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Essential Finishing Techniques

- Paint easy camouflage patterns with soft masks
- Apply washes for depth and realism
- Add wear and tear with pastels and dry-brushing
- Get perfectly accented panel lines with a sludge wash

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Paint easy camouflage patterns with soft masks

By Matthew Usher

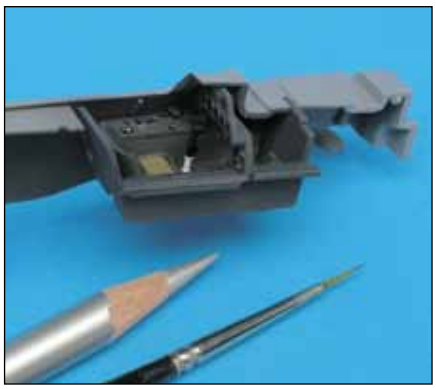
I love Luftwaffe aircraft, but as a modeler, they drive me crazy – the machines are interesting and great to model, but most of them have horribly complicated, seemingly impossible-to-airbrush camouflage schemes. More often than not, I find myself taking the easy way out and applying the simplest (and usually boring) scheme to whatever I've picked to build.

When I bought Tamiya's 1/48 scale Focke-Wulf Fw 190F-8 (No. 61039) I started to rethink things. The kit includes markings for a 190 stationed in Italy in 1944; its unusual tropical scheme was field-applied over the aircraft's factory finish. The upper-fuselage markings were completely painted out, and what markings remained were covered with bits of overspray. I was hooked. I knew I had to model that scheme, but how would I apply the pattern?

As I plotted my plan of attack, I wondered if I could take things one step further – could I apply a complicated finish without breaking out one of my tricky-to-clean double-action airbrushes? The challenge was worth the effort.

I have a soft spot for Badger's 350 airbrush. Decades ago, it was one of my first serious modeling tools. It was the airbrush I learned to paint with, and with it my models stopped looking like spray-painted toys and started looking like realistically finished miniatures. Even though I've graduated to more expensive airbrushes since then, I've always kept a 350 ready to go in my toolbox.

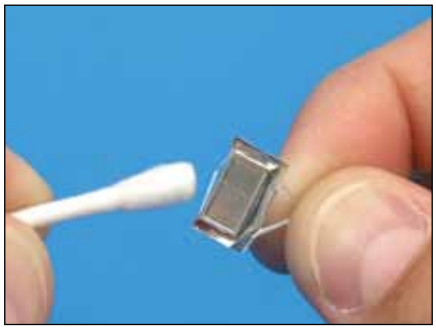
I thought combining the 190 and the 350 would be a fun challenge, and I'd have the opportunity to dust off another one of my favorite painting tools, soft masks. Soft masking enables you to apply complicated schemes with simple tools – it's and easy-to-learn technique that produces striking results. Follow along as I give my "butcher bird" a cool camouflage pattern without making things so complicated it spoils all the fun.



Assembly started with the pilot's office. Since Matthew planned on modeling his 190 with a closed cockpit, he didn't add any extra parts but instead concentrated on highlighting the kit's great out-of-the-box detail. A fine-point paintbrush and a silver art pencil helped pick out the dials and switches.

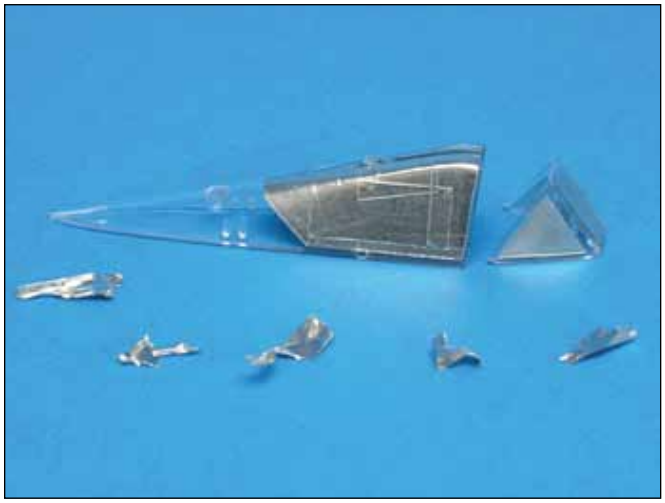
The kit fits together nicely. A little gap-filling super glue and some fine-grit sanding took care of all the fuselage seams.

Not much of the 190's BMW 14-cylinder radial engine is visible inside the fuselage – a large cooling fan covers most of the opening. Matthew airbrushed the engine flat black, then dry-brushed it with Floquil old silver enamel (No. 110100) to highlight the cooling-fin detail.



A lot of paint was going to go onto the fuselage, so Matthew masked the canopy with chrome Bare-Metal Foil. Working a pane at a time, he added a piece slightly larger than needed and burnished it with a clean cotton swab.

Trimming foil can be tricky. Matthew installed a brand-new No. 11 blade in his hobby knife, then blackened the blade with a permanent marker. The black finish cuts down on the reflections between the highly polished blade and foil and makes it easier to follow the line of the canopy framework during the trimming.

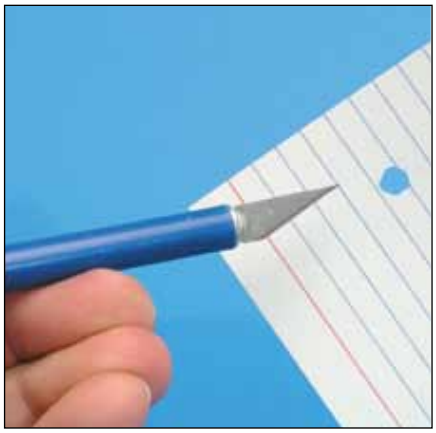


Matthew masked the entire canopy, installed the headrest, then added the parts to the fuselage with Microscale Micro Kristal Klear.

Matthew first gave the entire fuselage a coat of RLM 79 sandgelb (Testor Model Master No. 2088). It's the base color for the camouflage pattern, and the overall coat works nicely as a primer coat to point out imperfections.

Matthew planned to use Testor Model Master enamels for his 190's finish. Many of the Model Master Luftwaffe colors have a scale semigloss finish. To give the paints a dead-flat finish, Matthew thinned them with Ronsonol lighter fluid for airbrushing, using the same mixing ratios he uses for standard paint thinner.

Fitted with a medium tip, the Badger 350 produces a spray pattern that's too big for fine camouflage work. There's a way around that, though.



A soft mask cut from an index card will narrow the airbrush's spray pattern and still provide a soft edge for the camouflage pattern. Matthew cut a roughly circular hole in one end of a card with a hobby knife.

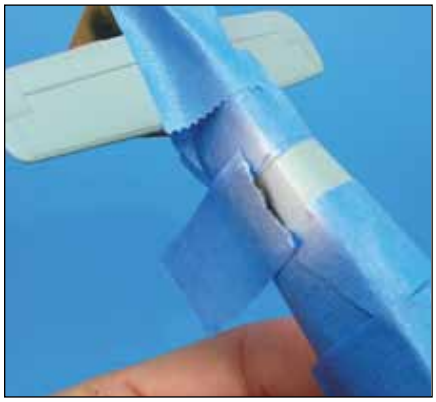
Holding the card about ¼" from the surface of the model, Matthew applied a quick burst of the camouflage color, RLM 80 olivgrun (Testor Model Master No. 2089).

Despite the large burst of paint, only a small spot makes its way onto the model's wing through the hole in the card. By working slowly and applying the pattern a spot at a time, Matthew was able to apply the pattern precisely.

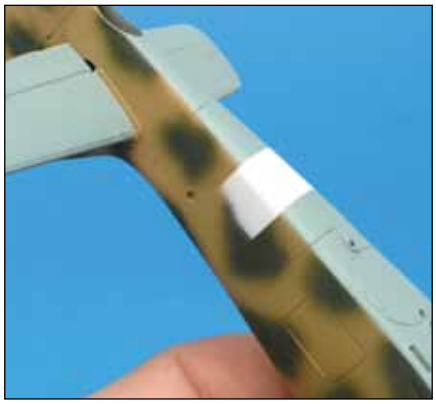
Overlapping the spots produced larger shapes and patterns. Starting at the left wingtip, Matthew applied the pattern a spot at a time as he worked toward the fuselage. When a soft-mask card soaked up too much paint, he discarded it and cut a new one. Note that he let the pattern overlap onto the canopy and around the lower edge of the fuselage.

Even up close, the pattern looks like it was painted with an ultra-precise airbrush. A little green overspray ended up where it shouldn't have, so when the green paint was dry, Matthew cut a fresh soft-mask card, filled the airbrush with sandgelb paint, and went back and "erased" the overspray.

After a couple days of drying time, Matthew masked the model and applied the underside color, RLM 78 hellblau (Testor Model Master No. 2087). A hard line separates it and the upper-fuselage camouflage. When the hellblau was dry, he masked and painted the wheel wells gray.



A decal is provided for the white ID band on the tail, but Matthew decided it would be easier to apply with paint. He masked the band's vertical edges with tightly applied masking tape, but for the upper edge, he tore a larger piece of tape and didn't stick it all the way down.



The hard and soft edges of the tape produce an ID band that looks as though it's been partially covered by the tan-and-green camouflage pattern.

With the model painted, Matthew moved on to the decals. After applying a coat of Future floor polish to the model, Matthew applied the kit decals using a little Microscale Micro Set to tighten them down.

Most of the upper fuselage markings were obscured by the field-applied camouflage pattern, but the balkenkreuz and number on the fuselage side weren't totally covered.

After the decals dried, Matthew gave the model an overall coat of Testor flat clear lacquer (No. 2015). When it cured, he broke out the green paint and soft-mask cards again and blended the edges of the decals into the camouflage scheme. This gives the scheme a field-applied look – as if a hasty groundcrewman got a little overspray onto the factory-applied markings. Remember, when you're painting a potential target, you tend to work quickly!

A little silver paint simulated chipped paint along the 190's panel lines, and some pastel powder made realistic-looking exhaust stains. The finished model's unusual field-applied scheme really makes it stand out in Matthew's collection of World War II fighters.

REFERENCES

Fw 190A, F, and G in Action Brian Filley, Squadron/Signal Publications, Carrollton, Texas, 1999

Production Line to Frontline 5: Focke-Wulf Fw 190 Malcolm V. Lowe, Osprey/MBI Publishing, Osceola, Wisconsin, 2003

Walk Around No. 22: Focke-Wulf Fw 190A/F Malcolm Laing and E. Brown Ryle, Squadron/Signal Publications, Carrollton, Texas, 2000

Apply washes for depth and realism

By Matthew Usher

Unlike other modeling genres, armor models need to receive some weathering to look realistic, but "dirtying up" your latest project can be daunting if you've never tried before.

I picked Tamiya's 1/35 scale mid-production Tiger I Ausf E kit (No. 35194) to practice on. It's a great kit of an important subject, and its massive hull provides plenty of opportunities for weathering. I decided to apply a middle-of-the-road weathering job – I'd add an average amount of dust, dirt, and wear, but stop short of adding inches of mud, grime, and severe battle damage.

I divided this project into two parts. The first part shows how to apply an artist's-oil wash, and the second (page 10) will cover dry-brushing and pastel weathering.

I started by applying an overall coat of Tamiya dark yellow (XF-60) with an airbrush, then I applied the freehand camouflage pattern using a slightly lightened mixture of Tamiya dark green (XF-61). Unlike standard, oil-based hobby enamels, acrylic paints like Tamiya's won't be affected or damaged by the mineral spirit-based wash that will come later.

After the camouflage colors dried for several days, I added the tracks and applied the turret's tactical-number decals over a glossy coat of Future floor polish. I wanted to model an Eastern Front Tiger, so I cut up the kit's decal sheet and reassembled the numbers to make two 30s for the turret. To seal the decals and protect them from the wash, I applied a coat of Model Master Acryl flat clear over the numbers with an airbrush. After drying a couple of days, the model was ready for weathering; I used the time to paint the Tiger's smaller external details, like the tow cables and pioneer tools.

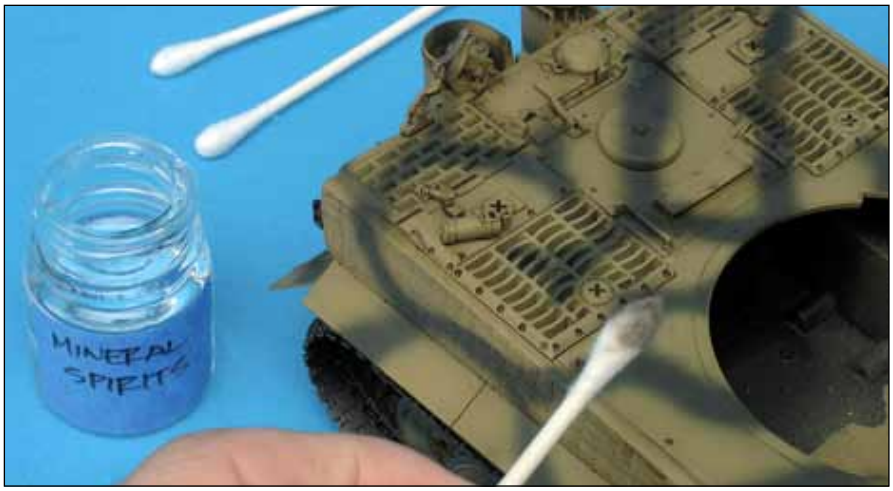
Here's what you'll need to apply an artist's-oil wash: cotton swabs, an eye dropper, paint thinner/mineral spirits, a plastic mixing palette, toothpicks, and a ¼"-wide flat paintbrush. Thinner is available at hardware stores, and oil paints are easy to find at art-supply stores. I used Grumbacher's Academy oil paints in ivory black (No. T115), burnt umber (No. T024), and raw sienna (No. T171). Oil paints may seem pricey compared to hobby paints, but their pigments are really dense, so a little goes a long way.

To mix an overall wash, I filled one of the palette wells most of the way with the mineral-spirit thinner using the eye dropper. Next, I added a BB-sized glob of burnt umber paint to the well's edge and mixed it in a little at a time until the thinner looked like strong black coffee. I added a little ivory black, too, to darken the mixture. As you can see here, the dense pigments will settle to the bottom of the well almost immediately; you'll need to keep stirring to judge the wash's density properly.

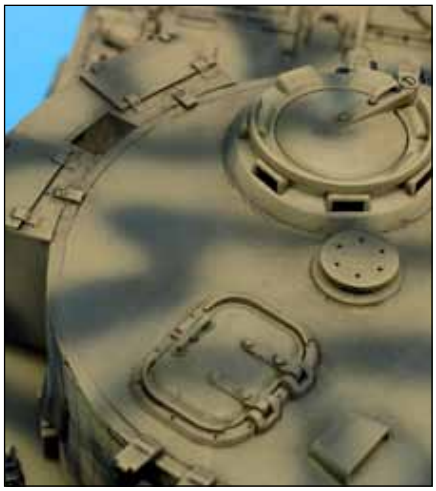
Let's go! I started on the rear deck and applied the wash using the flat brush. Just concentrate on covering the model thoroughly, working a section at a time. Stir the wash regularly with the brush as you refill it in the well. The wash will flow across the model's surface, and the pigment will settle in recessed areas like the panel lines around the engine hatches. Remember that the wash looks much darker when it's wet, and will lighten slightly as it dries. I kept going until I'd applied the wash to the entire model.

The model may look splotchy and uneven right after the wash goes on. Luckily, there's an easy way to even things out.

If mixing and applying an artist's-oil wash seems a little complicated, there's a simpler, off-the-shelf alternative. The Rustall system includes four basic weathering materials: a rust-colored wash, a black wash, a whitish flattening wash, and dust powder. The finishes are ready to apply with a paintbrush, and dry in less than an hour.



I dipped a cotton swab into clean mineral-spirit thinner and used it to "erase" the wash from the parts of the model where it looked too dark or too blotchy. Work carefully and don't rub too hard – you don't want to risk damaging the paint underneath. Now is the best time to use a little artistic license to vary the wash's – and the model's – appearance. Although I removed most of the wash from the smooth flat areas like the fenders and the top of the turret, I didn't do anything to the engine grilles or the Zimmerit-covered parts of the hull because the wash was doing a perfect job of deepening their engraved detail.



Here's the completed turret top. The smooth open areas are essentially clean, but the recessed details around the hatches, ventilator, and rear storage bin are realistically darkened by the wash.

I airbrushed the Tiger's tracks dark metallic gray, then applied Rustall's black and rust-colored washes. The Rustall set is handy, particularly when you need to add just a little weathering here and there. Rustall is available in most hobby shops and through Micro-Mark (800-225-1066, www.micromark.com).

The Tiger has a great combination of surface details to bring out with the wash. The Zimmerit looks much deeper and much more realistic after receiving the wash.

Add wear and tear with pastels and dry-brushing

By Matthew Usher

Like a lot of modeling techniques, weathering is an additive process in which a number of layered steps work together to produce a realistic effect. No one step is particularly complicated or difficult to handle, so the real trick to weathering just may be working up the courage to jump in and "dirty up" your latest project.

In part one (page 7), I camouflaged Tamiya's 1/35 scale mid-production Tiger I Ausf E (kit No. 35194) and added an artist's-oil wash to accent its recessed details and deepen the appearance of its Zimmerit coating. In part two, I'll finish things with some basic dry-brushing techniques and a little pastel weathering.

Dry-brushing highlights the model's raised detail, in this case, worn paint on the Tiger's most-used parts. Dry-brushing silver paint over these details will create the illusion of the Tiger's steel showing through worn paint. Dry-brushing involves whisking an almost-dry paintbrush across the model. The raised details pick up traces of paint. Using the right amount of paint is the key. Here I've dipped a flat, ¼"-wide stiff-bristle brush in Floquil old silver. I've made several passes on a scrap of cardboard to brush out almost all the paint. When just a trace remains, it's time to turn to the model.

Work slowly and let the trace amounts of paint build up gradually on the model. One of the secrets to realistic dry-brushing is adding wear where it appears most often. High-traffic areas, such as around hatches and frequently used tools like ladders and pioneer tools, always show wear before the rest of the tank. Here I've used the silver paint to simulate wear on the Tiger's hull-mounted tow cables. The light frosting of silver paint gives the illusion of freshly worn steel and contrasts nicely with the cables' darker recessed areas.

The Tiger's all-steel tracks wore quickly. When I built the model, I airbrushed the tracks with dark gunmetal paint, then darkened their recesses with a black wash. Dry-brushing with silver paint realistically highlights the links' most-worn high-contact areas. Don't forget to hit the inside surfaces of the tracks and the drive-sprocket teeth, too.

A silver art pencil (this one is a Sanford Prismacolor) makes it easy to add wear precisely. I used it to highlight the turret's machine-gun mounting ring and the hatch handles.

Applying a little pastel weathering is a good last step. Pastel chalks are available at art-supply stores in a huge variety of colors, but for most models, a good earth-tone set (like this one from Alphacolor, No. 145011) will provide most of the shades you'll need. I added a few extra sticks, including white and a few shades of gray.

Rubbing a pastel stick against a sheet of coarse sandpaper makes a fine pastel powder you can apply to the model with a soft-bristle paintbrush. An old, worn-out brush is best for this because dragging the brush across the rough sandpaper can ruin the bristles. A little pastel powder goes a long way, so only grind up a little at a time. Different colors of pastel powder can be blended, too, just like paint.

Broad strokes with the powder-covered brush add wide, even sections of color, while smaller, concentrated strokes let the color build up. I added a heavy concentration of dark gray pastel powder directly to the exhaust pipes, then lessened the effect on the surrounding areas. If you're unhappy with the pastel application at any point, you can brush it off with a clean paintbrush and start over. It's a really forgiving process.

Pastels aren't permanent. Handling the model will remove your carefully applied effect. A final, light coat of clear flat will "fix" the pastels and protect them. The clear coat can make subtle pastel effects disappear, so you may need to "overdo" the pastel application slightly to compensate. A little experimentation will help you get the hang of how far you'll need to go.

Use a sludge wash for perfectly accented panel lines

By Paul Boyer

You've seen them – you know, those models with the evenly accented panel lines and perfectly shadowed interiors. How do those modelers do that?

There are several ways to accent panel lines and shadow interiors. For accenting panel lines, some modelers use a sharp pencil to draw in each line. It's not hard to do, but it's time-consuming. Since most recessed panel lines are lightly engraved, the pencil has to be sharpened often for its point to fit inside the lines. As for shadowing, a pencil isn't very effective.

Some modelers prefer to use a "wash" – a dark, thin paint that floods the panel lines and recesses. This works well but can be difficult to apply cleanly. Also, you have to use a wash that won't loosen the paint beneath it.

Though accented panel lines aren't popular with all modelers, they look great when done right. The key is to avoid garishly overdoing the effect.

Sludge wash. There are two key elements to success with this technique. First, the model must be glossy – the wash will go on better and come off easier than on a flat paint. Second, the wash must be made with soapy water – the soap reduces the adhesion of the paint.

The beauty of this technique is that it can be made with any color – even white! First, mix five parts of water and two parts of Polly Scale water-based acrylic paint. Consider the color scheme of the model to determine which color to use for the wash. A predominately tan tank could use a chocolate–brown wash. Black panel lines on an all-white airplane are too stark; use medium gray. Light to medium gray looks good on a black airplane. For my A-1, I used neutral gray for the undersides, cockpit, gear bays, and landing–gear struts, and black for the upper-surface camouflage.

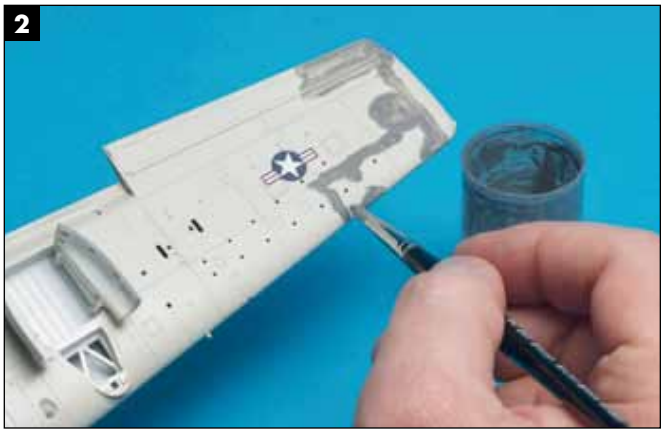
To this mixture, add three parts of liquid dishwashing detergent (such as Joy or Dawn), **1**. Just stir, don't shake – that will create a lot of suds. The result is a thick slippery wash that I call a sludge wash.

The ratio of paint/soap/water isn't critical, and you can adjust it to your desire. If you find it difficult to remove the excess wash, you need more soap in the soup.

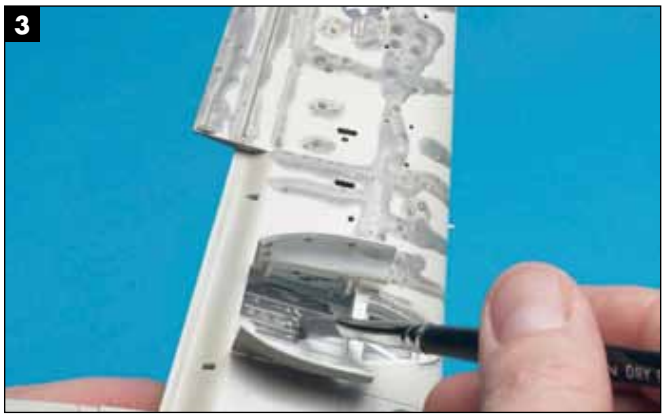
Slappin' on the sludge. Once the model is overcoated with clear gloss and dry, it is ready for the sludge! I use an old ⅛" brush to apply the sludge. I don't have to be careful because I can remove what I don't want. However, the more I put on, the more I have to work to remove the excess. I brush the sludge along all the recessed panel lines, **2**, into the gear bays, **3**, inside the cockpit, over the landing gear struts, **4**, and into the wheels, **5**. Vigorous brushing causes bubbles, so I go easy.

The Polly Scale sludge wash dries in 15-30 minutes. Wet spots look shiny, dry areas flat. A hair dryer speeds the drying. Once the wash is dry, the excess can be

Liquid dishwashing detergent and water are added to Polly Scale acrylic paint to make the sludge wash.



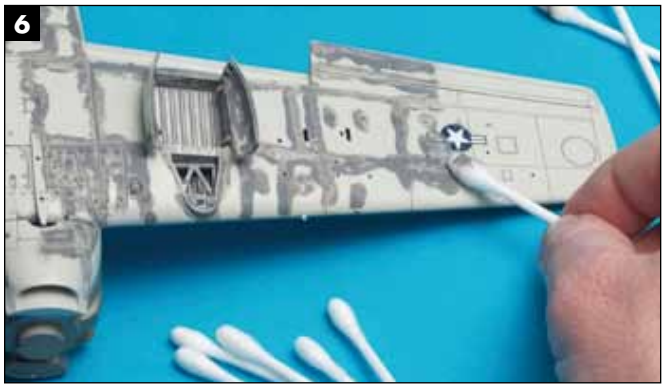
After the model has been overcoated with clear gloss, the sludge wash is applied to all recessed panel lines.



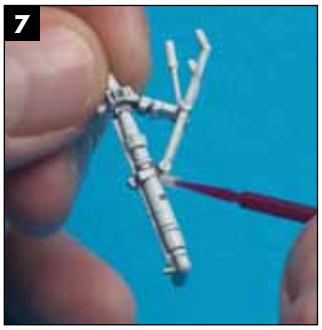
The sludge goes into the cockpit, wheel wells, and other deep depressions to simulate shadows.

Even the landing gear struts get sludged! Medium or dark gray works best on white.

More sludge is applied to the wheels and helps define the rims, hubs, and bolts.



Once the sludge is dry, the excess can be removed with dry cotton swabs.



To remove the sludge from tight recesses, use the tiny ball of absorbent fuzz on a Microbrush.

Compare the bland, sterile main landing gear on the left to the sludge washed unit.

removed. While the sludge can be removed with a damp cloth, I prefer using dry cotton swabs for better control. Just a little pressure is needed, **6**. I roll the swab as I wipe, avoiding paint buildup on the wiping surface. I go through a lot of cotton swabs, but I like how they work.

To remove the excess wash in tight areas (such as landing–gear struts), I use a Microbrush, **7**. The wash gives depth and definition to the struts and wheels, **8**.

Once all the excess is removed, the paint remains inside the panel lines and in the corners and low spots of the bays. I check for areas without enough wash and reapply if necessary. If I'm not satisfied with the wash (maybe the color doesn't look right), I can remove it with soap, water, and a toothbrush, and start over. The last step is the final overcoat of clear flat (or clear gloss) to seal the wash and the decals.

I hope you'll find the sludge wash method as easy and effective as I have. It's fun to get dirty!