Interior Restored, CSS&SB Car No. 9 Rejoins the East Troy Railroad

By Steve Thomas

Photos by Ryan Barry unless otherwise noted

East Troy Railroad Museum volunteers were proud when restored Chicago South Shore & South Bend car 9 rejoined the operating roster on July 4, 2015.

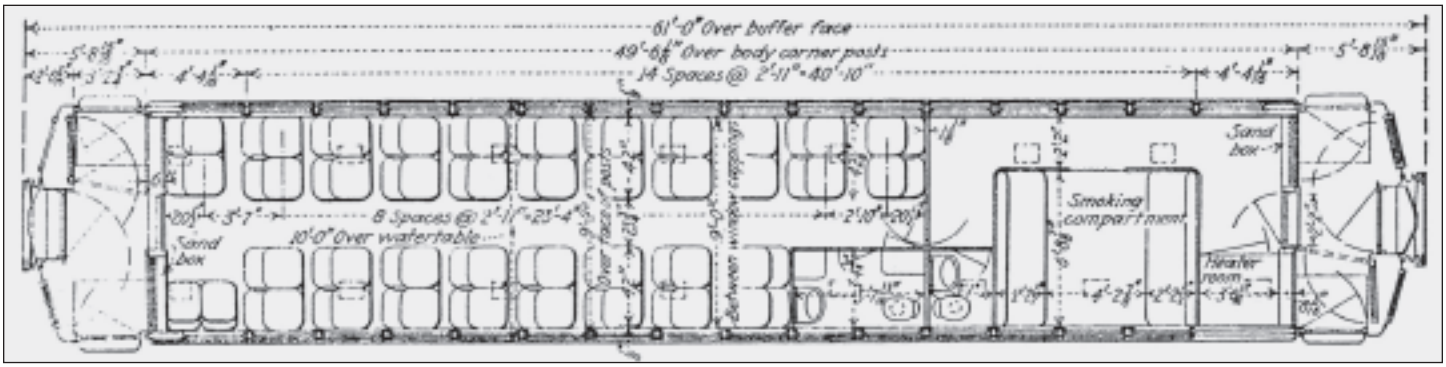
Nobody was prouder than Ryan Barry, who served as the project manager and did the lion's share of the restoration work. The interior of the car is beautiful. It has been redone to match what Barry believes the car looked like when it arrived at the South Shore from Pullman Car & Manufacturing in 1926.

Car 9 was one of the first 25 new cars ordered for the South Shore after utility tycoon Samuel Insull acquired the former Chicago, Lake Shore & South Bend railway in 1925. Cars 1 through 15 were double-ended coaches constructed entirely of steel. They were 61 feet long from buffer to buffer and weighed about 67 tons — some of the heaviest cars of their length ever built. Each car was equipped with four 210 h.p. Westinghouse No. 567-C motors and had Baldwin type 84-60 AA high speed, heavy-duty trucks. The cars also had Westinghouse electro-pneumatic multiple unit control and had both a pantograph and a trolley pole.

Most of the cars had a separate smoking compartment and two bathroom compartments. The interiors were described as being finished in rich brown mahogany woodwork, with light cream ceilings and linoleum flooring. Interior trimmings were of statuary bronze, and electric fans and large dome lights were installed. Fifteen of the original 25 cars were cut in half and lengthened to 80 feet between 1942 and 1950. But cars 1 through 10 remained at 61 feet long. Car 9 *does not* have a smoking compartment.

▲ Chicago South Shore & South Bend car 9 leads the East Troy Railroad Museum's Christmas Train on December 6, 2015 with a 3-car CCS&SB consist. —*Nikki Burgess photo*

The East Troy museum has 10 South Shore cars on its roster, with five currently operational and a sixth (car 33) being prepared for operation during the 2016 season. Cars 24 and 25 were converted to dining cars for the railroad's popular dinner trains. Cars 13 and 30 have been workhorses during the regular season and teamed with car 9 for the railroad's 2015 Christmas Trains.



▲ Diagram of standard design for the first 10 South Shore cars. —*Description of original South Shore Car Order and the diagram of the car are from "Traction Classics," Pages 216-217, by William Middleton, published by Golden West Books in 1983*

◂ The cracked and multi-colored roof of car 9 in September 2013.

▾ Ryan Barry is shown on top of CSS&SB car 9 re-staining the roof. —*Ryan Jonas photo*

It all started with the roof

"I was just going to repair and refinish the roof," said Barry. But what started with the roof in September of 2013 quickly moved inside the car. "I just kept looking at the interior, thinking about how great it would look if it were restored."

Once the project started, Barry and other East Troy Railroad volunteers worked meticulously for almost two years on the restoration, finishing the job on July 3, 2015. The accompanying photos illustrate the work.

The roof turned out to be a bigger project than Barry had planned, even before he moved to the interior.

"At some point the roof had been painted with grey latex paint and the paint had deteriorated over time," said Barry. "Someone had also applied linseed oil, but perhaps not in the right order. It appeared that the latex paint was put on top of the linseed oil. So the roof was very sticky."

Barry stripped off the grey latex paint, repaired some minor holes in the canvas, and re-stained the roof in grey. But the coloring turned out very uneven. The sticky linseed base was part of the reason, but it also appeared that part of the roof had been refinished a different way than the rest. It just didn't match, and it didn't look good. At that point Barry, with the help of another East Troy volunteer, Fred Biederman, decided to use a darker stain. The red oxide color they chose matched the color of the roof of South Shore car 33, also at the railroad. It covered up the discoloration of the grey, and it seemed to match several historic photographs found of South Shore cars with darker roofs.

Once Barry had a good look around the interior of the car, he knew that if he was going to do the project, he was going to do it right. He started by taking all the seats out, taking the vents and luggage racks down, and tagging all the pieces to make sure each could be returned to the right place. He took down all the light shades and took the globes inside the nearby volunteer center to make sure they did not get broken.

In mid-summer of 2014, Barry and Biederman stripped the ceiling to prepare it for repainting. They decided to repaint the ceiling because there were sections where paint had peeled off in the past, and it had just been covered up with another layer of paint. The multiple layers were visible, as were all the joints and cracks where the old paint had never been removed. As with earlier decisions, Barry was determined to do it right. To remove the old ceiling paint, he and Biederman first tried using an "air needle" system. It did not work well. Then they tried a wire brush wheel/grinder combination, which did a pretty good job. They used a sand blaster to clean the hard-to-reach areas, including the joints and the cracks. Biederman did most of the sanding of the ceiling. Barry did all the sandblasting while wearing an air-supplied hood to make sure he did not breath in the sandblasting medium. After the sand blasting, a good grade automotive primer was applied. The finish coat matches the light cream color believed to have been original to the car.

▴ After removing the luggage racks, the color of the original wood could still be clearly seen. The shellac had deteriorated and cracked, but Barry could see the original color. His goal became matching the original color and finish.

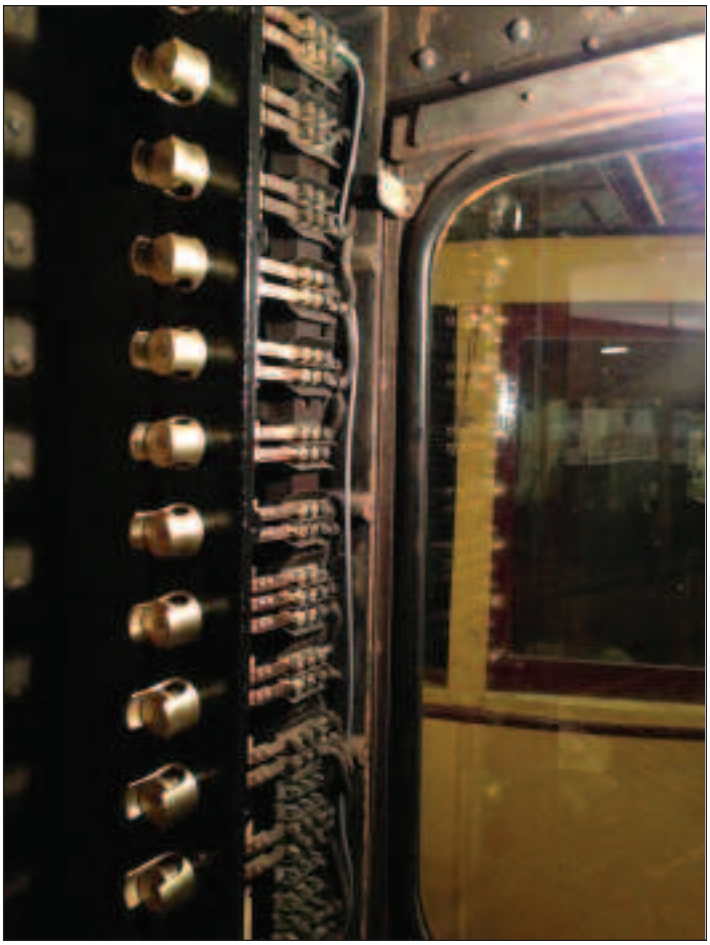
▲ In theory, after applying the chemical paint strippers, it should have been possible to go through with a putty knife and peel off all the layers of paint. But in this case, only two or three layers at a time could be removed. Since there were five or six layers of paint, the chemicals had to be applied and stripped two or three times for each section of painted wood.

◥ When Biederman started stripping the bathroom doors, he discovered that they were lettered "Men" and "Women." The layers of paint on top of the lettering are clearly visible in the photo. The top layer was a thick brown color; tan was next, then olive green. It appeared that tan had been used as a primer or as a base below the green. Then there was a white layer, and finally the wood finish with shellac, which had deteriorated before the first layer of paint was applied.

▸ A view of the car after the initial stripping. Note the cylindrical heater on the lower left. Much of the initial work was done over the winter of 2014 when temperatures were often in the 20s.

◂ Volunteer Adam Loeffler used a grinder to remove the heads of the bolts holding the seat bases in place. The nuts holding the seat bases beneath the car were completely rusted and very difficult to access. The easiest way to remove the bases was to grind off the heads of the bolts and pound the bolts through the bottom of the car. After they were removed, all the seat bases were sandblasted and repainted.

Ryan Jonas, president of the railroad, redid all the cab switches. ◣ He had to remove the outside plate around the control box in order to remove and refinish all the plungers and contact fingers for the switches. ▾ The cabinet was also repainted and reinstalled with new brass labels for the switches.

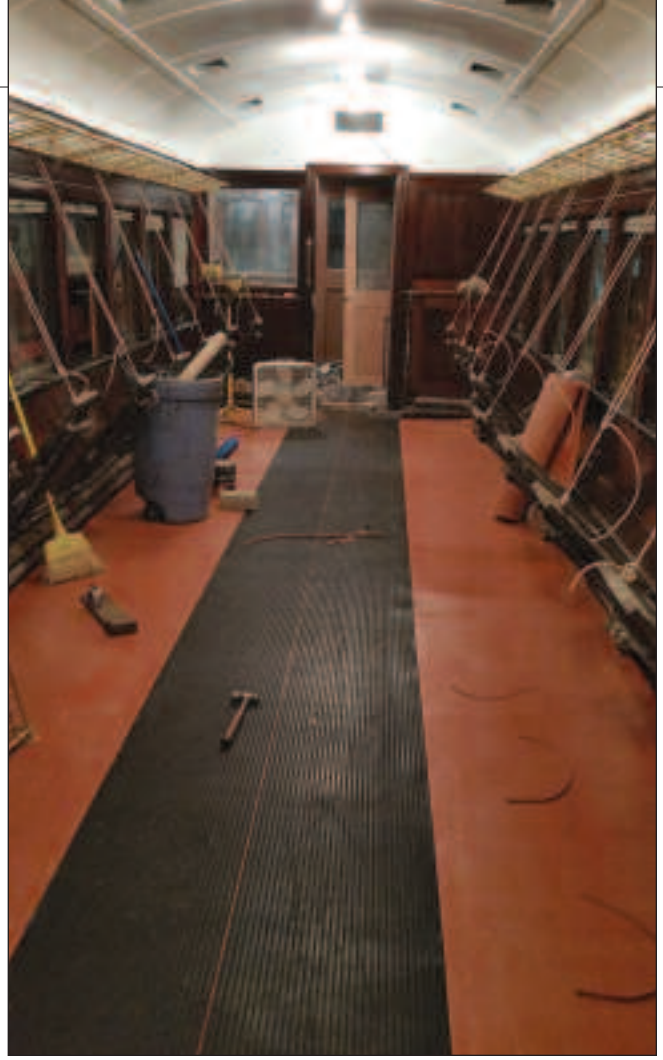


▸ This photo shows the sanded walls of the bathroom and the boiler room. The car came from the factory with thermostats and automatic temperature controls. The boiler, which is still in place, was coal-fired, and used on colder days when the electric heat could not keep up. Water circulated through the boiler to be heated and then circulated around the car. It was a basic hydronic heating system. The refurbished car has a new 600-volt electric heating system, but uses the thermostat that was on the car when the East Troy Railroad received it.

▸ The walls have been stained in this photo. Trim pieces were stripped and stained separately. The final finish started with several thin layers of shellac. At this point Barry did some additional research and learned that shellac is not the best choice when the wood will be exposed to significant variations in temperature. So he added one or two thin layers of polyurethane on top of the shellac.

▲ The rest of the car has received a layer of stain in this photo. Barry and Biederman repaired and repainted the trim pieces below each window. The metal tracks on both sides of the windows were also removed, repaired and refinished. This made it easy to replace some of the windows that had been cracked or damaged over the years. The result is windows that once again operate properly and safely.

◀ The wood uprights between windows were sanded to prepare for refinishing. The sanding was done in multiple stages, starting with 120- to 150-grit paper, moving to 180-grit, and finishing with 220-grit for a really smooth surface. Two of the uprights had to be replaced because they had deteriorated too badly to be saved.



▲ This photo shows the refinished bathroom door. The area with frosted glass had been filled in with plywood at some point, and it would not have looked right if they had tried to stain the plywood to look like the mahogany in the rest of the car. So they replaced the plywood with frosted glass. The door trim was replaced because it had been water-damaged. The door hardware is original. It was removed and refinished before being reinstalled.

◥ After the luggage racks were reinstalled in early May of 2015, Barry and Biederman started reinstalling the seat bases and the flooring. They put all the seat bases in place first to make sure everything fit properly. There were fittings and air valves under some of the seats, calling for careful trimming. Once they were sure of a proper fit, they used rope to tie the seat bases to the luggage racks to allow them to install the flooring. The new flooring is durable transit flooring from a company named Altro (formerly Altro Transflor). The East Troy Railroad worked with Altro's Pennsylvania office previously to order flooring for CSS&SB car 30. Once all the floor covering was fitted and trimmed, it was glued. A heavy floor roller made sure the floor adhered properly and helped remove air bubbles.

▶ In this photo, the floor is done, the vents are back, the seat bases are in place, and the luggage racks have been reinstalled. The luggage racks were sandblasted and repainted in gold.

▲ Decals were created to match the original lettering at the end doors of the car. They were applied and then coated with a thin layer of polyurethane.

▲ This is the finished interior, decorated for the Christmas Train. The seats came from CSS&SB car 107. The seats that had been in car 9 were pretty worn; some were ripped and had been repaired with brown duct tape. The fabric on the seats from car 107 was in very good condition and there were no visible tears or repairs. The seats were steam-cleaned after installation. —*Ryan Jonas photo*

▼ Chicago South Shore & South Bend car 9 leads the East Troy Railroad Museum's Christmas Train out of the trolley barn on December 6, 2015. —*Nikki Burgess photo*