

Truss rods on flat cars.

This article will explain how to string truss rods on Labelle flat cars without coming up through the floor and still stay out of the way of the trucks. In an article entitled, "Perfect Car Kits" I showed how to tie truss rods in a closed car, either a box car or refrigerator car. With the interior of the car going unseen it is easy to tie these and take out the slack in the truss rod strings. On a flat car this is a different issue. There is no place to hide the string ends. The car shown below has a lot of scale miles of operations and tracks very well with a bit of added weight from a load.

You should glue the scribed deck panel on the sub floor board as there will be no way to clamp this to the sub floor later. Consult an article on this web site called "Perfect Car Sides Forever" to see a technique for edge gluing the scribed panels before securing to the sub floor. This will prevent a gap in the scribed board pattern.

From the plans provided place a truck of your choice on the plan and plot where the inboard wheel set will locate on the finished flat car. Mark this distance on the floor board supplied in the kit. This is where an additional beam will be set into the sub floor. This location is important as it will ensure that there will be adequate clearance for the trucks even in the tightest radius curves of your railroad.

Cut two tie beams from a scrap of 1/16 inch square wood or styrene stock. Lay the queen posts that come in the kit on these new beams and mark the location for where the truss rod strings will enter the beam. This will keep the truss rods straight to the car and match the NBW castings that will appear to exit on the ends of the car.

Drill four holes in the beam with a #78 drill and test with the mono filament string for clearance. Cut across the six inner longitudinal ribs that are milled into the floor assembly. Do not exit the outer side rail of the floor so as to hide the beam. Cut a notch to allow for the clearance to set the beam into the base of the milled grooves. Apply a small amount of glue and secure the two beams into the slots. Allow to dry.

To tension the truss rods the queen post castings need to be set on the floor assembly in their proper location and glued to the floor. When dry tie a figure eight knot in the mono filament and begin threading the string through a hole near one side of the car. Then lace it from end to end and across the car to the other side. Leave the line slack for the moment.

Set each string line off of the queen posts and only over the needle beams. Pull the string just tight enough to take out the slack over the needle beams. Then tie another figure eight knot in the loose end. While pulling the knot tight, coax the knot toward the beam with a pin or small drill held in a pin vise. Work it until the knot finishes against the beam and secure it with a small dot of super glue. When the glue is dry the tag end may be cut off.

To test the tension of the truss rod strings start pulling the strings up onto the needle beams with a small screwdriver. The line will become quite tight and often so tight that the wood floor starts to pull into an arch. Secure the car floor to your bench or a bar of stout metal with a small clamp for several days. The string will yield and the floor will remain straight. Proceed then with the balance of the construction of the flat car.

