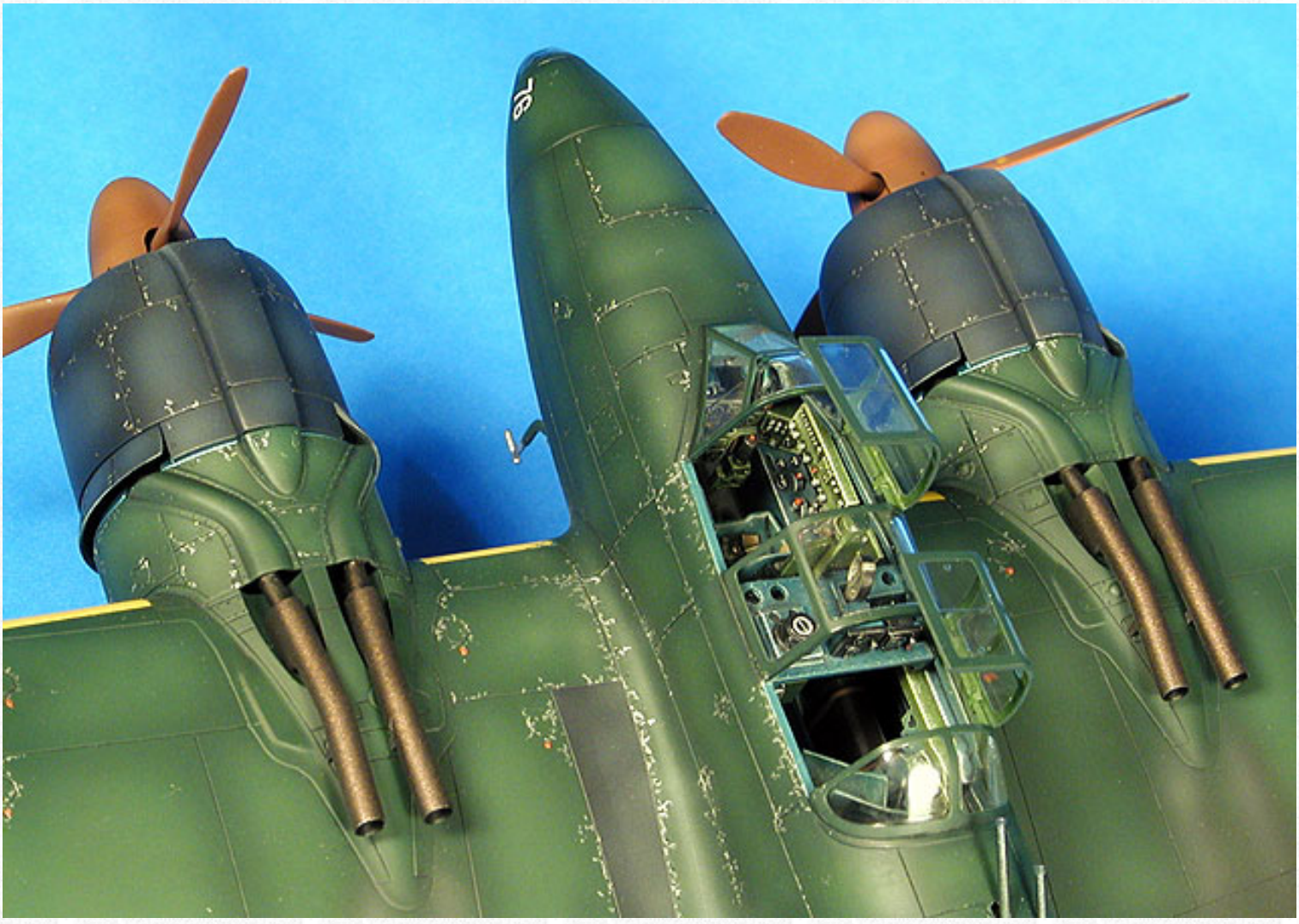
Gekko Part Three

Painting and Weathering Tamiya's Nakajima J1N1Gekko (Irving) "Straight Out Of The Box"

by Gregg Cooper



Nakajima J1N1 Gekko (Irving)

Introduction

Part 3 of this article has certainly taken a while to finish! As you will see though, it is quite extensive. I have tried to describe the exact sequence of painting carried out on Gekko, and where possible explain why I have done something in a particular way, and what products I have used to get the job done. My painting techniques may be familiar to some, and completely out of the ordinary to others, but certainly worth having a look.

Here are links to the first two parts of this article:

Gekko Part 1 - Interior

Gekko Part 2 - Construction

"Out of the Box"

First, a quick word on “Out-of-the-box” modeling:

The I.P.M.S. rules for OOB competition were originally written so that the models can compete on equal footing, disregarding of course the assembly and painting skills of the builders. All things being equal, the finalists in a competition will be cleanly built, straight, parallel, perpendicular, and symmetrical. From there, extra efforts are recognized, such as drilling out gun barrels and thinning parts to scale. Instruction sheets are usually required to be present with the model in OOB competitions. Finally, the quality of craftsmanship and the quality of the finish and decals can be considered. In the end, if the judging was adequate, the award-winning models represent the *best craftsmanship*, and the *best quality* that is possible on that given table. For an I.P.M.S. contest, quality and craftsmanship come *before* extra detailing, which means that it is completely possible for an OOB model to win an entire category. (!!) This may or may not sound correct to some of you, but the point here is, that regardless of the extra details, it’s how you assemble the model and paint the model that counts.

Modeling OOB does not mean you are absolutely roped into that set of rules. I strayed away from “the rules” in Part 2, and demonstrated how I made an antenna post from CA adhesive, a modification that would probably disqualify the model for OOB competition. *Technically*, the little antenna post was *scratch-built*, and therefore a

disqualification for OOB. On the other hand, (he says, tongue firmly in cheek…) the little blob of super glue on the wingtip looked just like an antenna post, so I left it…Actually, I debated whether or not to include it in the article at all, but in the end, I felt that the informative description of that technique was worth relaying. I should have elaborated on this point in Part 2. Let's remember that (for most of us) modeling is for *the modeler* first, and we should build to please *ourselves*. This article was intended to demonstrate how to improve modeling techniques, and demonstrate the fact that nice models can be built without aftermarket goodies or extensive scratch building. I never intended for this article to be a primer on winning OOB contests, & only mention the I.P.M.S. rules to establish a guideline from which to work. Use these tips for improving your basic modeling skills. Please experiment with them, and develop your own techniques, and your own opinion of what is appropriate for OOB modeling.

Painting

In the following paragraphs I am going to describe *my* painting techniques. This is what works for *me*, and I have written down these techniques as I do them. You may not agree with the techniques I use or why I use them, and

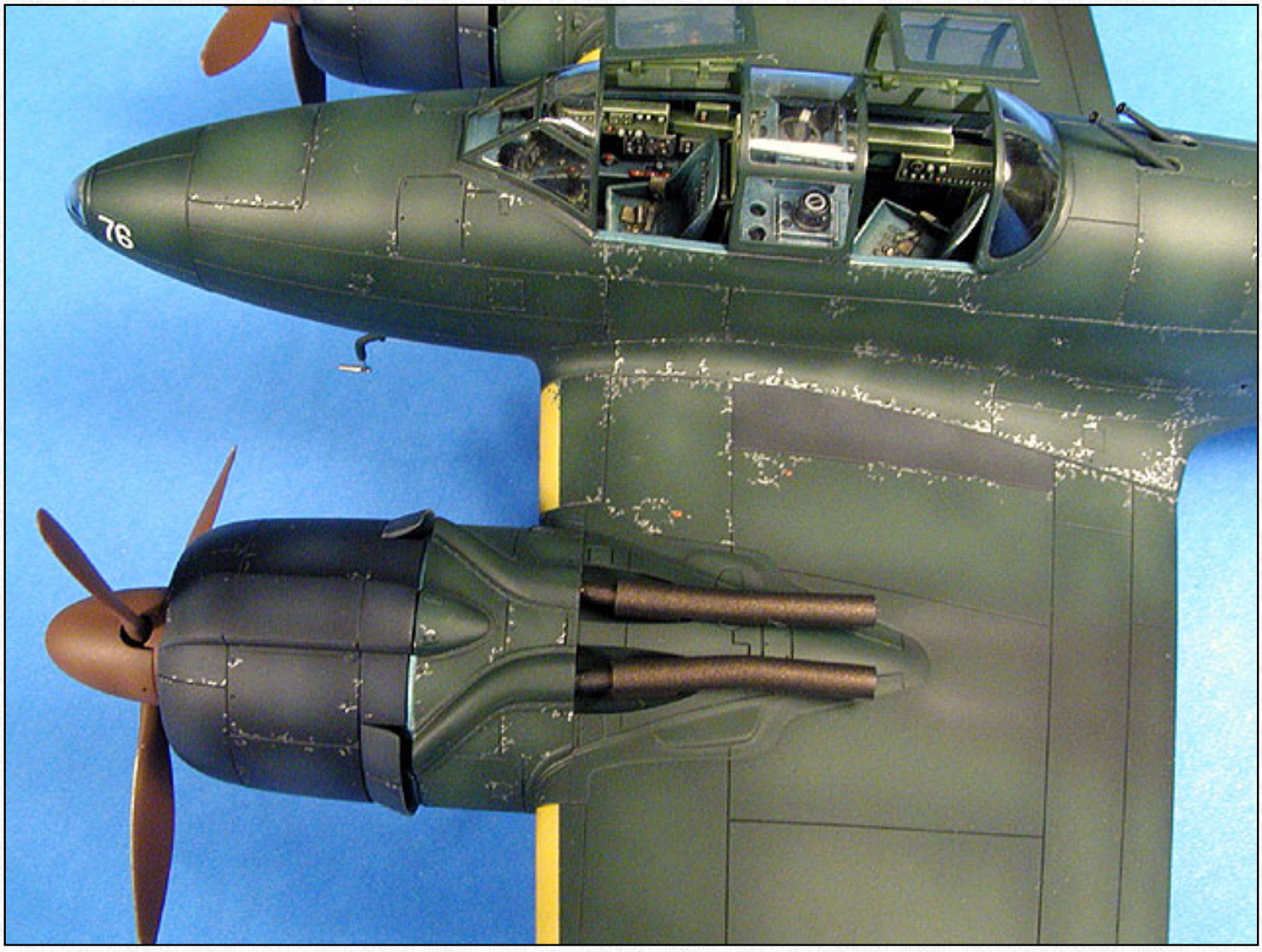
that is fine. Not everyone likes a "weathered" finish, or shaded panel lines. I will not go into the debate about pre-shading versus post-shading, (actually I use *both*) nor will I say things like "it should be this way, or that". We all have our own opinions of which way a finished model *should* look, and why.

Have you ever heard *this* around a table full of airplane models?

"No airplane EVER looked like that in real life!"

As far as I am concerned, these models of ours are 3D art, and as we all know, beauty is in the eye of the beholder.

The only reason I paint my models the way I do, is because I think they look interesting that way. I paint my models in a manner that is faithful to *my* vision of what the reality should be. It's called *imagination!* I wasn't there. I can't really tell you what it looked like. But I can study pictures, read manuals, and interpret this information into my own vision of what it should look like. A model that "grabs" you and retains your interest long enough to get you to look closer has a successful paint job. The model looks *interesting*. Just make darn sure that the model can stand up to the close scrutiny.



I have been using the same basic painting concept for more than fifteen years, but style, application, and substrate have all changed since then, and *will change again* based upon available paints and thinners, new ideas, or other whimsies.

For the most part, I have been using Tamiya brand acrylics for the exterior painting of my models since they were first introduced in the early 80's. Tamiya paints contain the finest-ground pigmentation of color particles that I have experienced. When applied correctly, Tamiya paints DO NOT show large individual spatters and are capable of extremely fine airbrushed lines, and incredible special effects. Tamiya XF series (flat) paints dry fast, and they dry hard. I do not have to worry about picking up the model, or handling it for long periods of time only to find that the warmth from my hands has softened the paint and caused a fingerprint to appear. My free time for modeling is very limited, so my choice of substrates and materials has evolved into products and techniques that are quick, simple, easy to use, and most importantly, yield good results consistently. I use 91% isopropyl alcohol as a base thinner, and Gunze's Mr. Color Thinner for special effects. I clean up with window cleaner and lacquer thinner. Tamiya's own thinner works well, but I prefer 91% isopropyl for the base finish. It seems to dry faster, and holds pigment better than Tamiya thinner. I can thin it more, and still maintain some opacity, while getting extremely thin lines.

I have been using a Paashe H model airbrush forever it seems. Believe me, I have bought and/or used nearly every major brand and type of airbrush. I keep going back to my old Paashe H. This airbrush is extremely simple in construction and very easy to use. Being made of metal, (except for the handle) makes it sturdy and easy to clean. Having very few parts also helps in the cleaning department. When using properly thinned paint and adjusting the air pressure and airflow, this brush is capable of human hair sized lines. And best of all for me, the single-action, externa- mix design provides longer, smoother flow-outs before the fast-drying acrylics start to mess things up. Dual-action internal-mix guns can clog easier and need more attention when spraying acrylics.

I usually spray with a H-3 tip, but I also use an H-1 as well. Another good point about the Paashe H is that is VERY affordable. A complete set-up including extra tips, bottles, and a hose can be had for under $50.00 U.S.

Because of this, I own several, and keep one designated for clears only, while another is set-aside for metalizers.

When studying pictures of Gekko, it becomes apparent that these aircraft were well maintained. In fact, most of them had quite a sheen to their paintjobs. Overall, the shade of green is very dark. The black (or blue-black) cowlings appear universally shiny, satin at the worst. Contrary to what has become common thinking when modeling Japanese aircraft, there are very few paint chips on these airplanes except in crew access areas and around the gun bay. Of course, there are exceptions. The early version of Gekko featured long exhaust stacks over the top of the wing as included in the Tamiya kit. Most of the pictures that I studied showed very little exhaust soot on the wing, and when it was there, it was mostly located near the trailing edge, and very dark.

I decided to model 3D-176 (the kit supplied markings) because there were two photos of it that I was able to find. These photos showed slight chips in common crew areas, and not-so-shiny paint. Another reason I chose this aircraft was because the photos showed that the armament configuration supplied in the kit was correct for this aircraft. Surprisingly, the only photos I could turn up that showed early style exhausts with only two upward firing cannon were the two aircraft included on Tamiya's decal sheet. There are however, LOTS of Gekkos with three upward firing cannon.

I knew going into this project that a monotone paintjob could be somewhat “boring”. My style of painting would help things a little here. What I didn’t want was a model that looked like I “spruced it up” because it WAS boring. A modeler could add lots of paint chips, really fade the paint, heavy exhaust stains, etc. to add a little interest. As much as possible, I like to capture the “essence” of what that particular airplane possessed. I want the finished model to be typical of the prototype and where it is serving. So, I decided that if the real airplane was boring, then so be it. I would build it as I interpreted the photos, with no extra “spice”. I did make one concession though; the under wing tanks were not fitted in the photos of the airplane I chose to build. I liked the look of them though; so I included them, painted in light gray for a nice contrast.

Most military aircraft from WW II have some sort of camouflage applied to the airframe, usually consisting of more than one color. A BF 109 for example, will usually have a light underside color, and two upper surface colors, for a total of three colors in the basic paint job. In that particular case, I would start with the lighter of the three colors, and work to the darker. The reason for this is because dark overspray is easier to blend than light overspray. Naturally there are going to be exceptions, but working from light to dark is a standard of mine. Any weathering or fading effects that I wish to apply will be done to *that color* before moving on to the next.

Gekko is all one color however, which made deciding where to start a no-brainer. Many modelers will add white too the base color to compensate for scale. Not me. I take a slightly different approach. I paint the model as closely as possible to true factory original specs. I will mix colors to exactly match chips if I have them. I chose Tamiya's XF 11 IJN Green as a base color for Gekko. It had the dark green look I was after; not too yellow. As I mentioned earlier, I used 91% isopropyl alcohol for thinning the base coat of paint. I always thin my paint 50% for starters, and see how it works on the model. I can add more paint or thinner depending upon the results.

NEVER assume someone's idea of a paint/thinner mixture is good for you. There are WAY too many variables involved to make a blanket statement about thinning paints. Just a few of these variables include the type of airbrush, what pressure is being used, temperature, humidity, and of course how experienced the user is with the airbrush. One variable that is often overlooked is the paint itself. I have experienced bottles of paint of the same color that did not work anything like it's twin. That is why I start with 50% thinner and see what happens.

I use a higher air pressure than some would expect, usually around 25 to 30 PSI. Sometimes I pump up to around 40 PSI for real close and tiny work. Again, like thinning, there is no standard here. You must experiment and see what works for you. I happen to like higher pressures.

At the end of Part 2, Gekko was primed, and all of the fuselage openings were blanked off with Blu-Tac (poster mounting putty) or spare glazing. Make double sure at this point that all seams are filled, that the scribing is good, and that there are no glitches anywhere. I use a strong light held at an oblique angle to the model so that surface imperfections are more visible. You want to take care of them NOW instead of later.

It is here, at this point, that some modelers will apply a “pre-shading” effect consisting of black or dark gray paint sprayed over the major panel lines of the airframe. The airframe colors are then sprayed thinly over the “pre-shading” which allows the dark colors to show through, creating a shaded appearance. I don’t use this method. It is too unpredictable. A little too much paint over it, and the effect disappears. Multi-colored paintjobs just make the situation worse by increasing the chances of obliterating the effect. The technique I use is both a “pre-shading” and “post-shading” combination that is applied after the basic paint color is sprayed down. By working on top of the base color, the effects are more easily controlled to my own satisfaction. More on this later.

Before I actually lay paint on the model, I look for any troublesome areas. Sharp angles and perpendicular surfaces tend to cause air vortices that will dry the paint before it touches the model, creating a rough and pebbled finish. To alleviate this problem, I spray these areas first. I apply the paint a little “wet” and build up the color gradually. At 50% thinned, Tamiya paint will be slightly transparent, and likes to be applied “wet”. Not like a gloss paint job, but not dry either. Get close, move slower, and find the balance between running the paint, and getting it on “wet”. This is a professional painter’s greatest talent. It takes a very long time and much experience to get it right, but once you achieve this special little talent, your paint jobs will always go better.

I work one section of the airframe at a time, like the top or bottom of one wing, left or right fuselage, horizontal stabs, etc. After painting in the problem areas, I start to cover the rest of the airframe (or the area pertaining to that particular color) using the same “wet” application. It may take two or three coats before a uniform finish is achieved. Gekko has a large airframe, and painting it all one color took a surprisingly long time. If applied correctly (for me) the finish of the model will be slightly eggshell; just a notch up from dead flat, and consistent overall. Since there are no other colors involved in painting the basic airframe of Gekko, it is time to proceed to fading and/or weathering the model

NOTE: The paint is dry almost immediately, and I literally waste no time going to each consecutive step of this process. By the time I have flushed out the airbrush, it’s time to paint again.

Fading and Weathering

“Weathered” paintjobs are *so* controversial. I have been painting my models with some sort of faded or weathered paintjob for as long as I can remember. Actually, the term “weathered” is a little misleading. I like to see something a little more interesting than a clean, neat paintjob on a model. Not necessarily “weathered”, but something different. Something creative and well-planned. I want the model to attract attention; not hide in plain sight. Most folks have paid compliments to my models, and some have bashed them publicly, but I can say for sure that the models I put on the table are attention-getters. They are *interesting*. Some of the best modelers I know NEVER “weather” their models. They don’t rely upon special effects at all other than superb building and painting skills, and are consistent winners in contests. I don’t relay on special effects either, but I DO enjoy looking at them.

I begin the "weathering" process by adding a "fade" effect that is comprised of two steps. The fade effect is applied to the entire airframe, including the underside.

What?

The *UNDERSIDE*?

Undersides don't fade!

No, but they can be boring. Therefore I do apply this effect to the underside, just not to the same extent. (More on this later.) For now, just realize that the effect that I am describing will be applied to ALL of the colors on a camouflage paintjob. The location of the color (top of wing, bottom of wing, etc.) decides how much of a fade effect will be applied. Furthermore, each color on the model receives the fade effect before moving on to the next color. Using the BF 109 again as an example, the underside would be completely painted, and then faded first. Then the next lighter color would be applied, faded, and so on until the model is completely painted.

For Gekko, the effect will cover the entire airframe, top and bottom. The degree of fade will be adjusted later in the final step.

To start the "fade" effect, I add at least 50% and as much as 75% white to the basic camouflage color I am working on. The amount of white added depends upon how severe I wish the final faded effect to be. Actually, the exact amount of white added here is not all that important, because the last step of the process will bring everything around to where I want it. For example, a Mediterranean or Pacific paintjob would get more white than a European paintjob. In Gekko's case, I did not want a severe fade since the aircraft was fairly well maintained and based on a large concrete complex on home soil. The fade mix here received 50% white. Thinning of the fade color begins at 50%, adjusted to suit, as per the basic paintjob.

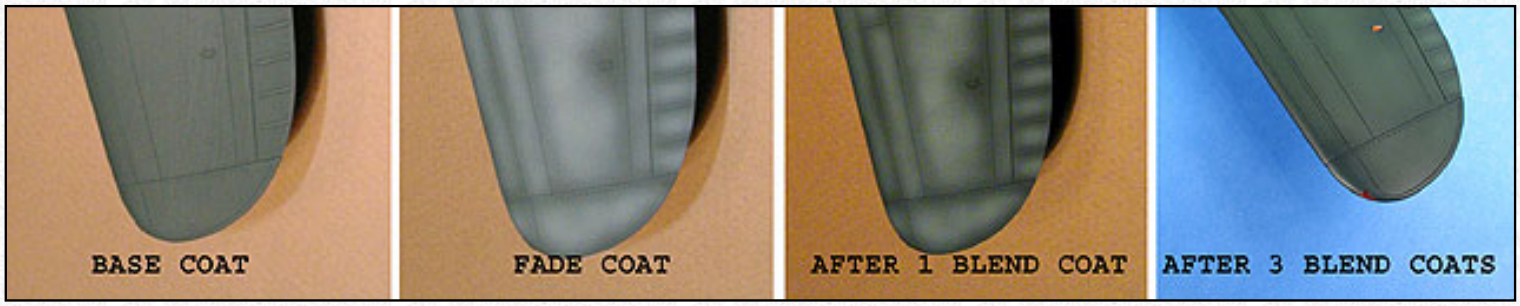
Now the fun starts. The center of every panel, every hatch, every fairing, every control surface, and even between the ribs in the simulated fabric is sprayed in the fade color. I start in the center of a panel, and work the airbrush in a circumferential pattern out towards the scribed panel lines. When a narrow dark strip remains around the panel lines, I stop. When this step was completed, Gekko resembled a patchwork quilt. YUCK! What I have actually done here is reverse "pre-shading", with lighter colors instead of dark. The faded effect at this stage will look too pale, way overdone, and totally unrealistic. You will hate it. No worries though, because this step was only a beginning.

Curiously, Tamiya acrylic paints can be thinned and sprayed with LACQUER THINNER. When I first discovered this weird mix, I was using a medium grade, automotive lacquer thinner. The lacquer thinner made the Tamiya Paints spray on like silk, and dry with a semi-gloss sheen. Also, thinning with lacquer thinner turned the Tamiya paints into a transparent coating, almost like a heavy clear coat. The sprayed-out paint was very smooth, but it took several coats to build up enough color for adequate coverage. I successfully used this combo for several years, but the time it took to get a final finish including all of the fading effects took FOREVER because of the translucent quality. Also, the mixture required constant agitation to keep it in substrate. So, I decided to try Gunze's Mr. Color Thinner, which is made for their line of Mr. Color lacquer paints. The results were similar, but the degree of translucency could be more easily compensated for. In addition, the mixture stays in substrate very well. Most large hobby shops stock Mr. Color Thinner, which was another big plus. BUT, even though I really liked what could be done with this formula, I was still spending too much time in the spray booth. Using 91% isopropyl alcohol as a thinner for the base coat and the faded coat solved this problem, but my good experiences with Mr. Color Thinner, paved the way for the next step.

Now it is time to blend everything together, and eliminate that patchwork quilt look. This next step could be called "post-shading." To begin, I go back to the original color for the base coat. This time though I add Mr. Color

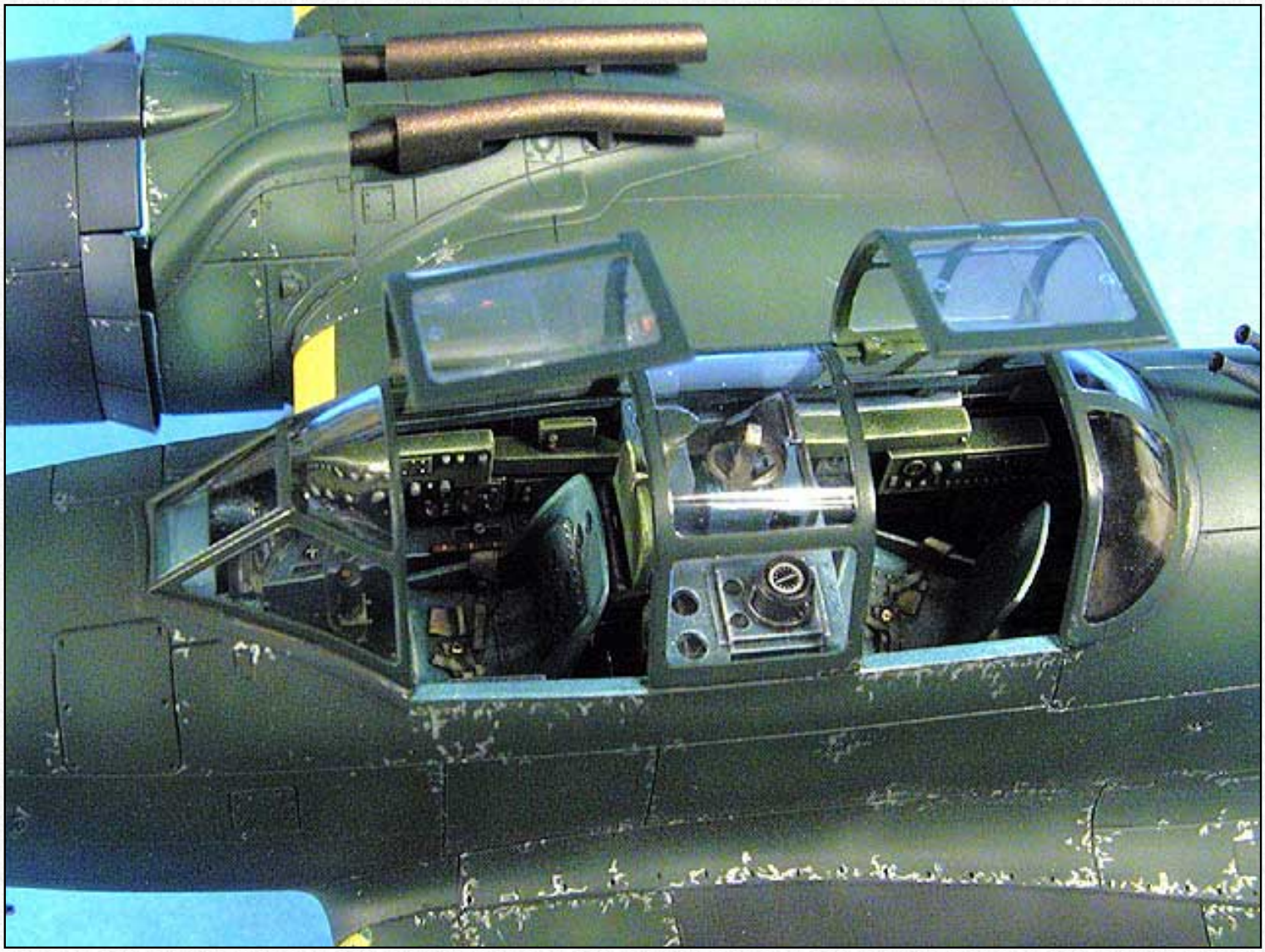
Thinner to the base color. The ratio is around 75% thinner, 25% paint, but like everything else this ratio is variable depending upon taste, painting methods, and what kind of final effect is desired. This color mix is applied kind of like a "bomb" coat. I spray a pattern about ½" wide, and lay it on wet. My objective is to completely cover the faded effect and blend the two colors together. When applied, this transparent coating will tint the faded paint back into the original hue. At the same time, the blend coat reduces the contrast between the two colors. By going over the area again, more blend, and even less contrast is achieved. Getting the picture?

The really cool part about this method of fading is that the finish can be worked over until only a slight fading is present, more of a visual interest if desired and less of a weathered paintjob. The choice is determined by how thin the blend coat is, and how many coats are applied. Each color on the model is completed with this entire process (base coat, fade coat, and blend coat) before moving on to the next color. Obviously, a multi-colored aircraft can be a little time consuming, but with practice, and the help of these fast drying formulae it is entirely possible to paint that BF 109 in a matter of hours. REMEMBER, these color coats dry almost immediately, and I move to the next step right away.



So now at this point, Gekko has been painted with a three-step paintjob that is not quite new looking, and not quite faded either. I applied the blend coat just enough to balance between too much and too little contrast; three wet coats was just right. Any trim colors like theater markings or IFF markings, national insignias, etc. can be applied either before (and masked) or after the base colors are applied, but remember to fade and blend these colors to maintain continuity. I decided that I would paint the Hinomarus onto this model, and apply the effects to them as well. I had a set of Eduard masks and used them very successfully. I highly recommend these vinyl masks! The cowlings were painted in a mix of black with just a touch of blue, and faded to match the fuselage. Also, the leading edges were masked and painted at this time. Any painting of wheel wells and open areas should be complete by now as well. I chose to mask and spray the wheel wells after painting the model. I used the same techniques described in Part 1 to simulate natural metal and Aotake in the wells, and on the leading edges of the engine nacelles. The engines were painted with Metalizer *Magnesium*, washed with black and then drybrushed with silver. The crankcase covers were painted gray, and washed with dark gray.

Painting Canopies



I don't think anybody really likes painting canopies. I *hate* painting canopies. Any shortcuts, or time I can save painting canopies is OK with me. However, canopies are very important to the overall quality of a finished model. I do use shortcuts, but I make sure that quality does not suffer. It is critical that the canopy is not marred in any way with stress cracks, crazing or scratches. A lot of folks use Future floor finish as a one-step fix-all for bad canopies. If that works for you, that's fine, and I urge anyone to give Future a try. For me, preventing canopy boo-boos in the first place is the best idea. When I open a kit for the first time, I always have a zip-lock baggie handy to put the canopy into. When I remove a canopy from the sprue tree, I use sharp flush-cut nippers and trim it well away from the canopy surface. If the canopy surface is too close to the sprue, I may use a hot knife to cut cleanly through the sprue. Whatever you use, it is absolutely necessary to leave a high "nub" of trimmed off sprue on the canopy part. DO NOT try to remove the part as close as possible to the canopy. It is far better, far safer, to carefully file down the nub until it is flush with the surface, and then wet-sand with super-fine grit paper. I use a metal polish called Blue Magic to polish the canopies clear. Blue Magic is creamy, not gritty, but it works very fast, and like it's name; *magic*. After polishing, if there is just too much damage for whatever reason, THEN I may resort to using Future. But for the most part, I do not use Future on canopies.

Beside vinyl masks, I find Bare Metal Foil (BMF) the easiest way to mask canopies. I use the standard shade of aluminum, and burnish it down onto the canopy with a cotton swab. Today's kits usually have well defined canopy frames that show up with no problems using BMF. Using a NEW #11 blade, the foil is cut with a very light stroke, more like lightly dragging the blade next to the frames. Use the frames themselves, or sometimes scribed lines for guiding the blade. Don't use pressure, just a steady hand. With only a little practice, you will be

surprised how easy this is. If the canopy frames are not well defined, I use tape strips as substitutes for the frames while masking with BMF. Apply the tape strips where appropriate, cover the canopy part with BMF, and cut as usual. After cutting, peel off the foil and tape strips, exposing the area to be sprayed.

Taking a short cut, I prefer to paint the *insides* of the frames by painting the interior color on the *outside*, before painting the exterior color. Because it was applied first, the interior color shows through when viewed from the inside. Gekko had medium green canopy frames on the interior, so this is the color that the canopies were sprayed first. The exterior color is sprayed next, followed by any fading and blend coats, and then set aside for the final finish to be applied later. DON'T forget to weather the paint finish on the canopy frames to the same degree as the surrounding fuselage, or it will not look right.

Decals

In order to prepare the model for decals, a glossy finish is needed. Testors Sealer for Metalizer is a very good product to use as a gloss finish, and as a sealer for the paintjob. Remember, I like to move quickly, and this product pleases me to no end. It dries fast, it's clear, and it dries hard. I spray it on straight-out-of-the-bottle in a nice even wet coat. Usually, I apply only one coat. 30 minutes later (no joke) I can apply decals. Don't forget to gloss the canopies so that they receive the same coats of paint as the rest of the model, and exhibit the same tonal qualities in the end. Besides being decal ready at this point, the model is also sealed and protected against any accidental damage that may result from detailing and weathering still to come.

Out-of-the-box rules state that you may use aftermarket decals on your model. This gives the OOB modeler a little bit of freedom from the contents of the box. I think that aftermarket decals have become such a staple in scale modeling that most of us never even think about using kit-supplied decals. How many decal sheets do you own? Me too.

Sometimes though, the kit manufacturers have gotten it right, and picked a good subject for their own decals. Such was the case with Gekko. The aircraft I wanted to model was one included in the kit decals. Actually, this happens a lot when I build models OOB, because more often than not, it's a brand new kit I'm building and there aren't any decals available yet. If using kit decals frightens you, then rest assured that there is a *solution* to your dilemma. Mr. Mark Softer decal setting solution will make your day. This is another great product that I use every time, and with every decal. This stuff works a little differently than the "Micro System" that uses two separate solutions; a wetting agent underneath, and a solvent on top. You know how it goes. Apply the decals and solvents, watch then wrinkle and crinkle, TRY not to touch them, and go to bed because it will be hours before you can touch them again.

Mr. Mark softer is a super simple one step topical application. After wetting the decal area wet with a little water, I slide the decal into place. A ¼ or ½ inch flat brush is used to squeegee out the water from under the decal, and set it into place. Now a little bit of Mr. Mark Softer is applied directly on to the top of the decal. Gunze even includes an applicator brush in the lid. Unlike other solvents that attack the decal immediately, Mr. Mark Softer is a slow starter. At first, you will not notice anything happening to the decal, then suddenly, it's snuggled down. All the way down. The underside wing roundel of Mk.I or Mk.V Spitfires is the ultimate test of a decal solvent. Right smack in the middle of the roundel is a HUGE exhaust vent for the gun heating system. It took two applications of Mr. Mark Softer over a ten-minute period, but that Aeromaster decal could not stand up to the pressure. Not even a wrinkle in the decal, and perfectly snuggled down.

On Japanese kit decals, Mr. Mark Softer is nothing less than a miracle worker. Hasegawa decals work great with this stuff. Tamiya decals work great with this stuff. (By the way, has anyone besides me noticed that Tamiya decals keep getting better and better?) The tail markings on Gekko went on with out a hitch. I will not hesitate to use Japanese kit decals with Mr. Mark Softer. And best of all, if I needed to, I could shoot a flat coat over them in as little time as one hour.

Panel Lines

After the decals, I apply a wash to the panel lines, making sure to include the panel lines located where the decals are. Like faded paint jobs, highlighted panel lines are a matter of opinion. I know several modelers that never do a thing to the scribed lines on their models, and the models look great. Even so, I have probably been asked more than anything else, how I "do" the panel lines. Funny thing is, enhancing the panel lines is just about the easiest thing to do on the model.

I use two different methods of applying a wash to the panel lines depending upon the situation. I might use oil for the wash or I might choose an acrylic wash instead. Choice of color for the panel line wash is important. You can choose a darker version of the base color, or even a lighter version, but dark gray is a pretty safe choice. Gekko was so dark however; that I felt a black wash was the only way to go. Ordinarily I will avoid black because it is too dark, and unrealistic. Windsor & Newton oils were used for the wash on this model. For thinning the oils I use Ronsonol brand lighter fuel (naphtha). Lighter fuel carries the oils very well, and as usual for my product choices, it is very quick drying, taking only *minutes* to dry. Any cleaning up or touching up of the oils can be safely done with clean lighter fuel. The lighter fuel is safe to use on almost any paint or surface, and in fact, makes an excellent cleaner. I have had good success with mineral spirits and Turpenoid (synthetic turpentine) but I keep going back to lighter fuel.

There is no formula I use to thin the oils. I simply add a little dab of oil to a dime size drop of lighter fuel, and mix it up. The fuel evaporates so quickly that you must constantly add more. Only experience can tell you how thin to mix the wash. A small brush filled with wash is applied to one end of a panel line, at a corner if possible, and touched down again where the capillary action has stopped. There will be some excess wash that has slopped out of the panel lines. I use clean lighter fuel on a cotton swab to remove this excess. I also used acrylic washes on this model in a few critical areas. The yellow leading edge stripes, white tail markings, and Hinomarus received a very controlled acrylic wash of medium gray so that I could maintain the boundaries of the color. Black in these areas would have been too harsh.

The acrylic wash is a little different. I use Polly Scale acrylics for these washes, but nearly any water-based paint will work. Thin the paint with water, and slop it into the panel lines. No need to be neat. Work only a small area; say about half of a wing at a time. The acrylic will dry very quickly. When it is, wipe off the sloppy excess with a cotton swab or soft cloth soaked in window cleaner.

A very sharp drafting pencil can be effective to use in the panel lines of a lighter colored model as well.

A thin coat of Metalizer Sealer is applied over the decals now to reduce the possibility of the decal film being visible.

Final Finishing Coat

The model, including those canopies, is now ready for a final finish coat. I mentioned earlier that Gekkos were very well maintained, and usually had a satin sheen to the paint. It is well know that many WW II aircraft had satin finishes, and many were routinely waxed for better performance. Even so, I still prefer a flat finish on my models. The choice of finish sheen is yours of course; I just think that they look better that way. I will vary the *flatness* of some colors to make concessions to various sheens in real life, such as the engine cowlings on Gekkos, which were a rather shiny black or blue black.

I have used Testors Dullcote for as long as I can remember.

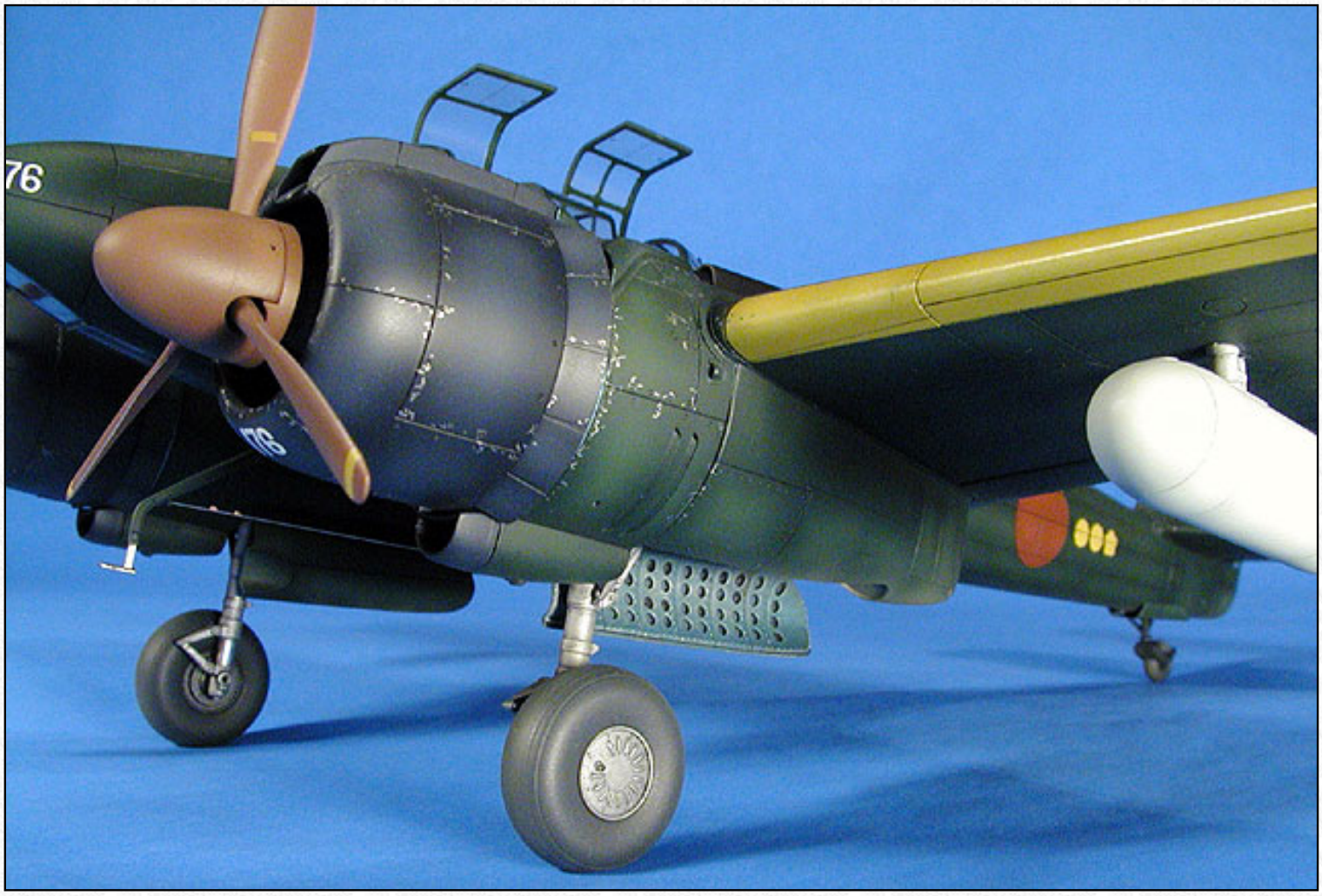
It dries fast, dries hard, and can be varied from satin finish to dead flat. Dullcote settles out in the bottle, leaving the flattening agent in the bottom 1/3 of the bottle. To vary the sheen, I will pour off the carrier agent in the top half of the bottle, leaving more flattening agent, or add some of the carrier to another bottle to increase the sheen.

I thin the Dullcote 50% with lacquer thinner purchased from a home improvement center. Like the other paint finishes on the model, the Dullcote is applied "wet" and left to dry, which usually takes about 15 minutes.

Dullcote has two potential drawbacks; it's amber color, and occasional flecks of talc (used as a flattening agent), which show up in the finish. I strain the Dullcote before using it to prevent talc flecks. If any get through, a second application of Dullcote will usually take care of them. Because the cowlings have a greater degree of sheen than the rest of the airframe, I mixed a little Dullcote with Metalizer Sealer and the results are very satisfactory.

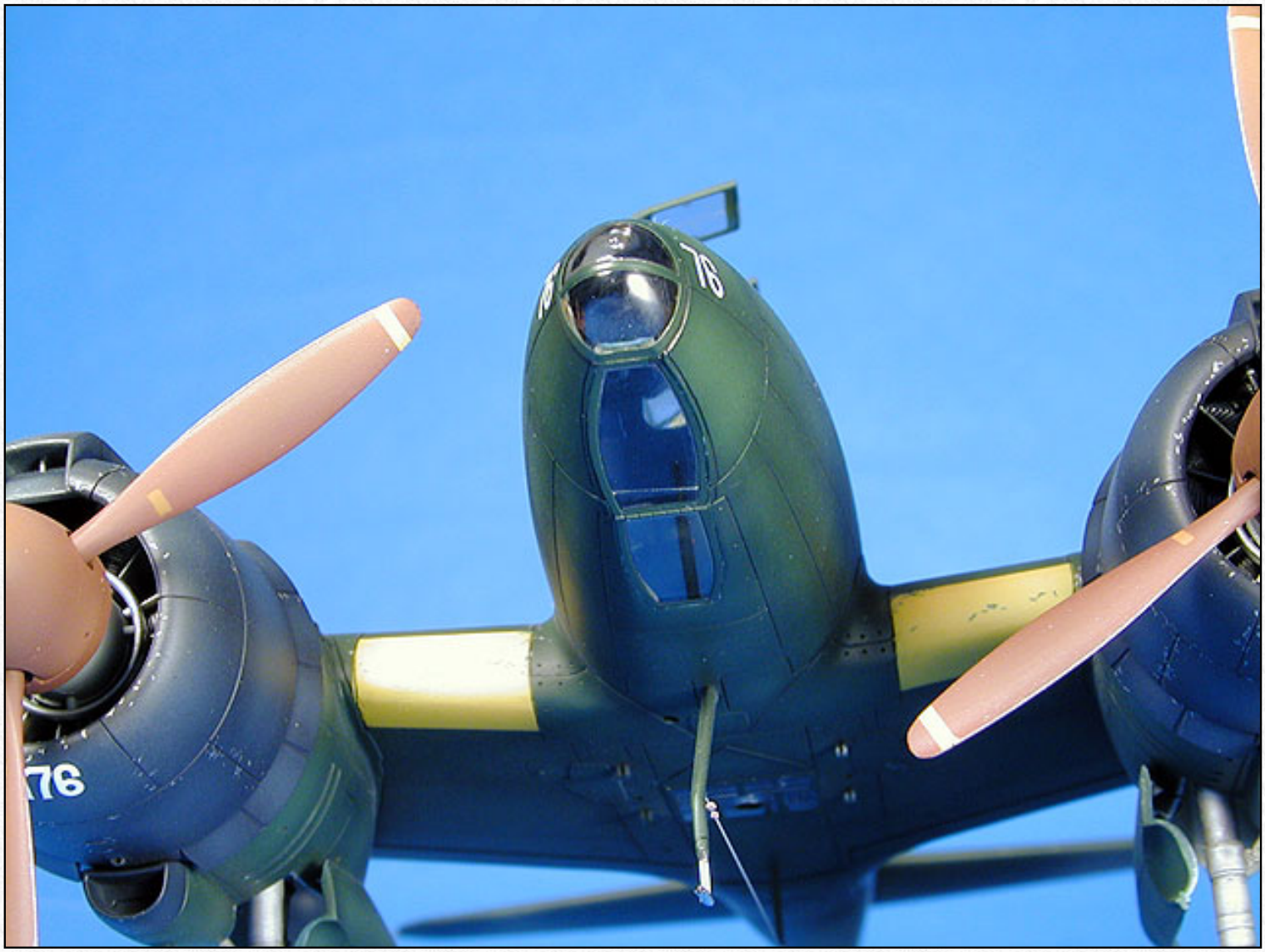
Final Assembly

This is the point in assembly that I usually put all the parts together. Engines, cowlings, landing gear, external fuel tanks, armament, canopies, etc. are all brought together on the airframe. The main tires and tail wheel were given flat spots with a file, to simulate the ground contact between rubber and pavement. I mentioned in Part 2 that I do not use cyanoacrylate adhesives for major assembly, but this is the stage where I do use them. My brand of choice is Zap-A-Gap, a medium viscosity glue that holds very well. Cyanoacrylate adhesives do not have good shear strength, and the bond will break with any sideways force. Therefore, I make sure that the parts to be bonded have a positive location to adhere to such as a hole or socket. I rarely use an accelerator, because it breaks down the quality of the bond. I make double sure that the gear legs have authentic alignment, and most of all are consistent to each other. I make sure that each leg is lined up with the other one, and that each leg has identical alignment with the wing or fuselage. At the same time, I make sure that the wingtips and tail surfaces are situated exactly alike from side to side. I use a mark on a card to measure the exact position of each wingtip and adjust the gear legs until all of this is perfect. This is not an easy task at all, and it is THE most critical step when building models that are intended for contests. (Remember this paragraph for a story at the end of this article)



Navigation lights were faired in and polished early in the build, and have been masked until the flat coat was sprayed on. Now the masks can be removed. Tamiya's wing tip lights are clear, and need a coating of translucent blue-green on the right, and translucent red on t he left. I use Tamiya clears for this, brushed on wet and left to dry. The layers of paint that have built up around the masks, serves as a boundary for the clear colors, and effectively works as a dam between the paint on the wings. A handy tip! The nav lights on the tail were clear inserts, and masked previously as well. Again, the paint layers serve as a boundary for Future this time, in order to enhance clarity. Other navigation and formation lights on the wings were painted in with Tamiya clears over a silver base.

Gekko's canopy was the last major part assembled onto the model. I use Microscale's Micro Kristal Klear, a glue similar to Elmer's white glue, to attach canopies. A small bead all around the mating surface of the canopy is all that is needed. After placing the canopy, a tiny bead of adhesive should flow out of the joint. If there is not a good flow out in an area, I will apply some Kristal Klear to the outside of the joint. After 15 minutes or so, the Kristal Klear is beginning to set up. Kristal Klear differs from white glue in that it can be re-solved with water, and gradually eroded down to a flush surface. I use a water soaked cotton swab wiped around the canopy joint until the joint is clean. This method will usually result in a perfect joint that can be washed to match the rest of the panel lines. If necessary, a little Dull Cote may be airbrushed carefully around the joint. The Paashe H is more than capable of this without masking the canopy. Just be careful and spray away from the clear areas. I should note that the glazing under the nose virtually snapped into place and did not need adhesive.



When the model is on it's gear, is when I decide exactly what additional weathering is needed. I can look at it from all angles, visualize dust patterns form the wheels, exhaust patterns, paint damage, etc. I wanted Gekko's exhaust to be an attention grabber, but not overdone. The exhaust stacks were painted with Metalizer *Burnt Iron*, and then Dullcoted. For the stains, I airbrushed a very thin black mixture where photos told me they should be. Gekko's stains did not start directly at the mouths of the stacks. They tended to collect aft of the cord of the wing, and widen out from there. The color was airbrushed on slowly and carefully, gradually, building up the color. The lighter streak in the middle is a tan color that I added for interest sake. Underneath, some buff-colored dust was airbrushed around the gear, and back along the tire tracks, and onto the undersides of the horizontal stabs. Likewise, I airbrushed some dust around the crew entry areas.

The paint chips on this model were done with a Berol Prismacolor silver pencil. I use a piece of sandpaper to keep the point sharp, and then kind of tap the pencil along in a random pattern. I tried hard to keep the chips in small areas, and limited to heavily used parts of the airframe, including the armament hatch in the fuselage spine. I followed photos very closely here, and I think the effect is typical of the prototype. In the yellow IFF markings on the wing leading edges, I used a dark green colored Berol pencil to add a few chips as well.

Click the thumbnails below to view larger images:



A little more Dullcote over the additional weathering finishes the Gekko's painting. An antenna wire made from stretched sprue added to the belly and to the wingtip and insulators made from drops of Kristal Klear, finishes the details.

Gekko took a long time to get to this stage, about 100 hours or so over two months time.

While I am assembling a model, especially an out-of-the-box model, I keep very thorough notes as to what I modified on the kit. I will mark these notes in red ink on the instruction sheet as I go. Since the instruction sheet is usually required to accompany an out-of-the-box project, this is a handy way to inform judges what you modified, and how you did it. There is no need to cheat, or try to hide anything you have done. If the judges feel that the model does not qualify for OOB, then fine. It will automatically become part of the originating category, and compete there. For me, it's not about the trophies. While I do enjoy competitions, it is far more important to me to finish something that I am pleased with, and have enjoyed building. Hopefully, somehow, the model was a bit challenging along the way. (Have to keep skills sharp!) If the model pleases others, well then, that is just a bonus!

"Oh, The Irony.."

There is a humorous post-script to this story that involves the assembly techniques that I talked about in Part2.

I took the model to several local shows and it was well received, was well rewarded, but failed to place 1st on a number of occasions. The models that beat it were excellent models, but I had to know, so I asked the judges where I went wrong. (By the way, unless you ask, you will probably never know…so ask the judges!) Remember all of the measuring and making sure that the wings were straight, and everything was parallel and perpendicular, and how important it is to judging the finished model? One trick that judges use to check a model for correct alignment is to stand in front of the model, and look at the horizontal stabilizer. The judge visually compares the horizontal stabs to the wings, by watching the tips of the stabs, and gradually lowering his vision until the stab tips touch the upper wing surface in his vision. If each stab tip touches the wing at the same time, the alignment is correct from a construction point of view. If they do not touch at the same time, then something is wrong somewhere. My Gekko was ever so slightly off on one tip. When measured, each wing tip was exactly the same distance from the table, as were the horizontal stab tips. The gear was perfectly aligned. But when viewed head-on, there was indeed a tiny gap showing when the alignment trick was used. What the heck?

Optical illusion? After considering this for a while, I came to the conclusion that the wing in question was slightly warped at the nacelle joint. Assembled carefully, measured, measured again, and the warp doesn't show up until the bitter end. Ever see Charlie Brown comics when our hero Chuck is mad? The dialog bubble is filled with scribbles. My dialog bubble was filled with scribbles.

It would not have been so bad if the model weren't the star of a three-part article on building models out-of-the-box that placed high emphasis on alignment and careful building techniques. Now I just laugh at the irony. Actually it really is pretty funny, and makes an excellent point to end this article on. The Gekko now resides in Oregon, USA and belongs to my good buddy, and fellow Hyperscaler Chuck Zellmer.

Photography

All photos in this article were taken with an Olympus C-2100 Ultra Zoom 2.1 MP digital camera. The camera was set to macro mode, and manual exposure. With the camera set to F8, the smallest aperture, exposure times varied between 1/5 and 1/30 of a second. Lighting was two halogen spots, and overhead room lighting.

Additional Images

Click the thumbnails below to view larger images:

[photogallery/photo7514/real.htm]

Page Created 05 March, 2002
Last Updated 11 March, 2002

Back to HyperScale Main Page

Back to Features Index