

**Documentation Package**  
**For**  
**HO-Scale Car Kahn's EKSX 3714 Refrigerator Car**



**Submitted as part of the NMRA AP**  
**Car Certificate Requirements**  
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## Kahn's EKSX Refrigerator Car

I am pleased to present my Kahn's EKSX 3714 Refrigerator as a super detailed car and not for merit-based judging. This car began as an Accurail car which I acquired at Mike Brock's Proto Rail meet in Cocoa Beach, FL in January, 2007.

### History

This car had been relegated to a siding for several years because one of the ice hatch hinges was broken, and the opening latch on another ice hatch was stuck in the open position. We recently were notified that an industry 28.37 miles down the line had expanded its facility and needed another refrigerator car to serve their new customers. Our maintenance pounced on the opportunity and completely rebuilt all four ice hatches with new and improved hinges from Grainger, Inc., new wood, improved insulation under the wood (trust me), and new latches on the front of the ice hatches. While this work was going on someone on the maintenance crew noticed that about 24.6% of the boards on the walkway were either broken or missing. So, after the hatches were completed, the crew removed the old walkway and installed a completely new walkway. Now we just need to pass the car by the washing station.

### Big Picture

As I mentioned above this kit is an Accurail kit vintage early 2000 most likely. Upon opening the kit, I observed what I thought was a highly oversized fish-belly center sill as seen in the photo below.

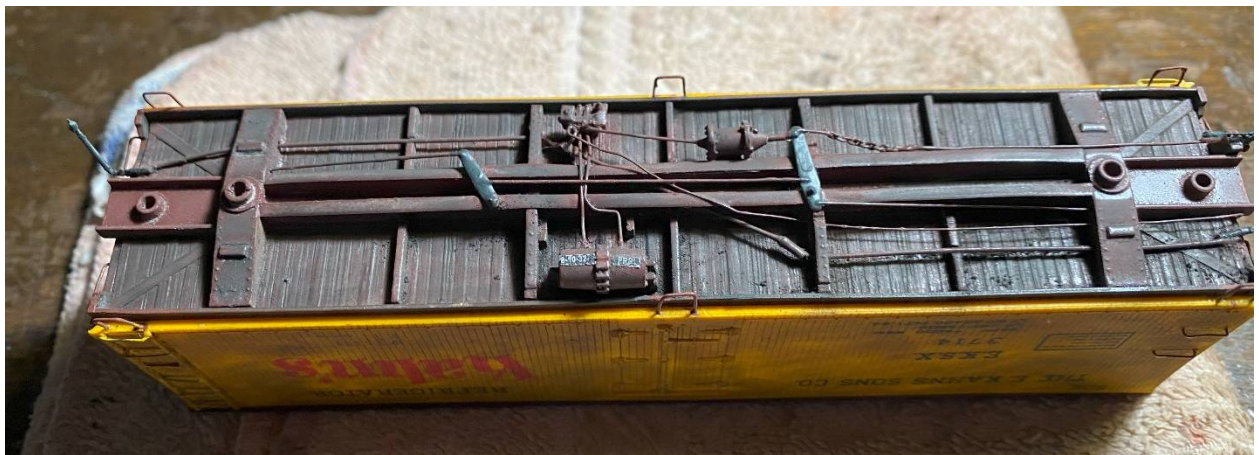


The kit did contain an air reservoir, brake cylinder, and control valve. But there were no air hoses nor brake system rods nor section of chain. Even if I had continued to use the large center sill and the three brake system components there was no way I could route the hoses or rods without a significantly large number of kinks and elbows. My first action was to rebuild the center sill in a manner like what I had used on my 4-merit award scratch-built cars. See the photo below. This rebuild then allowed me to use a CalScale brake system kit that I am very familiar with.

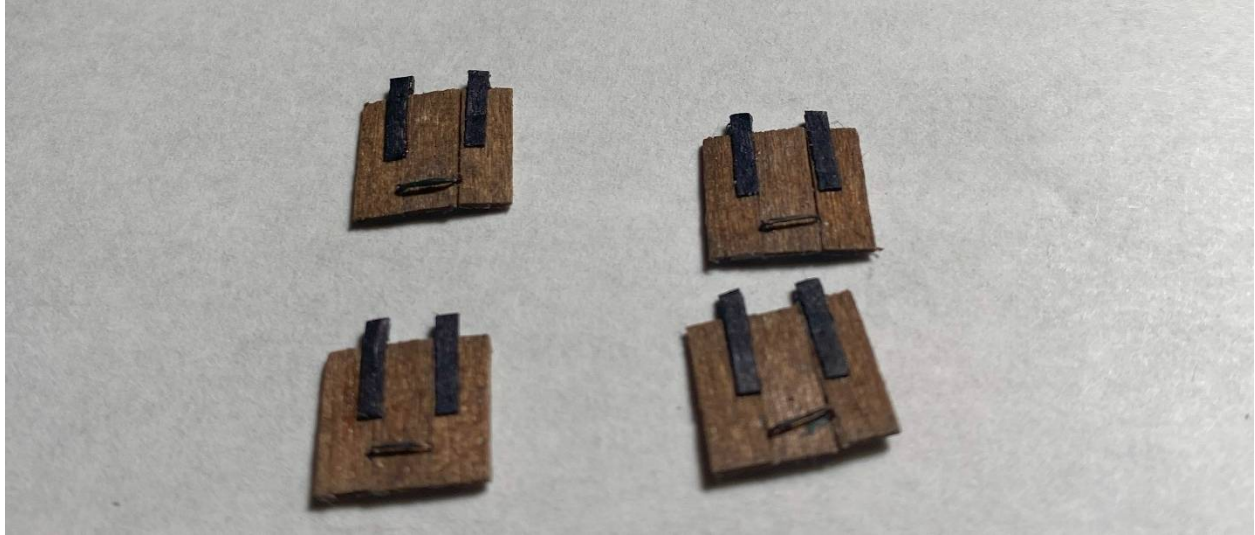




I decreased the height of some of the molded in supports for the air reservoir, control valve, and brake cylinder. After these three components were installed, I then completed installing all the associated air hose piping and brake system rods and chain including the addition of two scratch-built brake system levers. See photo below which also shows the completed underframe and associated weathering that I applied to the underside of the car.



I then attached the ice hatches and walkway on the roof of the car as mentioned in the History paragraph above. The four new scratch-built ice hatches are shown in the photo below.



All the ladder rungs, grab irons etc. were molded directly to the side of the car with no clearance between the rungs and grabs and the car body. I surgically removed the offending rungs, grab irons and stirrups, and then used my #80 drill to drill 76 holes for the new rungs, grab irons, and stirrups which I fashioned out of 0.008" and 0.012" diameter wire. I used a piece of 0.030" styrene to ensure that the ladder rung standoffs were uniform. See photo below.



## Details

A short list of the many details incorporated in my Kahn's EKSX 3714 Refrigerator Car is listed below, it is not meant to be a scavenger's hunt for the AP judges.

1. Gunk / dirt etc. on both faces of all eight wheels
2. Full AB Brake System including a section of chain on the rod leading up to the brake wheel at the top of the car, and a brake bell crank where the brake rod transitions from horizontal to vertical on the B-end of the car
3. Brake system air retaining valve located adjacent to brake platform.
4. Underframe painted with Scalecoat Box Car Red #3
5. Underside and body of the car weathered with Bragdon Dust Bowl Brown, Dark Rust, Grimmy Black and Soot weathering powders.
6. 37.83-degree elbow connectors installed on main brake line.
7. Grandt Line nut and bolt castings used to secure the brake levers to the mounting blocks.
8. COTS stencil located on the brake system air reservoir denoting the date and the railroad name where the last brake system Cleaning, Oiling, Testing and Stenciling (COTS) was performed.
9. Air hose at ends of car painted with Grimmy Black paint and the tip was painted with Pewter Gray
10. Ladder rungs made from 0.008" brass wire
11. Grab irons and stirrups made from 0.012" brass wire
12. Main air line made from 0.019" brass wire
13. Coupler release level on both ends of car
14. Plastic ice hatches removed and replaced with scratch-built ice hatches
15. Plastic walkway removed and replaced with scratch built wooden walkway