



Pat Hawkey built this handsome 1/48th scale TBF-1 Avenger from an Accurate Miniatures kit. The WWII torpedo bomber model owes most of its fineness to a modern, highly detailed kit, but Pat made sheet styrene open cowling gills to add an extra bit of life to an otherwise static model.

Chapter 5

Working with Styrene Kits

MOST MODEL KITS are made from styrene, and the techniques used to assemble them are similar to the techniques for assembling Evergreen sheet and strip parts. In this chapter we'll explore those techniques, and begin to show how Evergreen materials can be used to augment and improve kits.

Sizing up the job

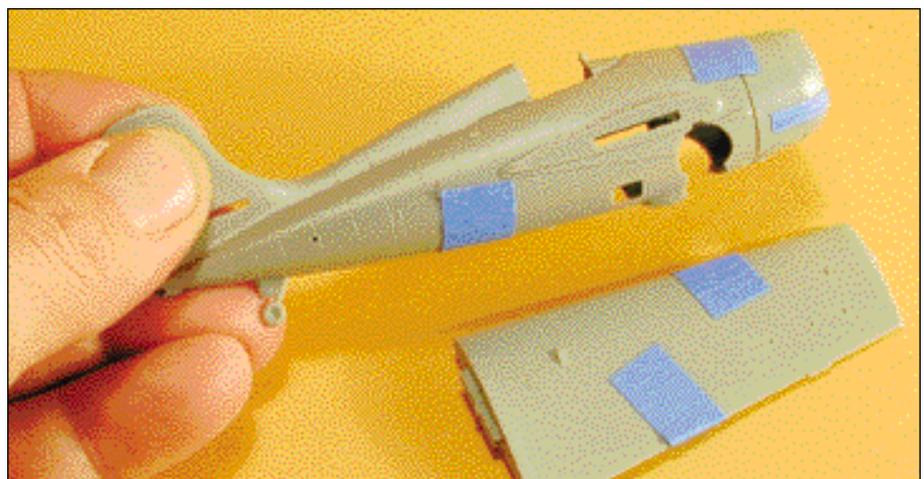
The first step in building a kit to always — ALWAYS! — sort out the parts to see what you've got. At the very least, you should inventory the parts to determine whether anything is missing. This is also the time to look over the instructions from beginning to end to see how the parts go together.

Most modelers will admit to a philosophy of "When all else fails, read the instructions." This can and will get you into trouble. Kits are becom-

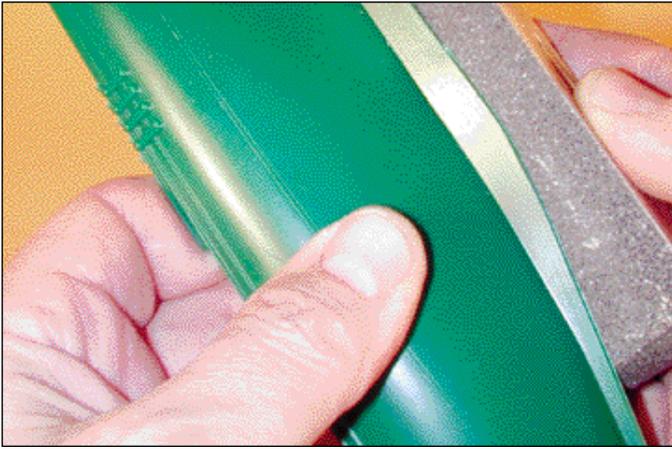
ing more and more sophisticated, particularly in the way they hide joints. This means the way the parts fit together may not be obvious.

As you look through the instruc-

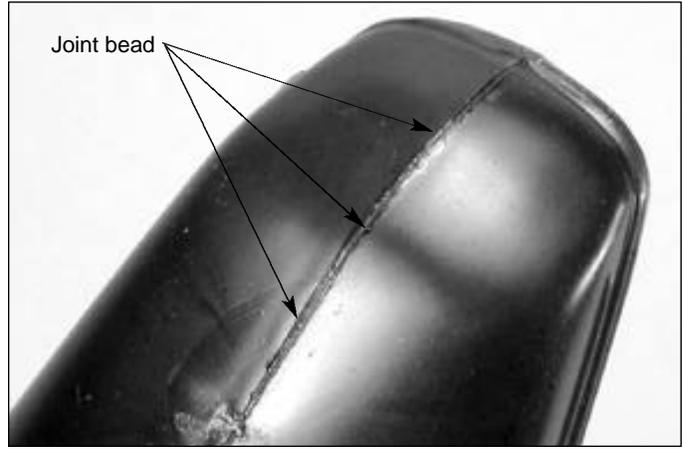
tions — nowadays, they're mostly drawings — you'll want to think about breaking the model down by sub-assemblies for painting. Kit manufacturers don't always concern them-



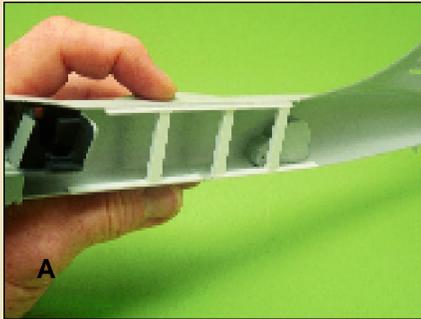
The fit of the fuselage and wing parts on this Hasegawa 1/72 scale F4F-4 Wildcat is nothing short of spectacular, but it still makes sense to dry-fit the parts with masking tape to see how the model goes together.



The large green hull molding on this old Aurora schooner kit wasn't quite flat along the joint line, and the aligning pins hindered more than helped. Here a sanding block is being used to flatten the mating surface and eliminate the pins to make more accurate fitting possible.



By softening both mating surfaces of this ship hull with solvent, then joining them with a little extra pressure, this small bead of molten styrene was squeezed out of the joint. When the bead hardens, the joint can be sanded and polished smooth with little or no filling required.



REINFORCING KIT JOINTS AND SEAMS

by Pat Hawkey

I often use styrene sheet and strip to strengthen internal model joints and provide more gluing surface. Especially on large aircraft models, fuselage halves and wing leading edges offer relatively small bonding surfaces. With all the handling the model will receive during construction and finishing, it's easy for these joints to fail — and once the model is painted, a split fuselage seam is a hateful problem to deal with. Therefore I make a point of building extra strength into any doubtful area.

This Italeri B-66 features a long fuselage unbroken by windows, turrets, or similar openings. To remove the flex potential, I fabricated an inner box of long strips top and bottom braced by three crosspieces, **A**. This provided plenty of gluing surface fore and aft, and the vertical braces eliminated any chance of flexing.

This Italeri V-22 also has a long unbroken fuselage line, and the moldings were slightly warped to boot. With the main floor fixed solidly in place, I added a wide strip of .040" strip stock and forced out the dip in the belly with a crossbar, **B**.

I believe plastic airplanes simply can't be built too strong. This Monogram 1/48 scale Me 262 shows a pair of mating surfaces

added to ensure a solid joint between fuselage and wings, **C**. This photo also shows another useful role for sheet stock: filling landing gear openings. If you build aircraft in the in-flight configuration, you'll soon discover most kits weren't meant to be presented that way. As often as not, the fit of gear doors in the closed position is something of a joke. Especially if there are multiple doors to fit into a given opening, it's easier to replace the kit parts with a single piece of sheet cut and sanded to fit.

Here are two more examples of the same situation, **D**. Hasegawa 1/48th P-51 on the left and Monogram 1/48th A-37



selves with this, but it's a vital aspect of building top-notch models.

Make notes on the instruction sheet showing the places where you plan to pause in assembly to paint or finish a subassembly. You may change your plan as you actually work with the model, but at least you'll have one.

To clean or not to clean?

A lot of experienced modelers recommend washing injection-molded kit parts before detaching them from the sprues. This removes mold-release lubricants that can prevent solvents and paints from sticking. I don't perform this step, and I've never had a model where the solvent wouldn't bond the parts. When we talk about finishing, however, I'll recommend a thorough cleaning of the assembled model before applying any paint or primer.

Removing flash

Plastic is forced into steel molds under extremely high pressure to make injection-molded parts. Where the halves of the mold come together they leave a thin line called a parting line. Some manufacturers are clever enough to make these correspond to raised detail lines on the real thing, but usually you'll have to remove them by scraping, sanding, or both.

When molten plastic seeps between the parts of the mold, it forms thin, featherlike projections called "flash." Old kits - molds that have been in production for decades - often have this problem. Flash is something that shouldn't be there; remove it by trimming with a brand-new No. 11 blade and by sanding the area smooth where required.

Looking for trouble

After removing the parts from their sprues and cleaning up the attachment points, begin assembly by dry-fitting the major kit parts. Masking tape makes a convenient "third hand" to hold parts together temporarily, and you may want to use it during final assembly, too.

The little pins and holes provided on kits to help align the parts aren't always helpful, and occasionally



To fill a long, thin seam such as this sawdust-burner joint, place masking tape along both sides to protect the adjacent detailed surfaces, then apply filler and sand. Nitro-Stan 9001 is a common fine-grain auto body putty, and a toothpick is a good way to apply it. From the looks of the battered tube, it's seen plenty of use.

you'll want to remove one or more of them to allow you to adjust the fit. You'll also find problems where the mating parts aren't perfectly flat along their joint; the solution here is to sand the edges smooth for a better fit.

Joints between major parts require extra care. Not only are these areas often prominent on the finished model, but they also need to be extra-strong to hold up during subsequent construction and finishing steps. If an aircraft fuselage or ship hull splits

apart as you prepare to paint the model, there's usually not much you can do about it except buy another kit and start over.

To strengthen these joints, start by applying a slow-acting solvent to both edges to soften them, then bring the parts together and apply more solvent from the inside of the model. Press the parts together until a small bead of softened plastic oozes out along the joint line. When this bead hardens, you can often sand it smooth and make the joint disappear



The circular ejector-pin marks on this plastic trestle-bent molding will be obvious on the finished model. The mark on the right side has been filled with a drop of thick super glue, then quickly set with accelerator. The next step will be to sand it flush.