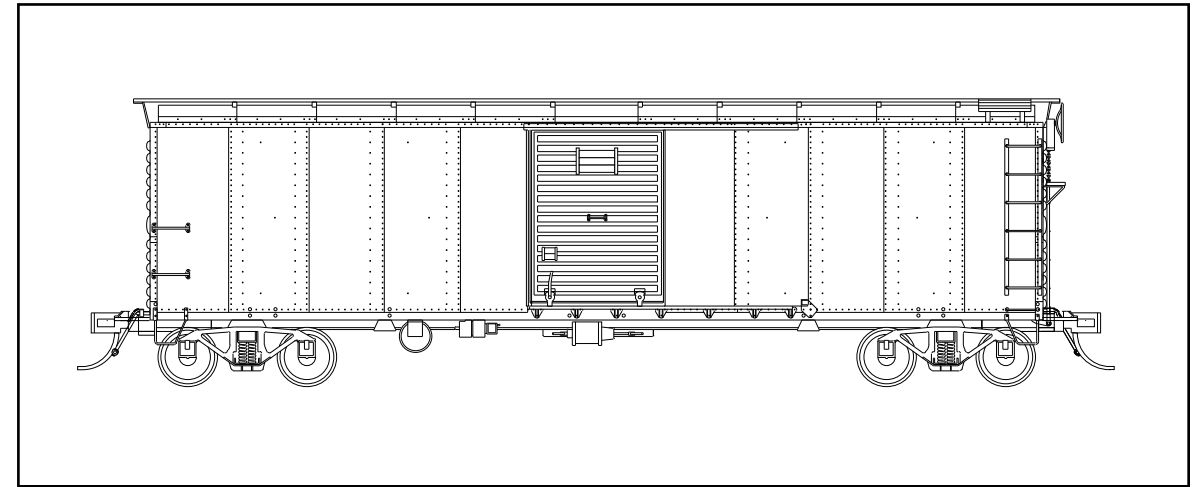


# RED CABOOSE

HO Scale



**PENNSYLVANIA RAILROAD X-29 BOX CAR**  
**With AB Brakes And DREADNAUGHT ENDS**

## HISTORY

In the early 1920's the Pennsylvania Railroad developed plans for a steel-sheathed box car and designated the design X-29. Production of this design began in 1924 and lasted into 1934. During this time period almost thirty thousand Pennsylvania X-29 cars were built. Not all X-29's were the same. Their parts components varied from the original cars almost immediately.

Variations included: frame components, brake systems, side sheathing, ends and doors just to mention the major changes. This kit represents the X-29 produced in the late 1920's and early 1930's with AB brake and Dreadnaught ends.

There are many photographs showing X-29's lasting into Penn Central maintenance of way service.

Although many railroads acquired variations of the X-29, each railroad called them something other than X-29. Here is a listing of the roads known at this time: Boston & Maine, Baltimore & Ohio, Central of New Jersey, Chesapeake & Ohio, Chicago Great Western, Detroit, Toledo & Ironton, Erie, Erie Lackawanna, Georgia Northern, Lehigh & New England, Louisiana & Northwest, Maine Central, New York Central, Nickel Plate Road, Norfolk & Western, Pere Marquette, Seaboard and Wheeling & Lake Erie.

## A FEW TIPS

Before you begin, read the instructions thoroughly. After reading the instructions, keep in mind this model will assemble quickly if the following rules are followed:

1. Cut all parts from their sprue with a sharp knife.
2. Check each part to be sure it is free from flash. Remove flash if needed.
3. Be sure all sprue marks are removed from the parts.
4. MOST important, be sure to clean all holes and surfaces where parts are to be glued together so that the part is paint free.

## PARTS POLICY:

If you break or ruin a part during assembly, or find a part with a manufacturing defect, it will be replaced free of charge by returning the part to Red Caboose. Subject to stock on hand. When requesting parts please specify scale, part description and kit number.

## PARTS LIST:

Part #	Part Description	On Sprue #	Quantity
1	Roof walk		1
2	Roof		1
3	Roof grab irons	1	2
4	Body		1
5	Side/end ladders	1	4
6	Grab irons	2	12
7	Below ladder grab irons	5	2
8	Door guides	2	2
9a	3 panel doors	3	2
9b	Youngstown doors	4	2
10	Tack boards	1	4
11	Bad order boards	6	2
AB-1	Retainer & Pipe	1	1
12	Brake platform brackets	1	2
AB-2	Brake platform	1	1
AB-3	Power brake mechanism	1	1
13a	Frame		1
13b	Frame cross bearers	7	4
AB-4	AB brake cylinder support bracket	7	1
AB-5	AB brake cylinder & levers	7	1
AB-6	AB brake air reservoir	7	1
AB-7	AB brake distributing valve	7	1
AB-8	AB brake quadrant	7	1
14	Outside brake levers	7	2
15	Truck brake rods	7	2
16	Brake staff rod	7	1
17	Coupler box cover	7	2
18	Side stirrup steps	5	2
19	Side stirrup steps	5	2
20	Truck bolster	8	2
21	Truck sideframes	9	4
22	Wheels		4
23	Screws		2
24	Airhose	7	2
25	End roof walk supports	5	2
AB-9	Brake rod & chain	1	1
AB-10	Brake wheel	1	1
K-1a	K-brake curved retainer pipe	2	1
K-1b	K-brake straight retainer pipe	2	1
K-2	K-brake platform	2	1
K-3	K-brake brake staff	2	1
K-4	K-brake brake wheel	2	1
K-5	K-brake cylinder and levers	7	1
K-6	K-brake air reservoir and valve	7	1
K-7	K-brake lower brake staff support	7	1
X100	Grab irons	2	8
X101	Lower door brackets	6	10
X102	Door stops	6	4

**RED CABOOSE**

P.O. Box 250 • Mead, CO 80542

August 1999

## HELPFUL TOOLS

Hobby Knife & sharp blades  
Pin vise

Small Phillips screw driver  
#72 & #76 drill bits

Needlenose pliers with cutter  
Tweezers

## ASSEMBLY

Please note that most parts have been silhouetted for easy identification and/or are shown in the exploded view. Part #'s follow the logical assembly sequence (mostly for handling, to avoid breaking smaller parts).

Some part sprues have extra parts for creating other cars than the one built in this kit. These parts include retainer pipes, grab irons, lower door guides, door stops, split K brake, AB brake, Youngstown and 3 panel doors.

## ROOF

1. Mount the roof walk, #1, to the roof, #2. Cut the four pins off the bottom of the roof walk and glue the roof walk directly to the roof.
2. From sprue #1 cut the two roof grab irons, #3, and glue in place on the roof walk as shown on the exploded view. Set the roof assembly aside.

## SIDE DETAIL

3. From sprue #1 cut two of the four ladders, # 5, and glue in place, one on each side of the body, #4. Pins closest to the bottom indicate bottom of ladder.
4. From sprue #2 cut 4 grab irons, # 6, and glue two in place on each side of the body to the left of the door.
5. From sprue #5 cut the two small grab irons, #7, and glue in place below each side ladder. From sprue #2 cut the two door guides, # 8. Note -- for PRR paint schemes only -- on the exploded drawing #8a. Cut off the large door stop and glue the door guides in place below the door opening as shown on the exploded view.

Also for PRR paint schemes only - note on the exploded view the two X102 door stops. Cut the two door stops from sprue # 6, drill a # 76 hole as indicated on the drawing where the door stops are shown (use the rivets as a locating guide) and glue the two door stops in place.

6. Select the type of door that you want on this car from sprue # 3 or # 4 and glue in place over the door opening for a closed position, or in an open or semi-open position.
7. From sprue # 1, cut two of the tack boards, #10, and glue in place on the doors as shown on the broadside drawing.
8. From sprue # 6 cut the two bad order boards, #11, and glue in place just to the left of the door on the side sill.

## ENDS

9. From sprue #1 cut the remaining two ladders, #5, and glue one in place on each end.
10. From sprue #2 cut 6 more grab irons, #6, and glue 3 in place on each end. See end view.
11. From sprue #1 cut the remaining tack boards, #10, and glue in place as shown on the end view.

## B END

12. From sprue #1 cut retainer line AB-1, and glue in place on B end as shown.
13. From sprue #1, cut the two brake platform brackets, #12. On the rear of each bracket, cut the bottom mounting pin off the back and glue each bracket in place using the end assembly drawing as a guide.
14. From sprue #1, cut both the brake platform, AB-2 and the mechanical brake mechanism, AB-3.

Glue AB-3 in the hole on the B end as shown on the assembly drawing.

Glue AB-2 on top of the two platform brackets being sure the slot is to the rear and lined up directly under the center of the mechanical brake mechanism, use the end assembly drawing as a guide.

## UNDERBODY

Your body is completely done with the exception of some delicate end detail and the corner stirrup steps. Do not install these at this time. Turn your body upside down so that you can work on the under frame. Be sure not to exert pressure on any of the detail parts previously installed.

15. Mount frame, #13a, to body. Be sure to place the B end of the frame on the B end of the body. To help you, look for a B on the floor of the body at one end, also look for the B on the frame. This B on the frame is located inside one of the bolsters between the flanges, see exploded view for location.
16. From sprue #7 cut the four frame crossbearers, #13b, and glue in place as shown on the exploded view.
17. Also from sprue #7 cut the AB brake cylinder support bracket, AB-4, and glue in place. Also from sprue #7 cut the AB brake cylinder and levers, AB-5, and glue in place as shown.
18. Next, cut from sprue #7 AB brake air reservoir, AB-6, and glue in place as shown. Also from sprue #7 cut the AB brake triple valve, AB-7, and glue in place as shown.
19. From sprue #7 cut the two outside brake levers, #14. Look at the exploded view and note how they are mounted to the frame. Also note #14a, on exploded drawing, shows that two of the pins need to be trimmed about half way. Trim the two pins as indicated and attach the outside brake levers to the frame.
20. From sprue #7 cut the two truck brake rods, #15, and glue in place as shown.
21. From sprue #7 cut the brake/staff rod, #16, and glue in place as shown.
22. Note coupler inset on drawing page, assemble the supplied Accurail/Accumate couplers and install. (Kadee #5 couplers can also be used as the box is designed to accept either type.) Use the press fit coupler box cover, #17, located on sprue #7 to secure the coupler in place.
23. From sprue #5 cut 2 stirrup steps, #18, and install on body as shown on exploded view. Also cut two stirrup steps, #19, and install as shown.
24. From sprue #7 cut the brake fulcrum, AB-8. Glue in place as shown on the exploded view.
25. Assemble the two trucks from bolster #20, side frames #21 and wheels #22. Install on the car using screw #23.
25. From sprue #7 cut the two air hoses, #24, and install one on each end of the car to the right of the coupler as shown on the assembled car end view.
26. Install the included weight inside the car making sure it is secure and centered properly.
27. Glue your roof assembly to the car body.
28. From sprue #5 cut the two end roof walk supports, #25, and glue in place using the end drawing and side drawing as a guide.
29. From sprue #1, cut the brake wheel, AB-10 and glue in place as shown on the assembly drawing.

Also from sprue #1, cut the brake rod and chain, AB-9. Carefully slip it through the slot in AB-2 (platform) until the top of the part clears the bottom of the brake mechanism and the clevis on the other end around the lever on the brake fulcrum, AB-8.

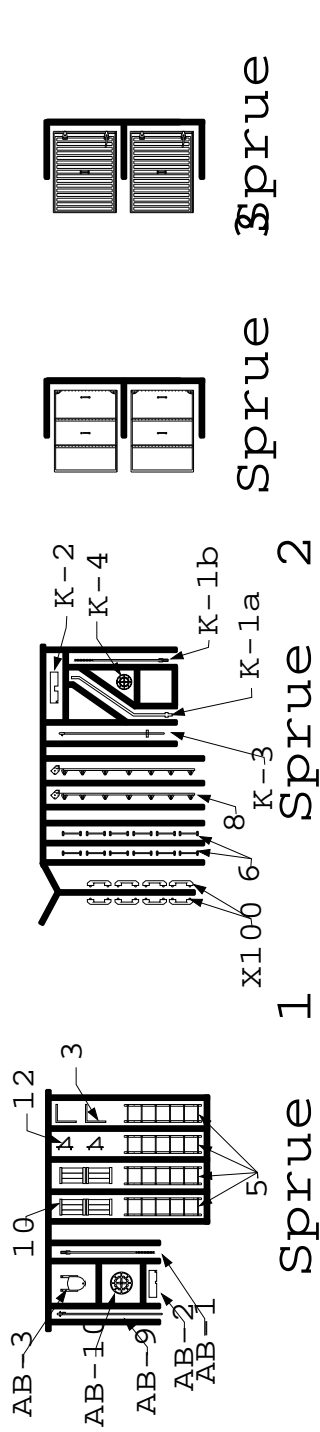
**This completes your model. We hope that you enjoyed building it.**

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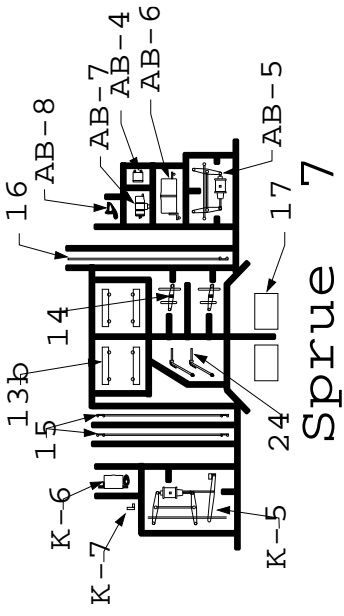
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# RED CABOOSE

PRR X-29 Dreadnaught End  
with AB Brake

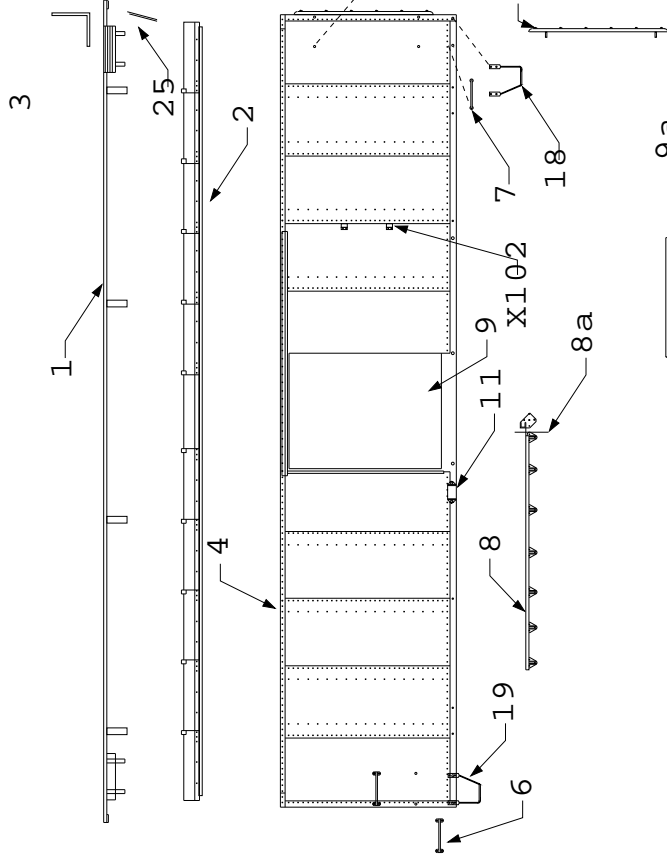


Sprue 1

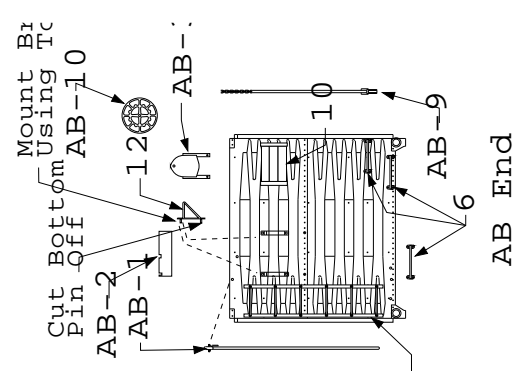


Sprue 5

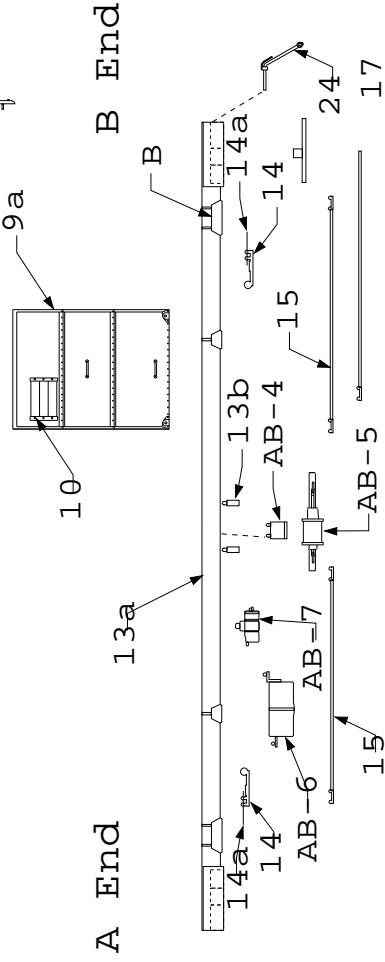
Sprue 6



Sprue 7

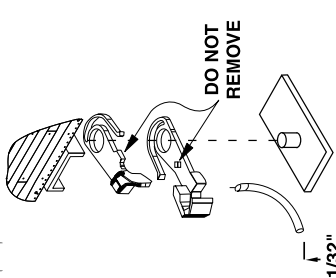


AB End



A End

B End



1/32"  
TO TOP OF RAIL  
LUBRICATE WITH DRY  
TEFLON OR GRAPHITE



Bottom View  
with AB Brake Parts