

Instructions for the ARHS Baldwin DR-4-4-1500 Babyface A and B units Using Broadway Limited Imports RF-16 Sharknose A and B Units

If you choose to power your ARHS Babyface Baldwin shells using Broadway Limited Imports (BLI) Baldwin RF-16 Sharknose A and B unit chassis, they are different. One each will be required. Both are equipped with sound decoders and speakers.

The Anthracite Railroad Historical Society's Babyface Baldwin A unit shell represents prototype Central Railroad of New Jersey numbers 74 and 75 as built in 1948. The B unit shell represents prototype unit L (or 12L). Over the lifespan of the prototype engines, CNJ shop forces performed numerous visual changes to them. As a result of my being involved with the original research of the CNJ engines, I have compiled a listing of the changes made over the years. I made the following list based on photos from a variety of publications. In the list, I have abbreviated the publications as follows:

Abbreviation	Title	Author
JCSI	The Jersey Central Story	Paul Carlton
JCSII	The Jersey Central Story: A Locomotive History	Paul Carlton
JCD	Jersey Central Diesels	Gerard Bernet
JCLI	Jersey Central Lines in Color, Volume 1	William J. Brennan
JCLII	Jersey Central Lines in Color, Volume 2	William J. Brennan
JCLIII	Jersey Central Lines in Color, Volume 3	Walter Appel
JCLIV	Jersey Central Lines in Color, Volume 4	Mike Bednar
NERS	The Northeast Railroad Scene, Vol. 5 The Jersey Central	Bob Pennisi
MPJC	Motive Power of the Jersey Central	Mike Eagleson
FD&S	Flags Diamonds and Statues	ARHS publication
DFE	Diesels From Eddystone	Gary W. Dolzall Stephen Dolzall
JCWB	Jersey City Westbound	John Henderson
Calendar	Various ones published by Communipaw Commemoratives	
Trains	Trains Magazine	

Turning our attention first to B unit 12L which was built before Nos. 74 and 75, here are the following noted changes:

Date	Applicable Unit	Structural Changes	Paint Scheme	Source
6/1948	12L	As built – shrouded dynamic brake grids, rain gutters over engine room door, intake screen, and sand filler hatch, and only one small intake screen between engine room doors. Rear stirrup step has two rungs. The handrails by the engine room doors are tangerine and blue.	Blue & tangerine with tangerine roof	JCSI, pg. 124

Date	Applicable Unit	Structural Changes	Paint Scheme	Source
2/22/1954	12L	Dynamic brake grid covers slightly extended. Rear stirrup step has three rungs. Four air intake screens (as on ARHS shell) All handrails and grab irons are safety yellow.	Green with yellow stripes	JCLII, pg. 58
3/3/1964	12L	Slightly extended dynamic brake grid covers. Four air intake screens (as on the ARHS shell); no ladder railings	Green with yellow stripes	JCD, pg. 58

CNJ Babyface Baldwins Nos. 74 and 75

Date	Applicable units	Structural Changes	Paint Scheme	Source
3/24/1949	75	Probably as built. No extensions on dynamic brake grid covers. Rear stirrup step has only two rungs instead of three, and there are no vertical grab irons above the stirrup, only a small, horizontal grab. A pair of vertical grab irons next to the nose door and no ladder grab irons on the engineer's side of the nose. The handrails by the nose door are tangerine; handrails by the cab and engine room doors are tangerine and blue.	Blue & tangerine with blue roof	See below
9/19/1949	75	Probably "as built" with short dynamic brake grid covers but with three rung rear stirrup step and two vertical grab irons	Blue & tangerine with blue roof	DFE, pg. 119
Undated	74	No added modifications (same as No. 75 3/24/49)	Blue & tangerine with blue roof	JCSII, pg. 212
6/24/53	74	Bug shield present. No grab irons above windshield. Ladder grab irons on engineer side. Slightly extended dynamic brake grid covers. No ladder railings. All handrails and grab irons are safety yellow.	"fresh" green with stripes	JCLII, pg. 46
9/19/1954	74	Bug shield present. Good view of different arrangement of nose ladder grab irons on engineer side. Slightly extended dynamic brake grid covers. No ladder railings.	Green with stripes	JCLIII, pg. 39
5/8/1955	74	Slightly extended dynamic brake grid covers. Bug shield present, grab irons on top of nose, no ladder railings, three intake screens	Green with stripes	JCD, pg. 54
Undated	75	No ladder railings. Number is visible on lower right corner of rear wall of the unit	Green with stripes	JCLIII, pg. 34

Date	Applicable units	Structural Changes	Paint Scheme	Source
4/22/65	74	Slightly extended dynamic brake grid covers, grab irons on top of nose, grab irons above windshield, ladder railings present, rain gutters NOT extended in front of front sand filler hatch. Lower front air intake is see-through	Solid green	JCD, pg. 54
Undated	74	Same modifications as on 4/22/1965. Top photo shows rain gutter extended in front of sand filler hatch.	Top photo green with stripes. Lower photo solid green	JCSI, pg. 127
Undated	74	All modifications resent	Solid green	JCSII, pg. 97
5/23/1965	75	Same arrangement of modifications as on undated photo of No. 74 on pg. 54 of JCD	Solid green nose, stripes on rest of body	JCLI, pg. 96
12/26/1965	75	Same as 5/23/1965 photo. Grab iron under engineer side number board visible	Solid green nose, stripes on rest of body	JCLI, pg. 96
Undated	75	Full rounded and extended dynamic brake grid covers, grab irons on top of nose and above windshield. Ladder railings, rain gutters extended below sand fill hatches. Three intake screens	Solid green nose, stripes on rest of body	JCD,pg.54
Undated	74	Same modifications as on 4/22/1965	Solid green	JCSI, pg. 127
Undated	75	No ladder railings. Number is visible on lower right corner of rear wall of the unit.	Green with stripes	JCLIII, pg. 34
Undated	74	All modifications present	Solid green	JCSII, pg. 97
Undated	74	No added modifications	Blue & tangerine with blue roof	JCSII, pg. 212
Undated	75	No ladder railings. Bug shield present. Grab irons above windshield and on top of nose.	Green with stripes	calendar
Undated	75	Ladder railings, bug shield, grab irons on engineer side of nose with auxiliary stirrup step below them. Grab irons above windshield	Green with stripes	JCLIV, pg. 21



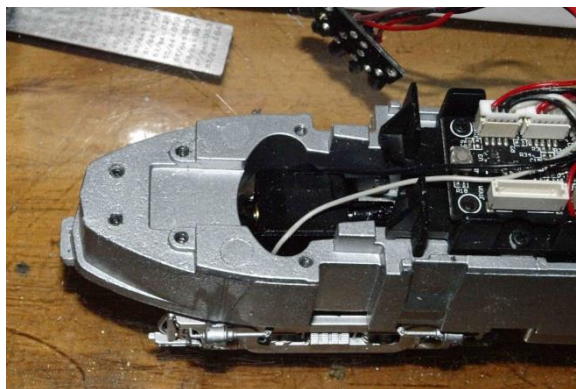
No. 75 near Middlesex, NJ 1949 (photo by Robert Morris collection of Frank Reilly)

PARTS NOT INCLUDED WITH THE KITS

Description	Manufacturer	Mfr Number
WABCO Type E horns	Details West	174
back-up light		162
windshield wipers	Utah Pacific	94
pilot brake hose	Cal-Scale	319
eye bolts	Detail Associates	2206
drop grab irons with NBW castings		2201
.012" dia. brass wire		2504
.015" by .030" flat brass wire		2524
1/32" dia. brass tubing	K&S Precision Metals	815035
.015" dia. brass wire	Tichy Train Group	1102
rivet transfers	Archer Fine Transfers	AR88094
speed recorder	Utah Pacific	61
back-up light lens	M.V. Products	25 or 280
marker light lenses		22

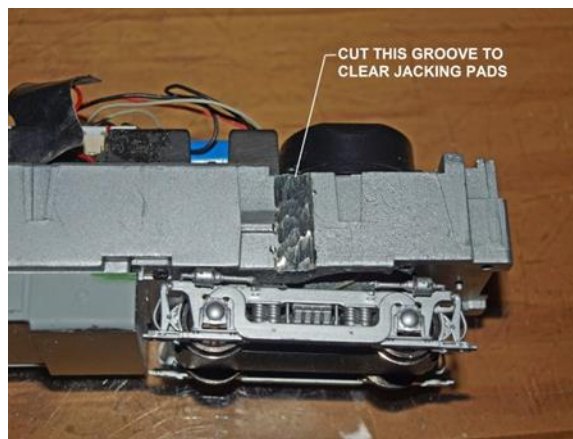
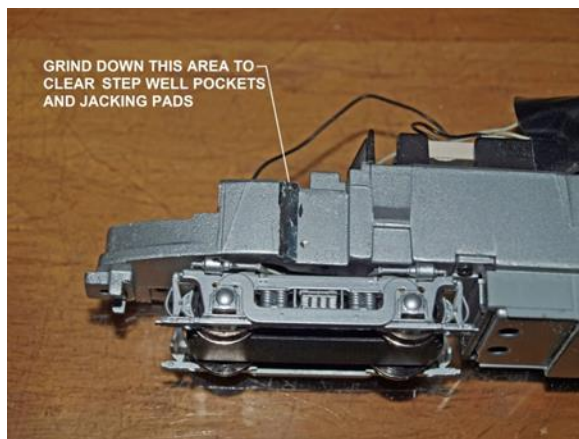
OPENING UP THE BLI ENGINES

You will need to remove the BLI shells from their chassis. There are four latches inside the body; two just behind the front steps and two just behind the rear jacking pads. On the A unit, you will need to remove the front coupler first. Spread their sides and lift the shell from the chassis. Though not absolutely necessary at this time, you may also want to remove the fuel tank casting and the rear coupler mechanism. Once the chassis has been separated from the shell, remove the cab casting and disconnect the front lighting module from the chassis.

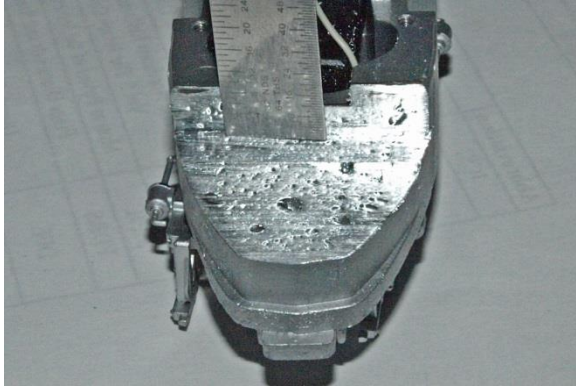


MODIFYING THE BLI A UNIT CHASSIS

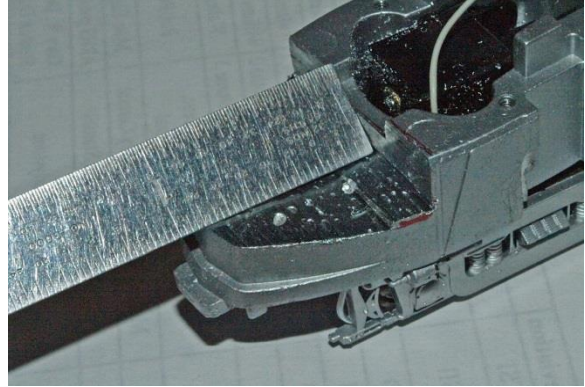
Cover the entire chassis with masking tape so only the two marked areas show. Grind away these areas until there is enough room between the chassis and shell for the step well/front jacking pad and the rear jacking pad.



If you are going to use the BLI front lighting module, you will need to cut away part of the cast frame. I removed the decoder, speaker and the decoder mount. I measured and marked the $\frac{1}{4}$ " cut depth and $\frac{7}{8}$ " cut length. Then I masked everything except the area I needed to cut away. I used a metal cutting blade in my woodworking bandsaw. If you don't have a bandsaw, you'll have to use a hacksaw or razor saw. Take your time cutting; you're going to need it.



1/4" cut depth



7/8" cut length

MODIFYING THE ARHS A UNIT SHELL

Turning to the ARHS A unit shell, you will need to remove all projections that are inside it. These include the four mounting posts, the front step and jacking pad locating blocks, and the molded pockets for the dynamic brake covers. We recommend using a coarse sanding drum in a motor tool to do this work. If there is any flash inside any of the window or other openings, remove that also with a hobby knife and files.

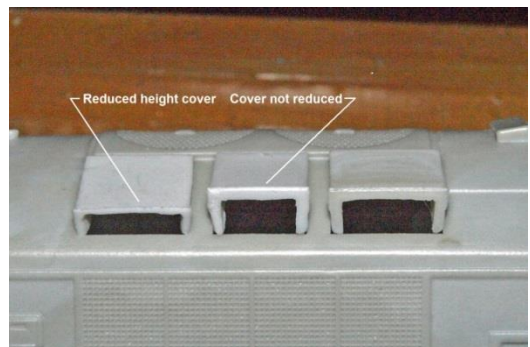
Note that to clear the speaker in the BLI chassis, you need to remove so much material that the dynamic brake grid areas will be open to the inside of the shell. This is actually a plus as it provides an opening for sound to leave the body. Remove any flash from the dynamic brake grid covers and test fit them in their proper locations.



If desired, you can thin the inside of the castings to more closely resemble the prototype parts. Based on photos of CNJ Babyface units as built, the cover openings should be only about nine inches high. Reduce the castings as desired.



Thinned vs. not thinned cover



Reduced height vs. stock height cover

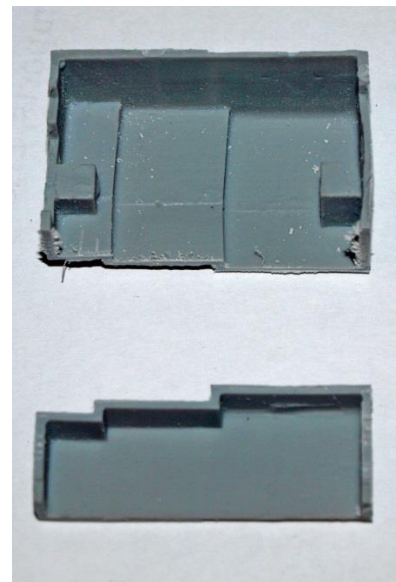
Glue the dynamic brake grid covers in place and then recheck to see that the BLI chassis still fits with its bottom edge flush with the bottom edge of the shell casting. Now is a good time to wash the body and then prime paint it. The Archer rivet decals that you will add do not adhere well to an unpainted surface. Also, why drill a bunch of tiny holes for lift rings, grab irons, etc., paint the body and then have to reopen all those holes to remove the paint inside them?

Moving on to the cab stepwells and jacking pads, mark the lower edge of the shell where they will go. Then place the shell on the chassis and mark the sides of the frame as shown in the following photos.

MODIFYING THE BLI AND ARHS FUEL TANK CASTINGS

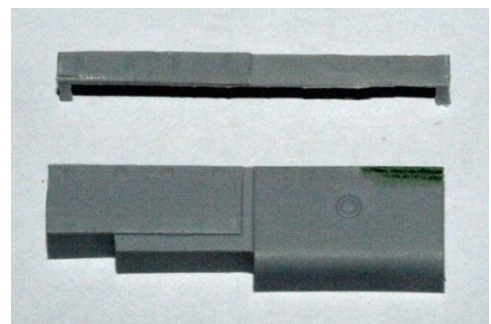
As you probably have already noticed, the BLI Sharknose fuel tank is not the same as the casting that comes with the ARHS shells. Not only are the BLI fuel tank sides different, the tank itself is shorter than the ARHS tank. It is your choice whether you use the BLI fuel tank as is or to modify it using pieces of the ARHS shell. If you choose to rework the fuel tank to look more like the prototype Babyface Baldwin tank, follow these steps.

1. Carefully cut the sides off the ARHS fuel tank even with the steps on the front and back.



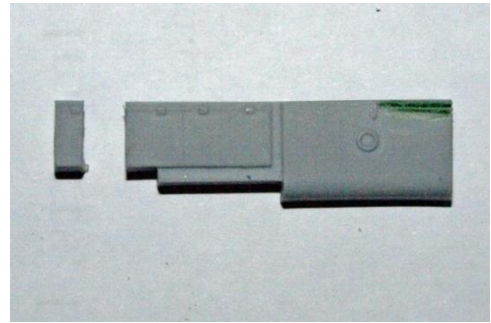
First cut

2. Make a cut even with the top of rear of the tank. If you make a mistake like I did, fill it with putty and sand it smooth.



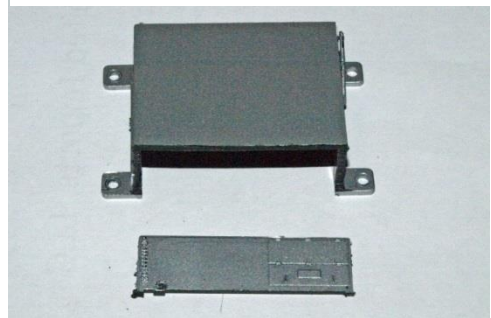
Second cut

3. From the back of the tank measure 1-13/32" and make the third cut.

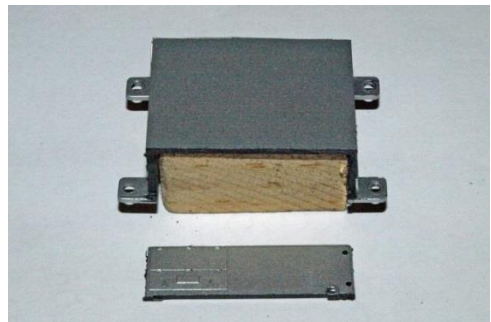


Third cut

4. Moving to the BLI fuel tank remove the separate fuel gages and any other parts that have been applied. Cut one side off even with its inside surface. Do this from the bottom of the tank, taking care not to cut off the mounting tabs. Before cutting the other side off the tank, cut a block of wood to fit inside the tank, so that the second cut is supported well. You don't want to break the tank ends. (I used a bit of double-sided tape to hold the tank to the wood block).

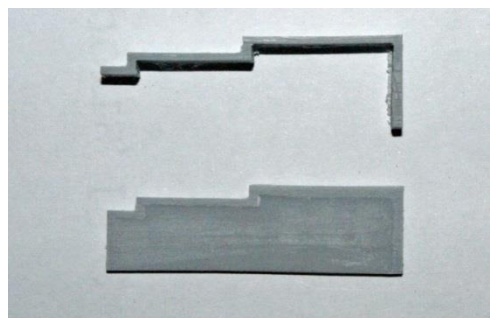


Fourth cut



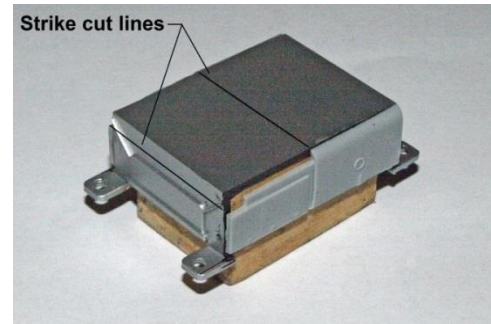
Fifth cut

5. Using the inside surface of the cut off ARHS fuel tank sides, remove the remnants of the tank bottom.



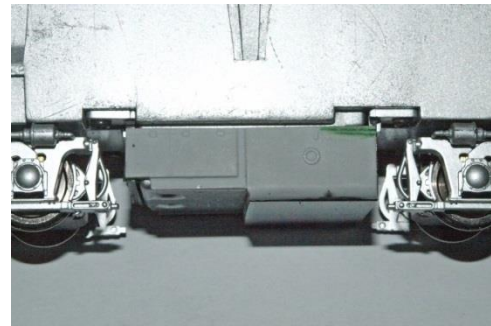
Sixth cut

6. With the modified BLI fuel tank on the chassis, test fit the ARHS fuel tank sides to assure they make contact with the edges of the BLI tank. Remove the tank from the chassis and use cyanoacrylate adhesive (CA) to fasten the ARHS tank sides to the BLI tank. Once the CA is dry, strike lines on the front and bottom of the tank even with the edges of the ARHC tank sides.



Make saw cuts on lines shown

7. Cut off the bottom of the BLI tank along the cut lines. The bottom of the BLI chassis will become the bottom of the modified fuel tank.



The completed fuel tank

DRILL THE HOLES

1. With a No. 79 bit, drill all the holes you need for the grab irons you want to add to your model. Use prototype photographs as a guide, keeping in mind that over their service lives, the Babyface Baldwins had grab irons in various places which at some time or other were removed by the CNJ shop forces, only to be added again in slightly different locations and in different configurations. I'd suggest you not install the grab irons until after painting. Masking for painting will be easier.
2. There was a rain gutter over the A unit engine room door which extended approximately 15 feet to over the rear sand filler hatch. Since the ARHS casting has a rain gutter over the cab side windows and door that measures close to .015" thick, I used .015" wire for the added rain gutter.
3. Using prototype photos as a guide, drill holes with a No. 79 bit for four lift rings. And while you're "up on the roof," drill holes with the No. 79 bit for the roof railing next to the access hatches. The five holes are located 10 scale inches from the engineer's side of the hatch edges. Each hole is to be parallel to the hatch edges and in line with the "joints" between the hatches and the ends of the front and rear hatches.

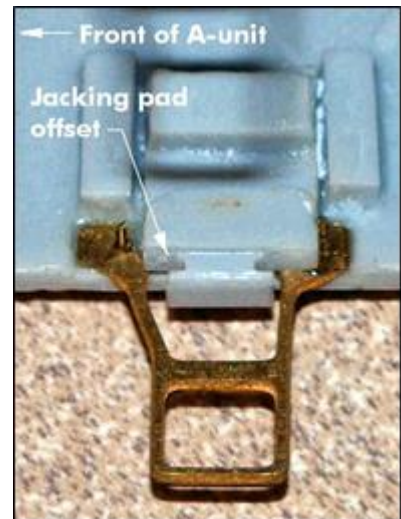


4. With a No. 77 bit, drill holes for the hand rails. There are cab door hand rail “ends” cast into the shell. Drill holes for the hand rails. Careful placement of the holes will allow you to use the illustrated hand rail bending fixture to form those that are located to either side of the A unit cab doors. Don’t forget to drill the top holes for the engine room door hand rails.
5. Two of the “straight” steps on the A unit and four of them on the B unit need holes drilled in them for the hand rails beside the engine room doors. These holes are located in the web between the top step and the vertical members and are drilled with a No. 77 bit.
6. Let’s wait to drill the holes for the A unit’s horns until we’re ready to install them.



BUILDING BITS AND PIECES AND ATTACHING THEM

1. Glue the rear jacking pads in place inside of the A unit shell. The jacking pads on the B unit are all the same, so you can glue them all in place, too.
2. Separate the etched brass steps from their sprue and attach the straight ones with CA. All of the B unit steps are the same, but since you drilled holes in four of them for the engine room door hand rails, make sure you put them all in the right place. The same thing goes for the straight steps on the A unit.
3. The angled steps beneath the A unit cab doors and the front jacking pads are glued in place at the same time. That’s because the step tabs are partially covered by the jacking pads. Note that the A unit front jacking pads are offset a bit. The accompanying photo shows how they are oriented. Also notice that after I attached the steps, I drilled through their tabs for the bottom ends of the hand rails. That helps hold everything together. Be sure that you have the angled side of the steps facing forward.



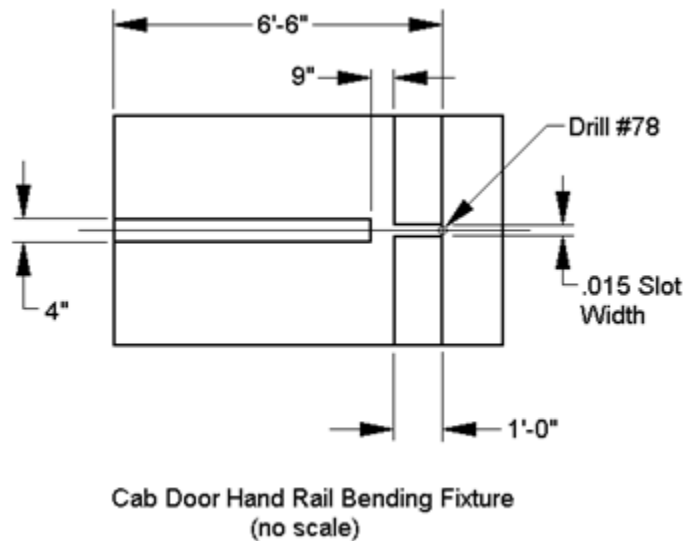
NOTE

Vertical hand rails were thicker than grab irons, so use .015” diameter wire for hand rails and, if desired, use .012” wire for grab irons that you need to fabricate. Depending on the prototype you are patterning your model after, you may be able to use commercially available grab irons.

4. Now that you’ve drilled all the holes for grab irons and lift rings, glue them in place with cyanoacrylate adhesive (CA). Bend those that are not commercially available from .012” diameter wire, and glue them in place, too. Here are a couple of tricks I use to make grab iron bending a bit easier. Using the grab irons on either side of the A unit nose door, bend one end of the wire and insert it into one of the holes adjacent to the door. With needle nose pliers, hold the straight end of the wire so the edge of the pliers jaw is just in

line with the edge of the other hole. While holding the wire in the pliers remove the bent end from the other hole and bend the straight end against the edge of the pliers. Voila – a grab iron that fits in its mounting holes without bowing one way or the other. Oh, and if it does bow, it's no big deal to toss it and make another one. Another way to make uniform grab irons is to use the serrations in the jaws of your needle nose pliers as a guide. First determine which serration is the approximate length of the grab irons you need. Place your wire in that serration, close the pliers, and bend the protruding ends of the wire down. Make as many as you need, and they will all be of uniform length.

5. The A unit cab hand rails have a dog-leg in them, but you'll find them easy to make by first making the simple bending fixture illustrated below. It is constructed from dimensional styrene strips that are glued to a piece of .040" thick styrene sheet. After you have built your bending fixture, follow the accompanying instructions.



Hand Rail Bending Instructions Using the Bending Fixture

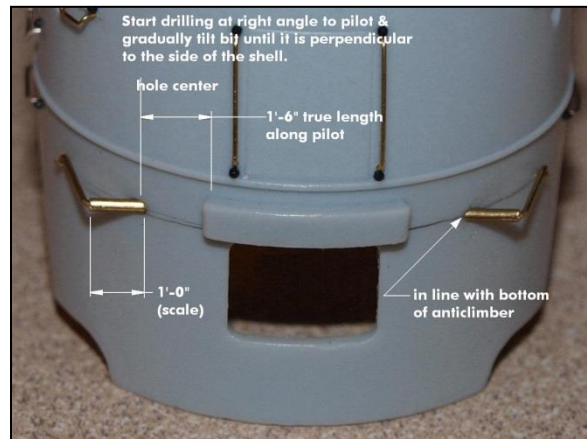
- | | |
|--------|--|
| Step 1 | Cut a sufficient length of straight .015" dia. wire. |
| Step 2 | Bend 1/8" of the end 90 degrees, and place the end in the hole. |
| Step 3 | Bend the wire at the end of the 1'-0" block diagonally until it just clears the long 4-inch-wide piece. Bend in one direction for hand rails on one side of the door; bend the other way for the other side of the door. |
| Step 4 | Bend the wire against the long 4-inch-wide piece. Make sure the long and short offset parts of the wire are parallel to each other. |
| Step 5 | Bend the remaining length of wire down at the edge of the fixture. |
| Step 6 | Cut the bend ends to length and insert into drilled holes. |
6. So where is the bending fixture for the handrails by engine room doors of the A and B units? To be honest, you don't need one. Take a length of .015" diameter wire and bend one end of it 90 degrees. Then with a chain nose pliers (in a pinch, a needle nose pliers will work, too) bend a small curved section right above the 90 degree bent part. For the left side of the engine room doors, the bend goes in one direction; for the other side of the doors, make the bend in the other direction. Once you have made these two bends, insert

the end in one of the holes in the steps below the door. Then using the “Voila tip” I told you about above, bend the other end of the hand rail to match the location of the upper hole.

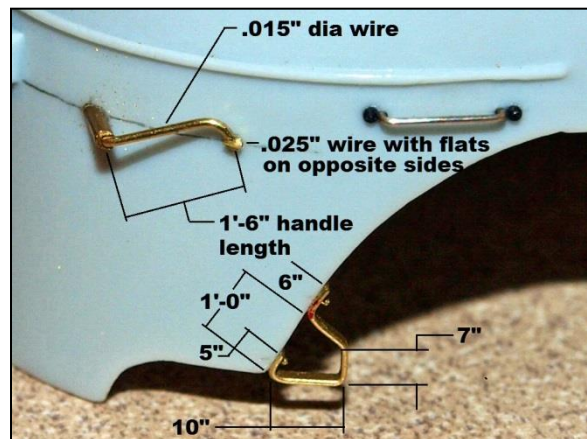
With all of the hand rails, you may have to tweak the bends to get the ends to properly line up with their mounting holes. But remember, sometimes it's easier to throw a hand rail away and make another one than spend a lot of time trying to adjust one that isn't “just right.”



7. While the front uncoupling levers look complicated, they really aren't hard to make. To make them, you will need some K&S Precision Metals 815035 .032" brass tubing and .015 diameter wire. Using the dimensions shown in the accompanying photo, lay out the location of the holes and drill them with a No. 66 bit. Start drilling at a right angle to the pilot surface and gradually tilt the drill bit until it is perpendicular to the side of the model. Insert the tubing and allow one scale foot to protrude from each side. Now make the uncoupling lever from .015" diameter wire to the dimensions shown in the next photo. Note that the overall length of the lever includes the small bend right at the very end. The .025" diameter wire with flats filed on both sides is inserted into a hole on the same center line as the 1/32" tubing. Laterally, it just has to be under the end of the uncoupling lever.



8. In this same photo are the dimensions for the pilot step. Again, while this little detail looks complicated, it isn't all that difficult to make. Bend it to shape from Detail Associates No.2524 .015" by .030" flat brass wire. Before you make any of the bends however, drill a small hole in the lower end with a No. 78 drill bit. Then, after you have bent the step to shape, drill the top hole. Then with the same No. 78 bit, drill holes in the edge of the pilot matching the locations of the holes in the step. Glue in short lengths of .012" diameter wire in the holes in the pilot edge and then trim them to about 1/32" long. Now attach the step and glue it in place with CA. These little steps will have your model railroading buddies sit up and really



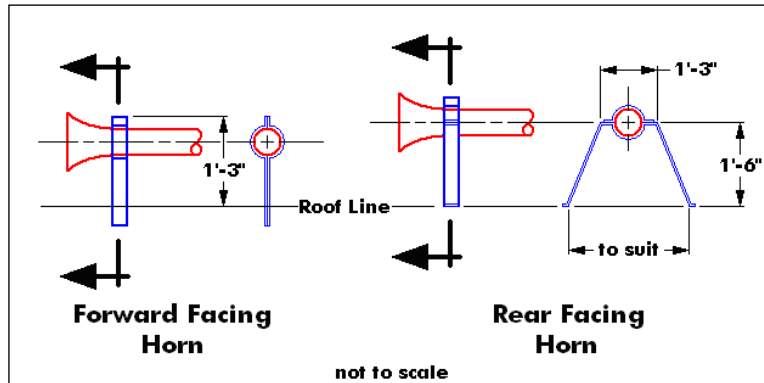
take notice of your Babyface Baldwin. (And you didn't have to spend four figures to get one of Overland's brass Babyfaces.)

9. I almost forgot – add a brake hose to the pilot of the A unit. A Cal-Scale No 319 is appropriate. Also add a Utah Pacific speed recorder to the right front bearing cap of the lead truck.



HORN INSTALLATION

All CNJ Babyface Baldwins with the stepped roof line had the rear facing horn mounted higher than the forward facing one. Those used by the CNJ were WABCO Type E2 horns. Details West makes a good example of these with their No. 174 casting. These horns do not have a front support, so you'll have to fabricate them for yourself. For the forward facing horn, take a bit of Detail Associates No. 2524 .015" by .030" flat brass wire, anneal it in a flame (a match or Butane lighter will do), and bend it around the horn just behind the flare. Take a look at the illustration below.



Use CA to hold everything together. Oh by the way, I cut the mounting post off the horn casting and replaced it with some .032" diameter brass wire. In that way, I could cut it longer than needed and trim it off from the inside of the body when everything else was in place. It really is easier to do than it sounds, but as I've always said, if you're not satisfied with your first try, toss the part and try again. You shouldn't have any trouble getting your horns to look like this.



LADDER RAILINGS

By the early 1960s, A units 74 and 75 had ladder railings. No. 74 had railings with 14 posts per side – 11 in front of the dynamic brake grid covers and three behind them. No. 75 had only 9 in front and three in back. (I model 1953, so I didn't add them to my models.) And as far as I can tell, B unit 12L never had ladder railings. I guess some of you would like to have an idea about how to make them for your models. Well, you can drill holes in a bunch of pieces of Detail Associates .015" by .030" flat brass wire and thread .015" diameter wire through them. Another possibility – and I say "possibility" because you will have to check their suitability – are Detail Associates No.1104 roof and hood side lifting tabs.

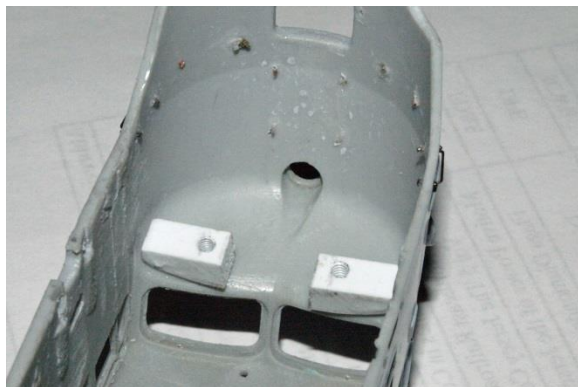
ADDING THE BUG DEFLECTOR

Adding the bug deflector above the headlight on the A unit is so easy, I wonder why I saved it for last. All you need to do is to use a thin, fine tooth saw to cut a small slot four scale inches back from the front edge of the headlight housing and cut the slot to be one scale foot long. I used a Micro-Mark No. 14346 .010" x 40 tooth per inch saw blade in an X-ACTO™ No. 1 handle. Be careful to keep your cut level. Then glue in a one scale foot length of Evergreen 1 by 4 strip styrene in place. After painting and decaling your model, glue a 4" by 24" piece of clear styrene to it.

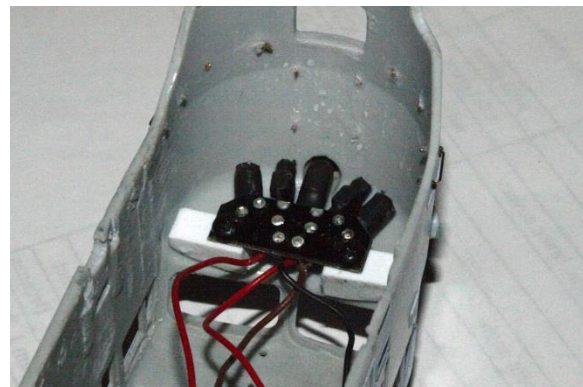


FRONT LIGHTING

I cut pieces of Evergreen .188" square styrene and contoured one side to match the underside of the Babyface nose. Then I located, drilled and tapped two holes for shortened Kadee plastic 2-56 screws to mount the lighting module **upside down** from its original orientation on the BLI chassis.



Lighting module mounts

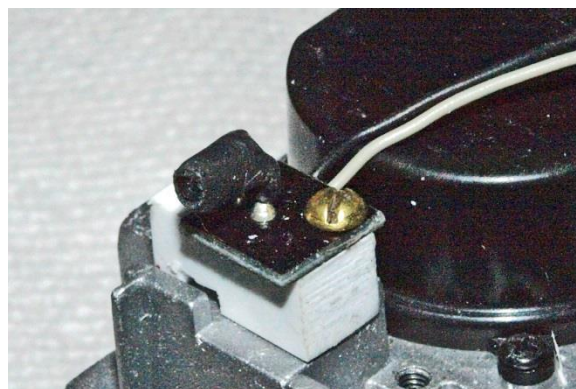
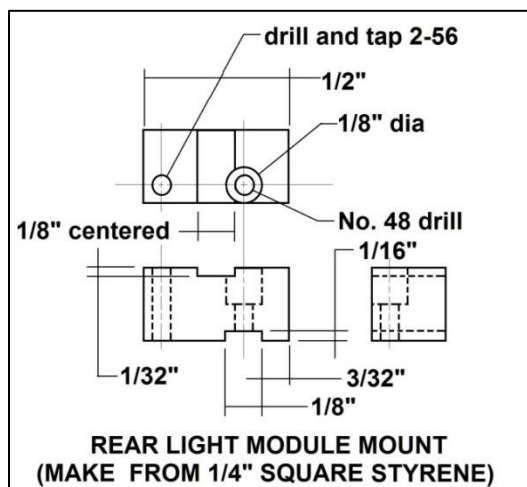


BLI lighting module mounted upside down

If you feel up to it, you can open the Babyface numberboards relocate the LEDs that light the Sharknose numberboards. You might try moving the marker light LEDs as well. For me, that was too much like work.

REAR LIGHTING

If you bought a Pennsy RF-16 A unit, the rear lighting module is mounted high on the rear of the chassis. Models of other railroad's Sharknose engines have a different module mounted low and on the engineer's side. (Mine was a D&H unit with the low mounting.) The high mount should be easily adaptable to the location of the Babyface rear light by reducing the height of the LED by about 1/16". For a low mount lighting module, fabricate a mount as shown below. Use one of the extra BLI screws to mount the block and a 2-56 screw to hold the light module in place.



Rear light module and styrene mount

Centered above each end door and 13/64" below the edge of the roof, drill a No. 55 diameter hole for a Details West No. 162 Pyle back-up light. Before gluing the light casting in place, file off the square "plate" that it sits on so only the light housing itself is on your engine's end wall. By the way, the CNJ had lights on both ends of their Babyface B units. If you decide to use MV lenses in the back-up lights, use either a No. 25 (.078" dia.) or a No. 280 (.082" dia.). If you want to use the lens from the BLI back-up light, slightly countersink the Details West casting with a No. 42 drill bit and then drill all the way through with a No. 47 bit. Don't insert the lens until after painting.



MODIFYING THE ARHS B UNIT SHELL

You are going to have to grind out all the interior projections inside the B unit shell as you did with the A unit shell and reduce the height of the dynamic brake grid covers. (See Page 6 of these instructions.) Follow also the instructions for modifying the ARHS and BLI fuel tanks. Take note that as built B unit 12-L also had two rung stirrup steps on the B end, no vertical hand holds, just a horizontal grab iron, and rain gutters over the engine room door which extended that to over the rear sand filler hatch just like the A unit.

On the roof an access panel is missing. Make it from .010 styrene sheet measuring 11/16" long by 13/16" wide. Again using prototype photos as a guide, drill holes with a No. 79 bit for four lift rings. And while you're "up on the roof," drill holes with the No. 79 bit for the roof railing

next to the access hatches. The five holes are located 10 scale inches from the engineer's side of the hatch edges. Each hole is to be parallel to the hatch edges and in line with the "joints" between the hatches and the ends of the front and rear hatches.

With a No. 77 bit, drill holes for the hand rails. Don't forget to drill the top holes for the engine room door hand rails. Four of the "straight" stirrup steps need holes drilled in them for the hand rails beside the engine room doors. These holes are located in the web between the top step and the vertical members and are drilled with a No. 77 bit.

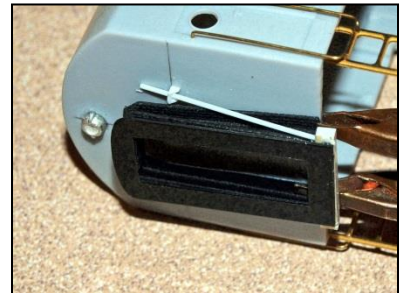


Add access panel to the top of the B unit.

REAR WALL DETAILING

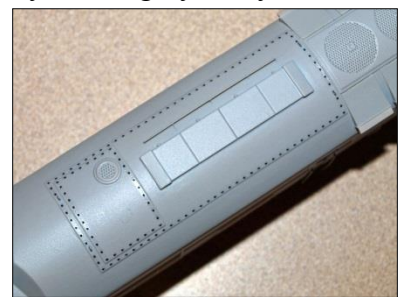
We're just about at the end of the construction phase of our project – the detailing of the rear wall of the A unit...and both ends of the B unit. The prototype Babyface ends were not quite so devoid of details as our models, but then, there's a limit to what can be cast into resin at reasonable cost. Besides, a lot of modelers are content to concentrate on the readily-seen parts of a model – front, sides, and top.

Included in the kit are cast resin diaphragms, and there is nothing wrong with them, but I had some Walther's No. 933-429 folded paper diaphragms among my stock of parts and decided to use them because they were compressible and extended beyond the end walls farther than the parts in the kit. Several other types of diaphragms are available, so the choice is yours. I would only suggest that you do not attach them until after you have painted your models.



THE HOME STRETCH

Now that you've built and detailed your models, it's time to prepare them for painting. You know the drill: Wash them in warm, soapy water, and let them dry thoroughly. If you're like me, you noticed almost as soon as you took the shells out of their boxes that there are no bolt heads along the edges of the access panels on the roofs. Since you've already gone to the trouble of adding all of those nice details, you can't just leave off the bolt heads. Now, before you think I'm one of those rivet counters who shaves rivets off old Athearn models and glues them one at a time to another model, I am and am not. Yes, I'm a rivet counter, but I haven't completely gone over the edge because I use Archer Fine Transfers rivet decals. If you've never tried them, you're going to love them. Go to their web site (<http://www.archertransfers.com/>) and peruse their offerings. The one thing you can't do with the decals is apply them to bare plastic; they don't stick, and the fine folks from Archer tell you



that right up front on their instruction sheets. So shoot a coat of primer on your models, and then add your rivet decals. (And yes, I know the prototype access panels were attached with bolts and not rivets, but in HO scale there isn't much visual difference between a round dot and a hexagonal one. On the B unit, don't forget to add rivet decals all around the access panel you added in a previous step.

ATTACHING THE SHELLS TO THE BLI CHASSIS

I added latches to the ARHS shells to hold them firmly to the BLI chassis. If you decide to use flat head machine screws, drill clearance holes low on the flat ends of the shells with a slight countersink. Then, using these holes as a guide, drill and tap holes in the chassis for the machine screws, making sure the bodies sit level on their chassis.



PAINT

For CNJ tangerine color, use Tru-Color No. TCP-295 Tangerine. To me it seems a bit dark so I lightened it with a bit of Tru-Color No. TCP-311 Safety Yellow. For the blue paint, use Tru-Color TCP-072 C&O/B&O Blue. The fuel tank should also be blue, but the trucks get painted black. The tangerine color continues on the ends of the A and B units; above the tangerine is blue in line with the paint separation on the roof.

If you're going to paint your engines in the CNJ "toothpaste" scheme of green with yellow stripes, the paint to use is Tru-Color No. TCP-233 CNJ Deep Sea Green. The paint match for the stripes is Tru-Color No. TCP-089 Lt. Imitation Gold. For the late austerity paint scheme of solid green, use Tru-Color No. TCP-232 CNJ Central New Jersey Austerity Green.

For decals, I suggest you use a set of Raritan Bay Hobbies CNJ-25 decals. You'll be able to decorate an A and a B unit with one set. The Statue of Liberty herald under the cab windows was originally gold leaf as were the numbers and road name on the B unit. It quickly faded to almost invisibility, so the CNJ shop forces repainted everything that was gold leaf in imitation gold (Dulux).

If you are painting your models in the green paint scheme – with or without stripes, you'll need the CNJ-26 decal set. This set, also good for an AB set, includes straight decal stripes. With patience and decal setting solution, you can get them to bend around the nose of the A unit. Just take your time and as they soften, nudge the stripes in place with a paint brush. Of course, if you don't want to be bothered with making the straight stripes curve down the nose of your model, you can always stripe just the sides of the A unit and give it number 75. In later years, the prototype No. 75 was damaged in a wreck, and the CNJ shop forces, after making repairs, just repainted the nose green and left off the stripes. As always, use prototype photos as a guide.

The CNJ attached painted sheet metal letters to the screens on their B units. When you add the words **JERSEY CENTRAL LINES**, letters that fall on air intake screens can be first applied to .005" styrene sheet painted the appropriate color. Then carefully cut them out and glue them to

the screens. An alternative would be to cut the letters from the decal sheet, paint the edge of the decal backing sheet the appropriate color, and then glue them directly to the screens.

Once you have completed decaling your models, clean off any decal setting residue, and give them an overall spray of Testor's Dullcote®. Add all the glazing, windshield wipers and vertical grab irons by the doors. Attach a short length of thin wire insulation to the speed recorder drive and route it up out of the way. Weather your engines as you see fit and then sit back and enjoy them.

