



ExactRail's P-S 7315 Waffle Side Box Car Undecorated Instructions

Thank you for purchasing an ExactRail P-S 7315 Waffle Side Box Car Undecorated Kit. We value your business and hope that these instructions help make the assembly of your model enjoyable. For more ExactRail Products, please visit us at www.ExactRail.com

Vocabulary:

For your convenience, we have identified the following terms with picture reference:

- AB Valve: **Photo B**
- A-End: **Photo G**
- Air Reservoir: **Photo B**
- B-End: **Photo H**
- Brake Cylinder: **Photo B**
- Coupler Cut Lever: **Photo O**
- Crossover walk: **Photo G & H**
- Crossover grab iron: **Photo G & H**
- Cylinder Lever: **Photo B**
- Door Track: **Photo I**
- Fulcrum Lever: **Photo B**
- Side Ladder: **Photo F**
- Slack Adjuster: **Photo B**
- Stirrup: **Photo F**
- Tack Board: **Photo E**

Contents:

The undecorated P-S 7315 Waffle Side Box Car kit consists of the following:

- Body Shell
- Roof
- Under Frame
- Weight
- One sprue with brake rigging and under frame details (PP 513)
- One sprue with door track
- Four small packages of detail parts
 1. One with ExactRail's ASF 100 Ton Ride Control Trucks, Kadee #58 couplers and mounting screws.
 2. A second package contains various detail parts, including: stirrups, brake rigging, door detail and draft box.
 3. A third package includes all grab irons and wire parts.
 4. The fourth package includes two ACI tag panels.

All parts are located within the body shell of the P-S 7315 Waffle Side Box Car. The roof should be removed gently to retrieve the parts.

Step 1: Underbody Detail

Weight:

The first item that is recommended to be added to the body shell is the weight. Having the weight in early will help minimize any damage to the separately added fine parts by handling the body shell.

- a) Add a liberal amount of Gap Filling CA (Cyanoacrylate) glue to the inside floor of the body shell. Flexible cement, such as contact cement or Walther's GOO will work as well.
- b) Very carefully insert the weight into the body shell. Keep it as centered as possible; it should be placed about 3/4" from each end and about 1/8" from each side.

Roof:

Once the glue that is holding the weight has cured, move forward and mount the roof into place.

- c) Clean off any flash if needed.
- d) Starting at one end of the body shell, insert the roof into the shell. Once it is in, work your way down the side until you reach the opposing end.
- e) If needed, add a little plastic cement to fix the roof into place. Tamyia Extra Thin Cement and Ambroid ProWeld are both recommended.

Under Frame:

The under frame of the box car needs to be placed in the proper direction. Two small tabs have been molded into the under frame that will be received by two corresponding holes on the body shell.

- f) Toward one end on the under frame, you will notice an L bend on the frame. Orient the under frame on the bottom of the body shell so the L is closer to the A-End of the body shell. **(See Photo A)**
- g) Clean off any flash with a hobby knife or file if needed.
- h) With the frame properly oriented, insert the two tabs into the corresponding holes. Fix it into place by adding plastic cement to the joints of the body frame and under frame.

Brake Rigging & Under Frame Details:

Locate the sprue with PP-513 molded onto it. This sprue has all plastic parts for the under frame, except for two wire parts.

The first part to be added to the under frame is the air reservoir/AB valve. A small tab will need to be removed so it can be placed into position.

- i) Remove the part from the sprue and clean off any flash. **(See Photo B)**
- j) On the underside of the air reservoir are two tabs that flank it on either side. Only one is needed to mount it to the frame, therefore the other needs to be removed. With the AB valve pointing up, remove the tab on the right side with a hobby knife. When you flip it over, the removed tab will be on the left.
- k) With the tab removed, insert the other tab into the hole on the L bend on the under frame. Next insert the tab on the AB valve into its corresponding hole. **(See Photo C & D)** If you are having difficulty inserting the tabs into the holes, do not force them. You can slightly enlarge the hole by inserting the tip of a hobby knife in the hole and making a few spins.

l) Once the part is in place, cement it in with plastic cement.

The next part to be placed contains the brake cylinder/cylinder lever and brake rod. This part is located on sprue PP-513.

m) Remove the part from the sprue and clean off any flash. **(See Photo B)**

n) Insert the cylinder lever into the two corresponding holes on the under frame. The holes located close to the center of the under frame. Next insert the brake cylinder tabs into the holes. Cement the part down in both sections. **(See Photo C&D)**

o) Coming from the brake cylinder is a brake rod that is in a U shape, the short end of the U is cemented on top of the two rods coming from the reservoir into the AB valve. The brake rod coming off of the cylinder lever is cemented onto the under frame between two tabs. **(See Photo C & D)**

Two separate parts will now be added to the under frame that both connect to the cylinder lever. Both parts have a fulcrum lever and brake rod molded into them. The piece that will be placed on the A end of the car includes a support and a slack adjuster. The last part on the sprue is the bell crank and it will be added as well.

p) Remove both parts from the sprue and clean off any flash. **(See Photo B)**

q) Add the brake rod and fulcrum lever part to the under frame first. At the end of the long section of brake rod is a small tab that inserts into a hole on the end of the cylinder lever. Enlarge hole if necessary with a hobby knife. The fulcrum lever inserts into a small square hole towards the B end of the car. Cement all parts together.

r) Insert the fulcrum lever on the second piece into its corresponding hole. Next add the end with the slack adjuster into the center hole on the cylinder lever. Lastly insert the brake rod support into its hole in the under frame. Cement all parts together. **(See Photo C & D)**

s) Add the bell crank to the left of where the draft gear will be added on the B-end of the car. Cement it into place. **(See Photo C & D)**

The two last parts to be added to the under frame of the box car are two wire bars. Both are located in the small package of wire grabs and parts. The two are a slightly different color from the rest of the grabs and are formed from a slightly thicker wire (.015").

t) Test fit the two wire bars to ensure they will fit into the holes on either end of the cylinder lever.

u) Once it has been determined that the bars will fit, add a small drop of CA to each end and reinsert into the holes.

At this point, we recommend adding the trucks to the car, this will allow you to set the car down and not risk damaging the under frame details. Drop the trucks onto the collar at each end of the under frame. Add the two pan head screws with a small Phillips head screwdriver to fix the trucks into place.

Step 2: End Details

Multiple small details will be added to each end. Both ends have the same details applied to them with the exception of the brake wheel and brake housing on the B-end.

A-End:

In one of the small packages are many small sprues with detail parts for the ends. Locate the sprues with the end ladders, crossover walk, crossover grab iron and tack board. **(See Photo G for placement of all items)**

- a) In the package, there are two crossover walks included, one for each end, however one has an opening. Acquire the crossover walk without the opening and insert it into the four parallel holes at the bottom of the A end.
- b) Apply plastic cement to fix it into place.
- c) Acquire the sprue with the four end ladders and remove two.
- d) The ladders have four tabs on the inside face, only the top two will be used. Insert the top two into the two holes on the left or right side. Add cement to fix in place and repeat for the opposing side.
- e) Locate the sprue with the tack boards and remove one.
- f) Insert into the two holes that are near the right ladder, apply cement to fix in place.
- g) On the same sprue as the tack boards are four small loop eyes. Remove one and cement it into place in the center hole in the end.
- h) In the package with the wire grabs, locate one of the two crossover grab irons. They will be the two longest items in the package.
- i) Feed one end through the loop eyes that was recently cemented into place. Apply a small drop of CA glue to each end and insert into each hole.

B-End:

For the B-end, you will need to repeat all of the A-end steps. You will also need to add the brake housing and the brake wheel. **(See Photo H for placement of all items)**

- j) Repeat steps a - i on the B-end of the car.
- k) Locate the brake housing and remove it from the sprue. Remove any flash if needed.
- l) Insert it into the remaining hole on the B-end of the car. Apply cement to secure the piece in place.
- m) On the same sprue as the brake housing is the brake wheel. Remove it from the sprue and clean off any flash if needed.
- n) Insert it into the hole on the brake housing and apply cement.

Step 3: Door and Ladder Detail

Doors:

There are many separately molded details that need to be added to the doors. The first are the door tracks, two on each side. Next will be the door bars, there are six pieces that need to be added.

Extra care must be taken when handling the door tracks because they are very fragile. Also the door tracks can be warped on the sprue slightly; this will not be visible when glued in place. Do not try to bend them back into shape as they will break. **(See Photo I & J)**

Door Tracks:

- a) Locate the sprue with the four door tracks and remove all pieces. Clean off any flash if needed, use care as not to damage part.
- b) There are two left and two right door tracks. The top of the door tracks have the door glides on the top and these will be located directly under the door. On the back of the tracks are four tabs that are inserted into holes on the sill of the car. Apply cement and add some pressure if door track is slightly warped.
- c) Add door tracks to the opposite side of the car in the same manner. **(See photos K & L)**

Door Bars:

- d) The door bars are located on two separate sprues; each sprue has enough door bars for each side of the car. Remove the bars from the first sprue and clean up any flash if needed.
- e) The four long bars will be inserted into either side of the door into the three holes. Apply a little cement to the holes and then insert the corresponding tabs in the bars into them.
- f) There are two small bars on the sprues as well; these will be inserted into the top center hole in the doors with a little cement.
- g) Repeat steps d – f on the opposite side of the car to complete work on the doors. **(See photos K & L)**

Grab Irons and Stirrups:

There are sixteen grab irons located in the package of irons. Four will be placed at each end of the cars side. A sprue is located in the package of various parts that contains the four stirrups that will be needed for this stage. **(See Photo F)**

- h) At each end of the car, insert four grab irons into the holes. Add a small amount of CA glue to each end of the grab irons to secure them into place.
- i) Repeat on the other three sides to complete all grab irons.
- j) Remove the four stirrups from their sprue. Clean off any flash if needed.
- k) Apply a small amount of cement to the two holes on the sill. Insert the two tabs on the stirrups into the holes. Ensure that the stirrups are vertical and not bent in or out. **(See Photos M & N)**

Step 4: Couplers and Final Details

Couplers:

The couplers used on this car are Kadee #58's. They are located in the package that contained the trucks. For this step you will need the couplers, bronze centering springs and screws. The package that contained the miscellaneous parts will also contain the draft gear boxes and lids.

- a) Attach the draft gear box to the under frame of the body shell. There are two tabs that insert into holes on the under frame. While not required, applying cement to fix the draft gear box in place is recommended.
- b) After the cement has cured, insert the bronze centering spring into the draft gear box.
- c) Drop in the Kadee #58 coupler into the draft gear box. Add the lid and then secure everything into place with the included screws.

Coupler Cut Lever & Air Hose:

The coupler cut levers are located in the package that included the irons and grabs. Both are identical and will be placed on the left side of the coupler. A small loop eye will be inserted into a hole on bracket on the end of the car that will support the cut lever. The Air hose will then be added to the right side of the draft gear box.

(See Photo O)

- d) On both ends of the car, a small bracket hangs down to the left of the draft gear box. Insert the loop eyes into the holes on the brackets and secure with cement.
- e) Feed the coupler cut lever through the loop eye and glue the end onto the lid of the draft gear box with CA glue.
- f) Remove the air hoses from their sprue, remove any flash if needed.
- g) Insert it into the holes that are on the right side of the draft gear box lid. Apply cement and allow curing.

The final detail to be added may or may not need to be added depending on the prototype you are modeling, this is the ACI plate. To mount it, locate the placement as per the prototype and add a small drop CA glue to fix it into place.

This Completes your ExactRail P-S 7315 Waffle Side Box Car Undecorated Kit. Thank you again for having purchased from us. We hope that the assembly of this model was a pleasure. Please look forward to all the latest ExactRail products and announcements by visiting us online at **www.ExactRail.com**

For any questions or concerns, please contact us at **info@exactrail.com** or by calling at **1-866-945-1701**.

Photo A: Under Frame

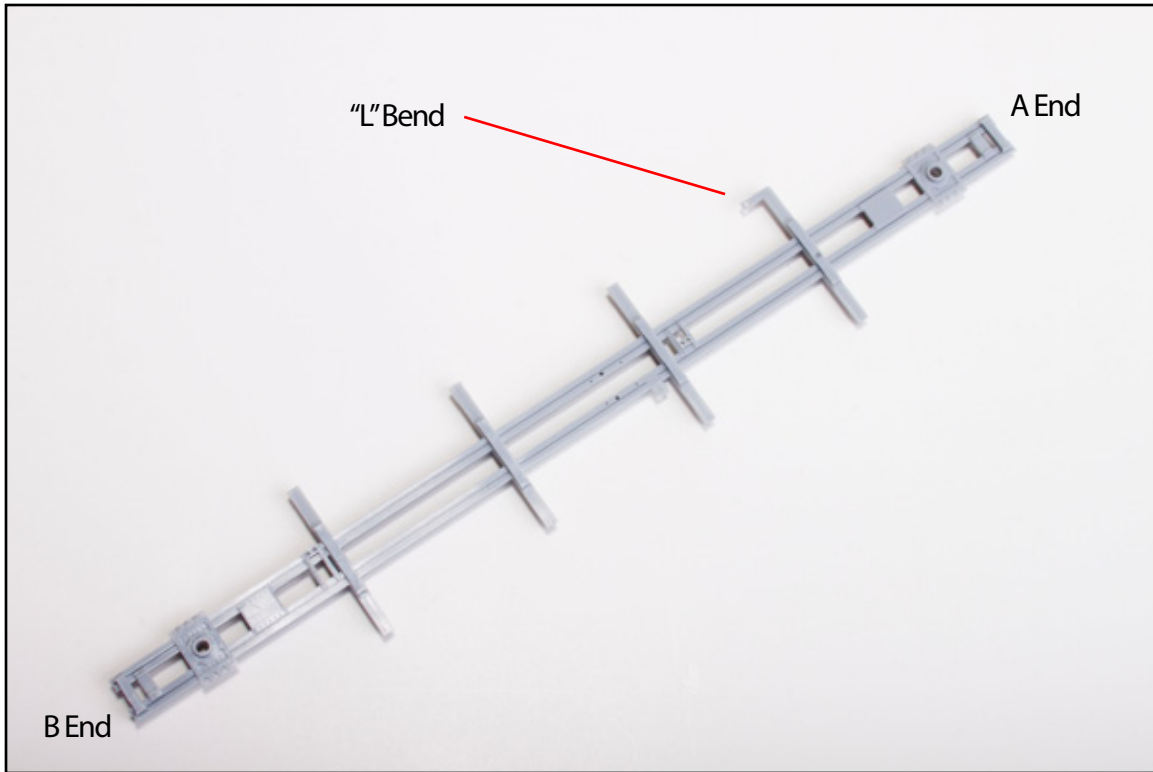


Photo B: Brake Rigging and Under Frame Details Sprue

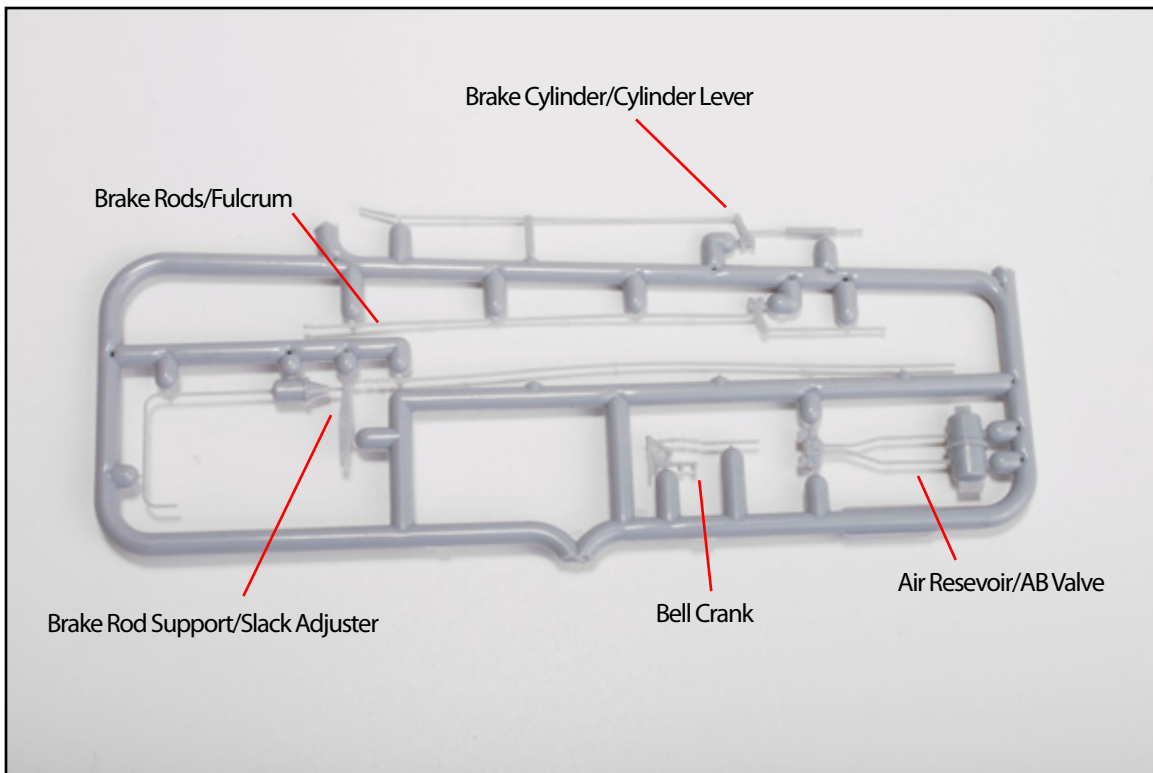


Photo C: Under Body Without Details

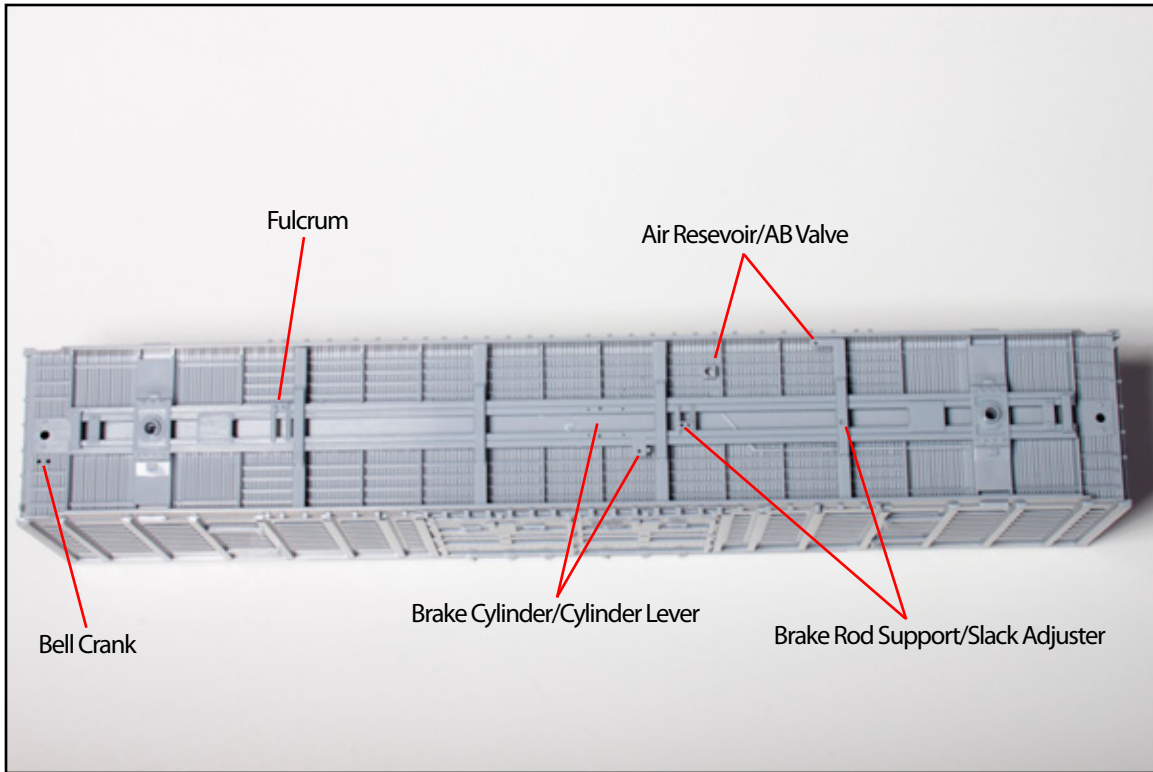


Photo D: Under Body With Details

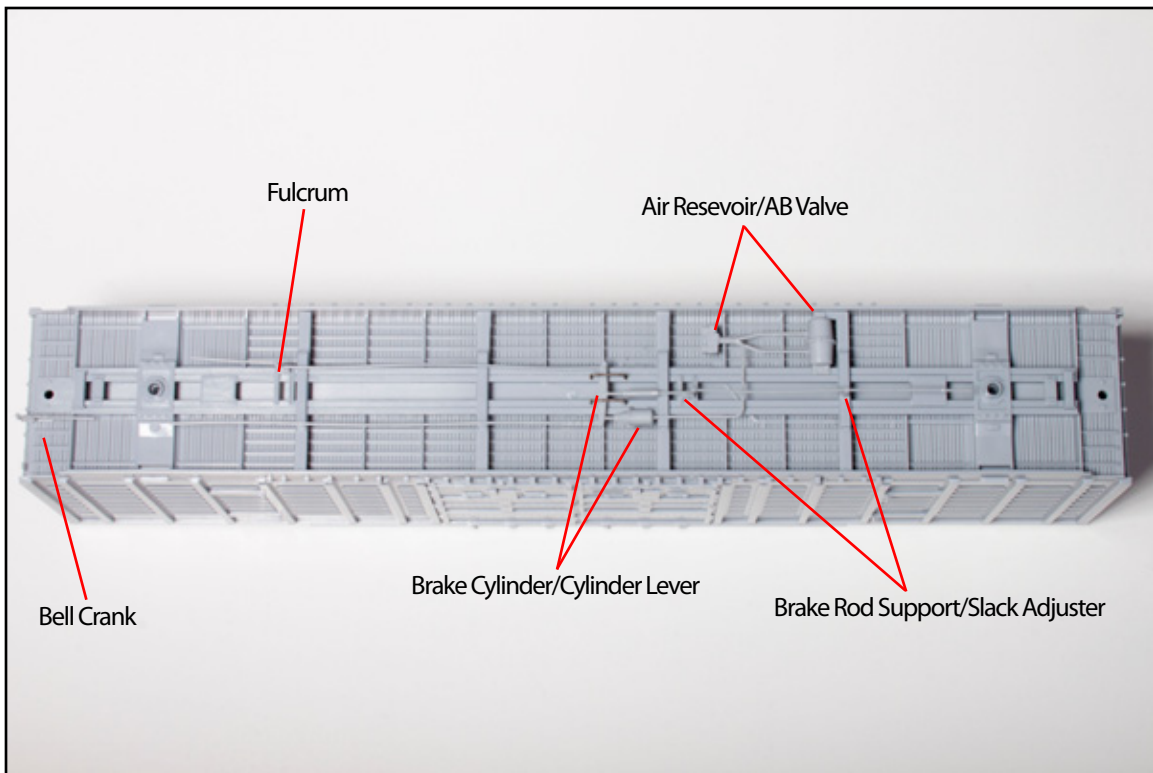


Photo E: Brake Rigging Sprue

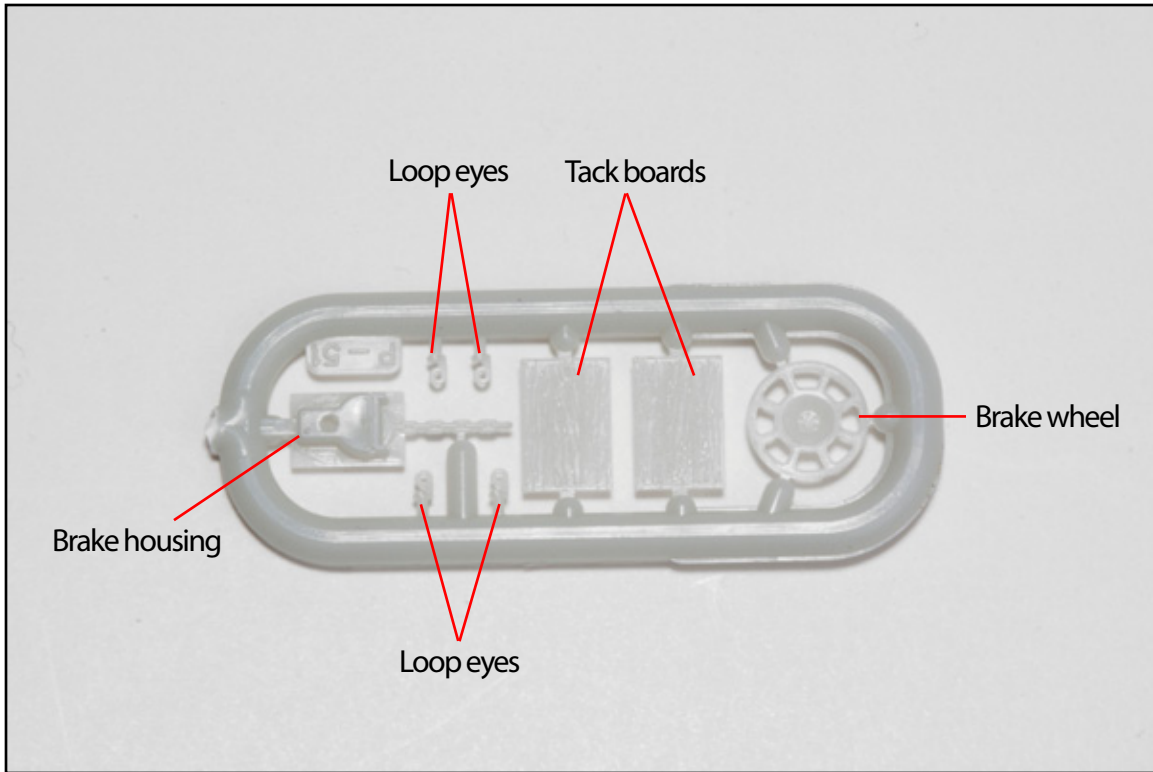


Photo F: Stirrup & Ladder Sprues

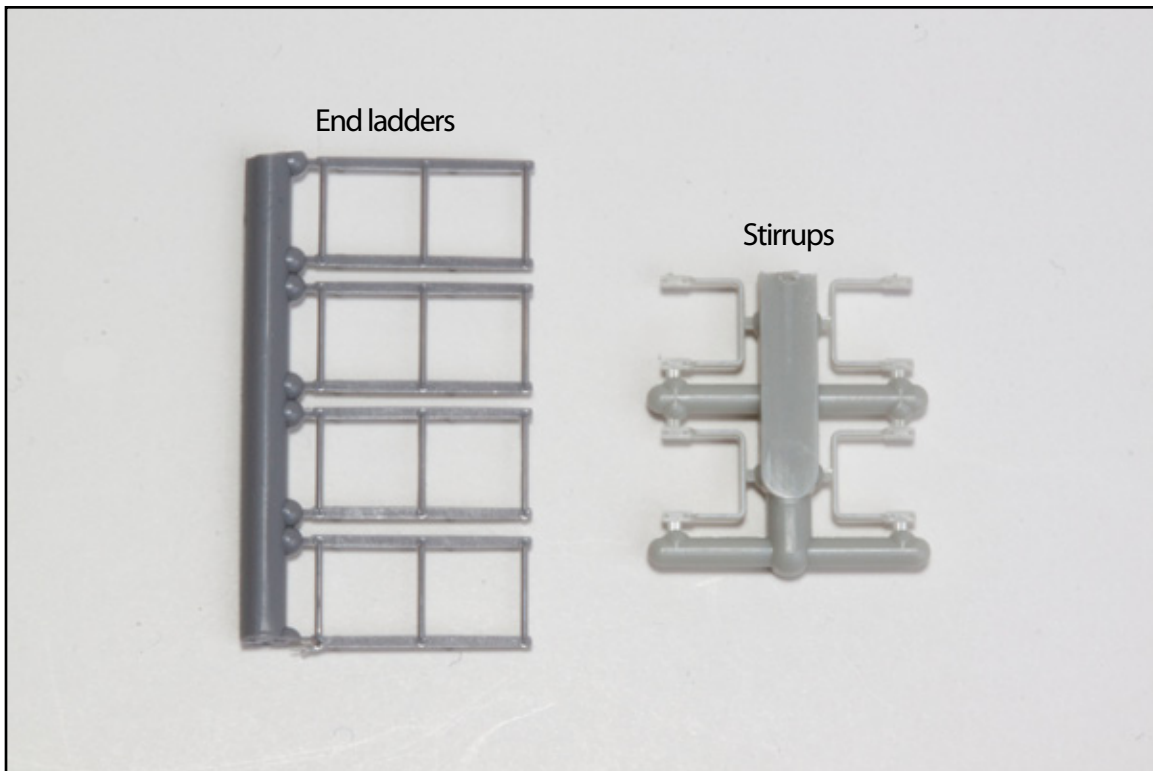


Photo G: A Ends

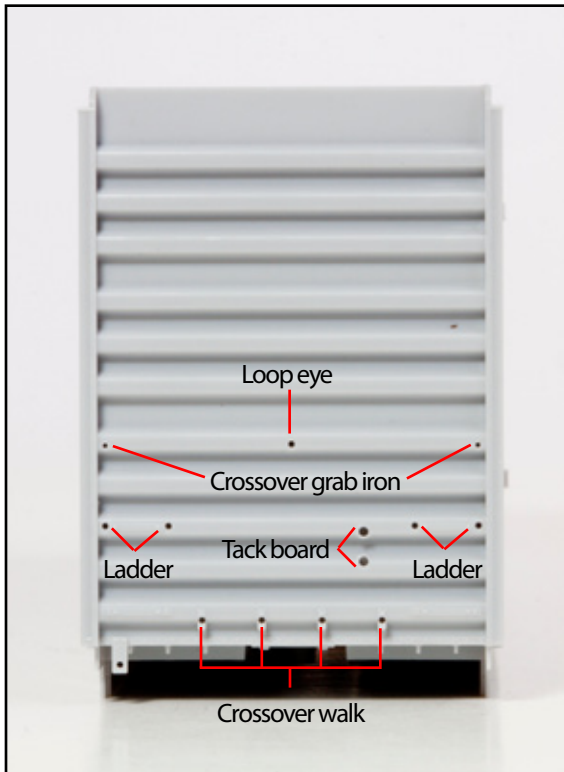


Photo H: B Ends

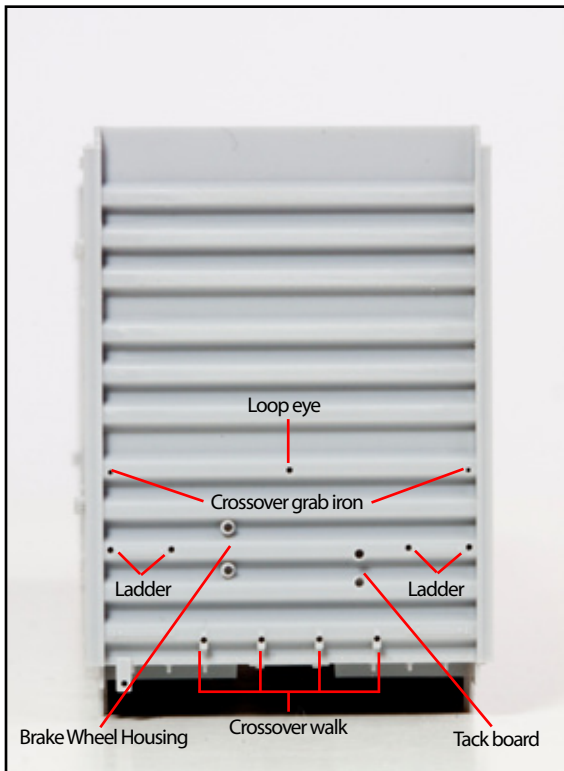


Photo I: Door Track Sprue

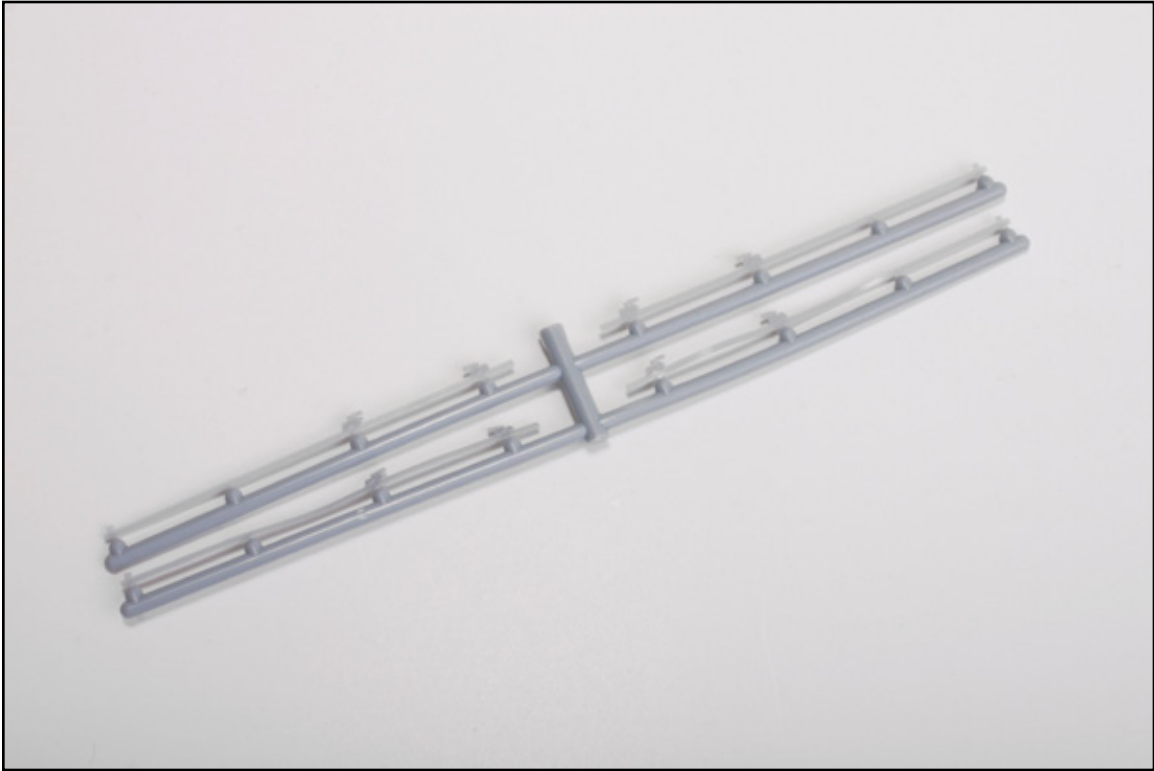


Photo J: Door Bar Sprue

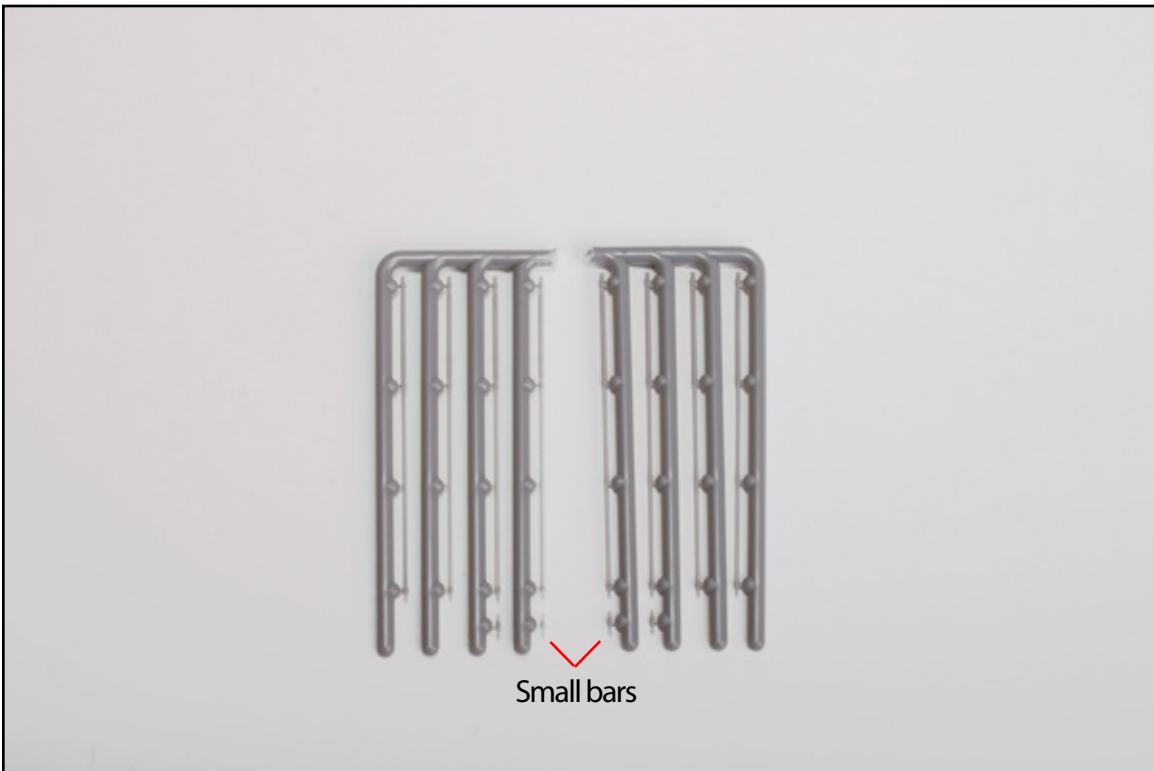


Photo K: Door Part Placement

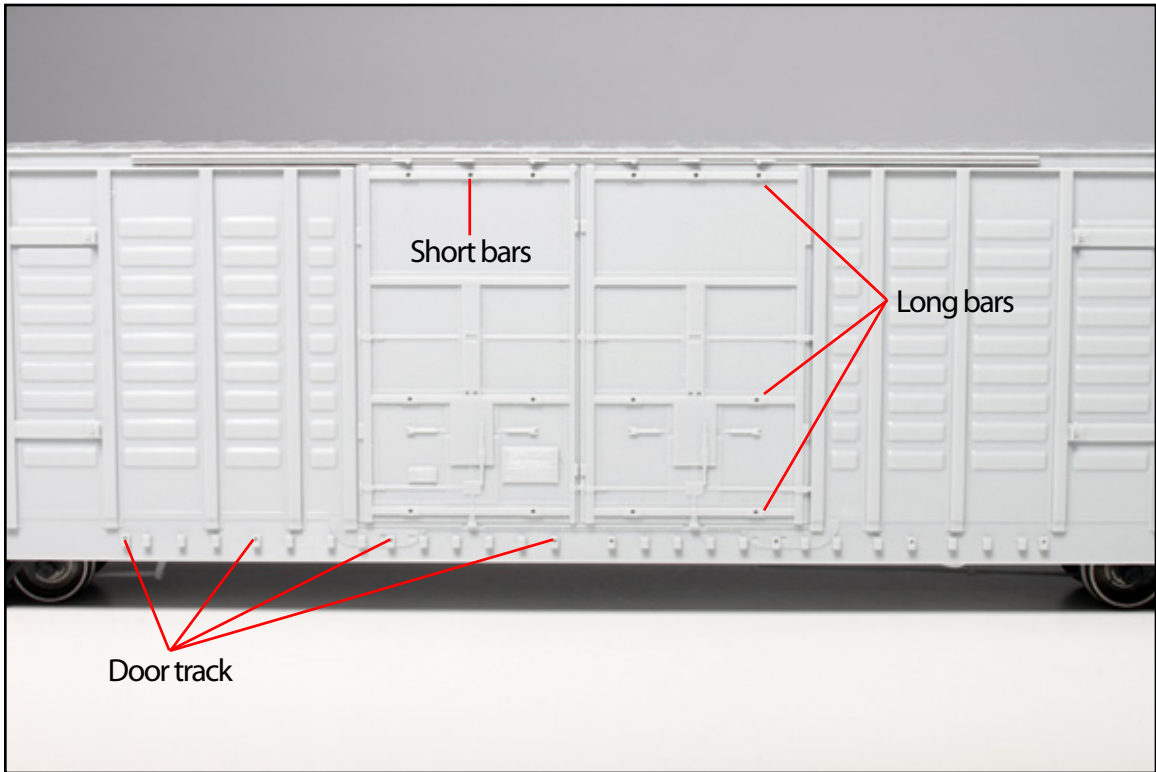


Photo L: Finished Door Details

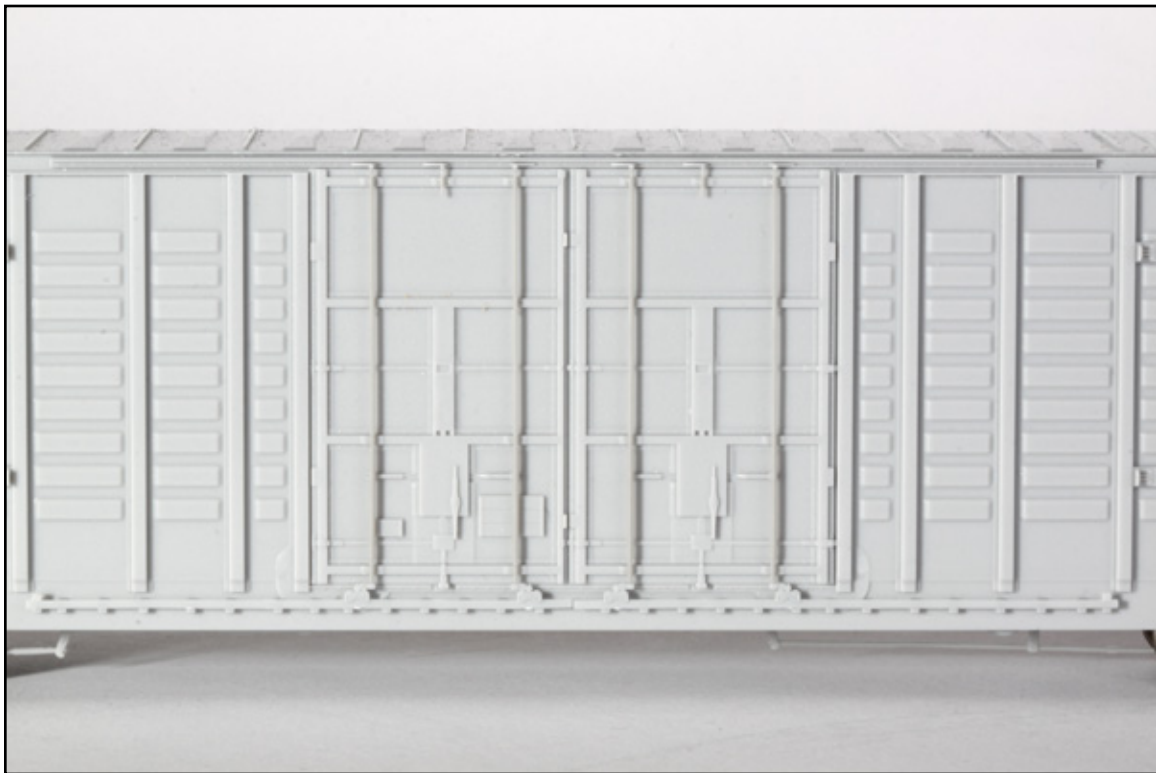


Photo M: Grab Iron & Stirrup Placement

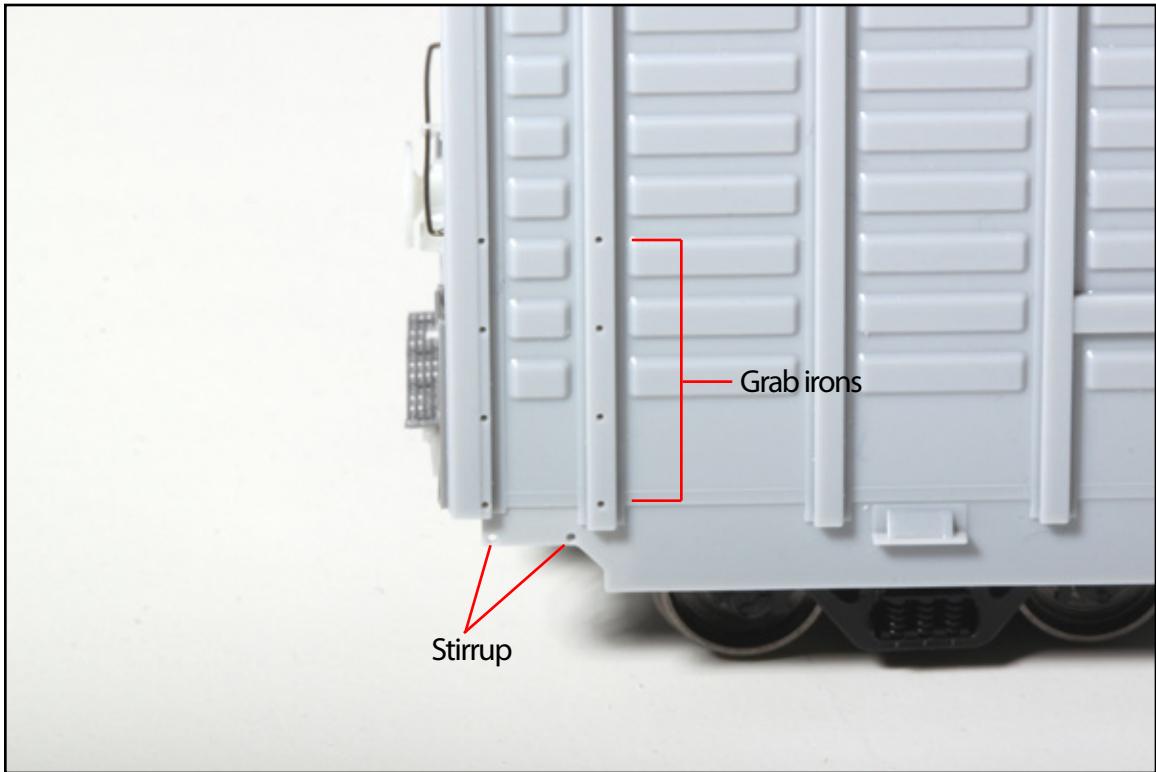


Photo N: Finished Grab Iron & Stirrup Details

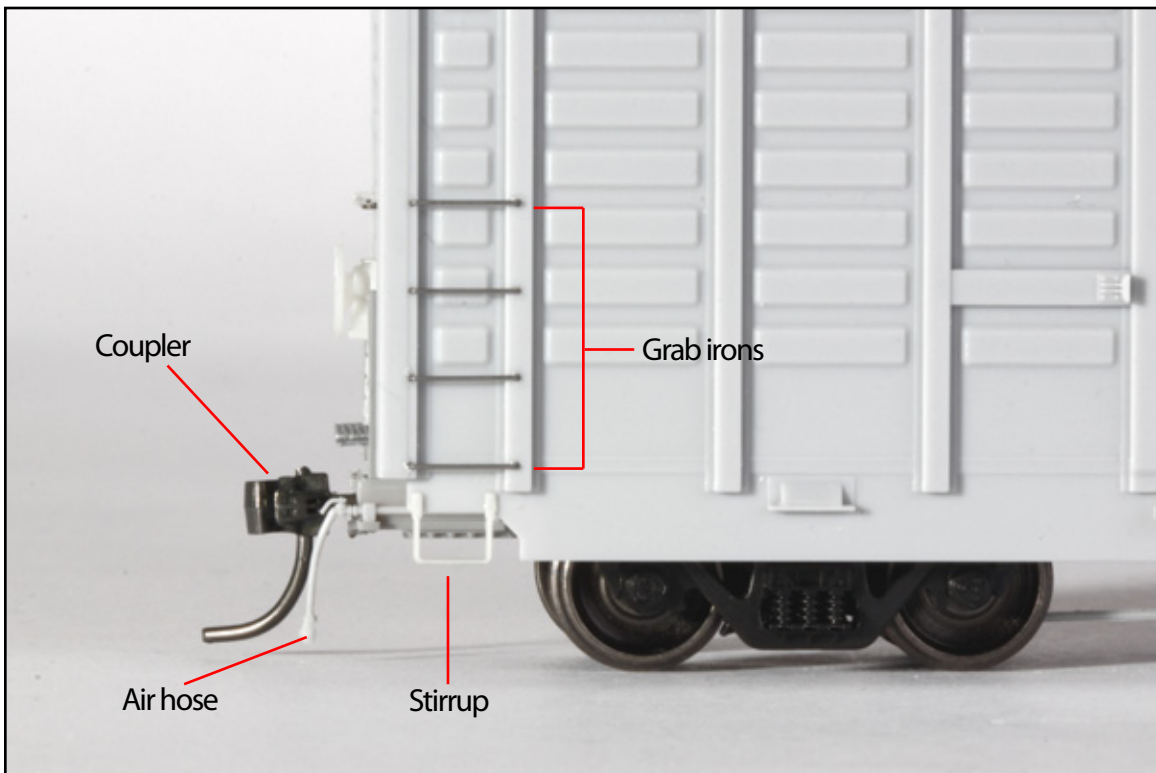
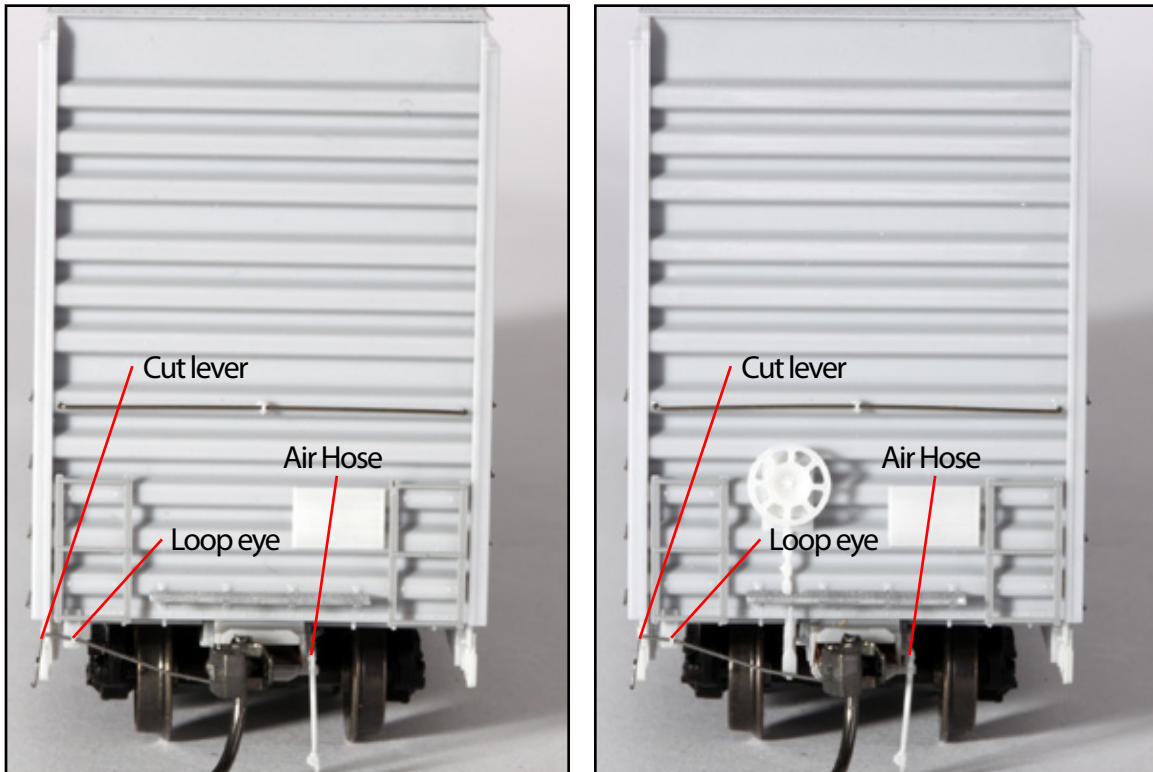


Photo O: Cut Lever & Air Hose Detail



Completed P-S 7315 Waffle Box Car

