

**Documentation Package  
For  
HO-Scale 10,000 Gallon Type 21 Riveted Tank Car**



**Submitted as part of the NMRA AP  
Car Certificate Requirements  
By  
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## GATX Tank Car

I am pleased to present my GATX 10,000 Type 21 Riveted Tank car as a super detailed car and not for merit-based judging. This car began as a Life-Like Proto 2000 kit. The appendix to this tome lists all the 71 major parts that I assembled to create the car. The list excludes such mundane parts such as weights (4), couplers, coupler springs, coupler lids, coupler screws (8), trucks (2) and wheels (4). In several cases, where it was appropriate, I substituted phosphor bronze wire in place of the plastic kit part, including the main air line. See Figure 1. As noted in the appendix part listing there are several non-kit parts that I added to increase the reality and detail of this fine car.

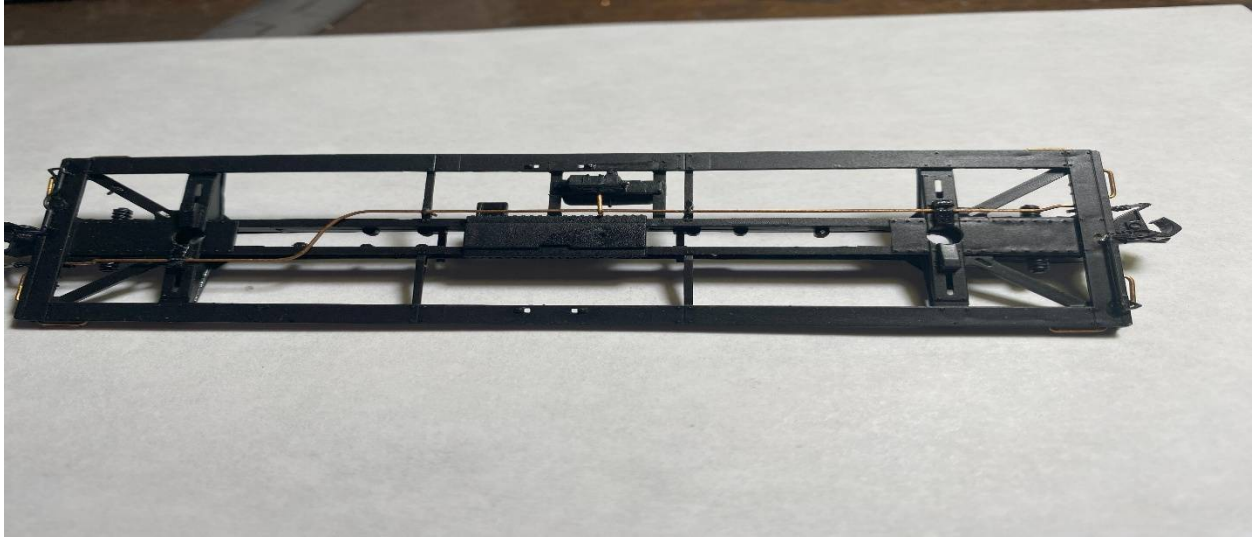
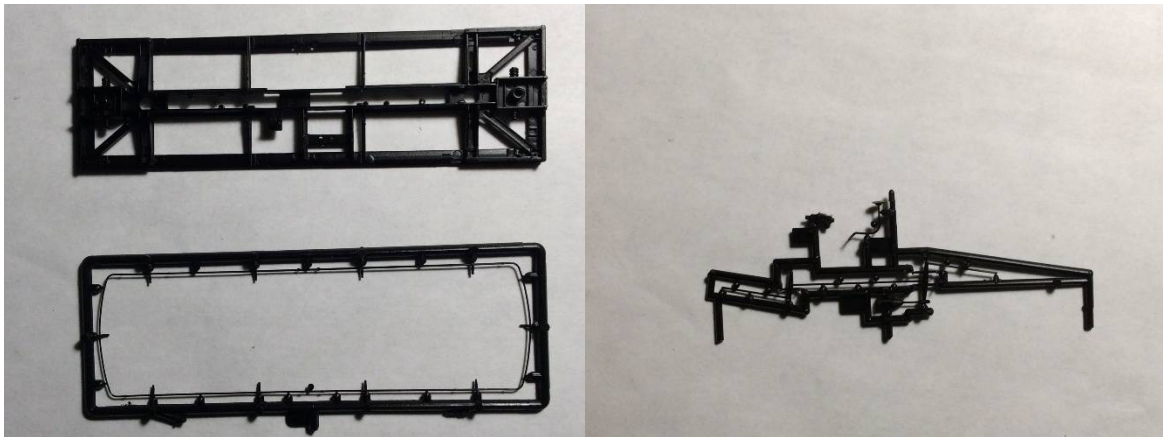
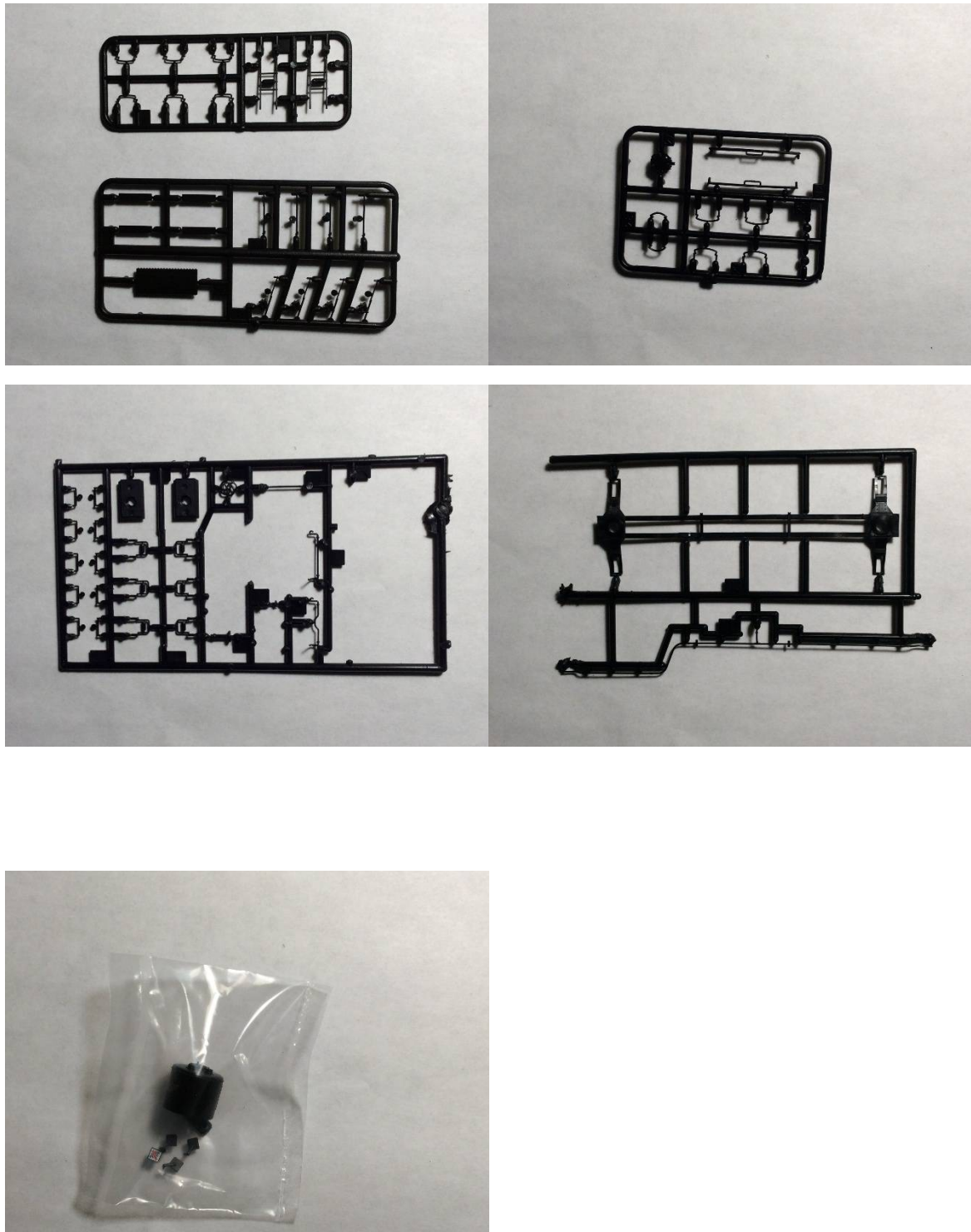


Figure 1. Main air line made of phosphor bronze wire

The appendix lists the many parts I assembled to create this car. The following photos show the numerous sprues that the parts were originally attached to.





The instructions that came with the kit noted "In order to achieve maximum prototype fidelity, our detail parts are quite small, with dimensions as small as 0.3 mm to reproduce important details....."

In assembling this detailed kit, I observed that the brake line between the brake cylinder and the brake wheel, including a short segment of chain, was completely missing from the very detailed underframe of the car. I added these two parts to fully complete the brake system components. A before and after photo are shown in Figure 2 below here.



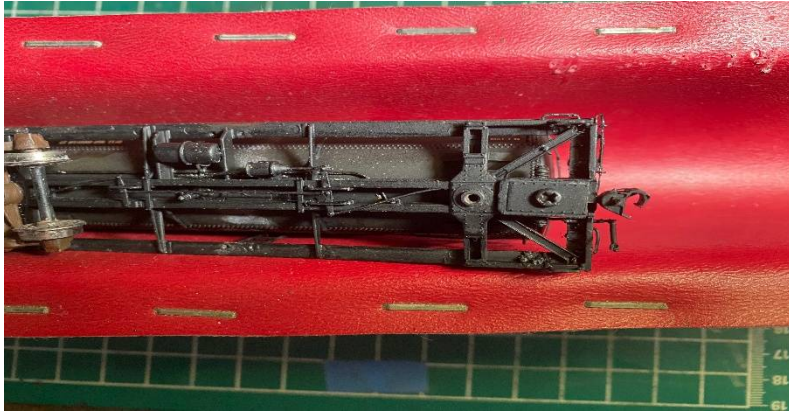


Figure 2 Before insertion of brake line and chain



Figure 2 After insertion of brake line and chain

To ensure consistency in the height of the numerous phosphor-bronze wire grab irons that I inserted I used a scrap piece of white styrene as shown in Figure 3 below.



## APPENDIX

### Expanded Parts List for GATX 10,000 Gallon Type 21 Riveted Tank Car

Part Name	Part Count	Comments
Dome Cap	2	
Dome	1	
Dome Cover	1	
Dome Cover Grab Iron	1	
Dome Grab Iron	2	
Platform	2	
Grab Irons	4	
Underframe	1	
Triple Valve	1	
Grab Iron	8	Plastic parts replaced with phosphor bronze wire
Cut Levers	2	
Outlet Valve	1	
Saddle	1	
Retainer Valve	1	
Main Train Line	1	Plastic parts replaced with phosphor bronze wire
Tichy Eyebolts	2	Added, non-kit part, used to hold wire main train line in place
Cal-Scale Air Hose	2	Added, non-kit item
Air Reservoir	1	
Sill Cap	1	
Brake Lever	1	
Brake Cylinder Piping	1	Plastic parts replaced with phosphor bronze wire
Stirrups	4	
Cradles	4	
Cradle Straps	4	
Placard Boards	4	
Ladders	2	
Brake Wheel Shaft	1	
Brake Wheel	1	
Inner Straps	4	
COTS Stencil	1	Added, non-kit part.
Handrail	1	
Tichy Eyebolt	4	Added, non-kit part, for Couper Release Lever
Coupler Release Lever	2	Added, non-kit part.
Brake Line from Brake Cylinder to Brake Wheel Including Section of Chain	2	Added phosphor bronze wire and 40-links per inch chain, non-kit parts
<b>Part Count Total</b>	<b>71</b>	