Chlorine Flat Car

N-Scale & HO-Scale

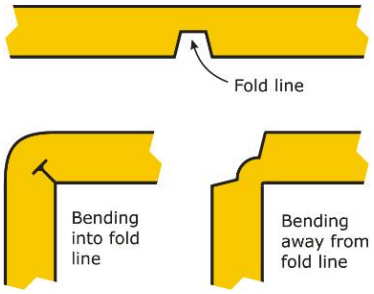
Before Starting

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.

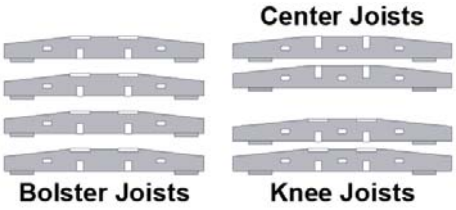
BENDING BRASS



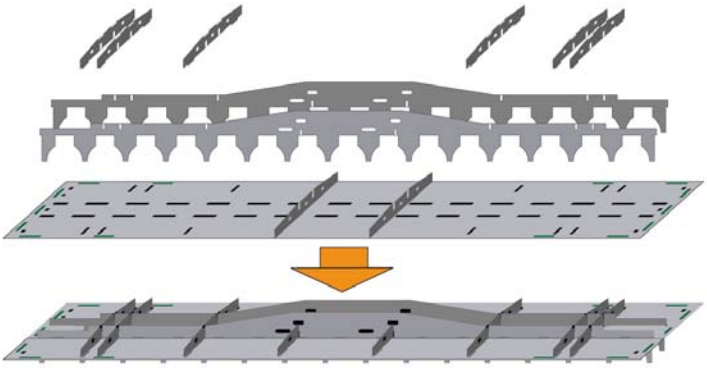
To control where a fold will be, we have put a Fold or Bend line into the design. This line is a small slot that has been etched half-way through the brass sheet at the point of the bend.Normally, you fold into a bend line when the bend is less than 135 degrees. Notice how bend into the line creates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

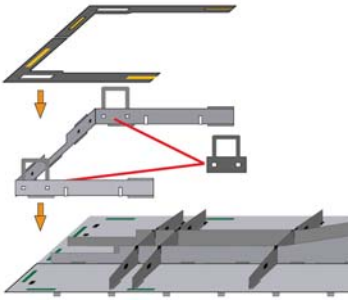


Begin by removing the Joists from the kit sprue and remove all remnants of the attachment ties. Notice that there are three different type of joists. Make you keep them separated. You will also need the Top and Bottom Floor Plates along with the Center Stringers. Each Stringer assembly has two Stringers sandwiched together for double thickness.



Place the Top Floor Plate (has etched details and holes for Tank Securing Bolts) on the work surface detail facing down. Place the Bottom Floor Plate on top of the Top Floor Plate.

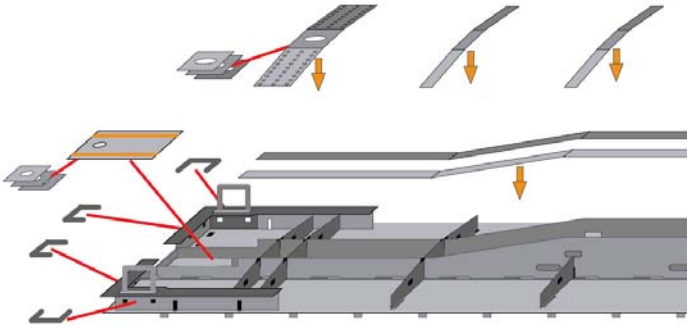
You must first secure the Center Joists to the Floor Plates. Next, add the four Center Stringers into the Floor Plates. Notice that there are slots for the in the Stringers for the Center Joists, and vice-versa. Be sure the Stringers are fully inserted into the Floor Plates before securing. Add the Bolster Joists to the assembly and secure. Finally, add the Knee Joists. Be sure all components are secure.



The End Frame has two bend lines on the inside of the Stirrups. Bend the End Frame into the bend lines and insert the tabs of the End Frame into the half-etched slots on the Bottom Floor Plate. Secure the Stirrup Doubler to the inside of the End Frame. Ensure the holes for the grabs are aligned.

Secure the End Frame Cap Strip onto the End Frame. Ensure that the tabs of the Frame are engaged into the half-etched slots on the Cap Strip.

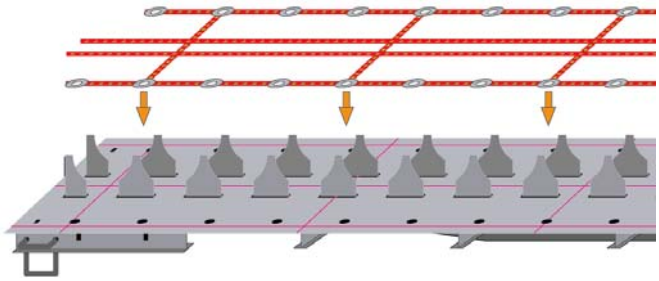
Build the other End Frame now.



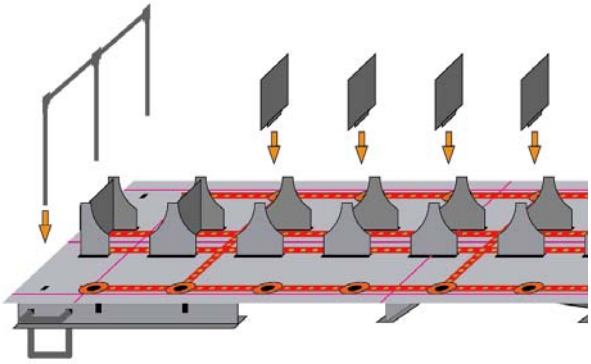
Secure the Stringer Cap Strips to the Stringers. Next, install the Bolster Cap Strip and the Knee Joist Cap Strip OVER the Stringer Cap Strips. Before Adding the Bolster Cap Strip, add the doublers to the underside of the Bolster Cap Strip. The Center Joist Cap Strip goes through the Stringer. Secure them now.

Add the doublers to the Coupler Plate and secure the Coupler Plate to the Stringers. Add the Grabs to the End Frame. This completes the Undercarriage.

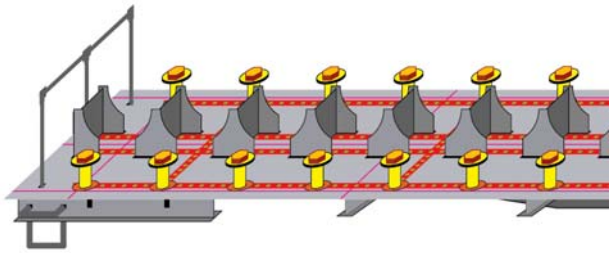
Step #2 – Detailing the Top



Install the Detail Overlay aligning the holes in the Top Floor Plate.

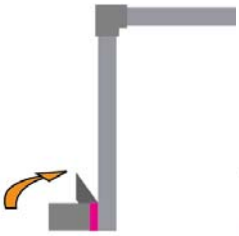


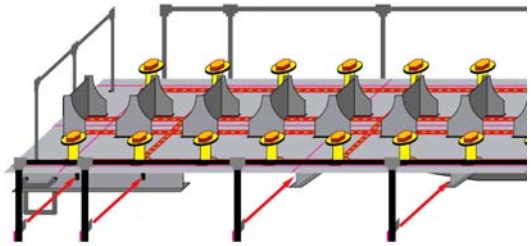
Add the Spacers between the Tank Cradles. Install the End Railing into the Top Floor Plate.



Cut the Nut-Bolt-Washer castings off the sprue leaving a 1/16th inch of shank on the casting. Insert the casting into the holes of the Detail Overlay.

The Side Railings have attachment tabs that must be bent on the bend line. This bend is different in that the bend line is on the outside of the bend.





Secure the Side Railing onto the assembly. The two end attachment tabs go into holes in the End Frame. The remaining attachment tabs are secured to the end of the Joists. Using the included wire, add the Brake Wheel to the car to complete the assembly.

Step #3 – Detailing The Undercarriage

Using the supplied castings, etched brass arms and .008 brass wire, install the Brake System using the diagram. The Reservoir, Brake Actuator and Selector Valve are castings. The actuator Arms are etched brass.

Secure the Z-Scale coupler to the Coupler Plate.

The Trucks are mounted to the bolster using a kingpin provided by the builder. The supplied Bolster hole will accommodate either a Atlas or Micro-Trains plastic Kingpin. The user may have to drill through the I-Beam Cap Strips for the Kingpin.