

Dressed in protective metal skirts, Aaron's model replicates a Panzer IV from the Hermann Göring division in Italy, 1943.



SPECIAL
SECTION

[COVER STORY]

LEARN TO USE PHOTOETCHED METAL AND UP-ARMOR A PANZER

How to cut,
bend, and
shape to
add detail

By Aaron Skinner

Photoetched metal is a great addition to modeling because, after everything's said and done, metal looks like metal.

Compared with sheet steel or aluminum on a full-size vehicle, thin brass or stainless steel performs exactly the same

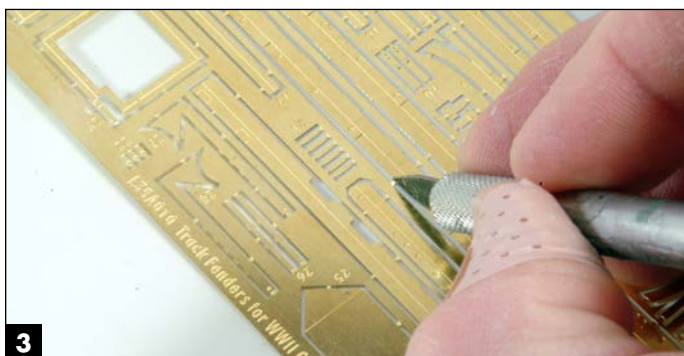
in scale. So, when I wanted to build a Panzer IV Ausf G with *schurzen* (skirts), I turned to photoetched metal and a set from Griffon Models. I also decided to replace the kit's fenders and make a few other additions to model a mid-World War II German tank in Italy.



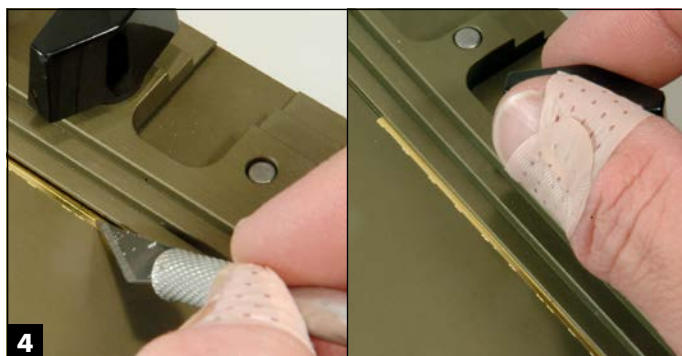
1 Studying the instructions for Dragon's Panzer IV Ausf G as well as Griffon's detail sets, Aaron highlights the parts of the kit that will be replaced by photoetched metal. This ensures he won't miss a step.



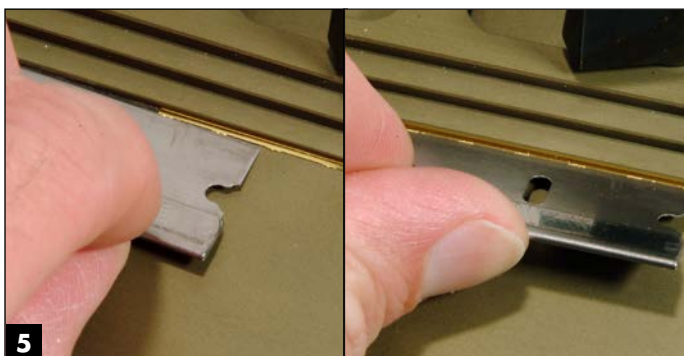
2 (Left) After assembling most of the lower hull, Aaron carves off a ridge at the top of the hull molded to represent a fender bracket. (Right) A sanding stick removes the remaining plastic and leaves the part flat.



3 Aaron places the photoetched-metal fret on a hard, smooth surface (glass works well) to remove the parts. He favors a sharp No. 12 blade – and for a large project, it's a good idea to have an ample supply, as the metal will dull knives quickly. Blunt blades can damage parts.



4 For long, thin parts like fender brackets, a bending tool such as Mission Models' Etch Mate is essential. (Left) Aaron uses a hobby knife to align the bracket's bending score with the edge of the tool. (Right) Tightening the knob holds the metal piece in place.



5 (Left) Aaron pushes the business end of a single-edge razor blade under the part and (right) gently bends it. To avoid crimping long parts, work back and forth along the length of the part, bending a little at a time until the entire part is bent to shape.



6 Attaching the parts is easy: Aaron holds the fender bracket in place and uses a needle point to deliver a bit of liquid super glue to the gap, allowing capillary action to draw it along the join. He uses accelerator to set the glue, then adds a little more glue to bolster the bond.



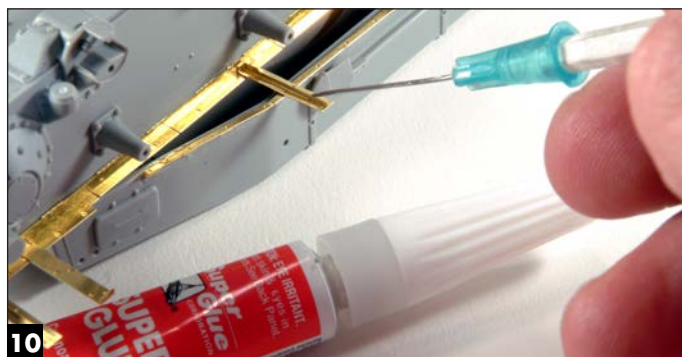
7 Unfortunately, after attaching the bracket Aaron discovered that it needed to extend past the edge of the plastic part. A little debonder saved the day, as a drop on the joint enabled him to pop the part loose.



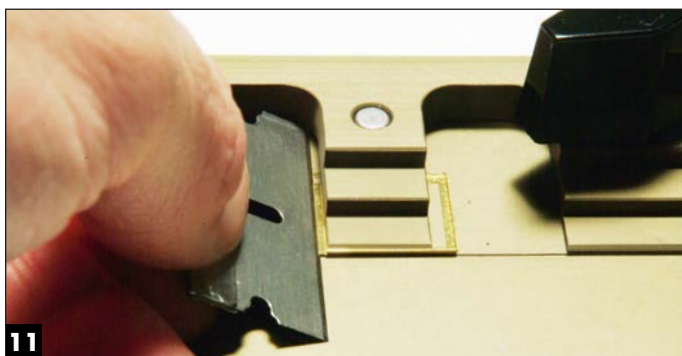
8 For smaller parts such as fender brackets, Aaron uses 3Detail's bender. It's small, easy to handle, and produces a perfect right-angle bend every time.



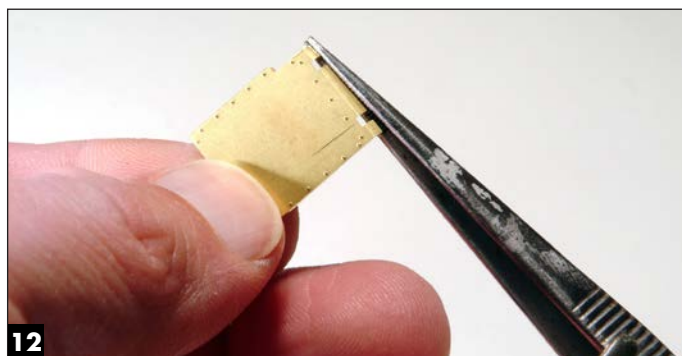
9 Tweezers and super-glue gel make quick work of attaching the fender brackets. Griffon marked attachment points clearly, so the job was easy. The slower-setting gel allowed time to align the part.



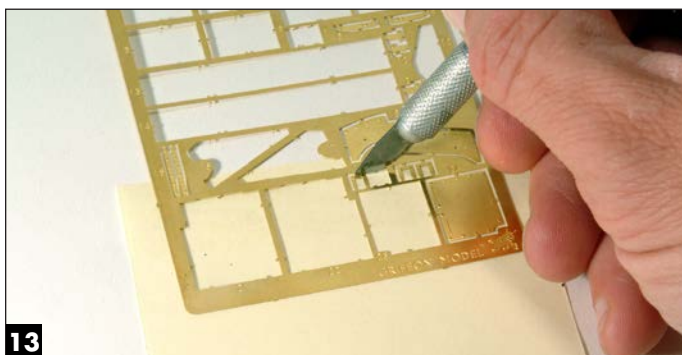
10 On the other hand, thin, quick-setting liquid super glue is useful for attaching small parts like the bracket reinforcements. Aaron aligned it with the engraved location mark, then merely touched the join with a dab of glue.



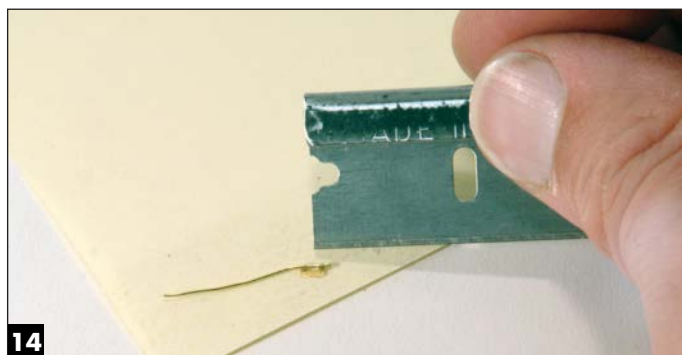
11 The Etch Mate's teeth are perfect for parts with bends on all sides. Aaron uses a razor blade to turn up corners on a rear fender frame.



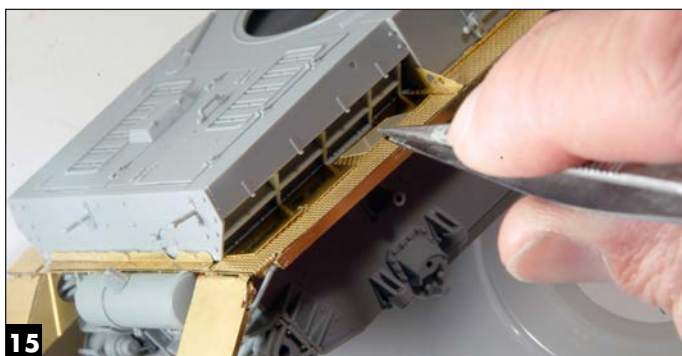
12 Using rounded tweezers, Aaron starts a bend at the top of a rear fender. He finished the curve with a knife.



13 To cut small parts like hinges from the fret, Aaron places it on the sticky portion of a Post-it Note. This prevents the part from taking off for lands unknown as it springs loose when the cut is made.



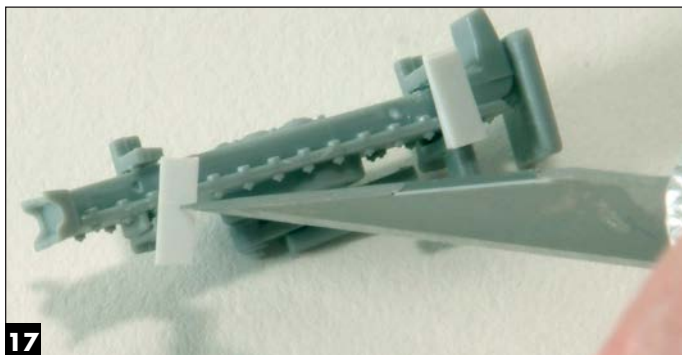
14 Leaving the part on the sticky note, Aaron forms the hinge. He holds a straightened paper clip against the part to begin bending, then replaces it with some of the .3mm wire included in the detail set for the hinges, pushing the end into position with the thin, straight edge of a razor or knife.



15 To attach engine-intake covers, Aaron dips the edge of the parts in a small pool of super glue, then carefully lines them up with tweezers. As the glue sets, he pushes the part against the fender.

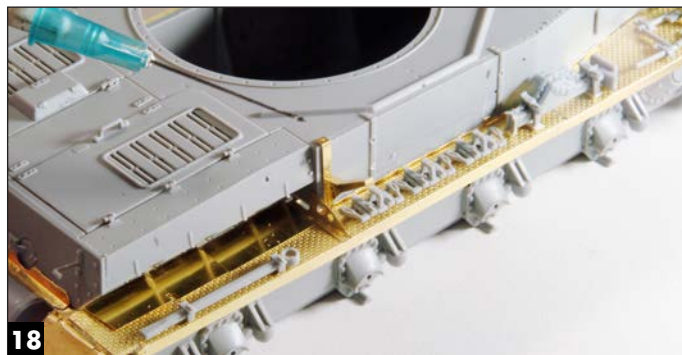


16 The brass fenders didn't have locating holes for the tools. Aaron used the kit's plastic part as a key to place items such as the fire extinguisher on the front left fender.



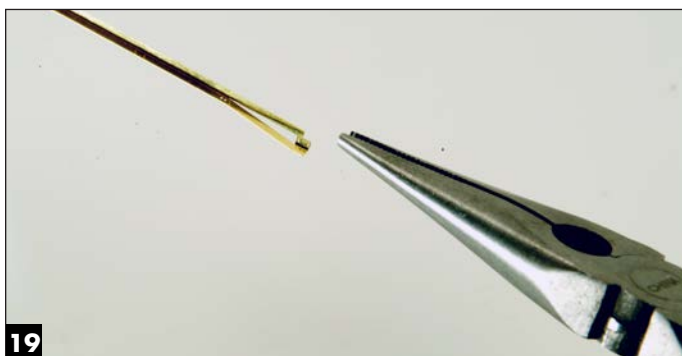
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The kit's jack was designed to fit onto molded locators on the plastic fender, so Aaron added strip styrene to the part so it had a substantial attachment point.



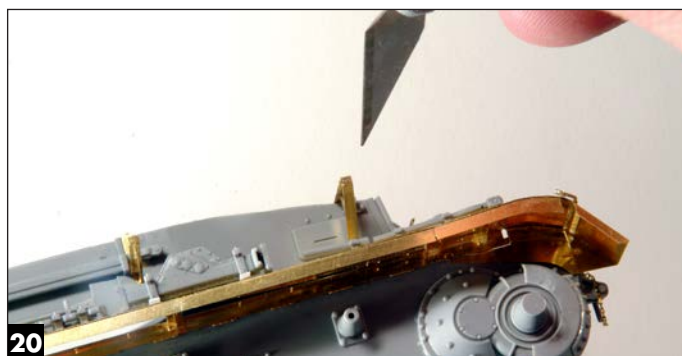
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Griffon provides four schurzen brackets on each side of the hull. Aaron mounted the third from the front first because it can only go in one place, then placed the mounting bar against it to mark locations for the others.



19

After bending the schurzen bar with Mission Model's Etch Mate, Aaron uses needle-nose pliers for the small bends at the ends. The pliers are quick and easy to control when working with small parts.



20

The skirts come with .3mm wire for mounting the plates bar to the brackets, but the holes are too small. Aaron bored them out with the point of a No. 11 blade until the wire moved easily through the opening.



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Attaching the schurzen rails completed the hull.



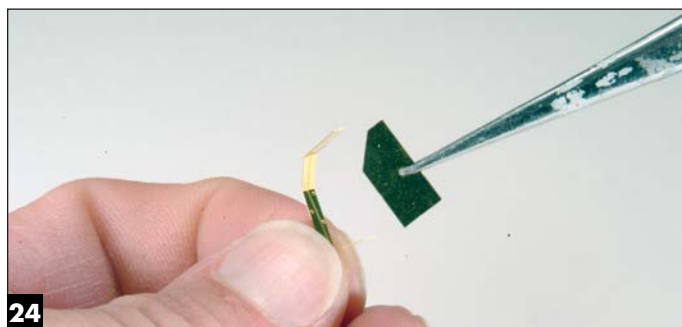
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The Griffon Models metal barrel is identical to the Dragon part, but doesn't include the rear end. Aaron removes that portion from the kit barrel.



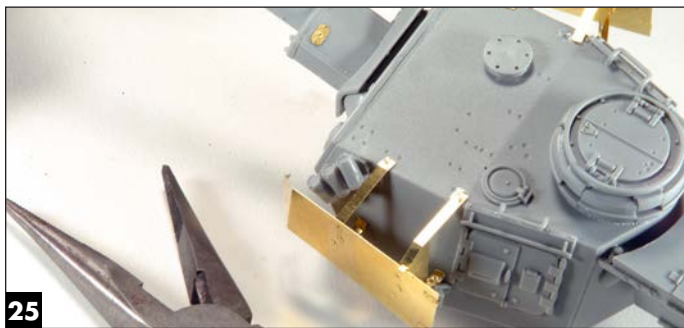
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Super-glue gel secures the metal barrel into the kit's recoil mechanism. Although this part won't be seen, it's an essential step to attach the barrel to the mantlet.



24

The turret schurzen brackets have reinforcing plates that fit into the frames. Aaron uses tweezers to place the part before securing it with thin super glue run along the join.



25

At the front of the turret, spaced armor is mounted on two brackets forward of the hatches. Aaron mounted both plates before bending their forward edges around the front of the turret.



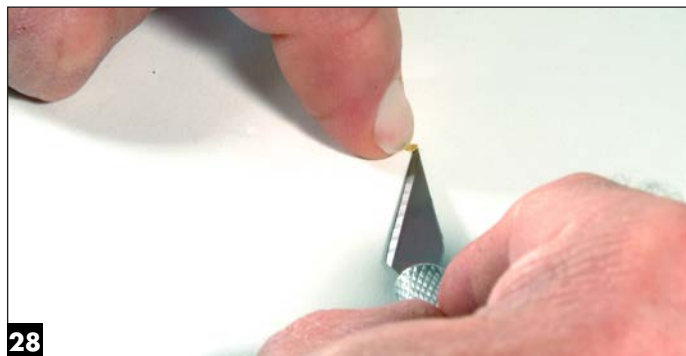
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The turret skirts curve smoothly around the bustle. Aaron uses a handy form – the lid of a super-glue accelerator bottle – to bend the metal plates to shape.



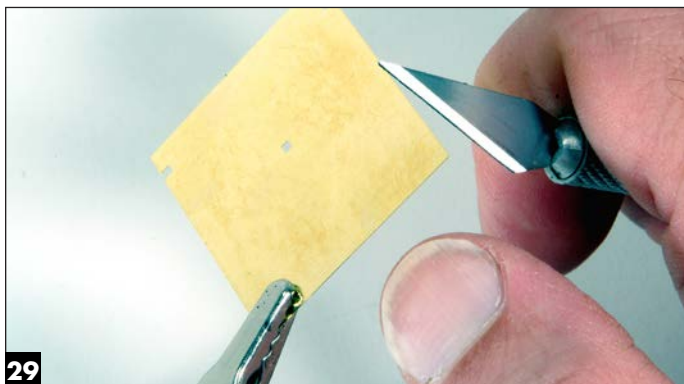
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After joining the two parts to complete the curve, Aaron super glues mounts for the rear skirt.



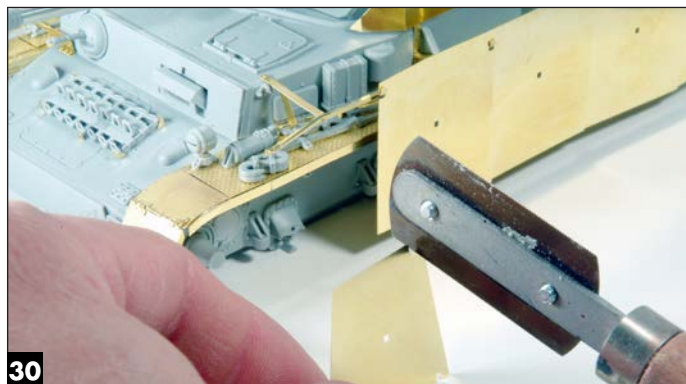
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To bend the armor-plate mounts as well as other small parts, Aaron holds his fingernail against the bend line and uses the tip of a No. 11 blade to flip up the other end.



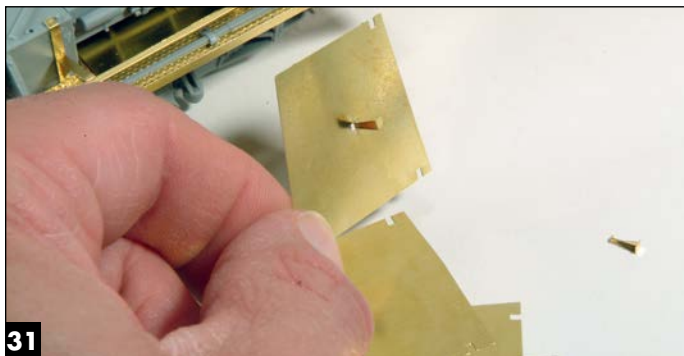
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To remove the remains of a fret attachment from a brass schurzen plate, Aaron uses a sharp hobby knife to shave away the excess metal.



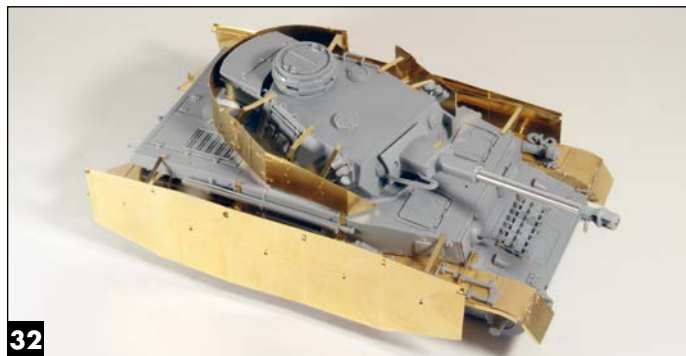
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The front plate was too wide, so Aaron cut along the sides of the forward locating slot to deepen it, bent it, then cut it flush with the plate.



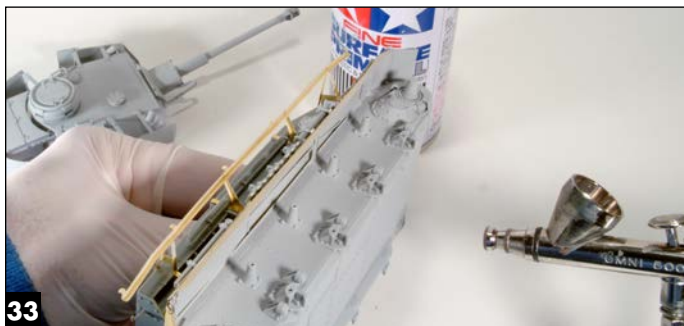
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Before painting the skirt plates separately, Aaron attached the fender brackets to make them easier to mount.



32

Heavy-metal medley: With all the new photoetched-metal parts attached or test-fitted, Aaron was ready to start painting.



33

Priming is always preferred, but it's essential with different materials (such as plastic and metal) to provide a uniform surface for the following paint. Aaron decanted Tamiya Fine Surface Primer for airbrushing.



34

Next comes a coat of Tamiya dark yellow, lightened slightly with a little white.



35

Aaron freehands olive green stripes, painting the skirts off the model but taped together in the right order to achieve continuous camouflage.

SOURCES

Turned-metal barrel and photoetched-metal details, skirts, and fenders, Griffon Model (No. BPL35001), www.griffonmodel.com, available from Dragon Models USA, 626-968-0322, www.dragonmodelsusa.com

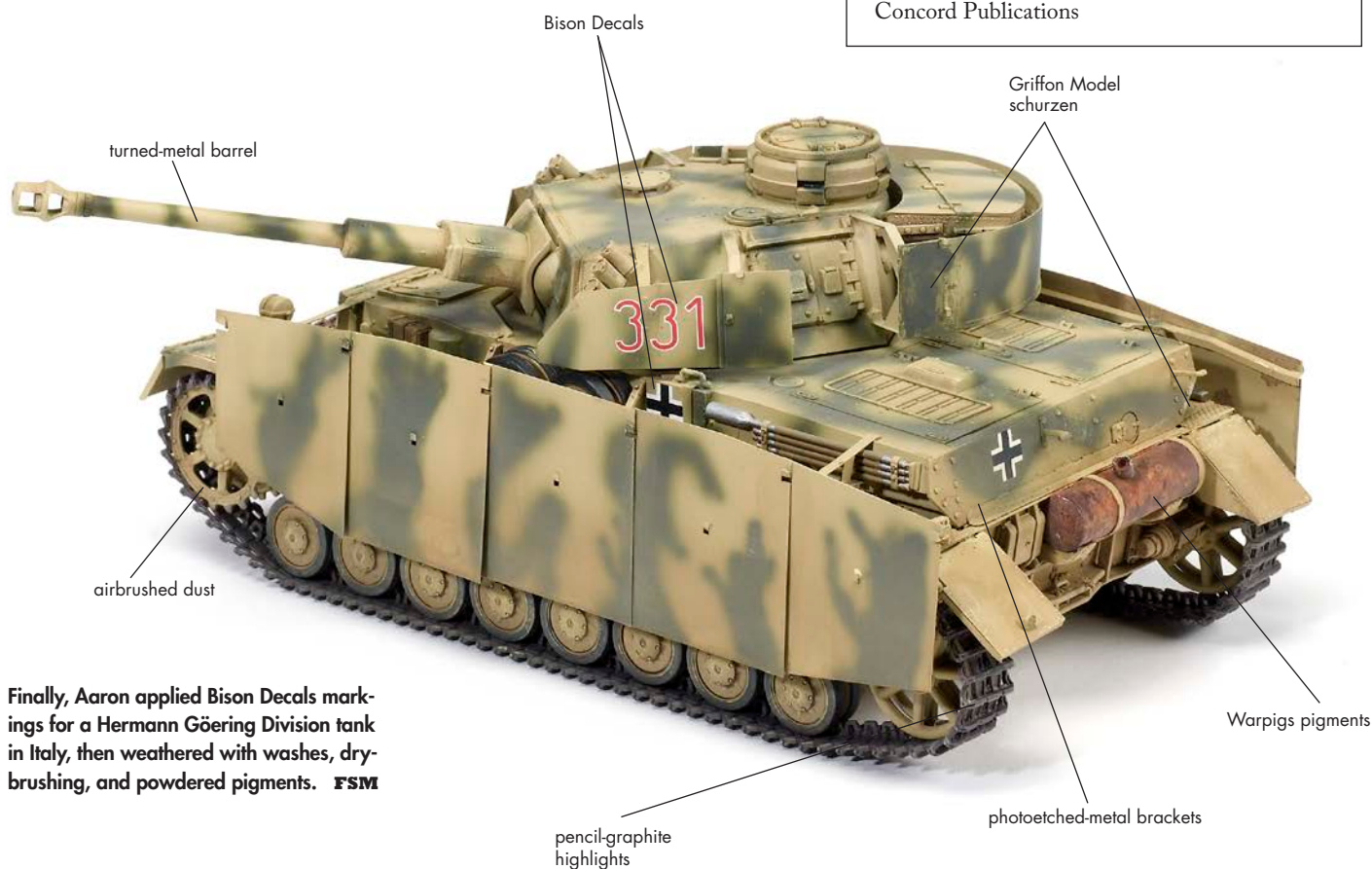
Decals, Bison Decals (No. 35066) www.angelfire.com/pro/bison

Weathering pigments, Warpigs, from Modeler's Warehouse, www.modelerswarehouse.com

Weathering wash, Mig Productions (No. P221), www.migproductions.com

REFERENCES

Pz.Kpfw. IV Ausf.F2/G AFV Super Detail Photo Book Vol. 5, ModelArt
Panzers in Italy 1943-1945, Tom Cockle, Concord Publications



Finally, Aaron applied Bison Decals markings for a Hermann Göering Division tank in Italy, then weathered with washes, dry-brushing, and powdered pigments. **FSM**