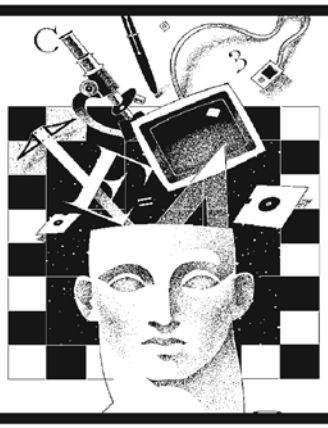
TEACHING Tips



Model Repair: Useful White Ink and Painting Tips

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This is the third report in a series on model repair tips. The new data presented here on recently discovered functional white ink for technical fountain pens and painting should be adaptable for use on all models.

Functional white ink

Before writing the previous articles (*HAPS-EDucator* Spring 2007 and Summer 2007), I had not found useful white ink for technical pens. Since then, I have found Koh-i-noor Trans-mix® media "opaque white" (9065F) ink to give excellent results with Koh-i-noor® pens. The Koh-i-noor® 0/0.35 mm point has given good white results for several months without signs of clogging.

Painting

The final touch to any repair would be to hide it, which usually involves sanding and painting. The latter has always posed a problem, but a few patient hours spent recently at our local Sherwin-Williams store has resulted in acquisition of paints that are an almost perfect match for muscles and tendons on Somso® legs. The only difference between the recent paint job and the original seems to be a shinier appearance to the new paint.

Bondo repair - gastrocnemius muscle

The new paint was used in conjunction with a massive Bondo® repair on a gastrocnemius. The first step was to wipe the exposed model plastic with alcohol to remove any grease. After the Bondo® was prepared by mixing its hardener and resin in a plastic cup (weighing boats are excellent!), it was ladled into the triangular gap with a tongue depressor and the assembly was allowed to cure overnight (Fig. 1).

Fig. 1 Initial Bondo® repair

The next day, a scalpel was used to cut and scrape the Bondo® flush to the surface of the model (Fig. 2). The finished repair was sanded smooth using 180-220 grit papers (Fig. 3). I tried using 600 grit sandpaper, but this left the surfaces too smooth for paint to adhere well.

Figure 2. Shaving to contour

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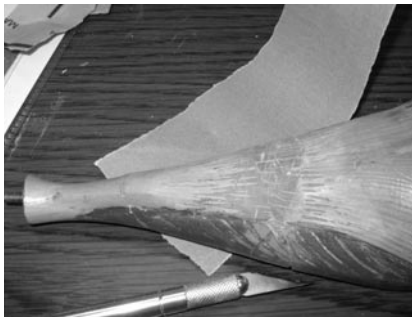

Fig. 3. Sanding

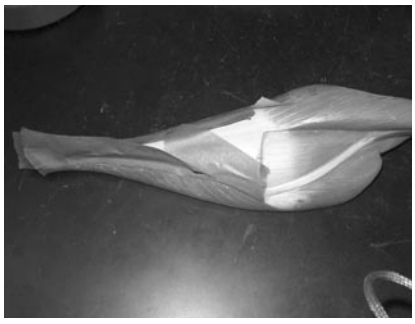

Fig. 4. Masking, stage 1

The model was masked with blue painter's masking tape (Fig. 4) to enable sharp delineation between tendons and muscles. The models were painted with two colors of Sherwin-Williams All-surface Enamel®, "Rich Chestnut" for muscles and "Dressy Rose" for tendons. Fig. 5 shows how close a match of colors was obtained.

Striations in tendons were reproduced using a "painter's comb" (Fig. 6), but a dissecting needle would probably do as well. Be sure to groove before painting.

Fig. 5. Paint matches: new paint (bottom) vs. old (top)

Fig. 6 A typical painter's comb

Using the following data, your local paint shop should be able to make an exact color match. It is also useful to take a part of the model with you to the paint shop. This approach to matching model colors should be applicable to virtually any model in your inventory and it should fill a major gap in repair methods.

The Sherwin-Williams All-Purpose Enamel® paints were mixed starting with "tinting white" in the following proportions according to the information listed on my cans. The shop had only quarts, which could probably repaint our models a number of times.

Dressy Rose

BAC colorant oz	32	64	128
B1- Black	6		
R4-New Red	14	1	1
Y3-Deep Gold	6	1	

Rich Chestnut

COMP(B001) 2090-20 Rich Chestnut

BAC Colorant oz	32	64	128
R2- Maroon	13	1	
R3- Magenta	23	1	1
R4- New Red	11	1	1
Y3- Deep Gold	30	1	

Correction to *Meat Is Muscle* Article

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The diagram included in the article, *Meat is Muscle (HAPS-EDucator* Spring 2007) was, unfortunately, upside down. This error was mine and not that of Professor Howard Swatland from whose excellent online source, www.aps.uoguelph.ca/~swatland/ch3_0.htm, the information for my article was taken. Here is the diagram in the correct orientation.