grab Iron and excess glue from the back of the End Sill. Secure the End Sill to the End Plates of the Steps.

If building the NYC Lot 103 / PC-CR N-9A variant, secure the etched stainless steel Grated Deck to the Frame Assembly.

Step #2 – Building the Cabin and Railings

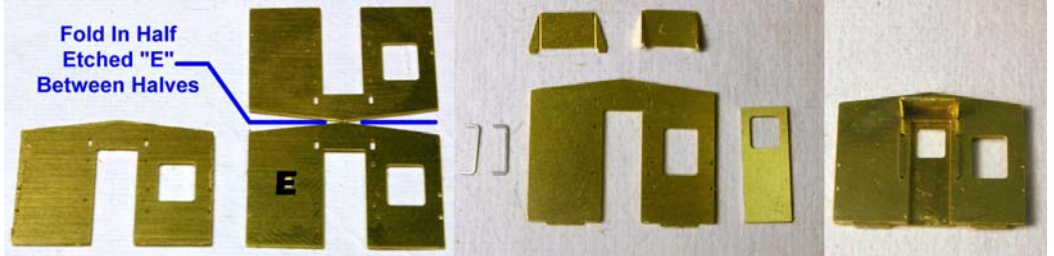
Start with removing all of the components shown in the next images and remove all tie remnants. It is particularly important on the Cabin Sides and Cabin Ends that will be folded. The width of the interior of the Cabin Sides are .020” smaller than the Exterior. This is to allow the Cabin Ends to fit into the channel that is created.



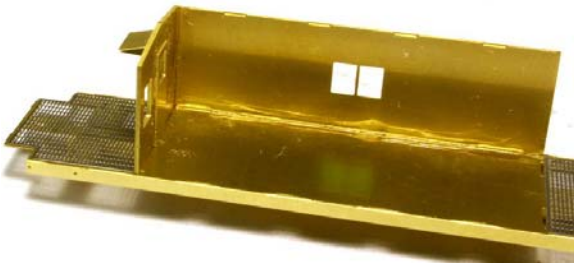
Fold the Cabin Sides in half away from the half etched bend tabs as shown. Secure the two halves together ensure no glue or solder is in the channel for the Cabin Ends.

Bend the short Side Eve as shown and secure it to the Cabin Side.

The two halves of the Cabin End are slightly different. The half with the tabs at the bottom and a “E” etched into it is the interior half of the Cabin End. Fold the Cabin Ends in half such that the etched “E” is sandwiched between the two halves. Be sure ALL edges are aligned together and secure. Clean up any excess solder or glue on the edges.



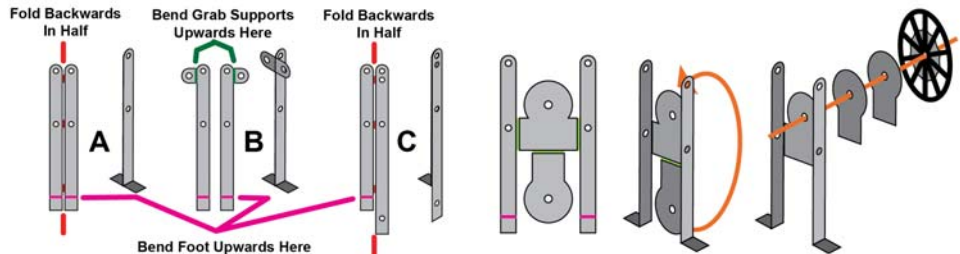
Install the shortest of the Log Grab Irons onto the exterior side (without tabs at the bottom) of the Cabin End. Remember that stainless steel can not be soldered so CA glue is required for this step. Using a jewelers file, file off all extra pieces of the Grab Iron and excess glue from the back of the Cabin End. Bend the sides of the long End Eve *into* the bend line 90 degrees and install the End Eve into the slots of the Cabin End. From the interior side (with tabs at the bottom), add the Door to the Cabin End. Do not put the Door too low that the tabs of the Cabin End will not go into the Frame Assembly. Secure the small triangle over the End Eve ensuring it is centered on the Cabin End and the slanted edges are aligned with the top of the Cabin End.



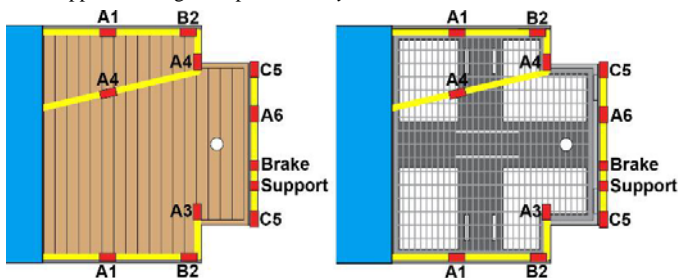
Begin assembly of the Cabin using one Cabin Side and one Cabin End. Both Sides and Ends have tabs that fit into slots of the Frame Assembly. The tabs must be fully engaged into the slots and the Cabin End fits into the recess of the Cabin Side. Secure the Cabin Side to the Frame from the interior. Secure the Cabin End to the Frame *only* at the location of the tabs. Secure the Cabin End to the Cabin Side *only* at the very top. Do not get any glue or solder near the holes for the End Railings.

Add the other Cabin Side and finally the other Cabin End. Again, make sure no solder nor glue get anywhere near the holes in the Cabin end for the Deck Railings. Before starting on the Railings, use a #80 (.0134”) or 1/64 (.156”) drill and make sure that all six holes for the Deck Railings are fully open and clear. At the same time, use the same drill to check the four holes on each Side Sill of the Frame.

The End Railings require three different Stanchions along with one Brake Wheel Support. Each end of the caboose will need six “A” Stanchions, two “B” Stanchions and two “C” Stanchions. For Stanchion “A” & “C”, begin by bending the Attachment Foot 90 degrees upwards *into* the etched bend line. With the Feet pointed upwards, bend the two halves 180 degrees backwards *away* from the bend line.



For Stanchion “B”, begin by bending the Attachment Foot 90 degrees upwards *into* the etched bend line. With the Feet pointed upwards, bend the two Grab Iron Supports 90 degrees upwards *away* from the bend line.

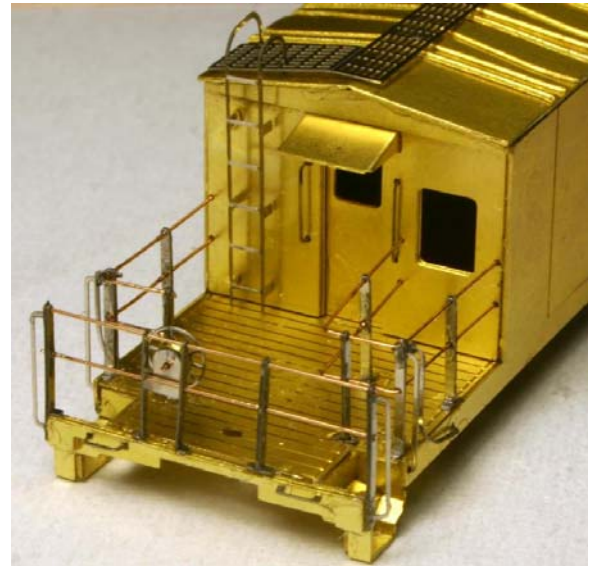


For the Brake Wheel Support, begin by bending the Attachment Foot 90 degrees upwards *into* the etched bend line. With the Feet pointed upwards, bend the two Stanchions backwards *into* the bend lines. Be careful about the bend directions, bend the Doubler for the Brake Housing 180 degrees *away* from the bend line. See image above. Finish the Brake Wheel Support by using a small length of wire to attach the Brake Wheel to the two brass spacers to the Brake Wheel Support as shown. Trim the wire as close as possible.

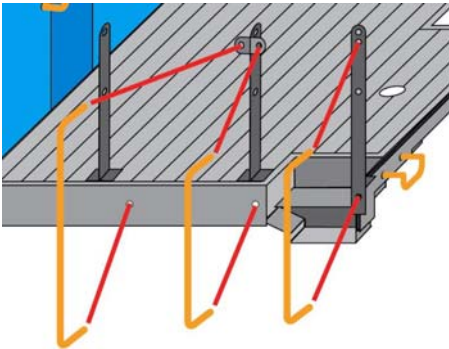
Start building the smaller L-shaped Deck Railings by attaching Stanchion A1 in the location shown. Cut two lengths of .008” PB wire to 1.25”. Bend the two wires at 3/4” to 90 degrees. This bend should be as sharp as possible. Thread the B2 Stanchion on to

the longer part of the “L” with the Grab Iron Supports to the outside of the car Frame. Thread the A3 Stanchion onto the shorter part of the “L”. Carefully thread the longer part of the two wires through the holes in Stanchion A1 and then into the holes in the Cabin End. Slide the B2 Stanchion all the way to the bend in the wire and attach it to the Frame next to the Steps in the location shown. Keeping the short length of the Railing perpendicular to the Side Sill, adjust Stanchion A3 into the position as shown and attach the Stanchion to the Frame. Trim the PB wire ends at A3 and secure the PB wire to the Cabin from the interior side.

Start building the longer V-shaped Deck Railings by attaching Stanchion A1 in the location shown. Cut two lengths of .008” PB wire to 2.25”. Bend the two wires at 3/4” to 90 degrees. This bend should be as sharp as possible. At 3/16 from the first bend, bend the two wires to 75 degrees so the Railing fits the path show in the image above. Thread the B2 Stanchion on to the 3/4” wire with the Grab Iron Supports to the outside of the car Frame. Thread the two A4 Stanchions onto the longer end of the bent wires placing one A4 Stanchion onto the 3/6” length of wire. The longer lengths of the bent wire are placed into the holes in the Cabin End next to the Door. Next thread the 3/4” length of wire through the holes in Stanchion A1 and then into the outer holes in the Cabin End. Slide the B2 Stanchion all the way to the first bend in the wire and attach it to the Frame next to the Steps in the location shown. Secure the A4 Stanchion at the 3/16” bend to the Frame and then adjust the last A4 Stanchion to be inline with the two A1 Stanchions.



Cut two lengths of .008” PB wire to 3/4i and thread the wire into the A6 Stanchion and the Brake Wheel Support. Secure the C5 Stanchions to the sides of the End Sill with the Attachment Foot on the top of the End Sill. Thread the 3/4i wire through the C5 holes and position the A6 Stanchion and Brake Wheel Support as shown. Secure all Stanchions, Supports and wires together.

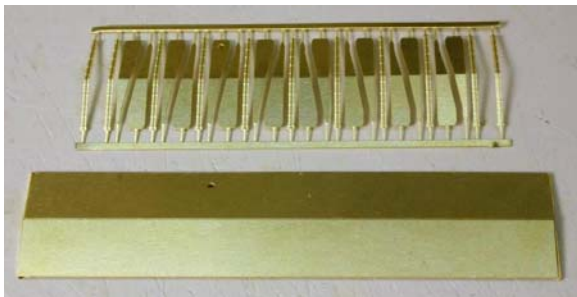


Install two medium length Grab Irons to each side of the Deck Railing (B2 Stanchion to hole in Side Sill near Steps) and the End Railing (C5 to C5).

Install the longest Grab Iron from B2 to the hole in the Side Sill farthest from the Steps. The longest Grab Iron must be curved concavely to fit into the Side Sill hole.

Step #3 – Final Assembly

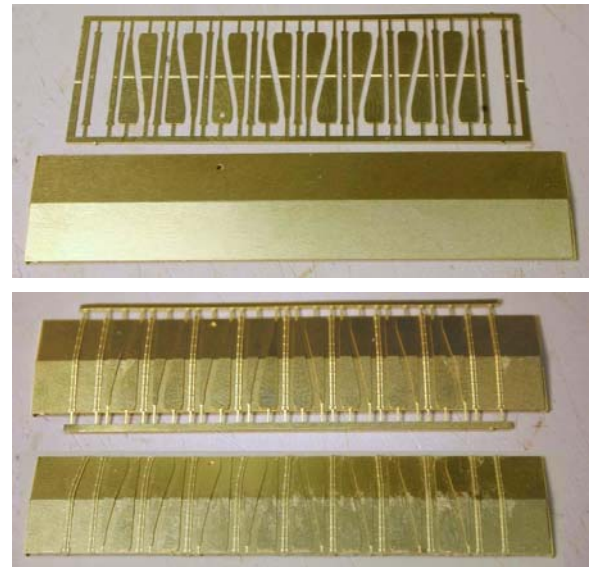
Remove the Roof from the sprue and clean off all tie remnants. Bend the Roof into the etched bend line using the Cabin Ends as a guide. The Roof Detail is a separate piece that is applied directly to the main Roof. All of the Detail pieces are held into place by a sprue all the way around them. The two variants of the Transfer Caboose have different details and these details even varied as to which railroad the caboose belonged to. In general, the wood deck variant had all of the Roof Detail that comes with the kit. The later grated deck variant had only the riveted roof panel seams and did not have the tear drop panels. Remove any details from the sprue that are not needed for the variant being built.



and a toothpick.

Bend the entire detail *into* the etched bend line to meet the Roof angle. Remove the ends of the sprue.

Carefully place the Roof Detail on the Roof aligning the smokestack hole and the Roof edges. Secure the detail to the Roof using thick CA glue

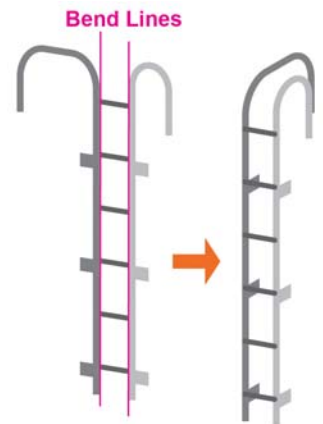


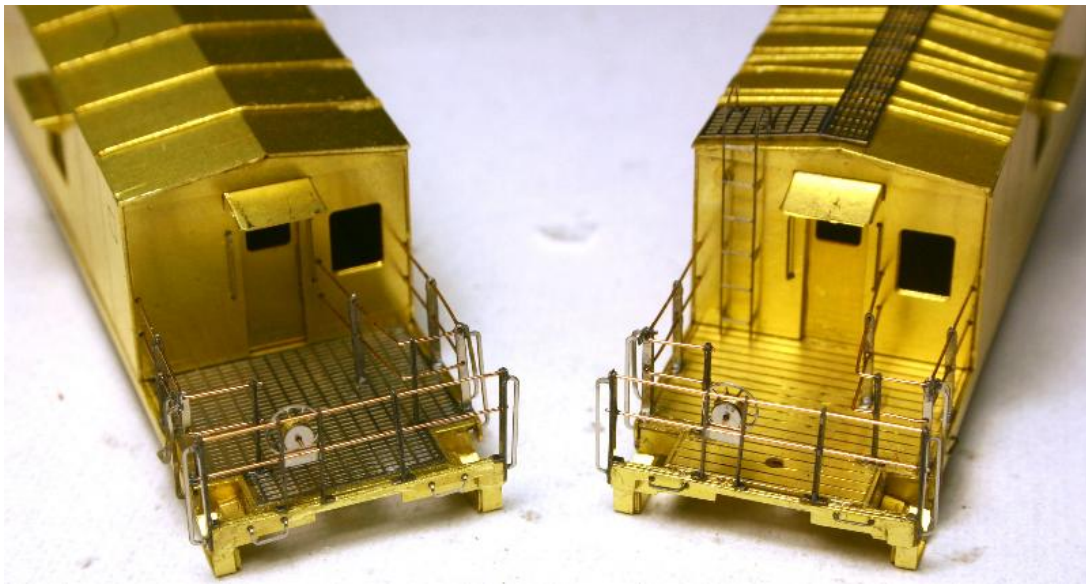
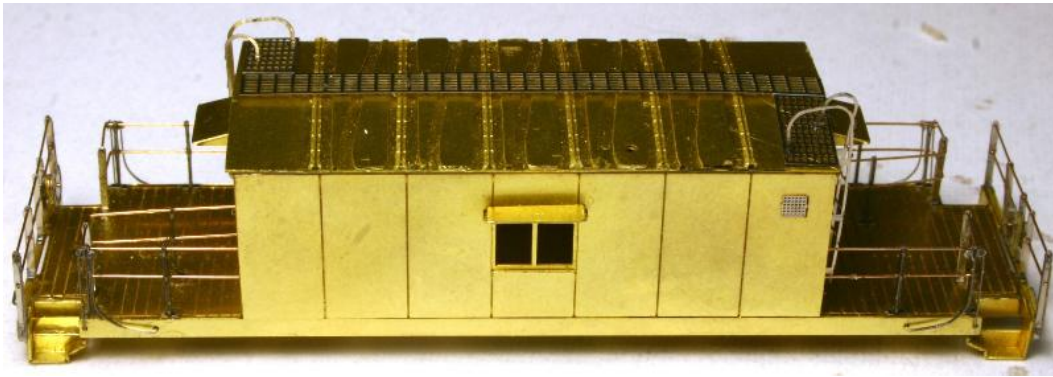
Trim the ties off the Details and clean up any imperfections. Secure the Roof to the Shell assembly centering the Roof in all directions.

For the Wood Deck Variant Only: Bend the Grated Roofwalk AWAY from the bend lines to the angle of the Roof keeping the center portion of the Walkway level. Center the Roofwalk in the center of the Roof in both the length and the width of the Roof. Secure only the center portion of the Roofwalk onto the Roof.

Bend the side rails of the Ladder AWAY from the etched bend lines to “pop out” the rungs. After bending, install the Ladders into the holes of the Ladder Platform and secure to the Cabin Ends.

Add the cast brass Brake Components to the underside of the Frame.





***TrainCat
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