



Milepost 93 Models Rear-facing Ditch Lights for Walthers Mainline ES44

This detail part was designed for the Walthers Mainline ES44 series of models to add functional rear-facing ditch lights easily to the pre-painted model.

Disclaimer

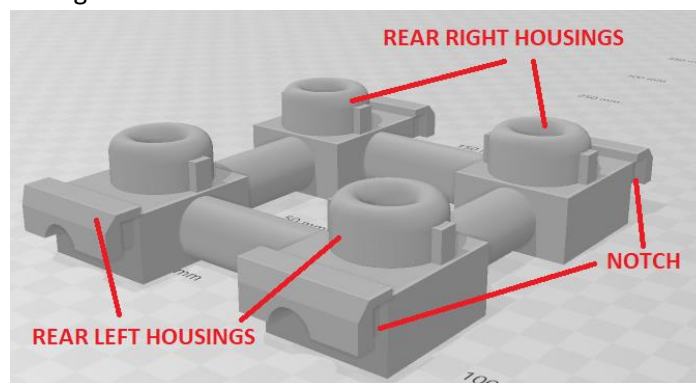
These parts may contain toxic chemicals, are extremely small, and can easily be swallowed. Keep out of reach of children. Recommended ages 14 and up. Milepost 93 Models will not be held responsible for any damages resulting from the use and/or misuse of this product.

Tool requirements

- #11 Hobby knife/blade
- Fine-grit sandpaper
- #55 drill bit
- #70 or other drill bit for through-body wiring
- Pin vice
- 0603 size LEDs with hair strand wires (vertical orientation; should be available from online resellers/ebay.)
- Thick or Medium viscosity CA glue
- Details West LN-341 light lenses
- Clear white glue (Testors clear parts glue or Microscale Crystal Clear recommended)
- Applicator or paint brush for glues
- Appropriate paint for the model in question. Eg. Red for Canadian Pacific
- Paint brush for paint and primer

Instructions

1. Understand the orientation of the ditch lights. There is a small notch on one side of the ditchlight bases that is designed to fit snugly with the anticlimber on the rear of the locomotive. See the diagram below for assistance.



2. Check the fit of the parts before removing them from the sprue. The light housings should fit exactly within the gap between the outermost stanchion and the edge of the pilot.
3. Use the #55 drill bit and ream out both the forward-facing hole where the lens goes, and the downward facing hole on all four of the ditch lights in the sprue. **Be careful not to break through the thin back and upper walls of the housing.**



4. Use the #11 hobby knife and cut one left side and one right side ditch light from the sprue
5. Use fine grit sandpaper to remove any remaining sprue plastic from the housing
6. Remove the locomotive body from the frame (See appropriate instruction manual)
7. On the locomotive body, use the drill bit of your choice (recommend #70, but size is up to you), and drill a hole for the ditch light wires directly underneath where the housing will be. This can be horizontally through the pilot, vertically through the deck, or diagonally, whichever you choose.
8. Paint the ditch light housings in appropriate primers and colours, using prototype photos for reference. We recommend painting the insides black and/or metallic silver to help minimize light bleed through the thin plastic walls.



9. Install LEDs inside housing through the bottom with a small amount of clear white glue and test them. Allow to fully cure.



10. Install light lenses with clear white glue. Allow to fully cure.



11. Apply thick or medium viscosity CA glue sparingly to the notch on the bottom of the housing. DO NOT USE TOO MUCH.
12. Fit the ditch lights to the model and allow CA glue to cure. DO NOT use CA accelerator. The housings should sit flush with the edge and top of the pilot, with the anticlimber snugly in the provided notch.
13. Make the appropriate connections to allow the DCC decoder to supply power to the LEDs. Don't forget a dropping resistor appropriate for the LEDs, if one is not included on the decoder or motherboard. See your decoder manual for more information.
14. Reassemble the locomotive.

15. Have fun and happy modelling!

