BUILDING Yeager's Mustang

Modeling "Glamorous Glen III" in 1/32 scale

Story and photos by Pat Hawkey

Chuck Yeager's "Glamorous Glen III," made from the old Hasegawa kit, looks great posed with a figure, goggles, Air Medal, and a map of World War II-era Europe. Photo by Jim Forbes.

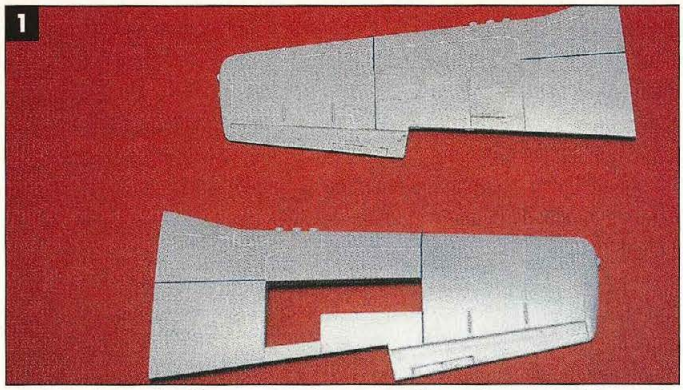
The North American P-51D Mustang needs no introduction – so I won't bother! Hasegawa's 1/32 scale rendition was first released in the summer of 1973 at a list price of $4.50. It reflects the state of the kit maker's art 28 years ago – how things have changed. But it's still basically a good kit with a pretty accurate outline and decent fit.

However, like all early 1/32 scale kits, it lacks detail we now take for granted. The cockpit, wheel wells, landing gear, exposed Merlin engine, guns, and ammo bays are basic. Unfortunately, in this big scale, basic really doesn't cut it. This model is also covered with tiny rivet heads and raised panel lines, which is not what most of us want to see when approaching a big natural-metal project. You're going to have to work a bit to get a really good representation of a P-51, but isn't a fine Mustang model worth it?

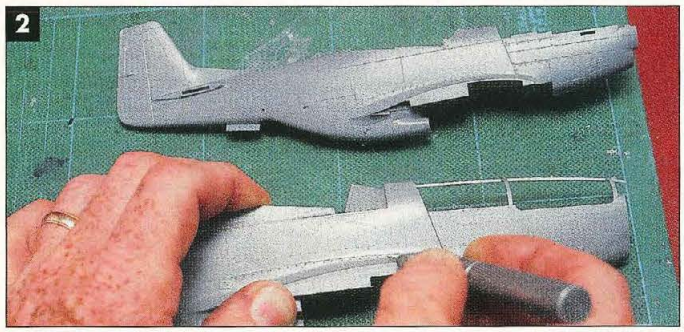
The year 2000 re-issue of the Hasegawa Mustang features decals for "Glamorous Glen III," the airplane flown by (then) Captain Chuck Yeager. Otherwise, the kit is unchanged.

When the opportunity arose to build this particular model for *FineScale Modeler*, I was ready. I'd built the same kit for a client a couple years before, and while everybody who saw it seemed to like it, it was built to some specs I didn't agree with. After building a big Mustang for somebody the way they wanted it, I was itching to do one the way I thought it should be done! Here we go.

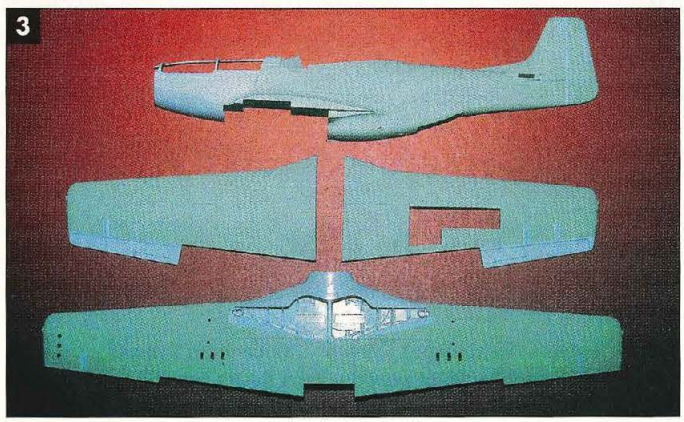
Flaps, down! When a Merlin-powered Mustang's engine is shut down, so is the hydraulic pump, so the hydraulically activated flaps and wheel covers slowly drop to the full down position. So, if you are modeling a D Mustang at rest, the flaps and doors should be down. While I was cutting the flaps from the wings, I also separated the elevators from the stabilizers. Instead of using a saw, I scribed repeatedly along the hinge lines with a needle chucked in a pin vise, then wiggled the flap or elevator until the joint began to give. After a few swipes with a No. 11 blade the parts were free. I glued the flaps and elevator halves together and set them aside.



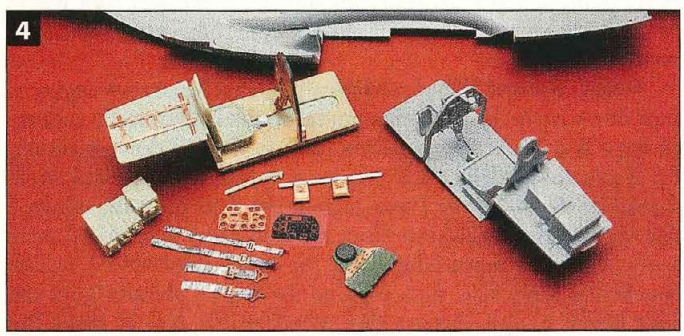
Pat glued stretched sprue into the unusually wide recessed lines of the upper wing halves.



While Pat poked holes in the wing fairing to represent rivets, he kept a Tamiya 1/48 scale fuselage handy as a rivet and panel line reference.



Pat tinted his gray primer with paint (here green) to make it more obvious against gray plastic. He masked areas he didn't want primed with thin strips of tape.



Verlinden's unpainted interior (left) is better than the Hasegawa representation, but it still has faults.

The elevators and rudder are marred by overdone "fabric detail" (which looks like burlap). These should be as smooth as the rest of the airplane. I scraped and sanded the coarse "detail" away. At this early stage I also installed the left gun bay doors into the wing, using liberal amounts of gap-filling super glue on the inside surface.

New panel lines. My next job was to re-scribe all surface detail. I scribed new lines right alongside the raised lines before sanding them down. For reasons we can only guess at, Hasegawa chose a few panel lines at random to engrave deeply. I filled these with stretched sprue secured with liquid cement, **1**. Were I to do it again, I'd rely more on gap-filling super glue. Re-scribing the sprue-filled lines proved problematic, with the sprue wanting to come loose in places.

The raised lines that are provided are fairly accurate in location, but I also relied on Tamiya's superb 1/48 scale P-51D interpretation as a guide to scribing. For the most part, I used my chucked needle with a drafting eraser shield as a straightedge, **2**. An eraser shield (available in art-supply stores) is a thin metal sheet that protects pencil artwork while erasing errors.

Scribing the wings and stabilizers was straightforward, but the fuselage, with its prominent rivets and fasteners, was a bit more involved. The fairings that join wings and stabilizers to the fuselage are attached on the real airplane with noticeable rivets. With my needle I poked a hole in each of these raised rivets – that's a lot of holes to be poked! The recessed fasteners around the nose panels are especially evident on real P-51s, and these I represented (for the sake of speed) by a poke of the needle followed by a twist of a No. 70 drill bit. In retrospect, I should've given the wing fairing rivets a twist of a small drill bit as well.

Sand, prime, smooth. When the scribing operation was complete, I sanded everything smooth with a combination of medium-grit sanding stick and 400-grit sandpaper. Fortunately, the raised detail provided is fairly light and not difficult to remove.

The exterior got its first of many primer coats at this stage, **3**. A lot of glitches appeared under the primer, and I re-sanded or filled crooked lines and missed corners with gap-filling super glue. Then I sanded and primed again. There would be lots more priming and sanding before this model was ready for paint.

Department of the interior. Verlinden's detail kit No. 787, a combination of resin and photoetched parts, copper wire, and a celluloid instrument face piece, was my choice for the cockpit interior, **4**. It replaced virtually the entire Hasegawa cockpit array, and saved a lot of time. However, there were some minor problems. Certain items seemed to be a bit overscale, especially on the left side wall where not all the bits have enough room to squeeze in. The carburetor hot air control lever was squeezed right out of the project, in fact. The seat belts and buckles look to me closer to 1/24 scale than 1/32. I used the buckles, but substituted cut and wrinkled strips of lead foil for the too rigid photoetched straps.

A photoetched instrument panel coaming is provided, and the installation of this piece caused some problems. Trimming as per the instructions removed too much of the kit's coaming. I discovered this problem only after I had the instrument panel secured to the floor in the notches provided. Test fitting quickly showed the panel to be too far aft (closer to the seat) in relation to the coaming. I broke it loose and installed it as a separate item, having to compromise on location. To set it in far enough and allow room for the under-coaming instrument lights, the attached rudder pedals would've been too far away for a 1/32 scale Capt. Yeager to reach.

Closing in. I determined the smartest building sequence would be to build the fuselage so the cockpit floor/seat assembly

could be inserted from below later, **5**. This would avoid potential damage resulting from handling this assembly. Before securing the fuselage halves I partially boxed in the tail wheel well, **6**. I didn't bother with a rear wall – you can't see back in there anyway.

The kit comes with an upper cowl panel designed to be removed to view the engine, and not surprisingly, getting a good tight fit here wasn't easy. I superglued a section at a time, using clamps to hold the panel flush with the fuselage.

Two other fuselage spots that needed attention were the ventral radiator scoop and the nose carburetor intake; both are just open holes into the model. I made a roof for the radiator intake out of .030" sheet styrene and filled the gaps and cracks inside with epoxy putty, **7**. It was a little tricky getting files and sanding sticks into the confined area to work it smooth.

The carburetor intake was more involved as there was nothing there to start with but a hole. I carved and sanded a small block of balsa to the size and shape of what the interior of the intake would be. With what I hoped would be a usable master, I dusted off my trusty Mattel Vac-U-Form and inserted a sheet of .040" styrene. This is thicker than the machine is designed to accept, and I had to clamp the plastic holder tight with a small pair of vise grips. The first draw was a good one. This was happy news, as my balsa master didn't survive the removal from my new part.

I glued my scoop interior behind the intake opening of kit part C13 and sliced off the rear end. I didn't get a perfect fit where my part met the kit part. Intake interiors are very smooth places and this was another very tight place to get a seamless look. I dabbed thick super glue into the gaps and cracks and when dry, following it with 400-grit sandpaper wrapped around a long straight pin, **8**. This got me into the tight corners and worked well. I painted the inside silver and glued a flat black backing piece to the rear end to give some illusion of depth.

Talkin' 'bout shaft. Since I wasn't going to install the engine, and the engine contained the propeller shaft, I had to improvise. I took 1/16" brass tube, cut a 1" length, and stuck it through a 5/8" disc of heavy sheet stock, **9**. I centered and cemented this in the back of part C13, using the spinner as an alignment guide. When this was set, I again used the round of the spinner,

REFERENCES

357th Fighter Group James Roeder, Squadron/Signal Publications, Carrollton, Texas, 2000

P-51 Mustang in Detail and Scale Part 2 Bert Kinzey, Squadron/Signal Publications, Carrollton, Texas, 1997

Pursue and Destroy Leonard "Kit" Carson, Sentry Books Inc., Granada Hills, California, 1978

Walk Around P-51D Larry Davis, Squadron/Signal Publications, Carrollton, Texas, 1996

The Yoxford Boys Merle C. Olmstead, Aero Publishers Inc., Fallbrook, California, 1971

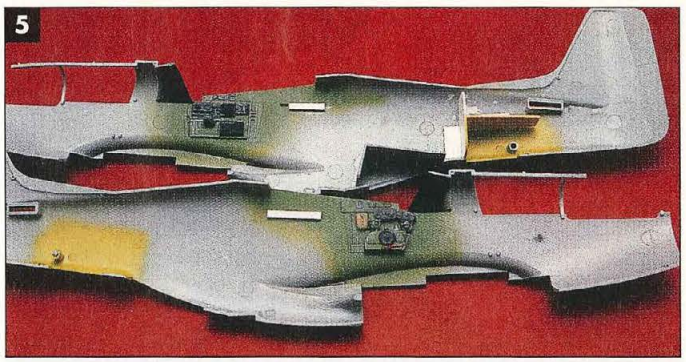
SOURCES

Cockpit set Verlinden Productions, 811 Lone Star Drive 63366 O'Fallon, MO 63366, 636-379-0077, www.verlinden-productions.com

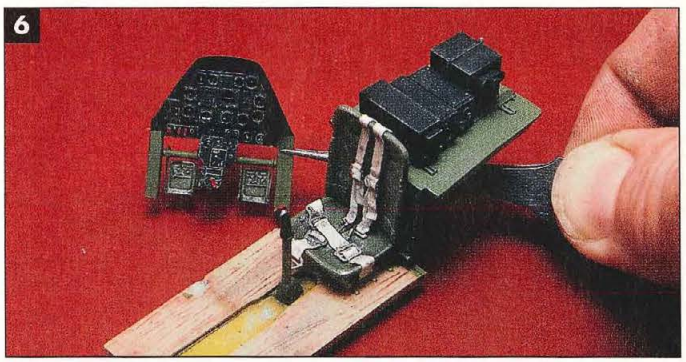
True Details wheels and vacuum-formed canopy Squadron Products, 1115 Crowley Drive, Carrollton, TX 75011-5010, 972-242-8663, www.squadron.com

Light lenses M.V. Products, P.O. Box 6622, Orange, CA 92863-6622

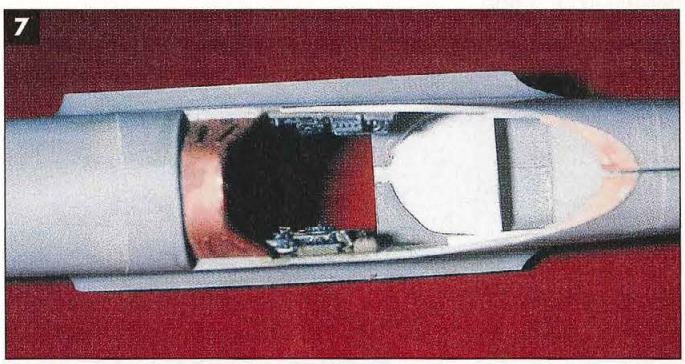
Parafilm M sold by Testor Corp., 620 Buckbee St., Rockford, IL 61104-4891, 815-962-6654, www.testors.com



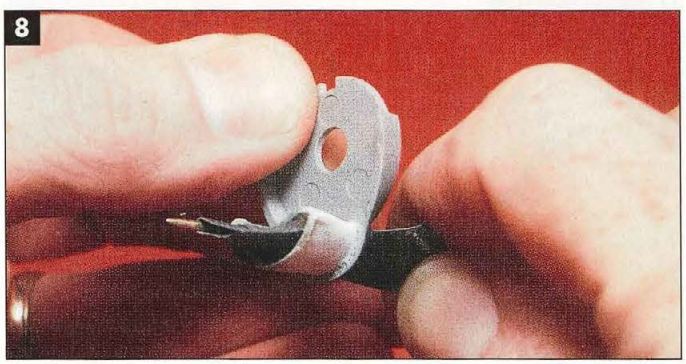
The painted side wall detail shows improvement over the kit parts. The fuselage halves are ready to be brought together. The white strips will hold the radio deck.



The cockpit floor, seat, stick, and instrument panel will be inserted from below before the wing is attached to the fuselage.

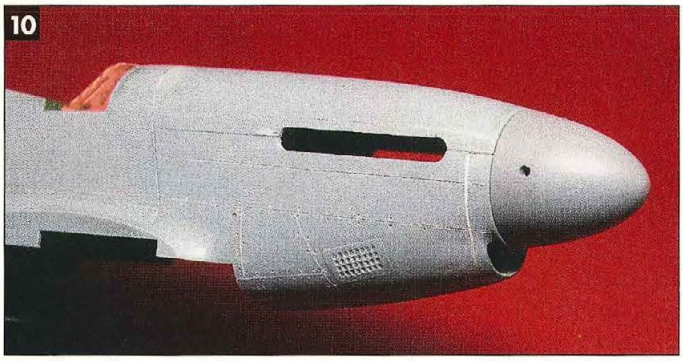


Looking down into the assembled fuselage reveals the roof added to the radiator interior. Also seen just behind the wing leading edge is epoxy putty blended to get the desired smooth upper fuselage contour.

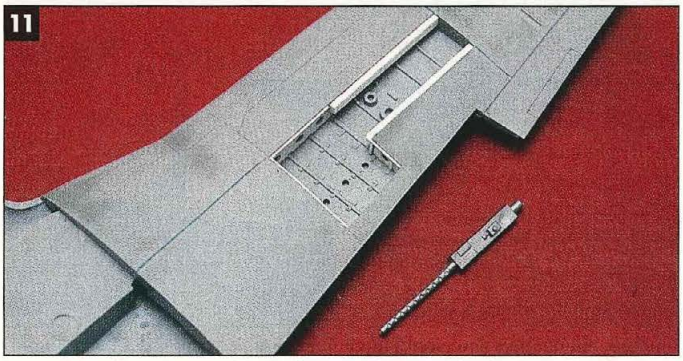


Pat forces 400-grit sandpaper with a straight pin into the corners of the carburetor intake.

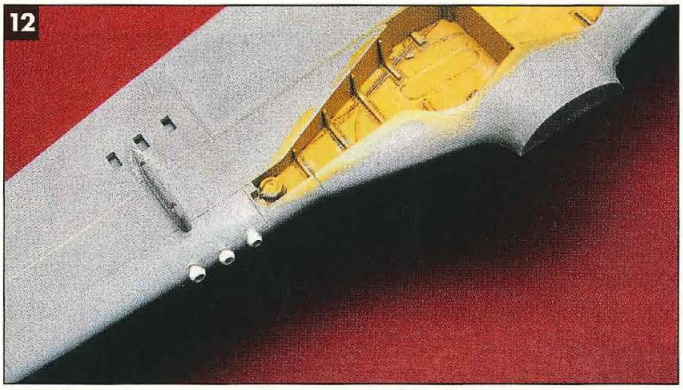
The propeller shaft and carburetor intake are ready to install in the nose.



Matching the curve of the spinner to the curve of the fuselage was the priority in getting the nosepiece in place. Note the styrene shim needed to fill a gap.



Pat inserted styrene walls in the gun bay, and substituted a better .50-cal. machine gun from the Hasegawa F-86.



To make the gun fairings better, Pat replaced them with styrene tubing.

matched to the round of the nose, as a guide to get C13 correctly positioned to the front of the airplane, **10**. This was not a tight fit. When I had the front end of the fuselage blended in, primed, re-scribed and sanded some more, I installed the interior and focused on the wings.

Wingman. The right gun bay was to be displayed open. As with the cockpit, Hasegawa provided a very simplified version of what was supposed to be in there. I added sheet styrene walls, tightened the ammo bay with Evergreen square stock and replaced the guns with a trio of better-shaped examples from a 1/32 scale Hasegawa F-86, **11**. Unfortunately it was only very late in the game that I discovered the ammo belt leading to the inboard gun ended up forward of the gun's breech. The fix would be to change the angle of the belt guide – no quick and easy job and the clock was ticking. I chose to live with the goof.

A sore spot on nearly all P-51 kits is the shape of the gun fairings. The top/bottom wing split puts a seam through the fairings that's hard to clean up, and in the case of this particular kit, the edges were not sharply defined. I shaved and sanded off what came molded on the wings and replaced them with rounded segments of ⅛" styrene tubing, **12**. Because the leading edges of the wings aren't as sharp as they should be (no true laminar flow wing here) I didn't get the characteristic top and bottom bulge of the real thing. Still, it was a better representation than Hasegawa's.

Expanding tanks. Photos show "Glamorous Glen III" with the pressed-paper drop tanks late in the war. The kit tanks looked stubby to me. I enlarged a side view photo of a P-51 carrying paper tanks to 1/32 scale (using a kit wheel as my sizing guide) and matching a tank half to the photo found them to be 5 mm too short, **13**. I glued them together, then sawed them in half, spaced the halves to the correct 83mm length with dowel epoxied in place. Then I filled the resulting gap with epoxy putty and shaved and sanded the tanks smooth, **14**. I chose not to try to represent the ribbing of the front and back ends, as photos show the ribs to be very faint. I replaced the prominent pair of encircling bands with strip stock. The location of these bands was set by the pylon, but I discovered too late that the kit racks were also too short. Oh, well.

I used straight pins to mount the tanks to their wing racks. The plumbing to get the fuel from the drop tanks into the wing tanks was all external and fairly prominent. I drilled holes into the tanks and into the wings where the lines needed to go, then cut and bent wire to the proper length and angles to represent hoses, **15**. I wanted these perfect, so that when it came time to install them for good when everything was silver and easily scratched, they'd pop right into their holes without fuss.

With the wing and tank assemblies just about done, I joined wing to fuselage and worked on getting the separate flaps to fit. I'd built up the open forward areas of the flaps with heavy styrene stock and epoxy putty then sanded the top leading edge round. This fit against a much-thinned trailing edge of upper wing halves. There followed a lot of fitting, adjusting, and re-fitting of flaps to wings to get a close to perfect fit and the 47-degree full-down angle. (Paragon makes resin flaps for this kit which I used on the previous Mustang, but I preferred to use my own the second time around.)

Once I was satisfied with the fit I superglued the flaps in place. I thought painting them while attached to the airplane was preferable to putting them on afterward and risking a glue mark on the aluminum finish. I also glued the elevators to the stabilizers, **16**.

Grind the gears. I wanted the landing gear to fit well the first time after the model was painted, so these were dealt with

way before the paint flew. The gear itself is good, but basic. I cleaned up mold marks and added brake lines and tow rings. The oleo scissors are thick and could use replacement, but I didn't bother. The kit wheels are wrong in that they show spokes on both sides. Spokes faced outboard while holes faced inboard on the real airplane. Fortunately True Details came to the rescue with their resin wheels (set No. 32001), **17**. I did sand away some of the bulged bottom of the tires to lessen the under-inflated look, however. The wheel wells are typically very basic, and I drew the line here. I decided that I'd leave them as they came and discourage anybody from turning "Glen" upside down to inspect them.

Canopy, anyone? The windscreen is molded with part of the upper fuselage and joins at panel lines all around. This is the smart approach from a modeler's point of view. The sliding section on the other hand comes as two separate pieces; the frame that rides on the fuselage and the clear hood. This presents two problems. The clear piece is joined to its sprue on the edge, and that's going to show. Problem two is that gluing the canopy to the frame for a perfect fit and a solid hold, without allowing any glue to show, is a challenge. There's just not much surface there to join.

After several attempts to glue and touch up the joints, I became frustrated and crunched it in a fist. Fortunately for me I had a second kit handy, and started again. My only suggestion would be to

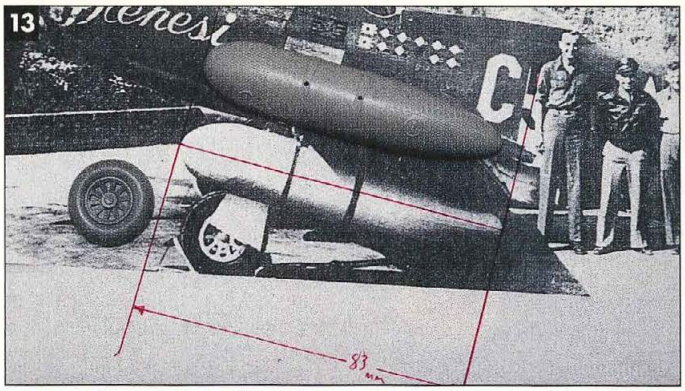
Invasion stripes on "Glamorous Glen III"?

I had my doubts about Hasegawa's box art and instructions; it showed "Glamorous Glen III" with full invasion stripes on top of the wing. Was that accurate? Well, if the plane had 12 kill markings, that would date it in late 1944 at the earliest, as Capt. Yeager got his last kills at the end of November. According to Dana Bell in his *Air Force Colors Vol. 2* (Squadron/Signal), invasion stripes were ordered off the wings on August 17, 1944, and this directive was to be complied with by September 10. What remained would be the lower fuselage invasion stripes, and these too were ordered removed on December 6.

Since most units were painting over or removing upper surface invasion stripes by July, "Glamorous Glen III" sporting them, along with 12 kills, was at best unlikely. However I had no photos to prove anything, so I thought I'd go straight to the pilot and ask what he remembered about stripes on the wings of his airplane. Gen. Yeager wrote:

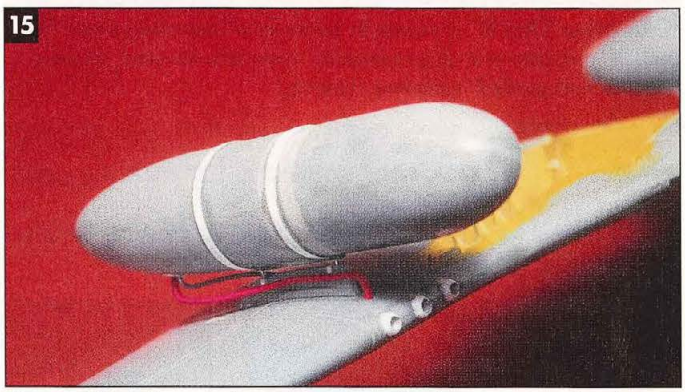
"Pat – Aug. 17, 1944, 8th AF put out a directive that all invasion stripes would be removed between Aug. 25 and Sept. 10. They were painted over with silver paint since P-51s were silver by then. Most outfits left the fuselage stripes on because they looked good...I don't know about the black stripe on the wing. I don't remember it."

Gen. Yeager sent me a couple of 8x10s – good copies of the only shots I've ever seen published of his plane. While no date is specified, Glen has 12 kill markings and snow is on the ground, so I think it's safe to assume the photos were taken end of November or December 1944. You can just see the black ID band where it should be on the landing gear door (and overspray that got past the masking tape!) and the slightest indication of the ID stripe where it should be on the stabilizer. The invasion stripes under the fuselage are obvious. – *Pat Hawkey*

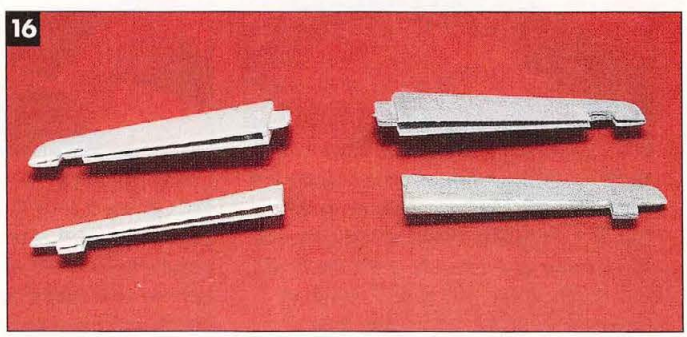


Using a photo enlarged to 1/32 scale, Pat determined that the kit-drop tanks were too small.

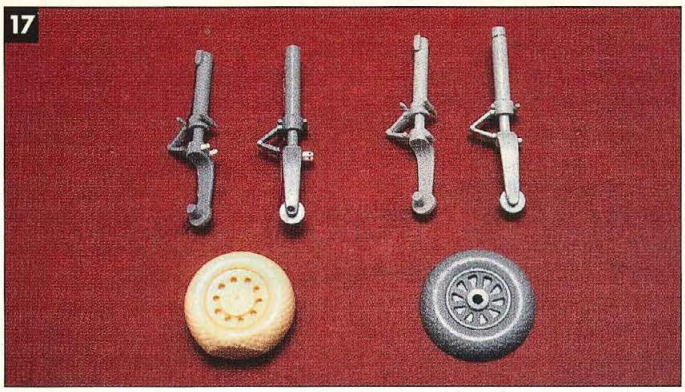
The kit drop tanks were cut in two and lengthened. The tank on top shows the wooden dowel used to maintain correct length. The bottom tank has had the gap filled with epoxy putty.



The modified drop tanks and exterior plumbing are test-fitted before painting.



The stabilizer and elevator on the left have just been separated. Pat thinned the interior trailing edges of the stabilizer and built up the leading edge of the elevator (right).



Landing gear improvements (left) include adding brake lines and tow rings to the struts. Hasegawa's incorrect spoked inner-wheel half on the right is superfluous if you use the True Details resin wheels.

"Glamorous Glen III" is moments away from becoming silver. The cockpit, gun bay and all pre-painted areas are covered, leaving only the fine-sanded airframe showing.

polish the clear piece beforehand and be ultra-careful securing it to the frame. (Only when all this work was done did I discover Squadron Products has come out with vacuum-formed canopies for both standard and Dallas hood Mustangs in 1/32 scale!)

I masked and painted the inside of the windscreen frame flat black; in this scale, leaving shiny clear plastic inside there just wouldn't do. Masking the exterior windscreen panels was tedious, as the raised lines indicating their location are very faint. Slow and careful cutting of Scotch Magic tape did the job. With the windscreen secure I wet-sanded the model one last time with 1000-grit sandpaper.

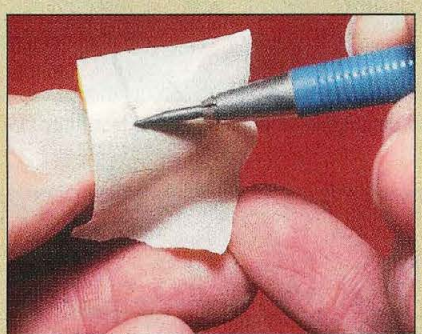
Aluminum finish. Since I needed to apply the aluminum finish to as smooth a surface as possible, I masked and painted the rudder, invasion stripes, antiglare panel, and ring around the nose first. (I painted the nose ring yellow and planned to separate the red checks from the decal sheet and apply them separately when the time came; I never trust decals to fit compound curved surfaces.) When the paint was completely dry, I removed the masks. This way the areas to be painted aluminum had no overspray from the other colors – just a smooth plastic surface, ideal for a natural-metal finish. Now I had to mask the prepainted areas to protect them from the aluminum color, **18**.

My aluminum finish of choice is good old Testor Model Master Chrome Silver thinned with Floquil Dio-sol, which helps it dry faster. I like this paint because I can put it on thick and heavy enough to fill and hide many of the fine sanding scratches that other metallics will highlight. The down side is that it takes a while to dry; in fact, I'm not convinced it ever dries completely. For this reason, I make sure I have a "handle" – an area on the model that I can hold without marring the finish. In this case, it is the invasion-striped radiator.

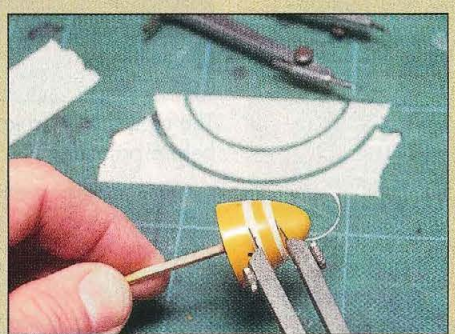
After letting the paint dry for a couple days, I masked the fuselage, flaps and ailerons and airbrushed the wing with a mix of Chrome Silver and white to produce the painted-wing look peculiar to P-51Ds – the wings actually were painted with aluminum

Great solutions for vexing problems

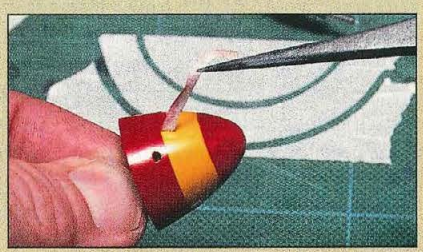
Pat used a couple of interesting tricks in finishing his Mustang, including this method for painting the spinner.



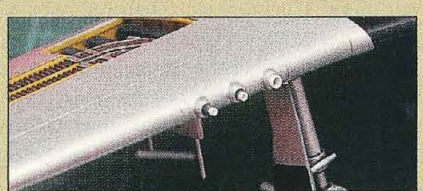
Painting straight stripes on a compound curve like the Mustang spinner is difficult. Pat wrapped masking tape around the spinner and roughly drew the location of the stripe with pencil. He then removed the tape, laid it flat, then refined the pencil line with a draftsman's compass.



Using the compass with a cutting blade, Pat cut out a strip to mask the edges of the yellow stripe. A pair of dividers is used to ensure even width all around. The gap between the taped edges is filled with additional masking material, and then the red paint is applied.



Removing the masking tape reveals a perfectly painted stripe.



The muzzles of the .50s were represented with sections of styrene tube stretched the same way you heat and stretch sprue. A little trial and error led to the proper diameters needed, and these were cut guillotine-style with a single edge razor blade.

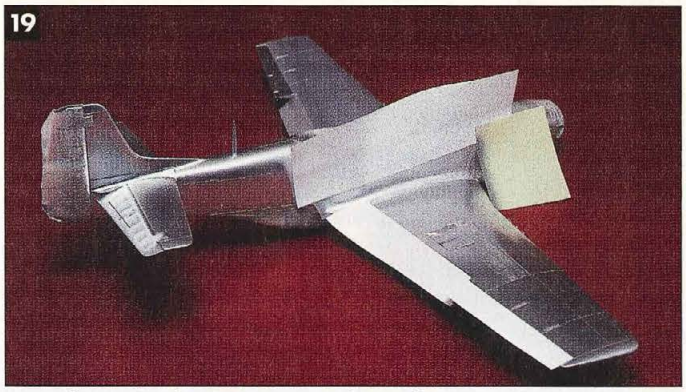
lacquer at the factory to seal panels and smooth the surface of the laminar-flow design.

Next I added a few drops of blue to fresh Chrome Silver and sprayed this on a few panels to change the tones. I masked with a combination of Post-it notes for flat, straight segments and Parafilm M for curves, **19**. I keep a test wing or fuselage handy to show me how different the new mix is going to look against the base color before I commit paint to the model. I don't want a patchwork-quilt look; the differences on the real airplane are subtle. The only panels that are noticeably different than the rest are those around the exhaust stacks. Here I mixed a bit of black with Chrome Silver.

Ready to decal. Decal adhesive can mar Testor Chrome Silver, so I gave this model a few coats of Testor Glosscote. This kills the chrome gleam, but I didn't want a glimmering finish anyway. More important, it provided a barrier between the decals and the silver paint.

The decals went on without any problem. The black ID bands came from Expert's Choice black decal stock. I also cut tiny ovals in this black decal with a scribing template (Verlinden Productions has one) to simulate the inspection openings in the tops of the flaps. The flap-degree indicator on the left flap was made from a block of white decal stock with black hashmarks cut and added on top.

"Sludge wash." With the decals dry, I mixed a very dilute solution of water, dish soap, and acrylic flat black (about a 50/30/20 mix) to make a wash. The dish soap is important as it reduces the adhesion of the black paint. I applied this wash over all the aluminum surfaces except the wing – photos I studied showed nearly invisible panel lines on the painted wings of real P-51s. (I am firmly against "bringing out detail" when this detail is not seen on the real thing.) When dry, I wiped the black wash off with a damp rag, leaving the panel lines and rivet depressions darkened. Once all the black wash was removed from where it didn't belong, the model got a final sealing shot of Glosscote.



A combination of Post-it notes and Parafilm M are used to mask off fuselage and control surfaces prior to painting tinted silver on the wings.

Final assembly. I immediately installed the landing gear to keep the belly from coming in contact with any surfaces and getting scratched. Next I installed the drop tanks.

I used a suitably sized lens from M.V. Products for the landing light in the left gear bay. You can also find M.V. lenses in colors and use them for the underwing red, green, and amber ID lights. I also added the big center landing gear door actuators from stretched sprue and styrene tube.

I kept "weathering" – though weather has little to do with it – to a minimum. I put some black chalk pastel streaks under the fuselage gas cap and dabbed Polly Scale Oily Black very lightly on the tops of the wings near the forward roots and around the gun bays – areas oil, grease, and dirty boots were likely to tread.

The finished model represents a little more than 100 (closely counted) hours of hands-on work. Were Hasegawa to do this kit again to today's standards, I'll bet you would get the same finished result in half the time. Can you imagine how well a truly great, 1/32 scale model of the P-51D would sell? **FSM**

Pat Hawkey's model poses in almost the same position as the picture of the original on page 90. Photo by Jim Forbes.