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Tech Tips

☒ Weathering AFVs - Step by Step

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What is weathering?

"Weathering" refers to a number of techniques that are intended to make a model appear more realistic by simulating the effects of the elements on the subject. Although not entirely correct, the term is often also used to describe similar techniques intended to enhance realism by compensating for differences in lighting and viewing between the model and actual subject, like enhancing shades or highlights on the model's surface.

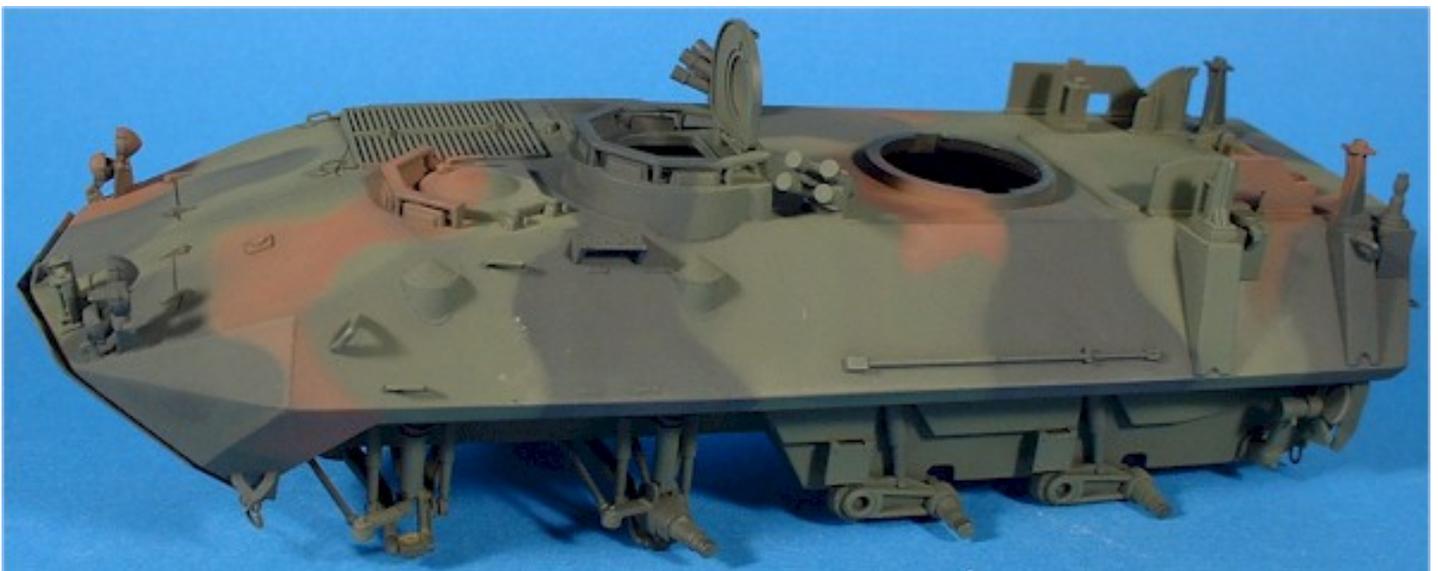
Weathering is the sustained trend in modelling which has developed tremendously over the recent years, especially in the area of armour modelling. There is now a whole variety of techniques to simulate dirt, fading, spills, paint wear and tear, rusting, etc. Another trend is to use these techniques in combination rather than alone, to simulate the diversity of the natural ageing and wear processes.

In all, from being a mere last step in a modelling project, weathering has made a rocket career to take time and effort in par with construction or painting. In my view this is positive because weathering always leaves plenty of room for creativity and artistic license, and as such is one of the most enjoyable parts of modelling!

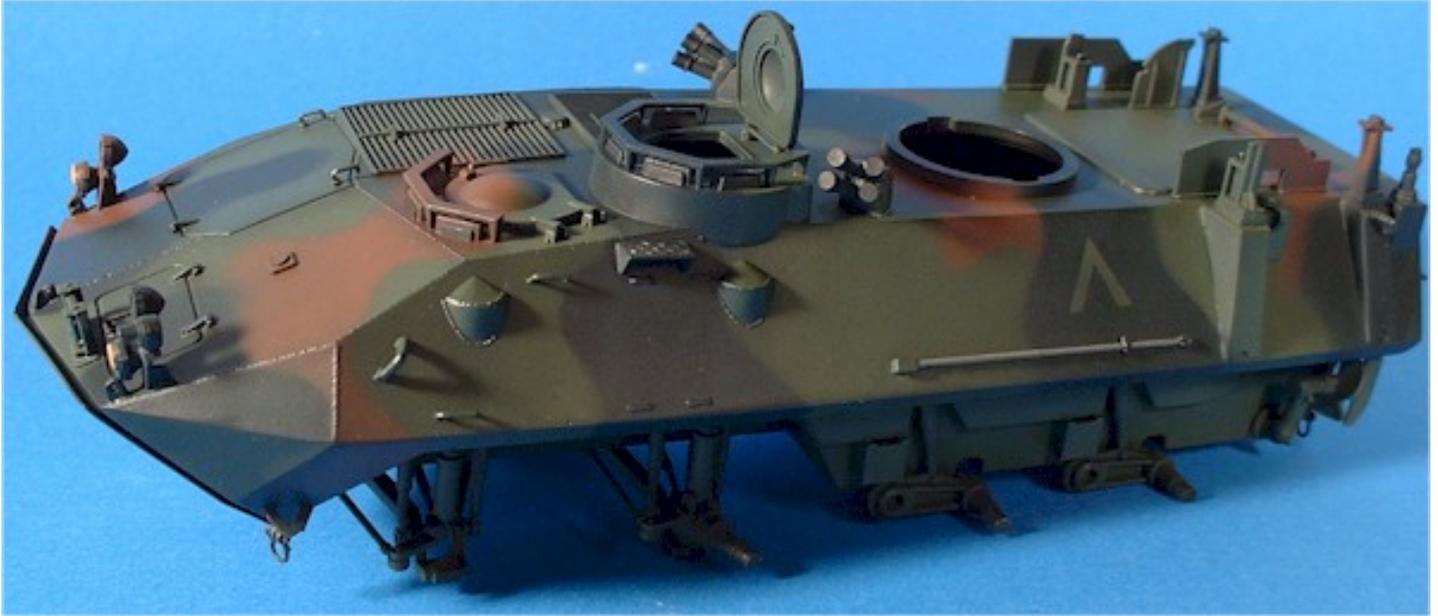
This article is an extract of my [construction feature on Italeri LAV-AT](#) where I describe step-by-step the weathering process of an armour model with the intention to assist a beginner in this area of modelling. The sequence and selection of techniques are of my own choice. I'm sure there are dozens of other approaches possible but hey, we've got to start somewhere!

Step one: Do everything else

Weathering goes *after* the basic painting, so what you will have to do (except for assembling the model!) is to apply the basic paint scheme first. I airbrushed mine using Tamiya acrylics.



With the markings applied a coat of gloss varnish (I used Vallejo 060 Satin Varnish) was applied to the entire model. The model will now have a slightly shiny surface that will form a nice contrast to the weathering that will follow. Gloss or semi-gloss surfaces are also much better for some "wet" weathering techniques such as washes or filters.



If you intend to use traditional water slide decals, apply them at this stage and then re-coat the model once again with varnish to seal them. I didn't have any, the reversed "V" on my model are simply masked and painted!

Step two: Filter out the contrast

I start my weathering by applying a filter to the entire model. A filter is an application of a very thin layer of extra colour and can be used to enrich uniform and "flat" surfaces or to modify base colours by adding overtones. Not to be confused with a traditional wash, the technique of applying filters has been pioneered by Miguel "Mig" Jimenez and is explained in his article on the [Missing Links](#) web site (look in the Rarities World section), so I will only explain it in short here.

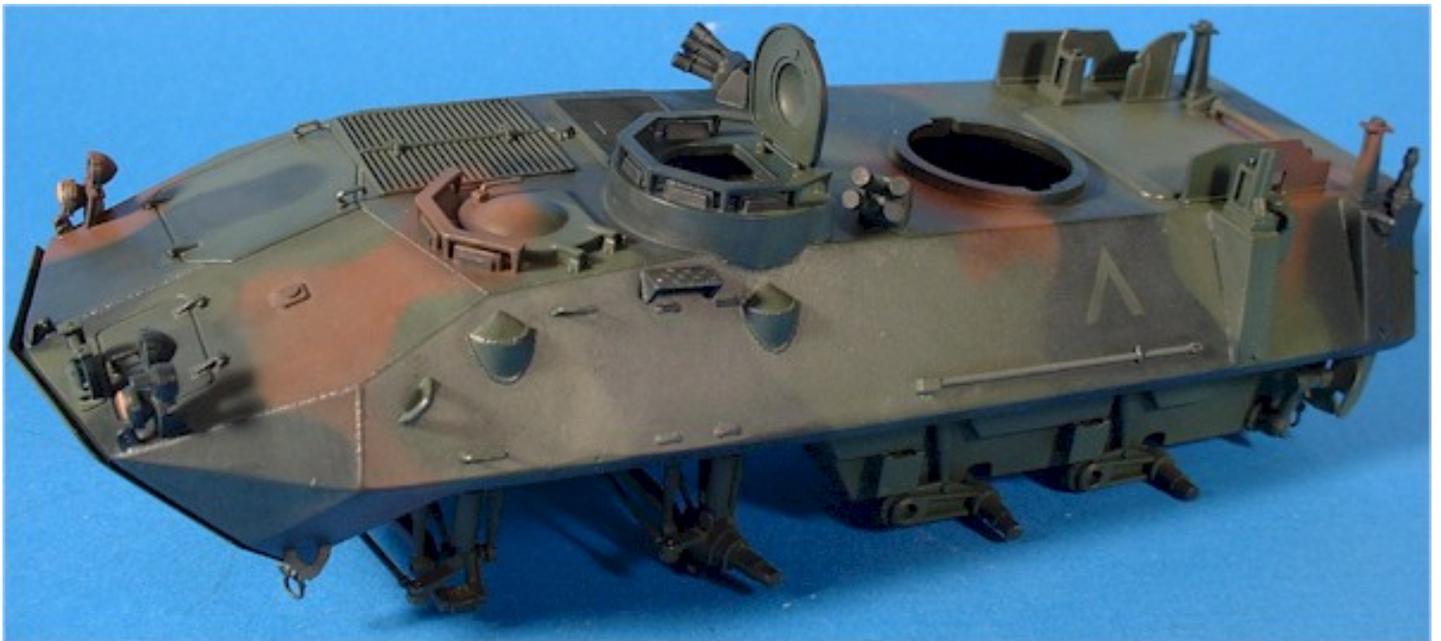
A "filter" is added by an swift application of a single, heavily diluted colour over the entire model. In the case of my model, I opted for a filter in earth tones to bring the underlying camouflage colors together. A good filter will increase harmony between the various colours of the camouflage and reduce contrast between them.

A filter is always done with a heavily diluted paint (like a maximum of 5% paint to 95% of thinner). A filter can be applied by brush or airbrush. The application should be uniform over the entire model and "wet" to avoid any brush marks.

I used a large round brush to apply a single filter to the entire model. This filter consisted of a heavily thinned mix of Burnt Sienna and Titanium White oil colour.



After everything was thoroughly dry I was pleased to see that the surface of the model had taken on more life and variation than before. Compare this with the previous photo!



Step three: Scratch without scratching

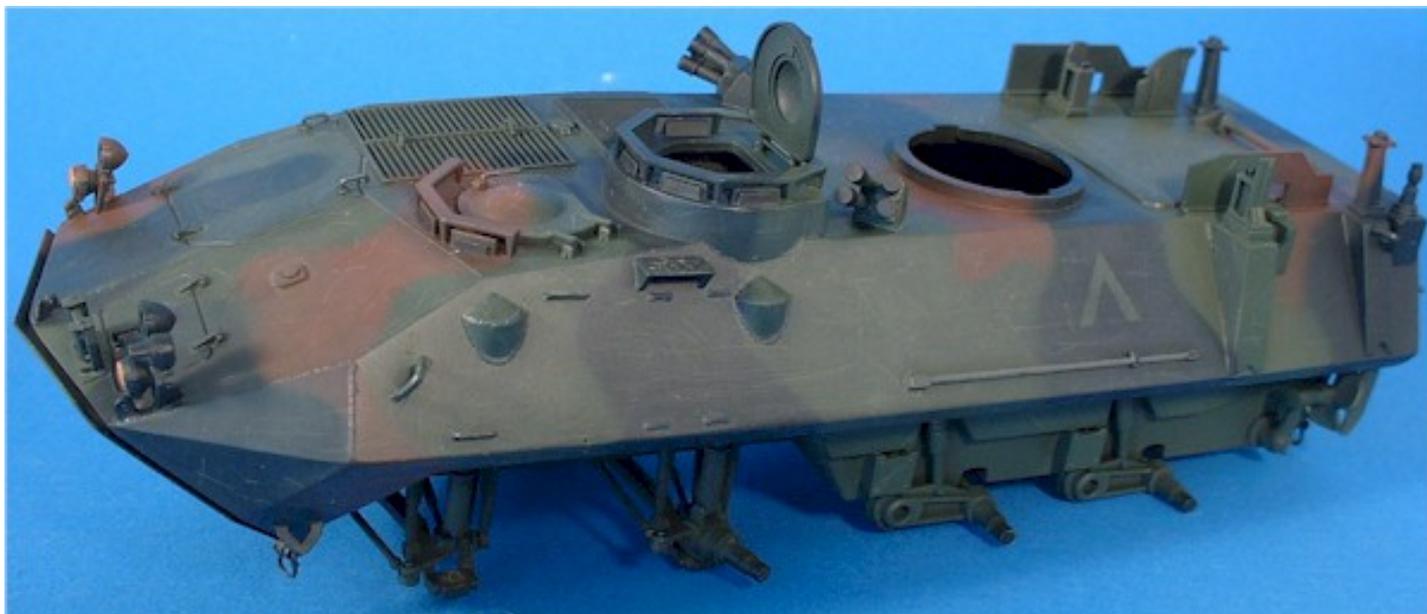
Now is the time to add wear and tear. Painted object exposed to handling, walking etc. will inevitably develop large and small scratches and scuff marks which, in time and greater numbers, will alter the overall appearance of the surface from "uniform" to "worn".

There are a few different techniques to simulate scratches. I found that a simple but very effective technique is to use artist's coloured pencils.

To simulate scratches and scuff marks I use a selection of Derwent coloured pencils. For this model the colours used ranged from light grey to a few greens and a brown. The exact choice of colours is not very important as long as they follow the general colour scheme of the model.



Using the pencils I went over the entire model, drawing and scratching. At this stage the effect of the pencils may look a bit harsh in places. Don't worry, everything will blend in nicely once the weathering continues.



Step four: Chipping paint

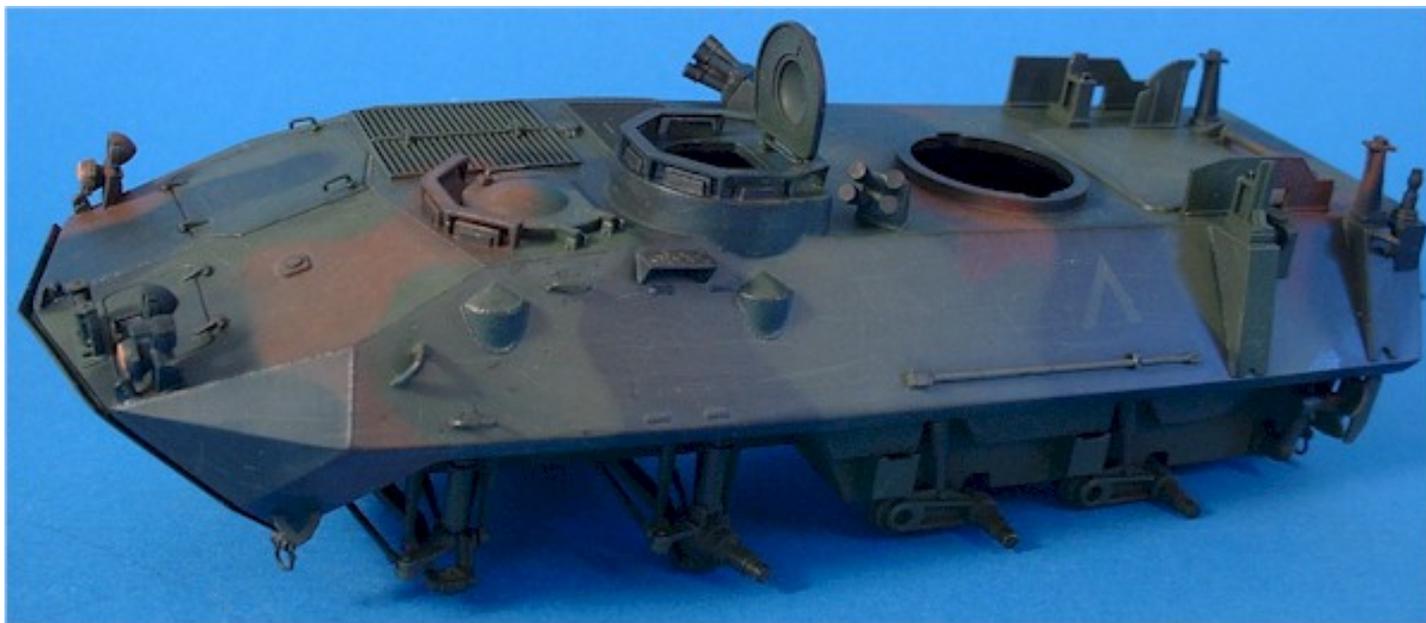
Another effect of heavy handling on a real tank is that paint will be chipped off on and around exposed edges and protrusions.

I find that the easiest way to simulate areas of chipped paint is to use paint and a small pointed brush.

I used a mix of Vallejo Acrylic for the task since they work great for brush painting. The colours used was a mix of 039 Hull Red and 057 Black and the chips were concentrated around hatches, foot steps and handles as well as other protruding details that would be subject to heavier wear and tear.



Step five: Dust on



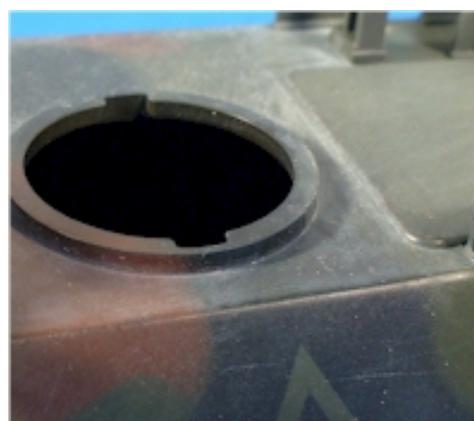
Time for some dust - the final effect that will blend everything together. Dust is an ever-present companion of military vehicles. Like in real life, the dust comes *last* on my model. Just how much dust to apply is a matter of personal preference, but don't be afraid, real tanks carry much more dust and dried mud than you can possibly imagine!

Unlike the filter described in step 2, dust calls for a *dry* painting technique for greater realism. You can use powder from dry pastel chalks or dry pigment powder. Both can be readily obtained from well-stocked artists' stores.

To simulate dust I use a mix of Yellow Ochre and Titanium White pigment powder with Humbrol Thinner as the medium. Here's how to do it:

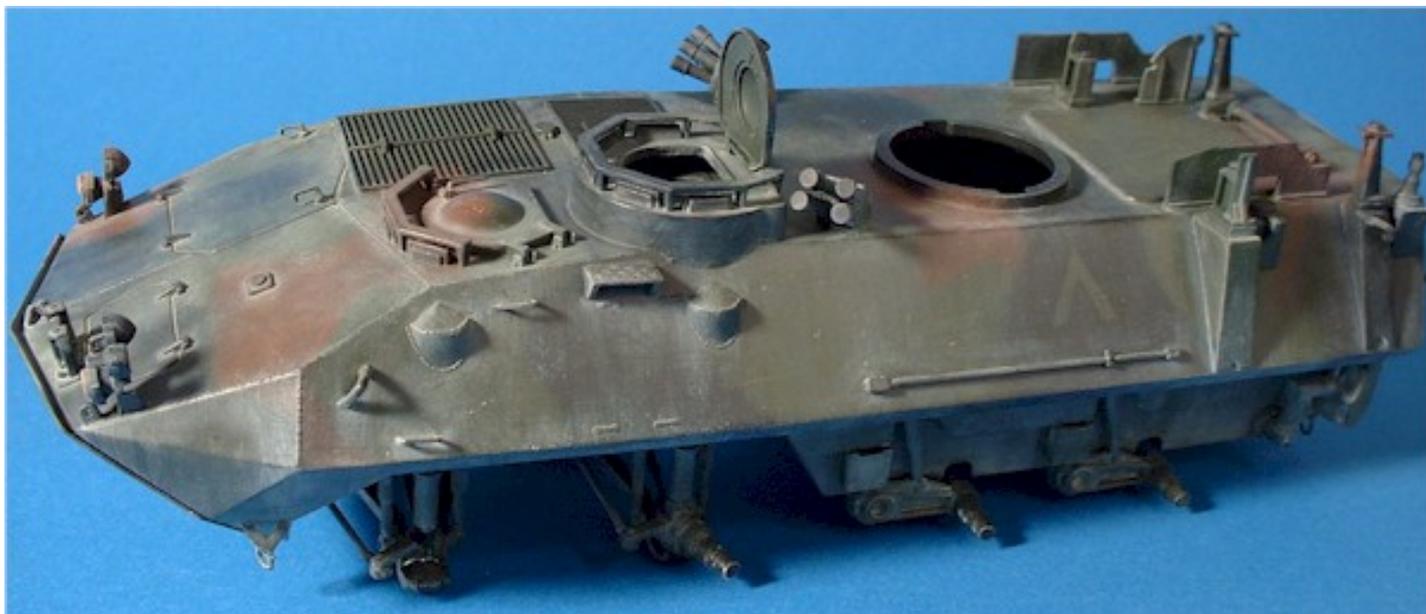


The powder is mixed with the thinner and applied with a brush.



The final effect of the pigment can not be observed until the thinner has evaporated. Sometimes another layer of powder is needed to achieve the desired effect.

After the mix is completely dry on the surface, the powder can be rubbed off using a finger or a dry, stiff brush to create desired patterns such as streaks of dust seen along the sides of the vehicle. See below.



Appendix: Wheels and tyres

Wheels and suspension would usually be the most weathered areas of a (dusty) vehicle because of their direct contact with the ground. When weathering wheels' it is appropriate to increase the amount of weathering applied by a factor of two!

The wheels of my LAV-AT have been first painted in rubber color (some grey shade), and then treated with my dusting mixture as follows:



The pigment powder is mixed with Humbrol Thinner and applied to the entire wheel.



The wheel is totally covered in the pigment powder and set aside to dry. Multiple applications may be necessary before moving on to the final step.



Finally the pigment powder is rubbed off from tread pattern and side walls.

Step six: Follow the light

By now you should have arrived on a model that is pretty well weathered. However, the impression of realism of the model can be further improved by enhancing the effects of light and shadow. A most effective technique for this is to apply a dark wash, which will add depth to the areas which normally remain in shadow. Another useful technique is highlighting, which adds lighter tones and gloss to the edges which will normally remain in full light.

A "wash" is an application of highly thinned paint (or other pigment) intended to deposit colour in the nooks and crannies of a model. Washes are usually dark colours.

One typical use for washes is to darken the "holes" in a moulded grill or screen, like on the picture below. I also applied

wash to various door and hatch hinge lines.

I restricted the highlights to simply "metalizing" edges of selected details with lead pencil.



A wash of black oil colour was applied to the air intake grills as well as the various door and hatch hinge lines to emphasize their pattern.

To simulate light reflections on exposed metal the most worn areas were treated with a soft lead pencil.

Conclusion



Six different steps may sound like a lot of work, but once you have tried the described techniques, you will notice that most of them are both quick and easy to apply. Once again, have a look at the difference - the final photo above is a composite showing the finished model with overimposed rear hull as it looked without weathering applied. I think you will agree that the final effect is worth every bit of effort!

This was how I made the weathering on my LAV-AT. Now, the really fun part of modelling armour is that there are almost as many techniques and approaches to weathering out there as there are modellers. What are your weathering

techniques?



Images of the completed model, click to enlarge



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