

"Flame Weathering"

by Mike Schwarze

"Flame Weathering" is the term I use to describe a method for adding dark black soot around exhaust stacks and fans on the roofs and sides of model diesel locomotives. Basically, all you do is get an old piece of sprue from your scrap box, light it on fire, and wave it underneath a painted shell. You can vary the effect in several ways - hold the model further away from the smoke; reduce the time the smoke hits the model; move the shell instead of the fire; brush the soot off after you're finished flaming.... Three of my experiments are below:

Here's two old AHC GP7 shells I used as guinea pigs for my flame weathering tests: These are undecorated, white-primed shells. I've also "torched" an IHC Southern green C-Liner.

*** I should add here that this should only be done outside - forget about the proverbial "well-ventilated area". Probably not a good idea to put newspaper down underneath, either, for obvious fire safety reasons. Wear heavy leather gloves & appropriate eye protection - trust me. Burning sprue is basically napalm - DON'T get it on you! * ***

All that out of the way, on to the experiments - - -

Shell #1

For this shell, I put the sprue in a clamp to hold it stationary and passed the model over it from side-to-side - notice how it feathers itself out down the sides.



Shell #2

For this shell, I held the burning sprue in my hand and passed it underneath the model from front to back, holding the shell slightly angled tail-up. The build-up is much heavier on this model - I did a lot more passes to try to get a black sooty appearance. It worked - the roof of the hood is just about jet-black.



Shell #3

This is an IHC (?) C-liner shell I picked up at a swap meet a few years back and has been a guinea pig for many weathering and paint-compatibility experiments. Here's how it survived the "flame weathering" process:



My conclusions:

I'm convinced that the way to do this is to have the burning sprue in a fixed position. A spring clamp would work to hold the sprue, but I'd go with a small vise and wave the model over that, because when you wave the sprue around, the flame dances too much. Also, do as I say and not as I do – this should be done outside. Black soot from burning sprue goes everywhere, and in close quarters, it just hangs in the air for hours. Also, it drips, so don't wear your Sunday best or try this on the dining room table. Probably not a good idea to put down a lot of newspaper underneath to catch the drips, either....

Once you've flamed your models, you can do several things with it - the soot is powdery, to a degree, so you can use a soft brush to take it off places you don't want it – tops of fans, any lettering on the side you don't want obscured, etc. Use a stiffer brush for a different effect. When it's the way you want it hit it with a coat of DullCote. Unlike chalk, it doesn't disappear, though. Now you can add a bit of dry brushing with rust, earth, dust, aged concrete – pretty much any weathering color you normally use – so the soot doesn't look too "new". It has a very fine texture that chalk doesn't seem to capture. While chalk is great for more subtle applications of color, to me, the "blackness" of an ALCo exhaust stack or the grilles on the side of an F- or E-unit is best captured with this method. For a well-used Geep, torch the sides and then softly brush off some of the soot for a great looking dirty engine.

Try it!

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