Anthracite Railroads Historical Society, Inc.

Dynamic brake conversion kit for Lehigh Valley EMD SW8 "Pup"

Designed to be used with the Life-Like Proto 2000 SW8

This kit contains the following components:

1. **Undecorated Life-Like Proto 2000 SW8**
2. **ARHS dynamic brake conversion kit (located under the Styrofoam tray)**
    - Replacement hood section with dynamic brake details
    - 36 inch fan housing
    - Crossover step box for rear platform
    - Air horn mounting bracket (very small and easy to lose if detached from resin flash)
    - Patch plate for cab front

You will need the following tools and supplies to complete this conversion:

- Hobby knife with #11 straight blade
- CA glue
- CA debonder
- 400 grit sandpaper
- A flat surface for aligning the hood parts, such as a small piece of plate glass or a block of wood with a completely flat surface.
- Suitable HO scale air horn: Nathan M3 (Detail Associates #1601) was used on most "pups," but others were also used.

Preparing the resin parts

Remove the flashing from all of the resin kit parts. To remove the flashing from the parts that are cast with a flat back, lightly rub them over a piece of 400 grit sandpaper fastened to a flat surface until the flashing falls off. Make sure that you rub the parts evenly so that they aren't thicker on one side than the other.

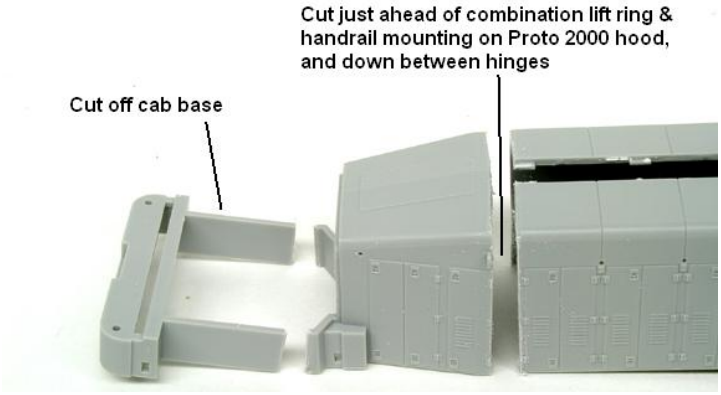
Preparing the Life-Like SW8

Even on this undecorated model, some parts are assembled by Life-Like using cyanoacrylate (CA) cement. CA Debonder will loosen these joints. These instructions will assume that certain parts have been factory assembled. It will be obvious if they have not, so you can move to the next step.

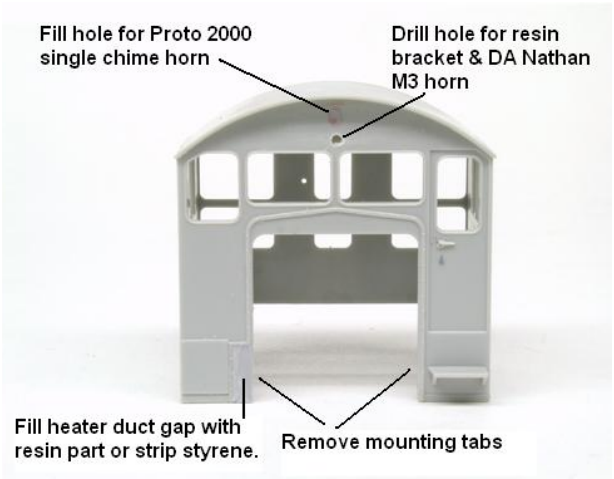
Assembly

1. Look inside the shell, and see where the deck/walkway assembly and cab/hood assemblies are glued together. Apply CA debonder on these areas. Use it sparingly, and from the inside. Set aside the deck/walkway.

2. Remove the cab from the hood. This may or may not be glued in place. If it is glued, use debonder as before to loosen the glue joins, then remove and set aside the cab.
3. Use CA debonder to remove the hood top section that contains the exhaust stack.
4. Cut the sub-frame for the cab and battery box from the rear of the hood and set aside.
5. Cut the Life-Like hood at the rear of the hood sides, just where the taper begins. The forward edge of the handrail mount/lift ring is a good guide, and the cut should continue down through the hinges of the hood doors that continue onto the tapered section of the hood. Be careful not to damage the rear hinges of the rearmost door on the straight section of the hood.



6. Remove about 1/3 of the material from the rear of the rearmost tabs that supported the exhaust stack section, since you may need to do some filing in this area later, and it is easier to remove part of these tabs now to allow working room.
7. Use a file or sandpaper to square the rear of the Life-Like hood section, and remove material as needed for a good fit.
8. Test fit the resin hood part to the Life Like hood. Scraping the inside edges of the Life Like hood to remove any roughness will help to get a perfect flush fit.
9. Test fit the hood parts and battery box part on a flat surface and test for straightness. Do no cement yet!
10. Test for length compared to the original Life-Like hood section by either or both of these methods:
    a. With the hood parts assembled on a flat surface, measure with calipers from the lip of the radiator on front of the hood to the mounting flange at the rear that fits into the cab front. This should be 3.76” to match the length of the original Life-Like hood.
    b. If you don’t have calipers or another precise means of measuring, check by temporarily assembling the hood and cab assemblies on the walkway. If necessary, hold the two parts of the hood together with tape or Elmer’s glue (which can be soaked off later). Clip the cab and battery box onto the sub-frame that was removed in step 4, and place them on the walkway so that the mounting tab under the rear of the battery box is engaged in the notch at the rear of the walkway. Attach the hood assembly to the walkway by gently squeezing the hood sides above the two mounting tabs at the front and clipping it in place. Check the fit where the rear of the hood meets the front of the cab.
11. Remove additional material from the rear of the Life-Like hood section if necessary, and repeat steps 9 and 10.
12. When you are satisfied with the fit, glue the resin hood part to the Life-Like hood with CA.
13. Fill the seam between the resin replacement part and the Life-Like hood and smooth the joint. This is perhaps the trickiest part of this project, since you are working very close to the hinge detail on the side of the hood. Here are several options:
    a. Gunze Sangyo “Mr. Surfacer” 500 or 1000, liquid putties used by aircraft and military modelers, can be painted into this joint with a fine pointed brush and smoothed with a cotton swab dipped in denatured alcohol. This avoids any damage to the nearby detail.
    b. Use Elmers Glue or a vinyl spackling compound to fill the joint, and smooth with a cotton swab dipped in water.
    c. Fill the joint with a fine grain putty such as Squadron white, using a small spatula or knife blade. With a narrow sanding stick or wet/dry sandpaper glued to the edge of a piece of 0.080” styrene strip or something similar, smooth the puttied area, being careful not to damage the hinge detail.
14. Test fit the exhaust stack section into the assembled hood. File the resin section as necessary to extend the slot for the exhaust stack section, removing just a little material at a time. We did not cast an extension of the hood-top slot into the resin section because it is much easier to remove a little material for a good fit than to fill in this area after assembly. Since there is rivet detail on the exhaust stack section, it is best to avoid filling and sanding in this area.



15. File or cut off the small mounting tab inside the heater duct cutout on the front wall of the cab. This tab fits into the hole on the cab base that you removed in the previous step. It is no longer needed, and would interfere with the installation of the resin parts.
16. Glue the small resin filler piece in the rectangular hole in the front of the cab and set aside. You could also use a short piece of 0.040" x 0.080" strip styrene to fill this gap.
17. If you are going to install a Nathan M3 air horn in the most common position, using the mounting bracket provided in the conversion kit, plug the horn mounting hole on the front of the P2K cab and use a #57 (0.043") drill to make a new mounting hole 6 scale inches above the top of the windows. This will locate the horns just below the cab roofline. A few "Pups" had their Nathan M3's mounted higher, so that the horns were above the roofline, and a few used single chime horns, so the horn supplied with the kit would be appropriate for them. You may want to leave the actual horn installation for later, since this part could be easily damaged while handling.
18. Depending on your preferences, you may want to paint the subassemblies before completing the next few steps. The rear of the dynamic brake section will be difficult to spray once assembled to the cab.
19. Glue the modified hood to the Life Like deck/walkway assembly. Leave an unglued area above the mounting tabs at the forward end of the hood sides, so you will be able to squeeze the hood sides to remove the body from the chassis in the future.
20. Plug the mounting holes for the step on the rear of the battery box with styrene rod or putty, and sand smooth. The step will not be used, since the "Pups" had a step box in this position, with the rear drop step attached to it.
21. If you are installing the cab interior and/or a bulb or LED for the rear headlight, do it now.
22. Place the cab/battery box sub-frame onto the Life Like deck. Place the cab and battery box in position, then apply glue to secure the battery box/cab to the walkway.
23. Clip the cab/battery box base to the bottom of the cab and slide the battery box into place. Do not glue in place unless you do not expect to open the cab again.
24. Clip the hood/cab assembly to the walkway. If you want to glue them to the walkway for greater strength, leave an unglued area around the two front mounting clips so that they can be squeezed in to remove the body from the chassis in the future.
25. Carefully scrape the raised tread pattern from the rear walkway where the raised box leading to the drop step will fit. Use the drop step to determine the width of the section of tread to remove.
26. Glue the rear drop step riser in place with styrene cement.
27. Sand the bottom of the resin step box so it is the same height as the drop step, and sand the front face so that it fits snugly between the drop step and the battery box. The step box was made slightly oversize so that it could also be used with a Detail Associates #1401 drop step, which is taller but narrower. If you are using the DA drop step, you will also have to sand the step box down so it is the same width as the DA drop step riser, and flatten the face of the DA drop step to fit against the step box.
28. Glue the step box to the walkway and drop step riser with CA. If you did not glue the cab assembly to the walkway, make sure not to glue the step box to the battery box so the cab assembly can be removed.

29. Glue the fan housing in place. Note that there is cast-on fan detail that will be covered by the resin fan housing. This detail is provided in case you want to use a see-through fan housing from a Highliners F7 or a Life Like SD-7, SD-9, or E-8.
30. To install the handrails on the new hood section, drill the pre-drills next to the bolt heads, and on the handrail mounting bracket plates using a #77 drill. Cut the handrail off next to the mounting bracket, then trim it so that it will fit into the hole in the new hood section. Install the modified handrail pieces.
31. Assemble the rest of the kit according to the Life-Like parts diagram.

Updated 7/12/2007. The latest revision of these instructions can be found at http://www.lvrrmodeler.net/SW8-DB-instructions.pdf