

Step 5: End Body Details

(a) Lower End Grab Irons. Place four Lower End Grab Irons(x) on the car Body using locator holes next to poling pockets on the ends of the car. Once the Grab Irons are in place, bend them down carefully with your finger to about a 45 degree angle. (Note: If a solvent based adhesive is used, the part becomes soft for a few minutes before setting up. Super glue will not work for this step.)

(b) Other End Grab Irons. Put two Grab Irons, one at each end of the car, in place just above the first rib on the right side of the end.

(c) Brake Mechanism and Brake Chain and Rod. Attach Brake Chain and Rod(z) to Brake Mechanism(y) at locator on back of Brake Mechanism. When glue has set up, place assembly on brake end of car. Clevis at end of brake rod fits over projection from end of Bell Crank.

(d) Air Valve and Line. Locate Air Valve and Line(aa) just to the left of Brake Mechanism Assembly on brake end of car and glue in place using two locators provided.

(e) Brake Step. Glue two Brake Step Brackets(bb) in place. When in place, attach Brake Step(cc). Note the two grooves on the bottom of the Brake Step for location of the Brake Step Brackets.

(f) Brake Wheel. Put Brake Wheel(dd) in place using locator in Brake Mechanism.

(g) End Ladders. Place End Ladders(ee) in place on each end of car body.

(h) Tack Boards. Large Tack Boards(ff) may be attached to the second and third ribs from the top on each end of the car Body just above the Upper End Grab Irons. Other placement may be appropriate based on your particular prototype.

Step 6: Side Body Details

(a) Tack Boards. Two Large Tack Boards are placed at the upper end of the panel just to the left of the door on each side of the car. The two Small Tack Boards are placed on the side sill next to the Fan On-Off Mechanism, centered over the end of the bolster.

(b) Side Grab Irons and Side Ladders. Glue two Side Grab Irons(gg) and a Side Ladder(hh) in place on each side of the car using locators provided.

Step 7: Roof Assembly

(a) Weighting. No weights are provided in the kit. If you wish to weight your model, it should be done at this time.

(b) Glue Roof Assembly in place using a small amount of glue around the edge of the car Body where the Roof attaches.

(c) Roofwalk Support Brackets. Glue Roof Walk Support Brackets(ii) in place at each end of Roofwalk between the walk and the car Body.

Step 8: Trucks

Assemble Trucks and fasten to bolsters with screws provided.

NOTE: Your car is now ready to put into service on your empire. We hope that you have enjoyed building this model. We welcome your comments on this kit and also suggestions for future projects. If you find that a part is missing or defective, or if you should break or lose one, please contact your dealer or write to us for a replacement.

Thank you for purchasing an InterMountain kit !!

InterMountain Railway Company

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PFE R-40-23 Refrigerator Car Kit

GENERAL INSTRUCTIONS:

Please read the instructions and study the drawings and parts before beginning assembly of this kit!! Many of the parts are very delicate in order for your completed model to be as attractive and authentic as possible. **DO NOT ATTEMPT TO BEND, TWIST OR BREAK PARTS FROM SPRUE.** The most effective tools to use in removing parts from their sprue are an X-acto knife or fine clippers.

It is best to test fit ALL PARTS before applying glue. The locators sometimes are slightly damaged in removing from the runner and must be trimmed before the locator holes will accept them. Generally very small amounts of glue are needed to affix styrene parts, so we recommend that glue be used sparingly. Also, when locator holes extend through the part, apply glue on the inside.

The connecting point between the part and the "runner" to which it is attached is called a "gate". In most cases the gates are designed to be trimmed completely flush with the part. There are two sets of exceptions to this rule. The first set of parts, listed below, should be cut from their runner as close to the runner as possible as the "gates" for molding these parts are used as locator pins to attach the part to the model:

1. End Grab Iron (x)
2. Brake Step Bracket (bb)
3. Water Drain (p)
4. Side Grab Iron (gg)

The second set of parts have both "gates" that are used as locators and "gates" that should be trimmed at the part. Each connecting point on these parts should be trimmed as close to the runner as possible except:

1. Gates on top of the Hatch Hinges (f).
2. Gates away from the locator end of Straight Hatch Levers (h), and Bent Hatch Levers (h).
3. All points of connection other than ends of Long Main Train Line (k) and Short Main Train Line (i).
4. Small gate on underside of glad hand (s).
5. Two gates attached to chain portion of Bell Crank and Chain (u).
6. All points of connection on Brake Rod Assembly (v) other than end of rods.
7. Center connecting point on Small Air Line and Filter (w).
8. Single connecting point on bottom of Fan On-Off Mechanism (o).

Assembly Instructions:

Step 1: Completion of Body

The first step in building your refrigerator car kit is to add the Ends(c) and Floor(b) to the Body(a) shell. All three pieces have locator pins that aid in correct positioning of the parts.

(a) Attach the Floor to the Body first, placing the one locator pin on the inner side of the Floor in the locator hole in the bottom of the Body shell. After test fitting, which should be done for each step during the assembly, attach the Floor to the Body using a small amount of glue around the outer edge of the Floor. There may be a small amount of play in the locator, so be sure to center the Floor as well as possible.

(b) Ends – Use the Roof(d) as a guide to position the Ends in place on the Body shell. Place the Roof on the shell, but do not glue at this time. Using a small amount of glue around the edge of each end, put the Ends in place using the locators, and push them upward to match the in-place Roof. After giving the glue a few seconds to set, remove the Roof until a later step.

Step 2: Roof, Roofwalk, and Hatches

(a) Attach Roofwalk(e) to Roof. There are two methods of attaching the Roofwalk to the Roof. Method (2) below is the easiest of the two methods, but we believe that method (1) produces the best result. The choice is yours.

(1) Remove the four locator posts from the bottom side of the Roofwalk, and smooth the resulting area by lightly scraping with a small file, knife, or by sanding. Put a small amount of glue on each of the mounting brackets on the Roof and the matching points on the underside of the Roofwalk and hold in place for a few seconds until glue starts to dry.

(2) Using a 3/32nds inch bit, drill four holes through the Roof at the "dimples" on the underside of the Roof. Place the locators on the Roofwalk through the resulting holes, and glue the walk in place.

(b) Hatch Hinges. There are two Hinges(f) for each Hatch. Hatch Hinges are placed in the locator holes adjacent to the hatch openings away from the ends of the Roof. The opening on the Hinge faces towards the hatch opening. Glue each Hinge in place from the underside of the Roof as it is put in place. Be sure each Hinge is pushed all the way into the locator hole. (Helpful Hint: The locator end of the Hatch Hinges are much easier to place in the locator holes if they are cut at an angle.)

(c) Hatches and Hatch Levers. Remove Hatches(g) from parts sprue and clean thoroughly. The gates on the portion of the Hinge that is located on the Hatch must be trimmed so that the Hinges can be "mated" with the portion of the Hinge attached to the Roof. The Hatches may be placed completely open, partially open, or closed. When put in place using Hinge segments on Roof and Hatch, the opening handle on the Hatch should be on the inside, or nearest to the Roofwalk, in each case. Two full sets of Hatch Levers(h) are provided in the parts. It is suggested that the Hatches be glued in place rather than left loose. Bent Hatch Levers should be used if you want your Hatches to be closed, and Straight Hatch Levers should be used for open Hatches.

(d) Roof Grab Irons. Glue the two Roof Grab Irons(i) in place on opposite corners of the Roof using the locator holes provided.

The Roof is now fully assembled. Set it aside until later for placing on the Body shell.

Step 3: Underframe and Main Train Line

(a) Main Train Line. The Main Train Line is provided in three pieces; a long piece(k), a short(l) piece including a "tee" fitting, and a very short piece molded in the groove of the Frame. When the first two of these are glued in place, it gives the appearance of being one piece. Each of the two longer pieces should be glued in three places; in their respective depressions on the sides of the frame near the middle, and in the notches provided in the Frame cross-members. The longer of the two pieces goes on the end of the Frame containing the two locator pins which locate the Frame on the Body.

(b) Underframe. Place the Underframe(j) on the Body and attach with glue.

Step 4: Floor Body Details

(a) Corner Stirrups. A notch in the locator on the Corner Stirrups(m) assists in locating them on the car floor. The irregular side of the stirrup faces the end of the car in each case.

(b) Center stirrups. The two Center Stirrups(n) locate under the door on each side in the notch in the car Floor behind the side sill. They center on the door hardware.

(c) Fan On-Off Mechanism. A Fan On-Off Mechanism(o) is provided for each side of the car. The two locators on each mechanism locate in the two locator holes in the groove behind the sill on the fan end of each side of the car.

(d) Water Drains. Both open and closed Water Drains(p) are provided in the kit. You may use any configuration of drains that you wish. They are located just outside the bolsters at the four corners of the car Floor in the locator holes provided.

Step 5: Underframe Details

(a) Coupler boxes and Couplers. Mount couplers in Coupler Box(q) and glue Coupler Box Cover(r) in place. (Kadee #5 couplers are recommended.) When dry, attach to car Body using locators provided.

(b) Glad Hands. Glue Glad Hands(s) in place on each end of the car in line with the Train Line. Use locator holes in the Floor next to the Coupler Box. Interior end of line matches end of Train Line in slot on upper side of bolster.

(c) Triple Valve and Air Tank Assembly. Glue Assembly(t) in place using locators on posts projecting from the Floor toward the non-brake end of the car Body.

(d) Bell Crank and Chain. Bell Crank and Chain(u) locates at the opposite side of the Coupler Box from the Glad Hand at the brake end of the car Body. Locator holes are found on the Floor next to the Coupler Box and on the bolster.

(e) Brake Rod Assembly. Locate Assembly(v) first with large pin on the back of the air cylinder in locator hole on Floor of car Body near the center of the car. Ten other small locators will then be in place. Curved end of air line projecting from air cylinder lays on the two airlines attached to triple valve.

(f) Small Air Line With Filter. Short end of Small Air Line(w) attaches to "tee" on train line, and opposite end lays on the three airlines attached to triple valve.

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Parts List:

- | | |
|-------------------------------------|-------------------------------------|
| 1: Body: (a) | 7: Underframe: (j) |
| 2: Floor: (b) | 8: Underframe Detail Sprue: |
| 3: Ends: (c) | (1) - Long Main Train Line (k) |
| 4: Roof: (d) | (1) - Short Main Train Line (l) |
| 5: Roofwalk: (e) | (2) - Coupler Box (q) |
| 6: Roof Hatch & End Detail Sprue: | (2) - Coupler Box Cover (r) |
| (10) - Hatch Hinge (f) | (2) - Glad Hand (s) |
| (4) - Hatch (g) | (1) - Triple Valve And Air Tank (t) |
| (4) - Straight Hatch Lever (h) | (1) - Bell Crank And Chain (u) |
| (4) - Bent Hatch Lever (h) | (1) - Brake Rod Assembly (v) |
| (2) - Roof Grab Iron (i) | (1) - Small Air Line And Filter (w) |
| (8) - End Grab Iron (x) | 9: Floor And Body Detail Sprue: |
| (1) - Brake Mechanism (y) | (4) - Corner Stirrup (m) |
| (1) - Brake Chain And Rod (z) | (2) - Center Stirrup (n) |
| (1) - Air Valve And Line (aa) | (2) - Fan On-Off Mechanism (o) |
| (2) - Brake Step Bracket (bb) | (8) - Water Drain (p) |
| (1) - Brake Step (cc) | (6) - Side Grab Iron (gg) |
| (1) - Brake Wheel (dd) | (2) - Side Ladder (hh) |
| (2) - End Ladder (ee) | 10: Truck Package: |
| (4) - Large Tack Board (ff) | (4) - 33" Wheel Set |
| (2) - Small Tack Board (ff) | (2) - 50 Ton Truck |
| (2) - Roofwalk Support Bracket (ii) | (2) - Sheet Metal Screw |

Recommended Tools:

X-acto Knife Fine Clippers Small File or Emery Board Pin Vice Small Drill Set
Tweezers Liquid Styrene Cement (Bottle or Tube) Small Phillips Screwdriver

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