

# **N SCALE WEATHERING: CONCEPTS & TECHNIQUES**

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## **Concepts:**

The weathering of N Scale locos and rolling stock requires some unique thinking in order to achieve realistic results. There are plenty advantages of weathering in N Scale and I will try to demonstrate how we can use these to improve the overall appearance of N scale locos and rolling stock to represent hard working prototypical models.

Rather than try to achieve detailed weathering such as rust streaks / patches etc which can be easily reproduced in HO scale and larger, I concentrate my efforts on improving the “arms length” appearance of my rolling stock to eliminate that brand new / out of the box look. If like me, you are a modeller rather than a collector, I hope you will find some value in looking at the “Concepts and Techniques of Weathering in N scale”

As I mentioned the term “Arms Length”, I will briefly describe what I mean and how we can use this concept to our advantage. If you hold an N scale model at arm’s length or view it while standing back from a layout at a similar distance, you are in fact really looking at the model or scene from approximately 100 scale metres away! If you think of what sort of details can be observed from that distance in real life, you can understand why I try to weather my models with this perspective in mind. Not to say that there are occasions where we choose to super detail a specific model to either match a prototype or weathering effect, but I prefer to do this as an exception rather than a rule.

I always weather my locos and rolling stock whilst referring to a prototype photo of a similar car / loco. You don’t necessarily have to have the exact prototype photo but it should be one similar in colour / age / era and weathered to a similar extent to that of what we are trying to replicate. I used to try and weather in N scale using prototype photos either from full / half page in books or printed from pics that I’d downloaded from the internet. It took me a little while to realise that my concept of “arms length weathering” was not achievable while I was referring to prototype image approximately 25 – 30 times the size of my models.

Whilst books of your favourite prototype railroad that you a modelling are an invaluable reference, they do not always contain the exact reference photo you are after and are not cheap either. I have had a lot of success with the following technique in building a library of great prototype reference photos to which I can refer whilst weathering a particular model. You may also want to weather a car not from your “home” road for which you are unlikely to spend \$50US + on a book just for 1-2 photos.

There are many websites that have thousands loco and rolling stock images, most of which are searchable by roadname / car no. / car type. In addition to the websites I have listed below, railroad historical societies and loads on magazines will have other great sites you can refer to.

The websites I have used most regularly include:

[www.rpicturearchives.net](http://www.rpicturearchives.net)

[www.railpictures.net](http://www.railpictures.net)

[www.rr-fallenflags.org](http://www.rr-fallenflags.org)

[www.railcarphotos.com](http://www.railcarphotos.com)

[www.locophotos.com](http://www.locophotos.com)

Once I have located at least one (usually several photos) that are relevant to the model I'm about to start weathering, I save the images to my USB flash drive (memory stick)

I then take my USB drive to the local digital photo lab and view the images that I have saved for printing.

An important tip here: When you choose your images for printing always use the "Don Not Crop" option on the print menu, otherwise you will end up with various image sizes sometimes with half or more of the picture missing. This is due to the fact that these photos have been uploaded to these sites at different sizes & resolutions.

The other advantage by using the "Do Not Crop" option is that you will bring the image size nearer to N scale proportions on a standard 4x6" print.

In no time at all you should end up with a reasonable collection of useful reference photos for less than about 20c a copy. I try & collate my photos into small albums so they don't take up to much valuable workbench space

### **Techniques:**

Now that we have a pretty good idea of what degree we want to weather a particular piece or pieces of rolling stock, we can look at how we can achieve this.

I guess the one term that I have tried (not always successfully) to work by when it comes to weathering models is the old saying "Less is More!!"

It is easy to add some effects after you stand back & look at a model, but it is almost impossible to reverse some effects if you have gone too far. I have a collection of “demo” models that I overdid the techniques described here on, but as a start nothing gives you the experience like experience. With that in mind it’s probably best to test out some new weathering techniques on old / less cherished rolling stock so that the pain of any mistakes doesn’t sting too much.

### **Lighting:**

Most importantly, I make sure that whatever technique I am using to weather a model; I am doing it under the closest possible lighting to that of my layout. I have gone to the effort of installing the same flouro tubes above my workbench and airbrush spray booth to ensure I am looking at the same conditions. Working under a different light will have a huge impact on the finished model and your ability to detect the extent of your weathering as you progress. I also try if possible to keep a similar car handy that is untouched by any weathering (as yet) so that I can compare the extent to which I have weathered the other - a before and after comparison

### **Airbrushing:**

I won’t go into every safety aspect of using an airbrush & compressor as this has been covered extensively elsewhere. As reference all paints I refer to with airbrushing are Floquil Railroad Colours (yes the old lethal – but I like the finish & know what results to expect) As a precaution I use a mask when painting

The fundamentals that I stick to when using an airbrush to weather my rolling & loco’s include:

- I use extremely thinned paint to build up weathering effects so that I have gradual control over
- I use only really Rail Brown / Railroad Tie Brown to spray my trucks / wheelsets / couplers mixed at about 50/50 ratio

### **My basic weathering steps to improving the “arms length” appearance of your rolling stock:**

- **Coupler Trip Pins** - The first thing I usually do is paint any brass trip pins Grimy Black or Railroad Tie Brown. Nothing attracts attention like these & it’s a real simple modification to fix up. I make sure that I touch up the top of the trip pin above the knuckle coupler. While I’m at it, although not an aesthetic modification, I always install low profile metal wheelsets at this point so that any weathering we do from here on is consistent
- **Scratch Back Lettering** – Next, I carefully and lightly rub back the car lettering to simulate effects of time / sun / exposure. Generally if you look at

the lettering on most rolling stock it varies between being fairly legible and barely seen at all. It's easy to overdo this step and experience has shown me that I'm better off starting with a folded piece of fine grit sand paper / sanding stick or emery board. Rather than remove any lettering, I try to simply "feather or soften" the edges so that they blend better with the cars base colour. Depending on the type and quality of print I have in the past had to use a fibre glass brush, but these can be unforgiving and harsh. I have also tried softening the printing with Poly S Easy Off decal remover which can work well on some cars

- **Fade Overspray** – Now comes the fun part where we really try & add some age to our rolling stock. If you compare a brand spanking new out of the box model to your prototype photo, you will notice that the colour intensity of the real thing is much less than that of your model. There are two reasons for this, firstly we could never duplicate the suns intensity on a layout and secondly the main colour has faded over time due to exposure to the elements. We can cheat a bit here and try to duplicate this exposure.

What I do is mix up a thin colour several tones lighter than that of my model. As an example Boxcar Red can be lightened with a little Reefer Yellow (not white cos it'll look like pink). I then overspray the entire car with this colour. If the roof or ends are a contrasting colour, they will only receive a very light spray. Generally you can lighten most paint colours with a little Reefer White / Light Earth and this will soften the intensity of your base colour. The other effect this has is that it blends the lettering on your car with the main colour. It's really a case of trying to see what will work on a less valued piece of rolling stock before working on your good stuff.

*Some colours I have used to overspray other with include:*

*Weathered Black / Grimy Black / Reefer Gray > Over black coal Hoppers*

*Mix of Reefer Yellow / Boxcar Red > Over Boxcar Red*

*Light Green / Reefer White > Over BN Cascade Green*

*Reefer Yellow / UP Light Orange > Over D&RGW Aspen Gold / Orange*

*You get the idea, whatever colour your car is, take it a few shades lighter to fade it.*

*You can as a simple fall back mix up some Reefer white + Light Earth and use this to overspray your car.*

*Just remember – build up your weathering with thinned oversprays so you can control the extent to which you are weathering!*

While we have the airbrush out, I generally spray my trucks and couplers either Rail Brown (which works best in bringing out the details on truck side frames) or Railroad Tie Brown which looks best on black coal hoppers and darker coloured rolling stock. Again refer to your prototype photo to see what suits. I have a jig that I use to spray my trucks / wheelsets without removing them from the car, and this enables me to get an even spray over all wheelsets as I can roll the car along while painting whilst minimising the amount of over spray to the wheel treads.

I only give my couplers a quick spray from either side with the same colour just to kill the shiny black Delrin knuckles, as we have already painted our trip pins haven't we guys??

To save time in mixing paint colours and cleaning my airbrush, I will sometimes set up to paint a few cars trucks / couplers / wheelsets at once and set them aside until later to do any further weathering.

There are a couple of other effects we can achieve while we have the airbrush out.

A thinned underspray of road grime Light Earth / Foundation / CN Gray sprayed from an angle below the car to just catch the lower edge

A couple of quick sprays up from below at each end to represent road grime thrown up from the car adjacent

Remember – less is more!

### **Shadow Washes + Drybrushing –**

Once our overspray has dried we now have some “tooth” or texture to which we can work with (another reason I stay loyal to my Floquil paints) If you have ever tried to run a wash onto a shiny new piece of rolling stock you will know that you need some surface texture for it to grab and flow into. The finish that we now have is ready to run a wash into which will accentuate things such as cast on steps / ribs / doors / rivet seams etc. The idea is that we want to create a shadow effect and create some depth. I have tried and used several types of washes over the years with different levels of success, but what seems to work really well for me is a wash made up of a few drops of Tamiya “Nato Black” (XF-69) mixed in with a capful of windscreen washer fluid. The Nato Black seems to work well with most colours and I vary the level of intensity depending on the car I'm working on. A lighter coloured car works better with a more diluted wash whereas a darker coloured car needs a heavier wash to create the shadow effect. Again this is a technique that you can build up with and don't need to do in one go. I use a range of brushes to apply the wash, but always work from top to bottom just like gravity does. I sometimes get patches or seams where the wash has dried on a strange way. Occasionally this is a good random effect but if not I try & fix it by washing it out with straight windscreen washer fluid.

I also try to run a dark rusty coloured wash around door runners

Now that we have some depth and shadow effect, I start to highlight raised details such as ribs / grabs etc. Again there are a range of techniques to drybrush or highlight details but my favourite is the Tamiya Weathering Master pigments (sets A,B + C) that look like little makeup kits. You can buy new foam applicators for these from the supermarket in the women's makeup section if you're brave!!

I use the lighter toned pigments to highlight those exposed details to accentuate where sunlight would have the greatest effect. Another source of weathering pigments that I use are "Schminke Kunstler Pastells" which you can get from high end art supply stores. At about \$6.50 a stick they aren't cheap but the pigments are so fine I've had some last for years and they have an extensive range of earthy tones.

Lastly I turn to the roof, as up until this point we have been holding our model by the underframe and the roof, generally our shadow wash into roof ribs followed by a thinned overspray of Grimy Black to represent either diesel exhaust or soot depending on the era you are modelling will do the trick here.

### **Stand back and compare –**

If you were able to keep an untouched model handy as a comparison, it is a good time now to have a look and see what difference you have made to the car you have just finished working on.

Remember some cars may not require all the above steps to improve their "arms length" appearance and some may require taking another step, but generally I have had success with these techniques.

Like anything I am always learning & open to trying new ideas, I guess it just comes down to what works for you & what you are comfortable with

I will sometimes also use the following methods to further improve the "up close & personal" look of my rolling stock:

- Installation of Micro Trains Z Scale # 905 couplers to replace McHenry / Accumate couplers and their unrealistic coupling distance
- Lowering of certain cars to achieve a closer to scale ride height. Keep in mind if you do this to adjust your coupler height to match that of your other rolling stock in accordance with the NMRA standard height.
- Adding specific loads and details to flat cars and detailing commercial loads to suit
- In rare occasions renumbering / re stencilling and number paint outs

**Give it a shot –**

Everything I have described here is a matter of trial and error and being prepared to see how some technique will work. I haven't had a 100% success initially but have learned to accept that with some practice I can improve the overall and "arms length" appearance of my rolling stock.

There are plenty of good weathering reference books available (I have brought along some of my favourites to show you) and each time I read about a new technique, I can't wait to give it a go

Thanks guys for your interest & hope you got something out of my clinic

Enjoy the convention + happy weathering

**Steve**