TMRK Kit Review

Kit No.: 9808	**Reviewer: John Brohm**
Model: 1:20 OSC Pegasus	
Report #1	**Date: May 26, 2008**

This, and the ensuing build reports, chronicle the construction of TMRK's latest scale release, the 1:20 OSC Pegasus.

Packaging:

The kit arrived in a well secured, heavy walled corrugated cardboard box, measuring 36.5" long x 4.25" square. A stat sheet, together with a very fine photograph of the finished model, was securely taped over the one end of the box, providing a concise summary of the finished result.

Photo 1: Box Label

Overall, the packaging and labeling were first rate.

Contents:

The kit contents were well protected by balls of newspaper; the smaller parts and parachute were secured in sealed plastic bags. It was apparent that both effort and thought had been placed into the protection of the kit contents. Again, first class.

Materials:

After validating the kit inventory, a quick assessment of parts quality was made. The quality, cut, and tight surface seams of the heavy wall airframe were excellent; it should be more than adequate for the intended impulse of the finished flying model.

The basswood stock is clear, although there is a slight width warp in the 1/16" x 4" stock (not unexpected in stock of this thickness). Of the 4 pieces of supplied aileron stock, one was warped, but not enough to make the material unusable. In general, the choice of materials is excellent, the laser cut parts being very precisely prepared.

Documentation:

The cardstock templates are clear and accurate, and the curl imparted from being securely rolled inside the airframe (for shipping purposes) was easily removed after lying flat for several hours under moderate (small magazine stack) pressure.

The package included a full color expanded view of the prototype, the print being protected in a plastic sleeve – a nice touch. A further nice touch was the copy of the Centuri Technical Report TIR-25, Reliable Cluster Ignition, instructions that will become useful later when the model is prepped for flight.

A comprehensive set of illustrated assembly instructions were also provided. These will be under review step by step, with comments forthcoming as necessary. However, it must be noted that a typo was found on the cover sheet, in the box containing the model specifications. The word diameter is spelled incorrectly, as shown in the following photo:

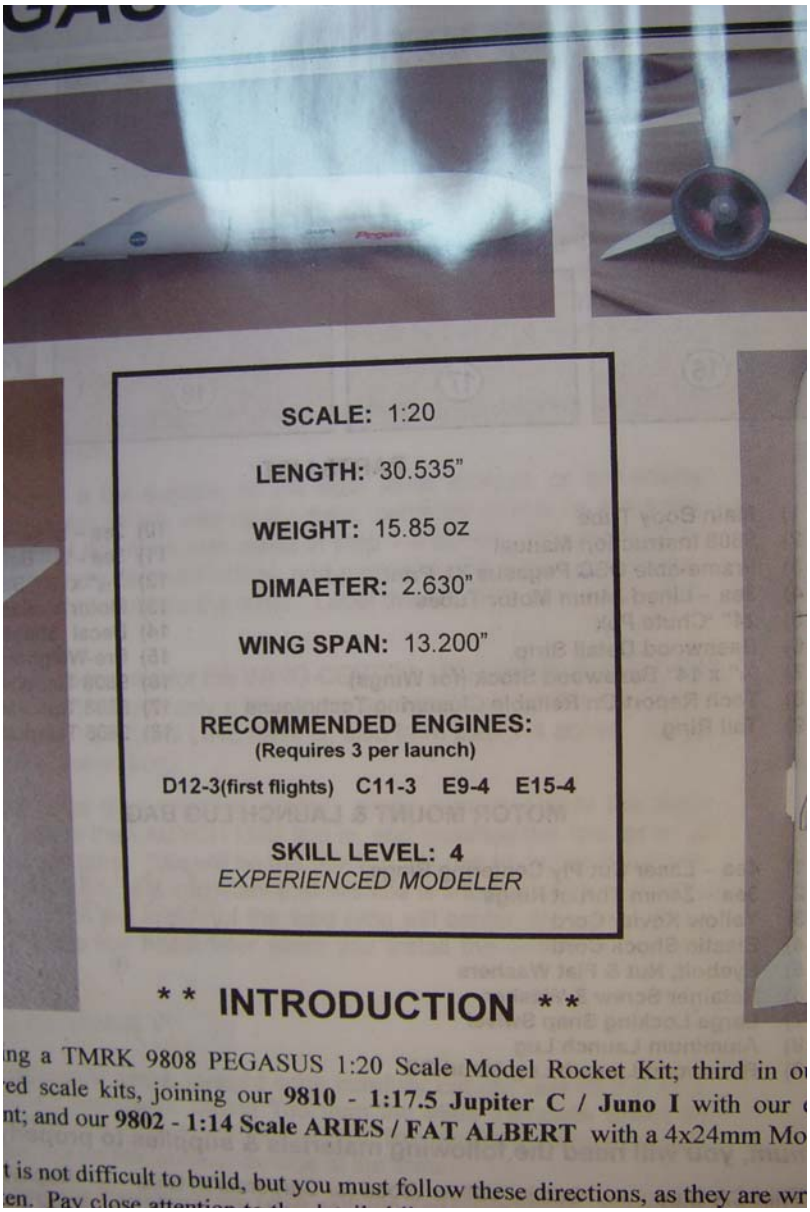

Photo 2: Kit Instructions Cover

It should also be noted that the OD value listed in the instructions cover sheet is not identical to the OD listed on the shipping box label.

Apart from these minor points, it must be mentioned that the attention to detail in the whole kit is excellent. TMRK must be congratulated in this regard, and it is hoped that this differentiating level of attention will be retained in their future kit releases.

Construction:

Before starting Step 1, the nose cone was prepped with sanding sealer and butyrate dope, and the airframe seams were filled – this included the seam underneath the outer glassine covering. The following photo shows this preparatory step complete:

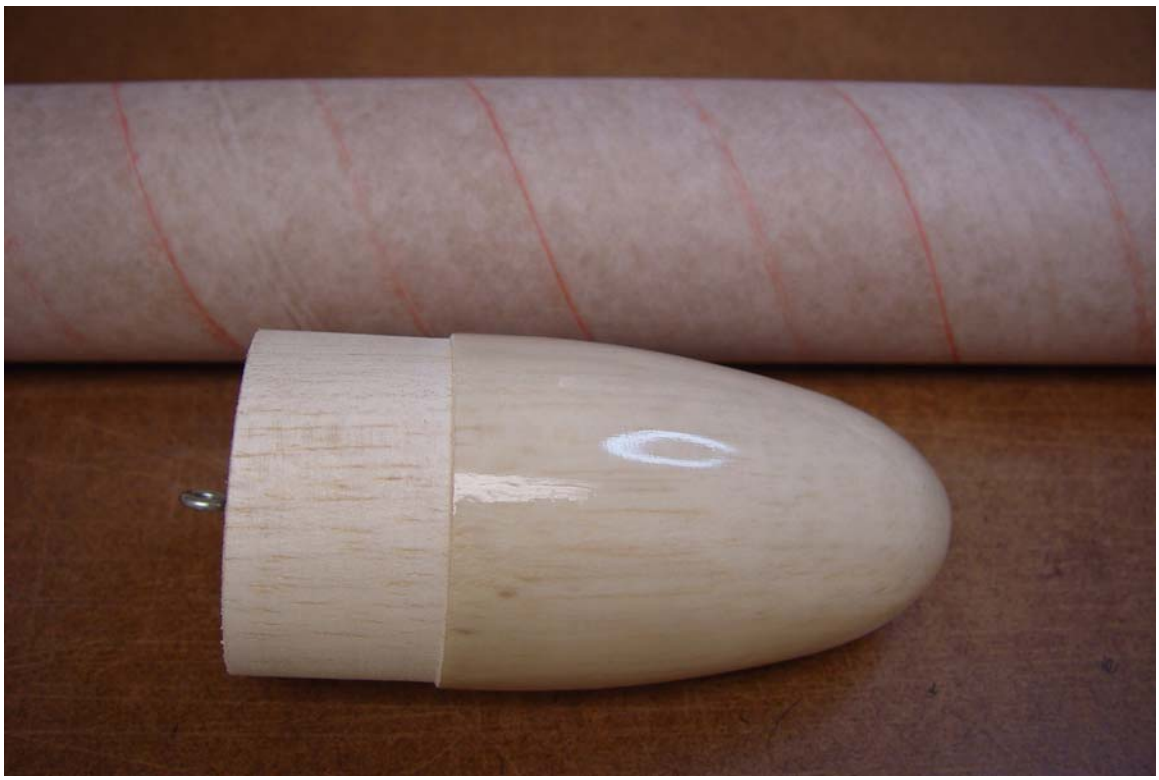

Photo 3: Prepping the Main Airframe Components

Construction commentary will continue with the next report.

John Brohm
May 26, 2008

TMRK Kit Review

Kit No.: 9808	**Reviewer: John Brohm**
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Report #2	**Date: June 1, 2008**

Report #2 continues with construction.

Step 1:

Step 1 instructions were found to be precise and easy to follow; the tube slotting template fit the airframe accurately and was easy to position by sliding it down the tube to sit flush on the bench surface.

Photo 1: Tube Slotting Template in Position

As shown in Photo 2, a length of 1" aluminum angle was found to be the perfect tool for extending the Wing Center and Launch Lug lines. In Photo 3, a length of 3/4" aluminum angle was used to center a straight, parallel line for the 1" interior launch lug line, as called for in Step 1-8.

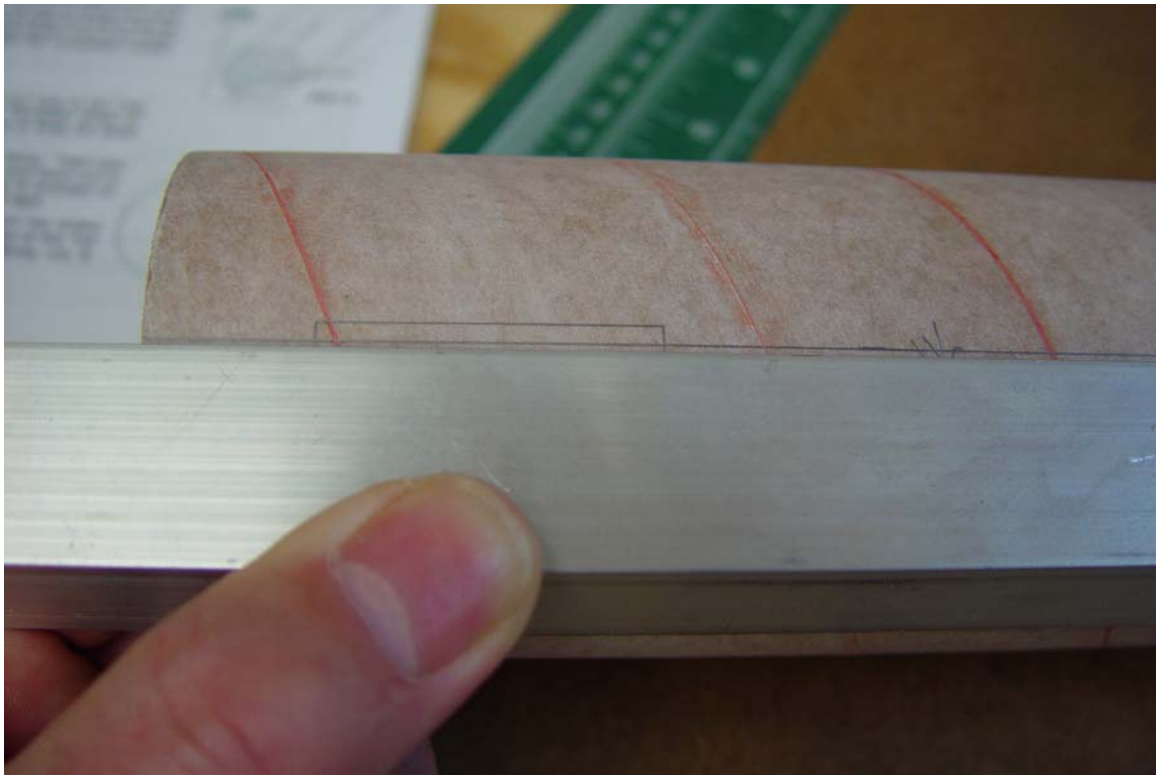

Photo 2: Extending the Center Line

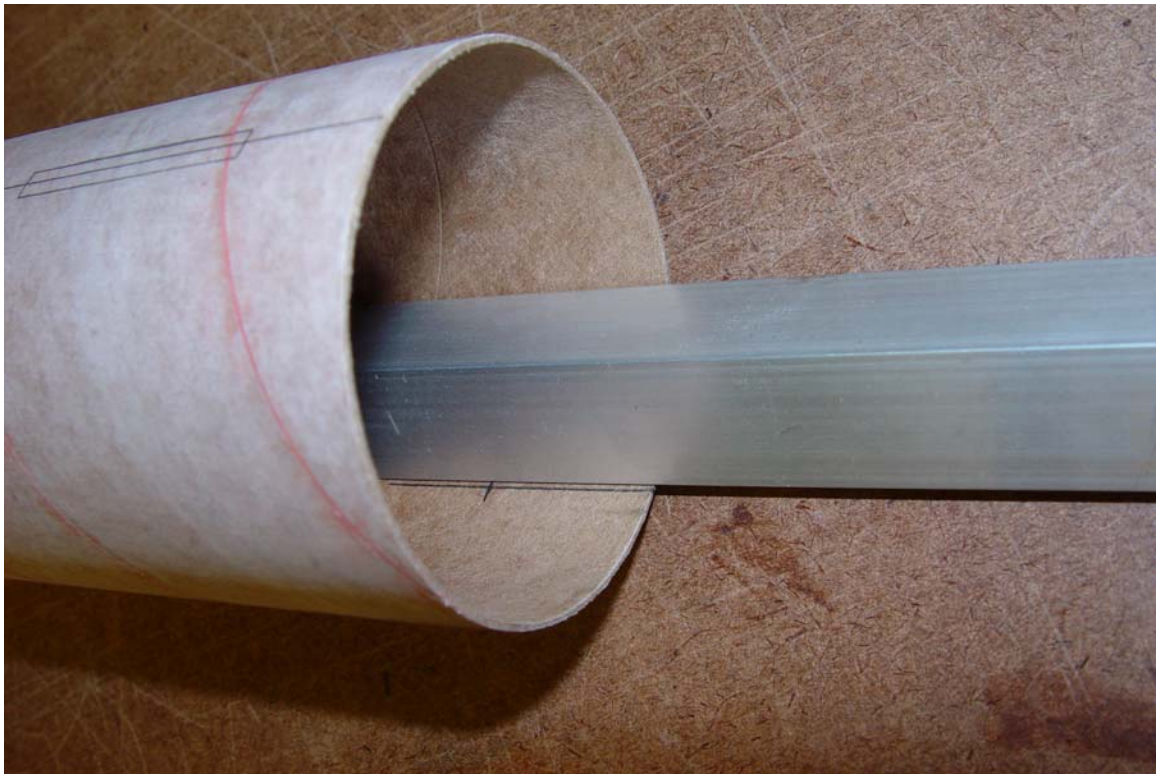

Photo 3: Extending the Interior Launch Lug Line

Step 2:

Step 2 instructions were clear and easy to follow; a few comments are provided.

In Step 2-1, it was found that a pair of Fiskars (or similar) mini-scissors worked very well to accurately cut out the curved portion of the tail cone template.

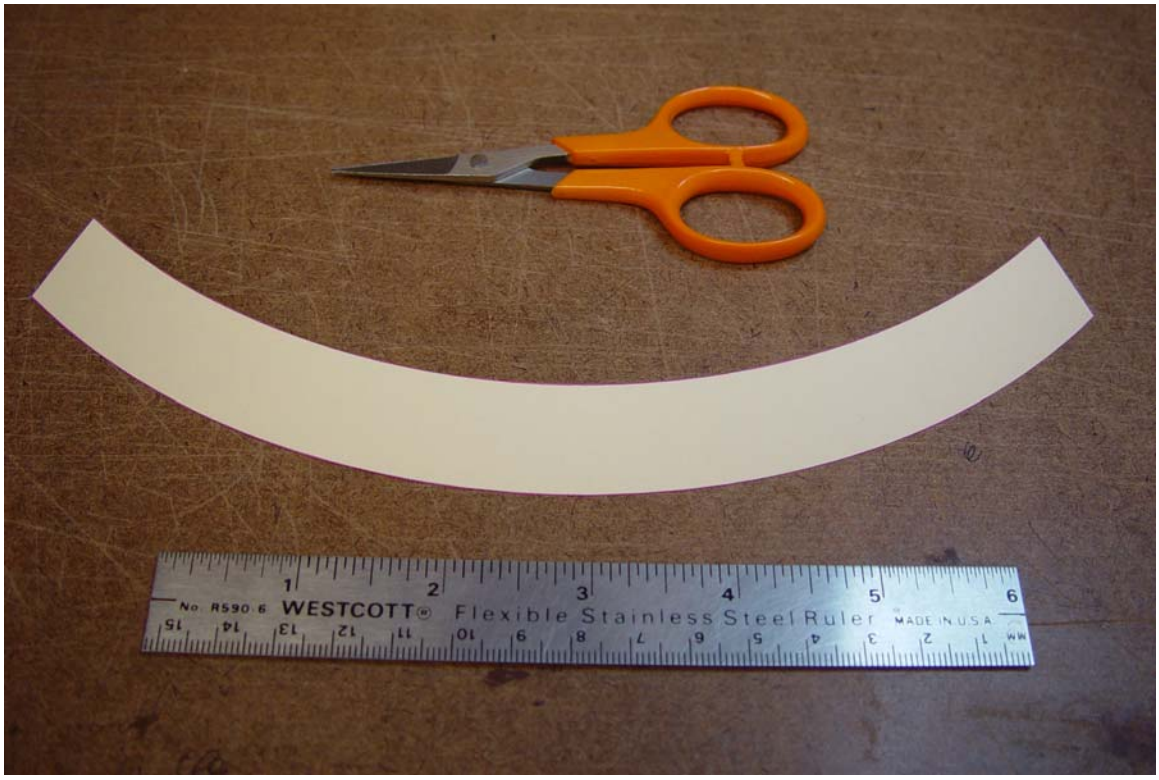

Photo 4: Tail Cone Pattern

In Steps 2-3 and Steps 2-4, Contact Cement was used to glue the tail cone together; this worked very well, with no risk of wrinkling. The glue was applied with a cotton swab.

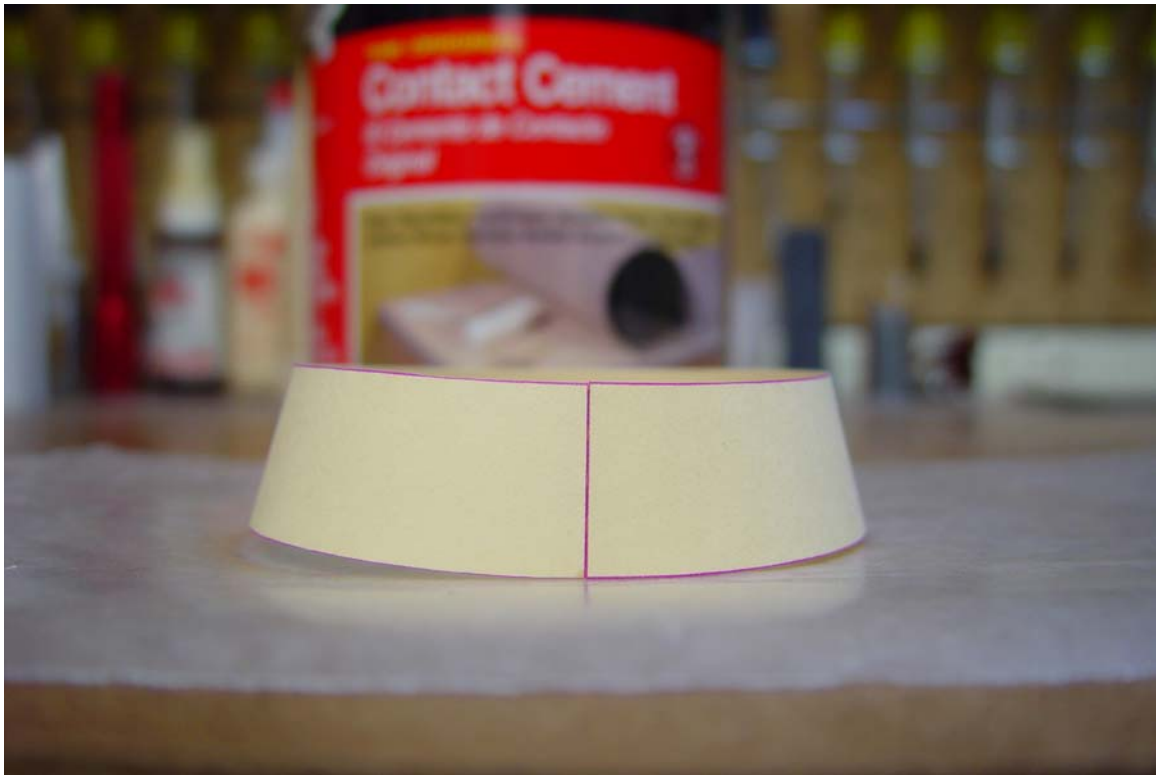

Photo 5: Tail Cone Complete

Steps 3 and 4 were found to be very clear, and if followed closely, they deliver a nice finished cone. It was found that the interior edge of the black fiber tail ring did have to be beveled in order to seat the forward edge of the tail cone evenly with the rear fin slot lines.

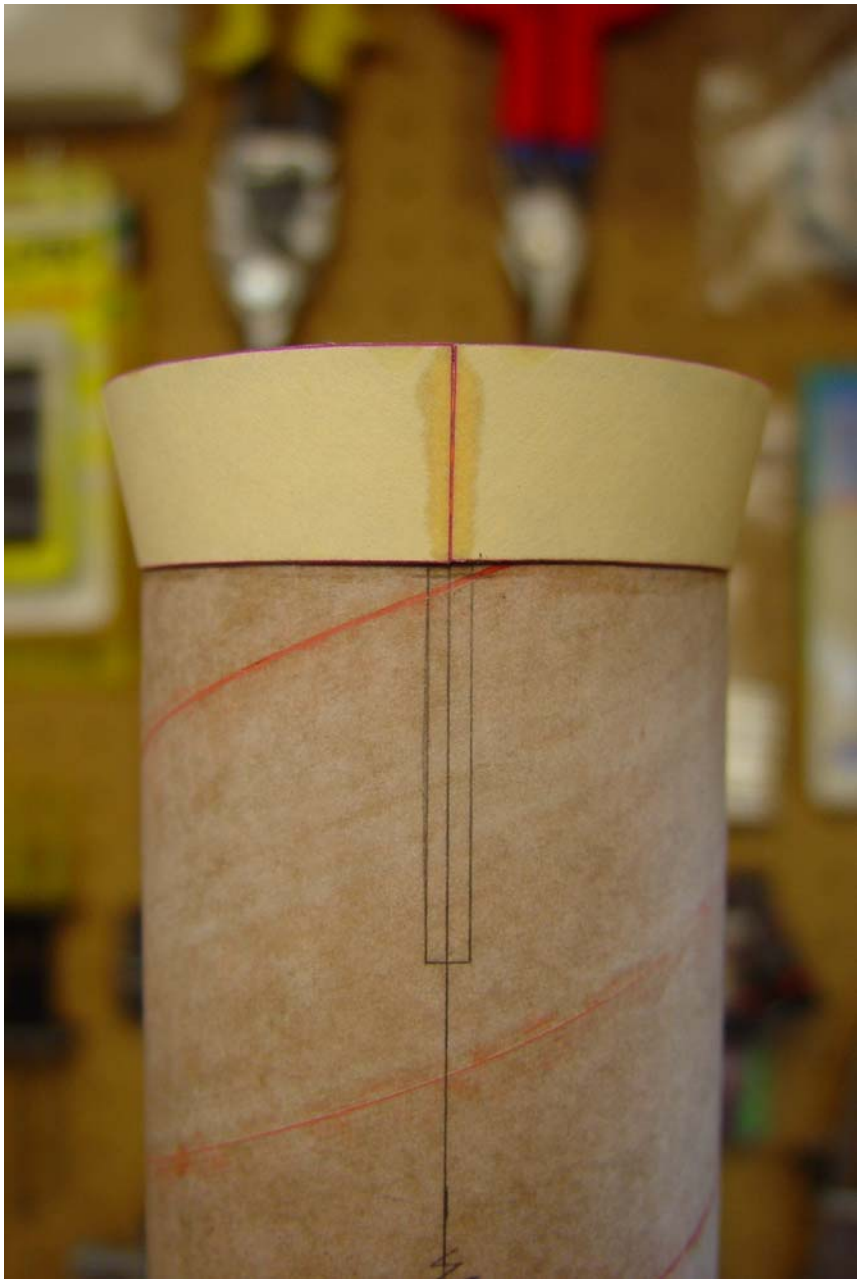

Photo 6: Tail Cone Installed

Construction commentary will continue in the next report.

John Brohm
June 1, 2008

TMRK Kit Review

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Report #3	**Date: June 8, 2008**

Step 4, Continued:

Step 4-8 suggests that the tail cone/airframe end can be trued with a sheet of extra fine sandpaper. In this case, it was necessary to use a sanding block with a #80 grit to shear off the tail cone overhang first. This was due to the residual epoxy at the cone/ring interface and as well the CA-impregnated cardstock – all of this was found to be quite hard, and extra-fine sandpaper wasn't adequate for this task. Use some care, though, with the heavy grit.

With the end trued, a sanding block with a fine grit (#220) was used to smooth the end. The following photos show the final result.

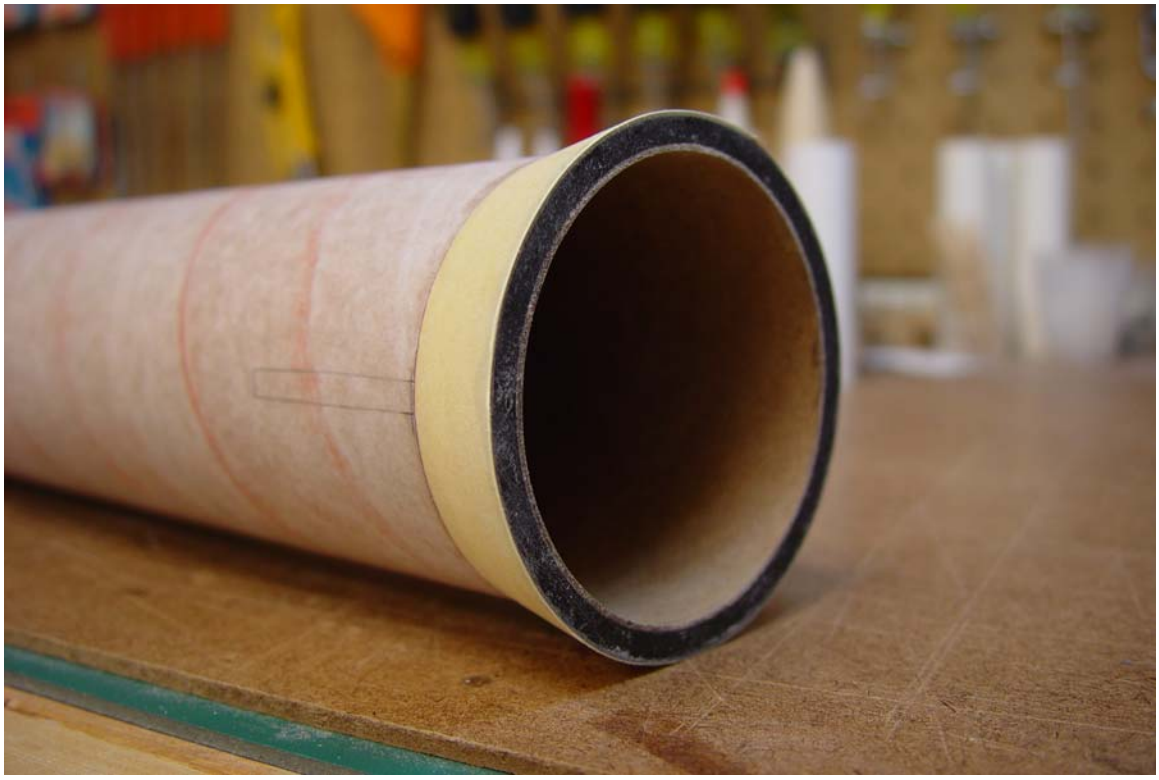

Photo 1: Trued End Cone

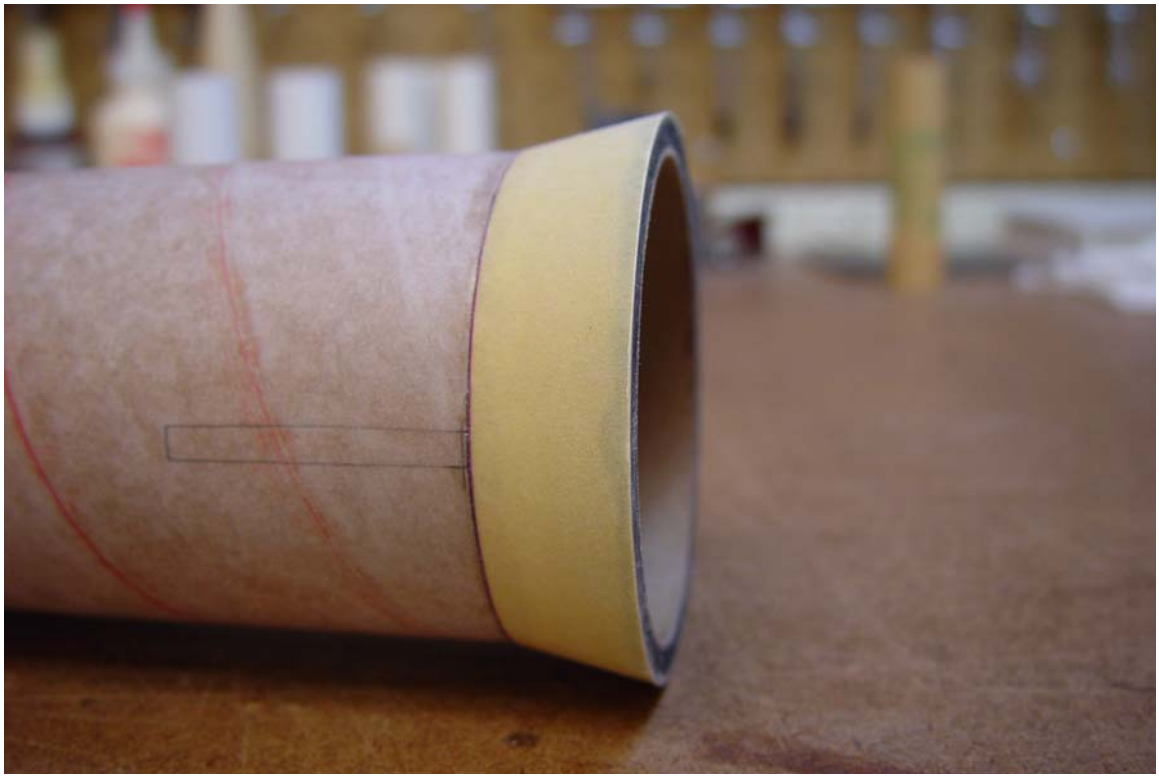

Photo 2: End Cone, Sanded Smooth

The opportunity was also taken at this point to fill the end ring; this would facilitate final finishing later. Hobbico® Hobbylite™ Balsa Filler was used for this step.

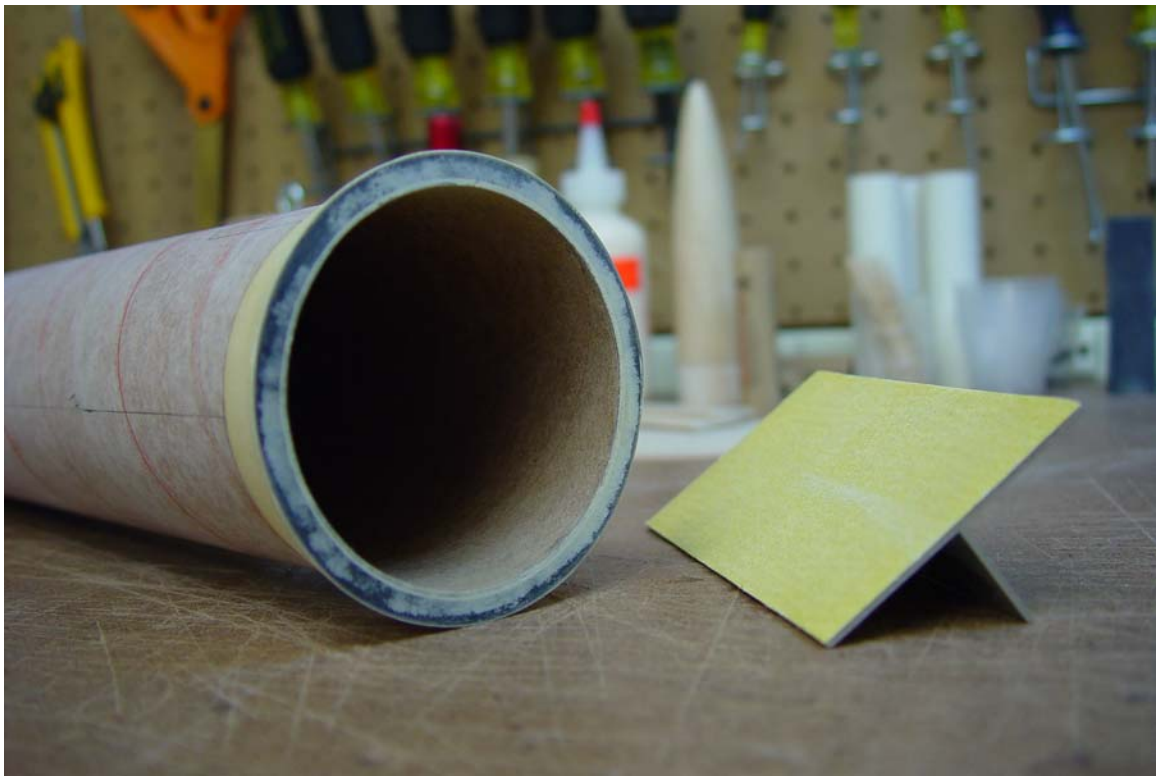

Photo 3: End Ring Filled and Sanded

Step 5:

In general, the instructions for Step 5 were found to be clear and logical, although a couple of observations:

The Recovery System Anchor is installed in Step 5-8, after the 3 motor tubes have been tacked in place with CA. This process was followed, but with some difficulty – having the three tubes in place made it difficult to tighten down the anchor nut without disturbing/dislodging the 3 motor mount tubes. It would have been preferable to have installed the anchor in Step 5-5. Doing so of course would mean that the forward ring would not be able to lie flat on the bench in the subsequent steps while inserting and tacking the 3 motor tubes – this could be mitigated by placing the assembly over any solid flat item possessing an appropriately sized hole that would permit the eye of the anchor to pass through. An elevated piece of plywood with a hole in it would do the trick.

Step 5-9 positions the middle centering ring for gluing; it was found that the fit was not quite tight enough (either to hold the position or to facilitate the wicking of thin CA), and in the end a couple of pieces of masking tape were used to support the ring while some epoxy tacks set. The following photo illustrates the point:

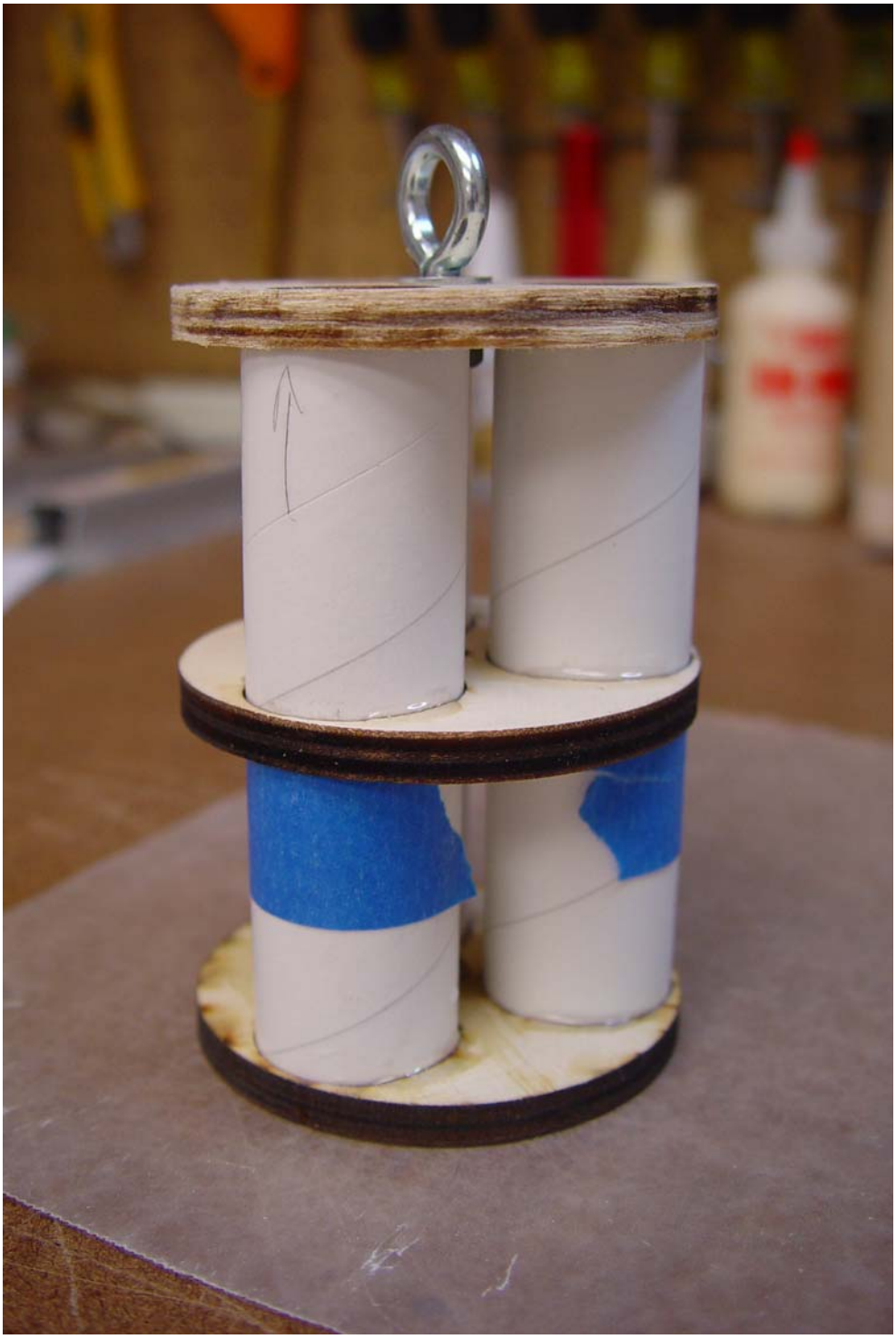

Photo 4: Tacking the Middle Centering Ring in Place

The end result, however, was smooth and flush, just as Step 5 intends:

Photo 5: Aft Centering Ring in Place

Step 6:

Some typos -

Step 6-5 refers to "9808 Template Sheet #1 as"; this is a typo and should be corrected to read "9808 Template Sheet #2"

Step 6-11, line 4: "your" should read "you're"

Step 6-20, line 3: "…Center Seams do line up…" should read "…Center Seams do not line up…"

Continuing with the construction commentary, I opted to use wood glue (Sig-Bond) to assemble the wing pieces, this being considered a stronger adhesive for joining dissimilar woods. Also, even with the best effort to keep the knife vertical while cutting, there will nevertheless be slight gaps at the interface between the pieces – wood glue does a better job filling these gaps (and with strength) as compared to thin CA. In using the yellow glue, once the exposed joints begin to set the assembly does need to be flipped over and the Wax paper removed so that the bottom side joints can breathe.

Step 7:

A French curve provided the perfect guide for cutting out the saddle pieces with a nice, smooth cut.

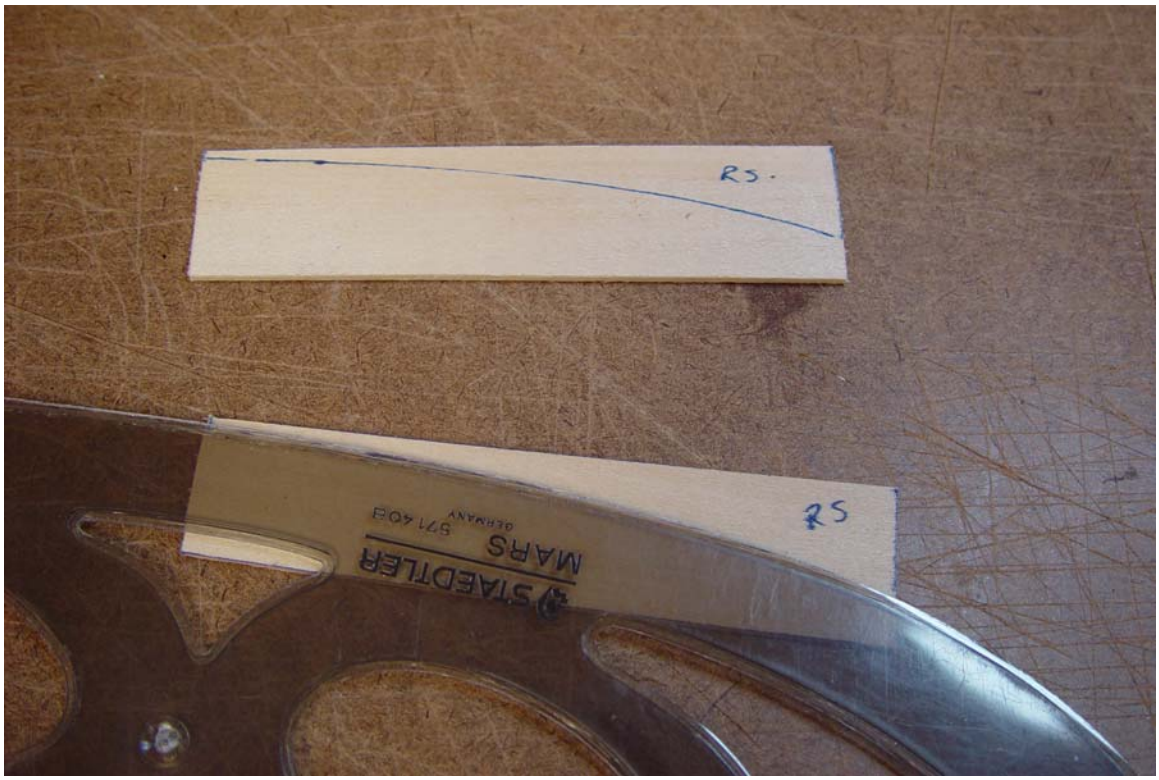

Photo 6: Cutting the Curved Saddle Pieces

A large dowel, with #320 grit, provided the means to sand the curves smooth – note that this was done in pairs to preserve the symmetry of the parts.

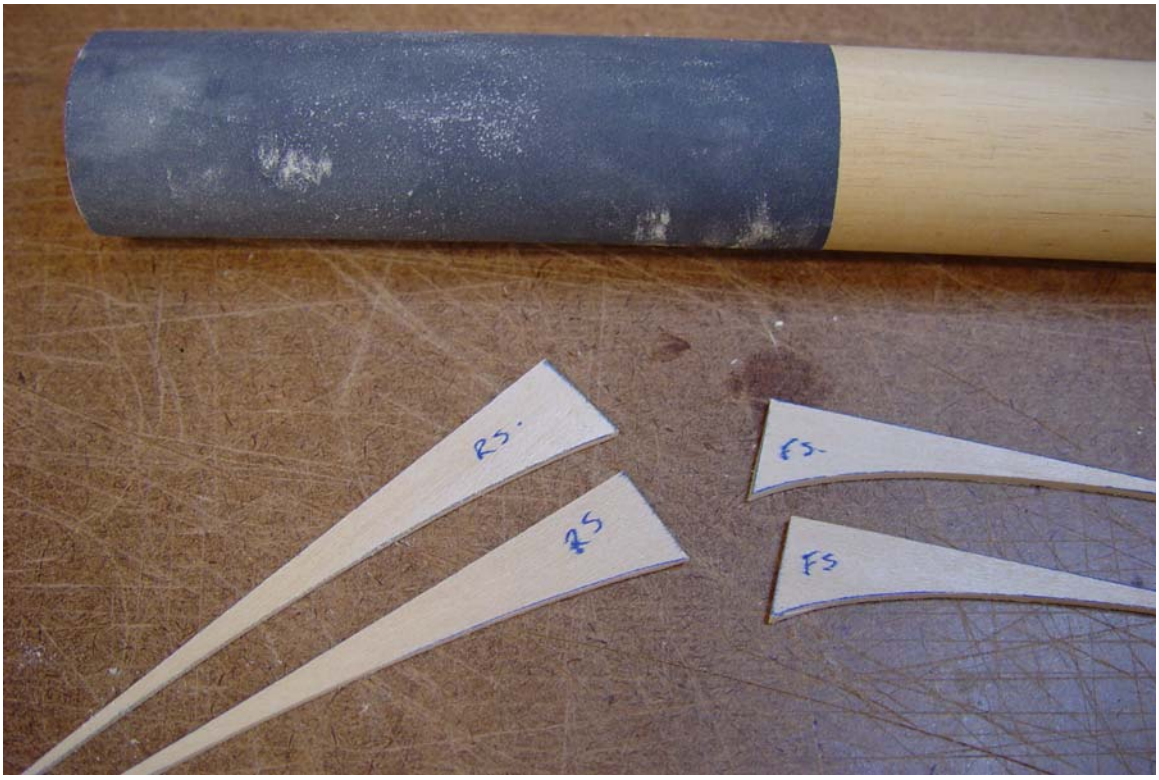

Photo 7: Sanding the Saddle Pieces

Assembly of the saddle was done with wood glue. The finished wing and saddle assemblies turned out as follows:

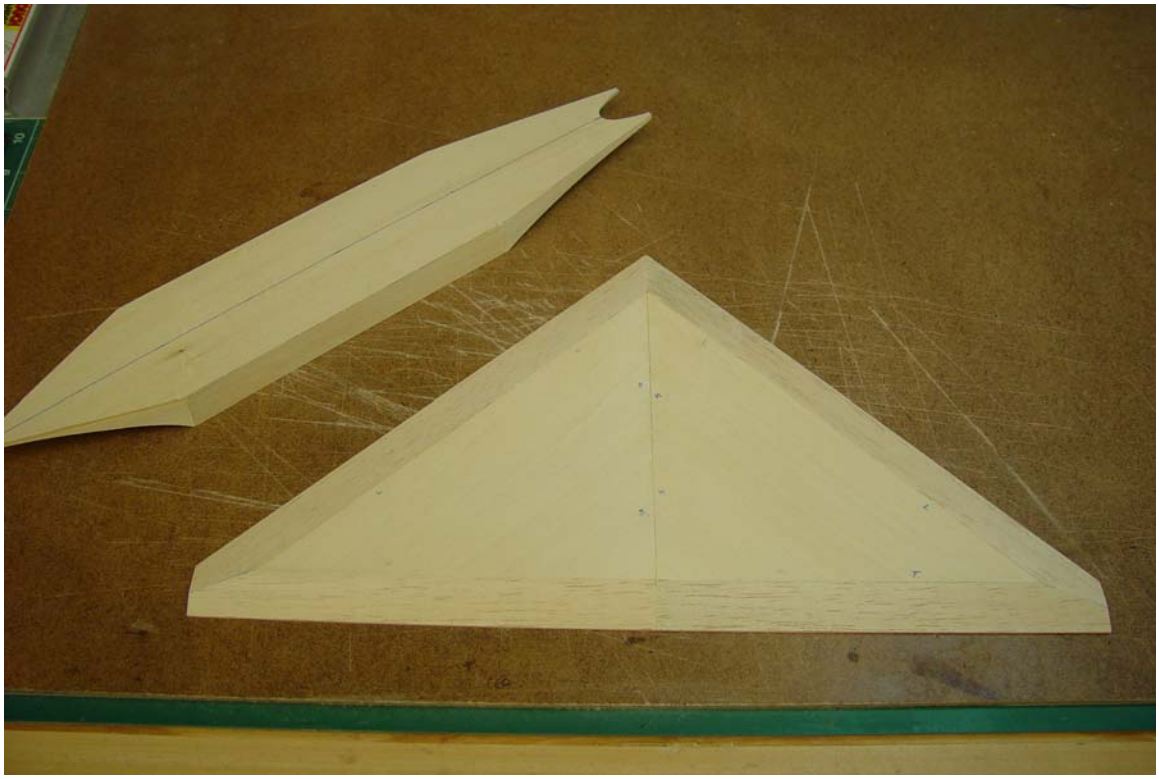

Photo 8: Finished Wing and Saddle Assemblies

Step 8:

Medium CA was used to glue the saddle to the airframe, and the saddle/airframe interface was filleted with wood glue as prescribed by the instructions. Results as follows:

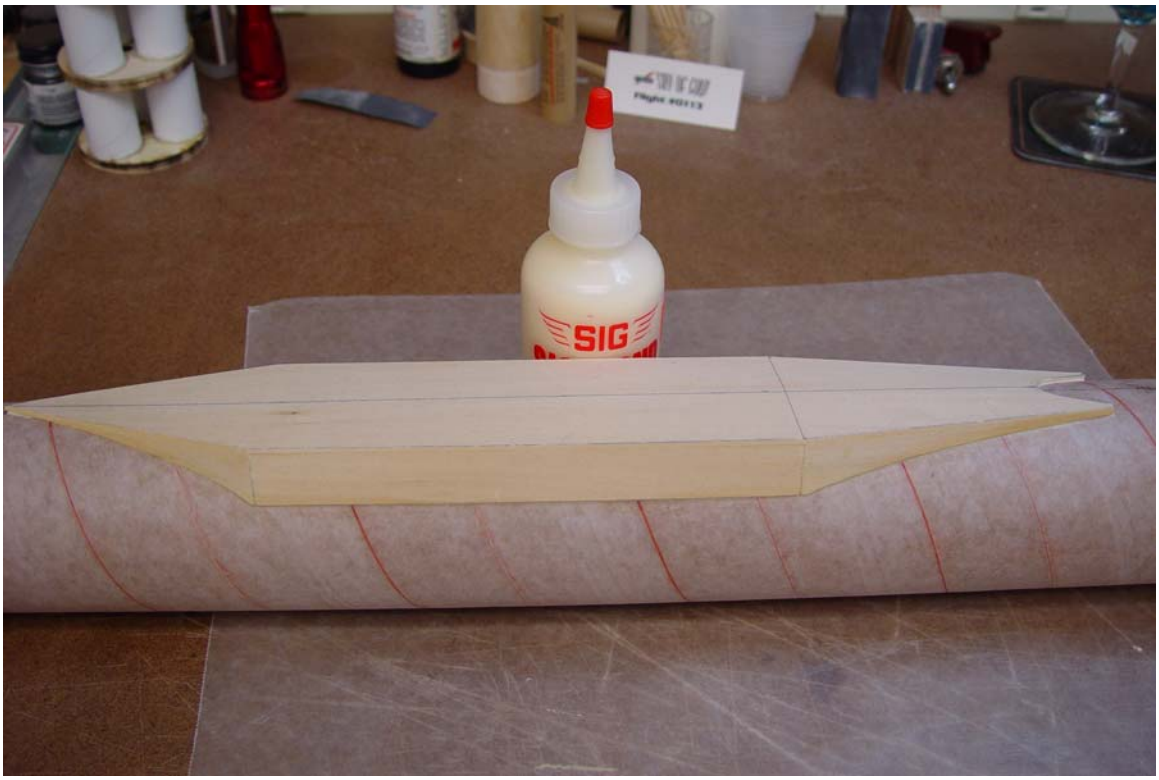

Photo 9: Saddle Installed

Step 9:

The test fit in Step 9-1 revealed a small crown in the installed saddle, as shown in the following photograph:

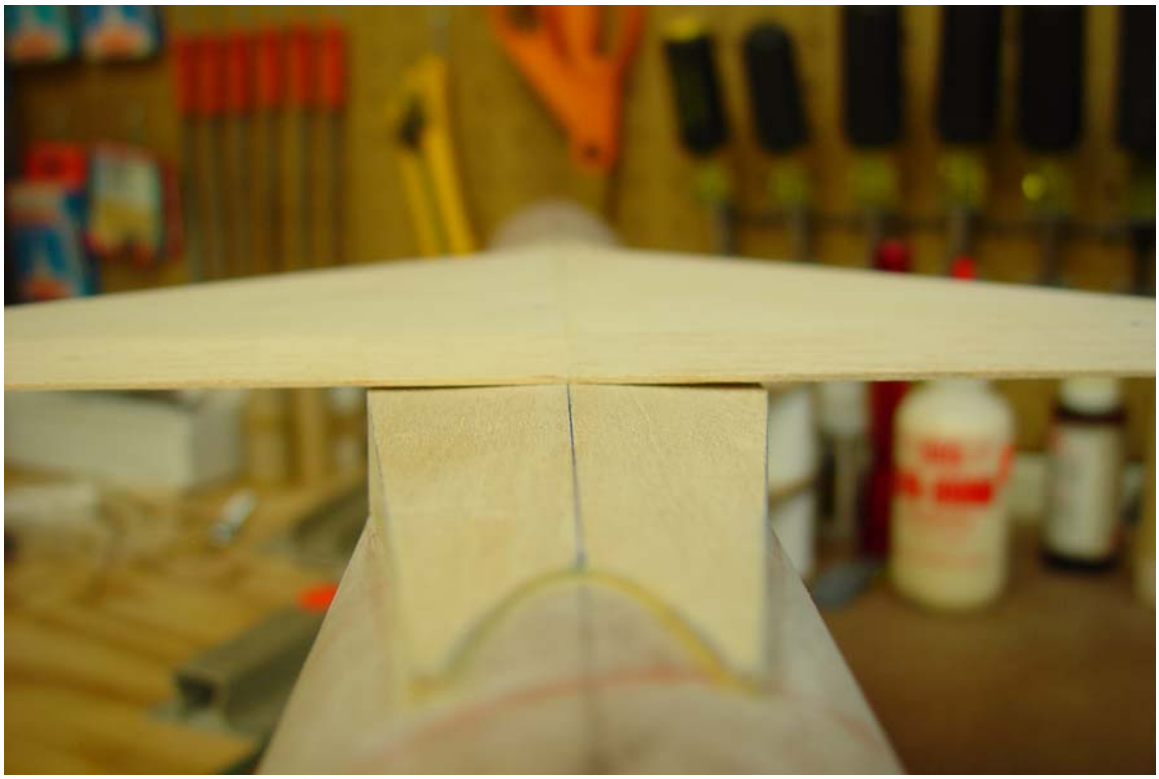

Photo 10: Saddle Crown

To ensure that the wing seats fully with the saddle, a balsa shim will be added on each side of the saddle and then sanded until the top surface of the saddle is flat with no gaps between the wing and saddle; this will be illustrated in the next report. But before this, a few words on the crown issue.

In my view, the crown problem stems from the saddle sides being too short in the depth dimension. It's possible that the crown could have occurred if, in Step 7-5, the saddles sides were pushed out while being glued to the saddle base. But in this case, the sides had been checked for plumb during construction, so this effect isn't in play here. A crown could have occurred if the saddle base was too wide – while this is a possibility, in this case the saddle base was cut to the prescribed width of the template. Finally, a crown could have occurred if the saddle assembly was sanded too deep during Steps 7-14/16; but as can be seen in Photo 11, the saddle hadn't been sanded quite as deep as the instructions suggest – just less than 1/32" sits between the surface of the airframe and the lower surface of the saddle base. Had the saddle been sanded any deeper, then the crown effect would have been even more pronounced.

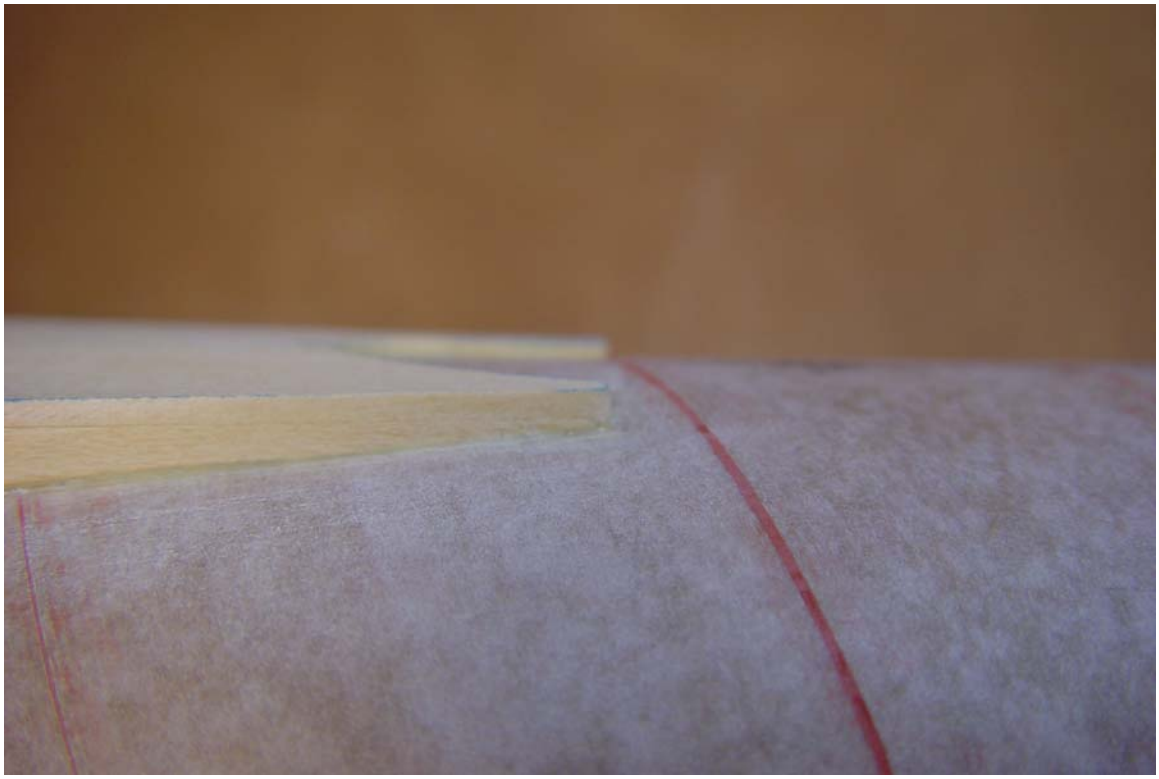

Photo 11: Saddle/Airframe Interface

Therefore, the most likely cause is the depth dimension of the side saddle pieces isn't long enough. The possible solutions to this problem before construction are:

- Increase the depth of the saddle sides
- Narrow the width of the saddle base.

As the saddle assembly is already installed in this case, the problem will be solved with balsa shims – this will be continued in Report #4.

John Brohm
June 8, 2008

TMRK Kit Review

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Model: 1:20 OSC Pegasus	
Report #4	**Date: June 8, 2008**

As recounted in Report #3, upon completing Step 8 a crown was observed in the Saddle Assembly. This report focuses on the build up of the balsa sheet shims to level the wing assembly on the airframe saddle.

Photo 1 shows the crown in the assembly:

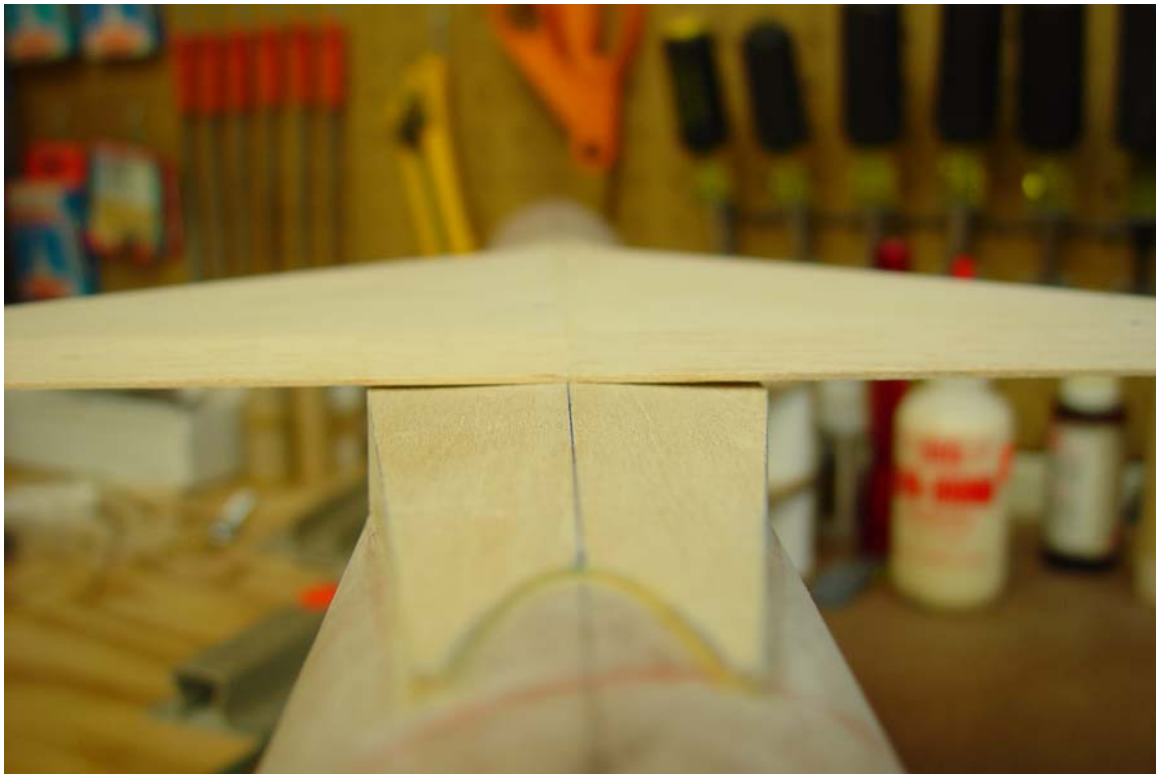

Photo 1: Saddle Crown

This problem was mitigated by gluing 1/16" x 1" balsa strips to each side of the saddle. This left an open strip down the middle, the high point that will be used as the final surface reference. A sandable adhesive needs to be used, as the balsa must be sanded down until the interior edges are fully feathered into the center high point of the saddle. In this case, a quality model airplane cement was used.

Photo 2: Saddle Shims Cemented in Place

After much sanding (and frequent checking for trueness), the top surface blends into the underlying basswood saddle.

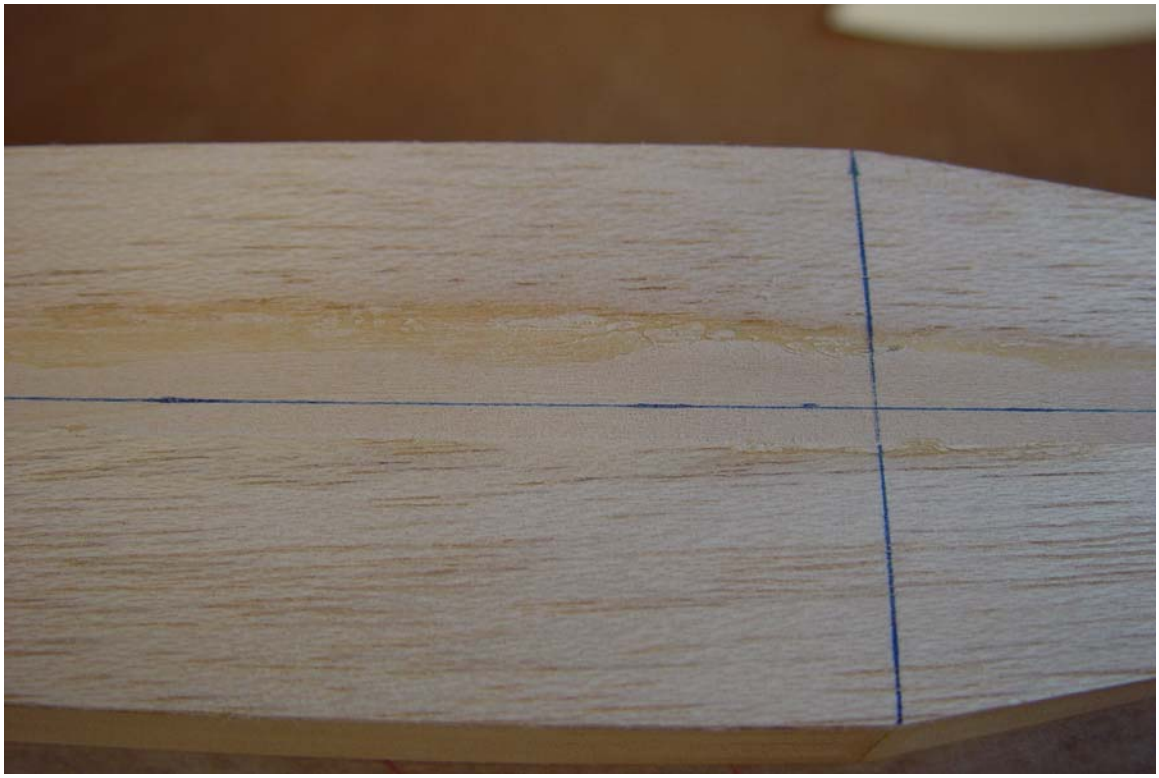

Photo 3: Shims Sanded

A test fit shows that the crown has been eliminated. Total thickness added to the edges is about 3/64".

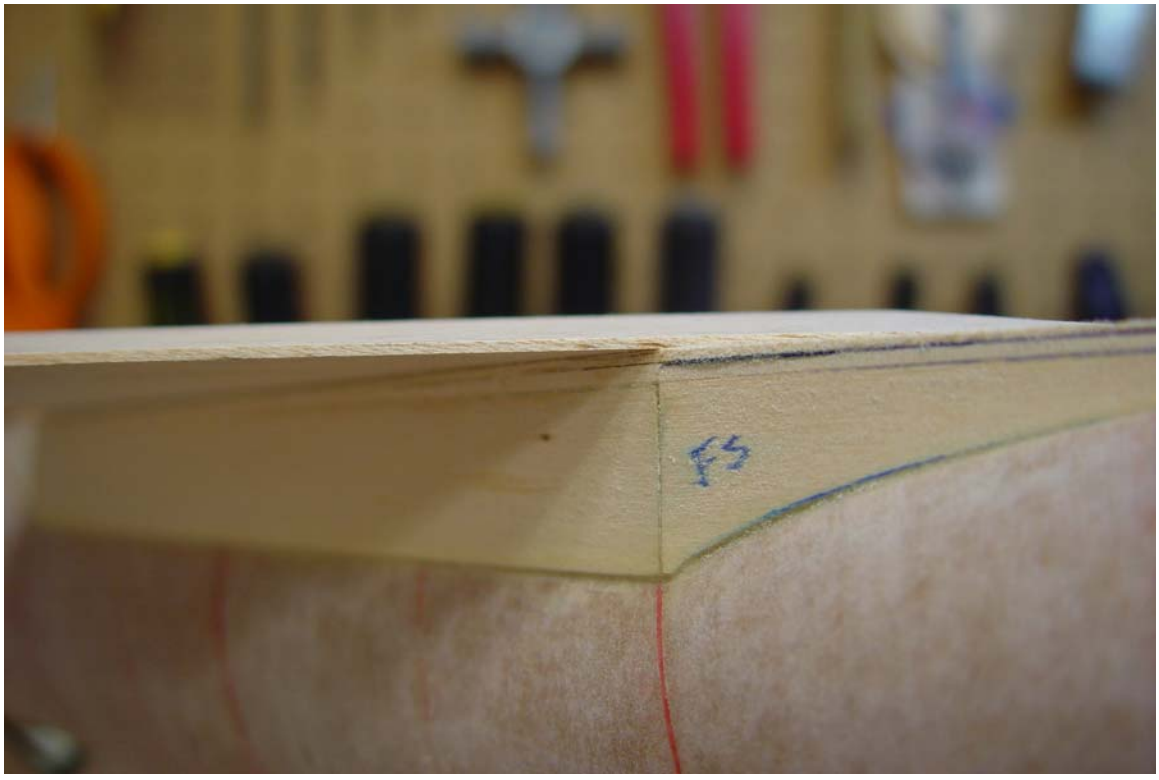

Photo 4: Crown Eliminated

Photo 5: Wing Sits Flat

A final check for trueness reveals a square and flat fit. The Wing assembly will be glued into position once the airframe/saddle seams are filled and sanded.

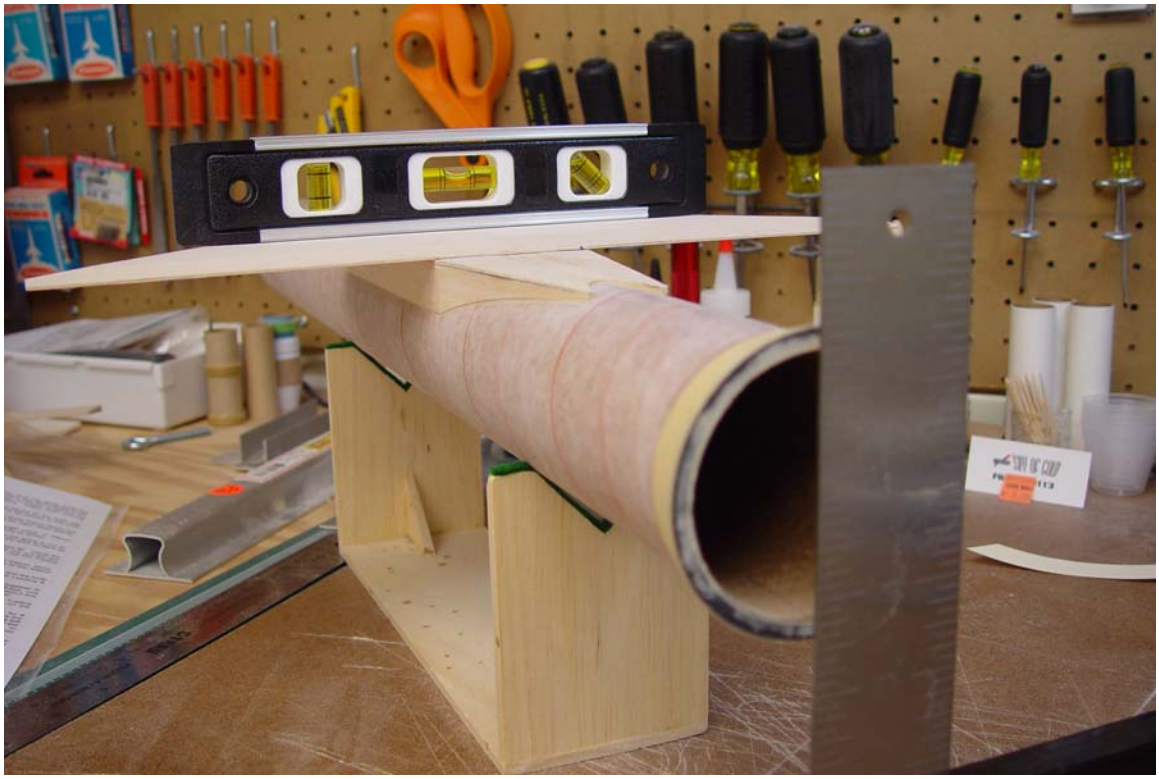

Photo 6: Square and True

John Brohm
June 8, 2008

TMRK Kit Review

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Model: 1:20 OSC Pegasus	
Report #5	**Date: June 14, 2008**

Step 9

Some difficulty was encountered with Step 9-3. Using yellow wood glue (Sig-Bond), it was noted that the wing assembly began to warp as the glue set: first the trailing edge began to curl upwards, and then there was a noticeable upwards warp along the front to back center axis of the wing assembly. The effect became very noticeable as time progressed.

The warping was occurring due to the swelling of the bottom glued surface of the wing. The warpage was very noticeable, and for fear of a ruined model (suppose the warp doesn't come out once the glue is completely dry?), the wing was removed before the wood glue had entirely set. Once the glue had completely dried on the separated components, the glue was sanded off, and the saddle and wing bottom surfaces were re-trued.

The wing assembly was then re-positioned on the saddle using epoxy as the adhesive; once set, 3/32" epoxy fillets were added to the underside interface joints, as shown in Photo 1.

Photo 1: Underside Wing Fillets

Step 10:

The instructions were clear and logical, and no issues were encountered during this step.

Step 11:

The instructions were clear and logical, and no issues were encountered during this step.

Step 12:

Having read the instructions for Step 12 several times, I felt that the objective was not as clear as perhaps it should be.

The general notes in Steps 12-1 and 12-2 are helpful, but the reason why the aileron stock center line needs to be parallel with the work surface is not fully explained – the answer goes to the geometry of the aileron stock itself, the fact that the aileron stock is not symmetrical (isosceles), but blessed with a right angle in the base of the stock. For the intended application in Step 12, this right angle, and its effects on the cuts, has to be removed so that the finished aerofoil will sit symmetrically on the fins.

This right angle leads to the next ambiguity in the instructions: in Step 12-2, a procedure is described that is intended to balance out the angles. But should the right angle side of the stock be

placed on the work surface or should it be the other angle? Does it matter? Which angle should be facing up on the work piece?

Then there's the matter of the base edge of the aerofoil. Once the pieces are cut, the base edge still needs to be sanded to render the aerofoil into a truncated isosceles triangle.

Some quick calculations show that the angle on the aileron stock is 9.46°. If we imagine the aileron stock placed on its base edge (for example, as per the illustration in figure 12-7), then the part needs to swing through half of this angle to arrive at the intended isosceles configuration. This exposes about 1/64" of material along the right angle edge of the stock that needs to be removed to realize a symmetrical part.

Step 12-8 begins by asking the Builder to "Lightly sand the edges of the Leading & Trailing edges…" but it's my opinion that not enough emphasis is placed on adjusting the base of the parts to achieve the required symmetry. The foregoing steps, while perhaps not intended, leave one thinking that by making the cuts over the scrap pieces of aileron stock that all of the seams will come together as intended. They can't, and won't, until the base edge is sanded to remove the right angle.

In this case, the parts were cut as described in the instructions, and then the base of the each part was carefully sanded so that it would butt up against the relevant fin area in the intended symmetrical way. The following photo shows one of these parts:

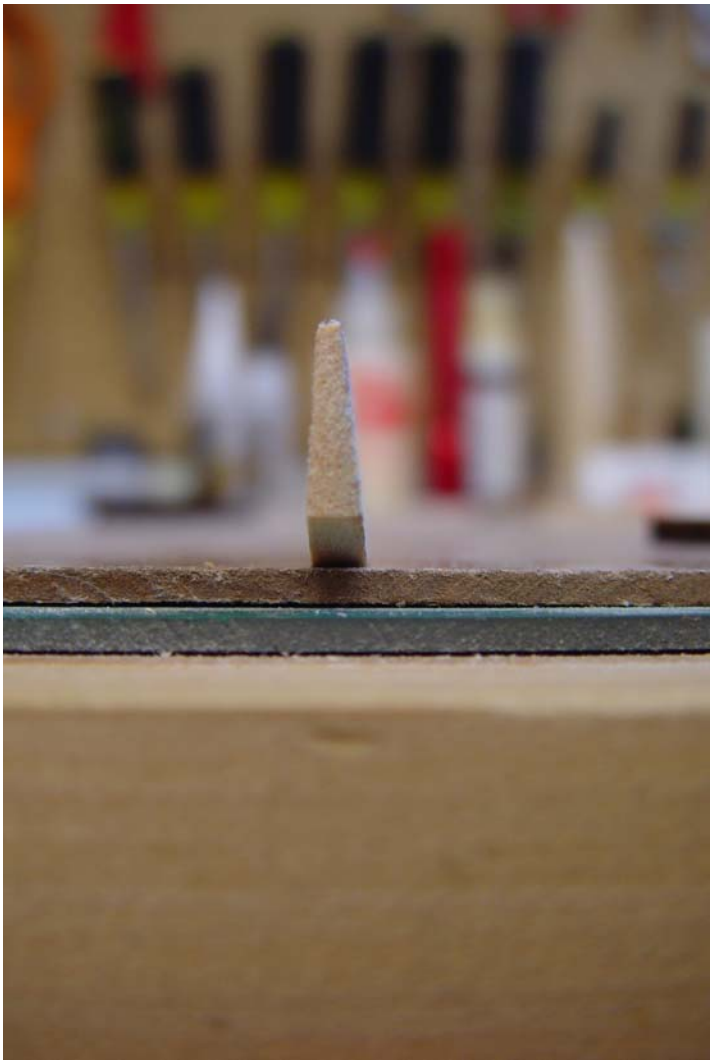

Photo 2: Aileron Stock Sanded Symmetrical

The parts were then assembled as per the instructions, and then finished with Silkspan and 3 coats of Nitrate dope prior to installation.

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June 14, 2008

TMRK Kit Review

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Model: 1:20 OSC Pegasus	
Report #6	**Date: June 16, 2008**

Step 12 (Continued):

It should be noted that it was more reliable and consistent to cut the aileron stock with a fine toothed razor saw, rather than a hobby knife. This was accomplished by using a steel straightedge as a cutting guide while holding the razor saw vertical through the cut. Sanding the cut pieces was necessary to arrive at a tight joint fit. The parts were then assembled with wood glue as per the instructions, and then finished with Silkspan and 3 coats of Nitrate dope prior to installation.

Photo 1 shows the dorsal fin during its trial fit; the final wedge shape of the trailing edge can be clearly seen.

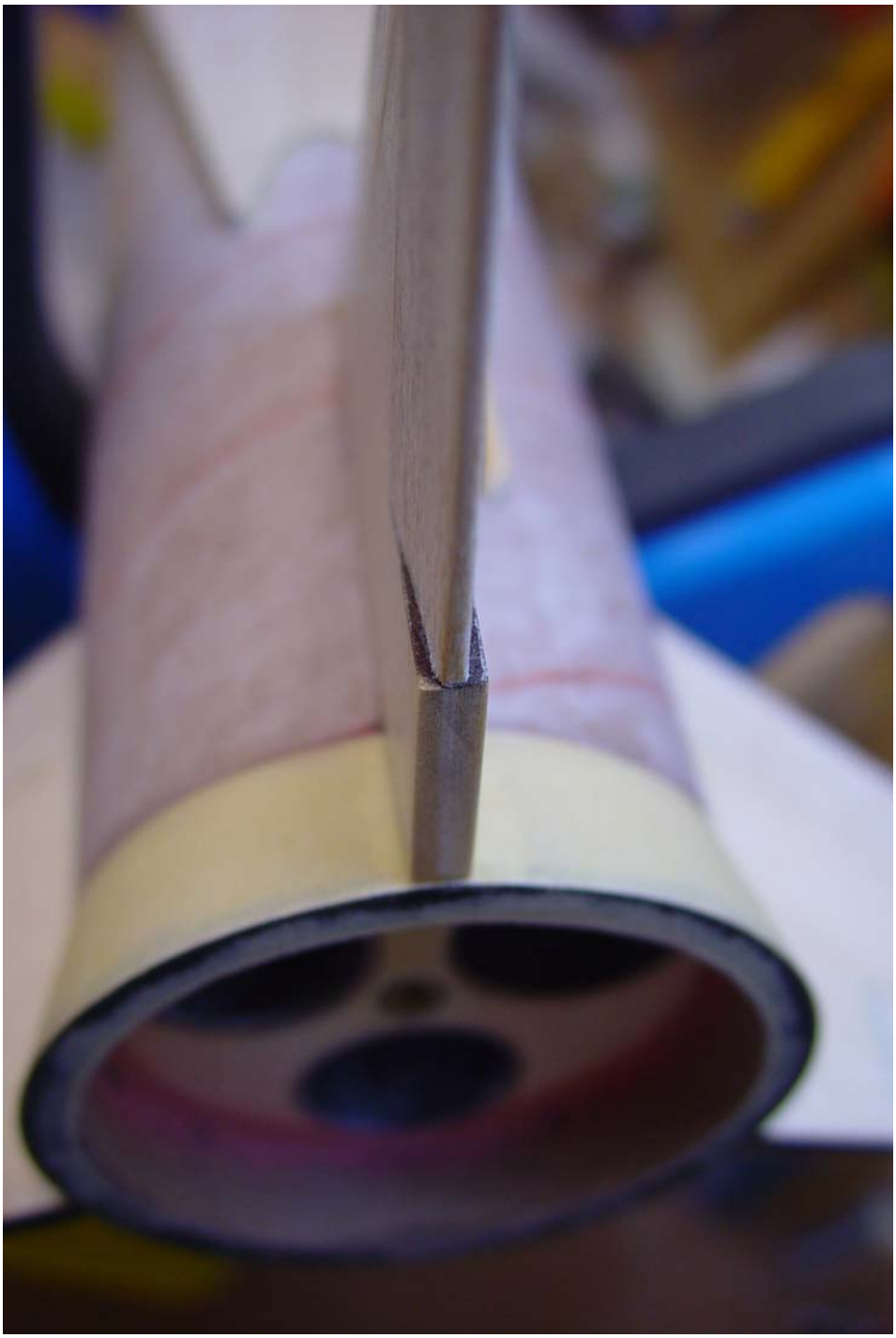

Photo 1: Dorsal Fin Trial Fit

Step 13:

The instructions for Step 13 were found to be clear and consistent; installation of the fins proceeded without difficulty. Yellow wood glue was used to fillet the fins. Photo 2 shows one of the installed fins:

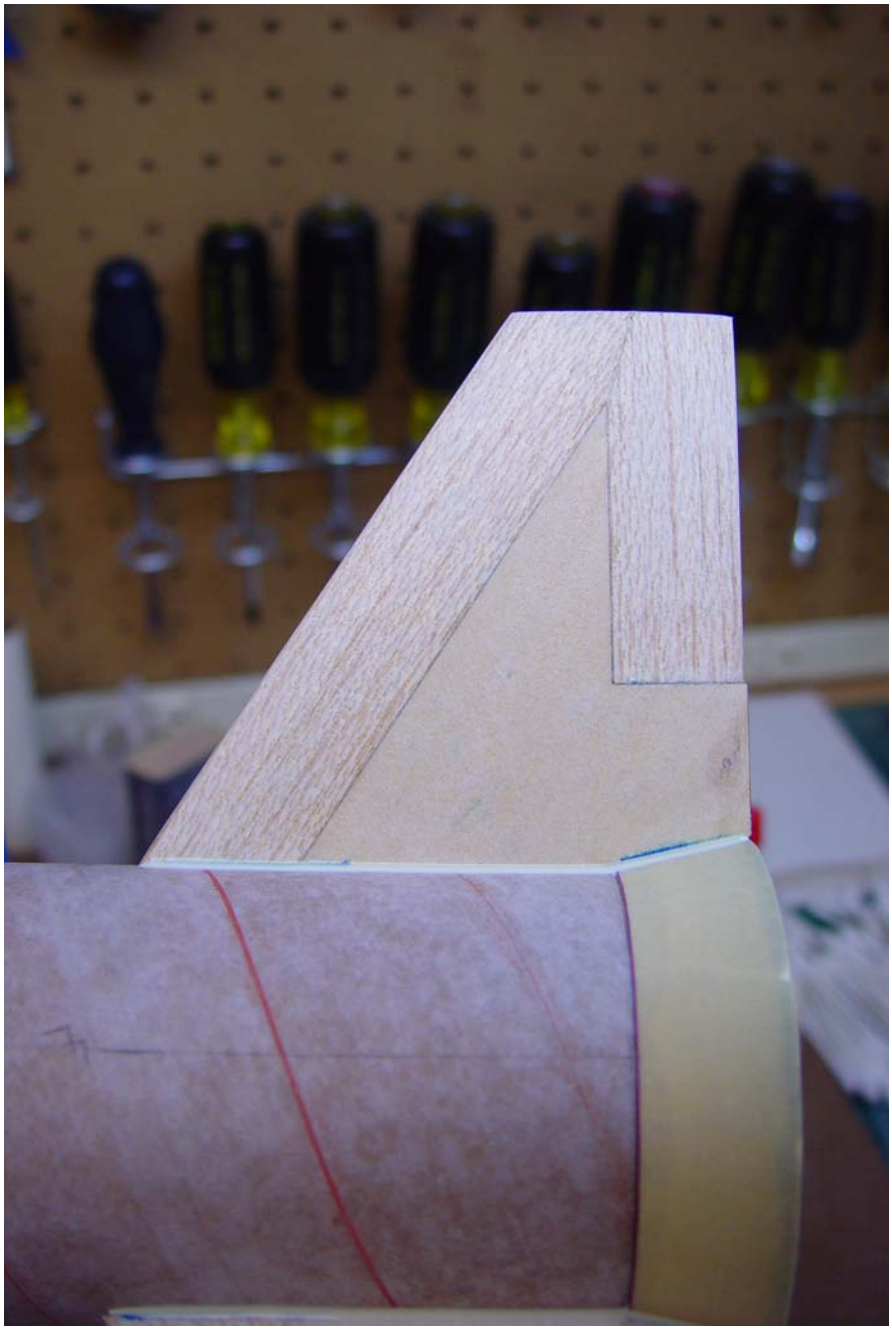

Photo 2: Installed Fin

Step 14:

Preparation and installation of the launch lug proceeded without difficulty.

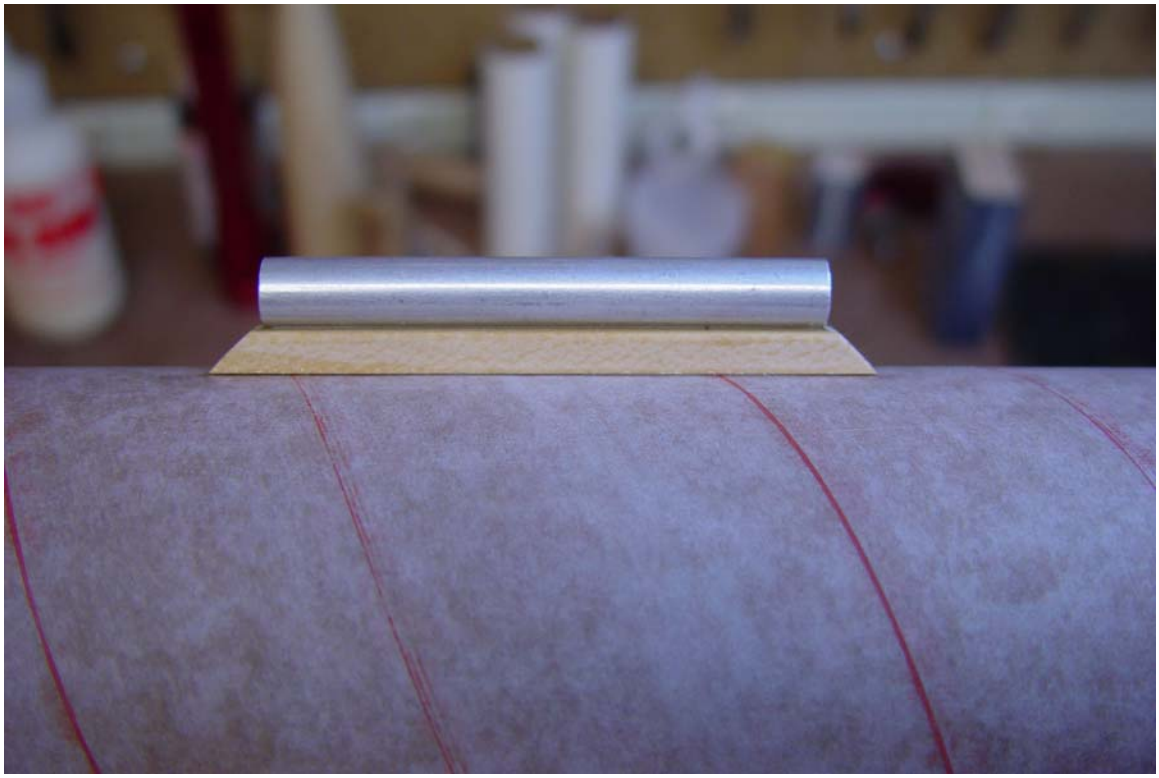

Photo 3: Launch Lug Installation

Step 15:

Conduit details were prepared and installed without difficulty.

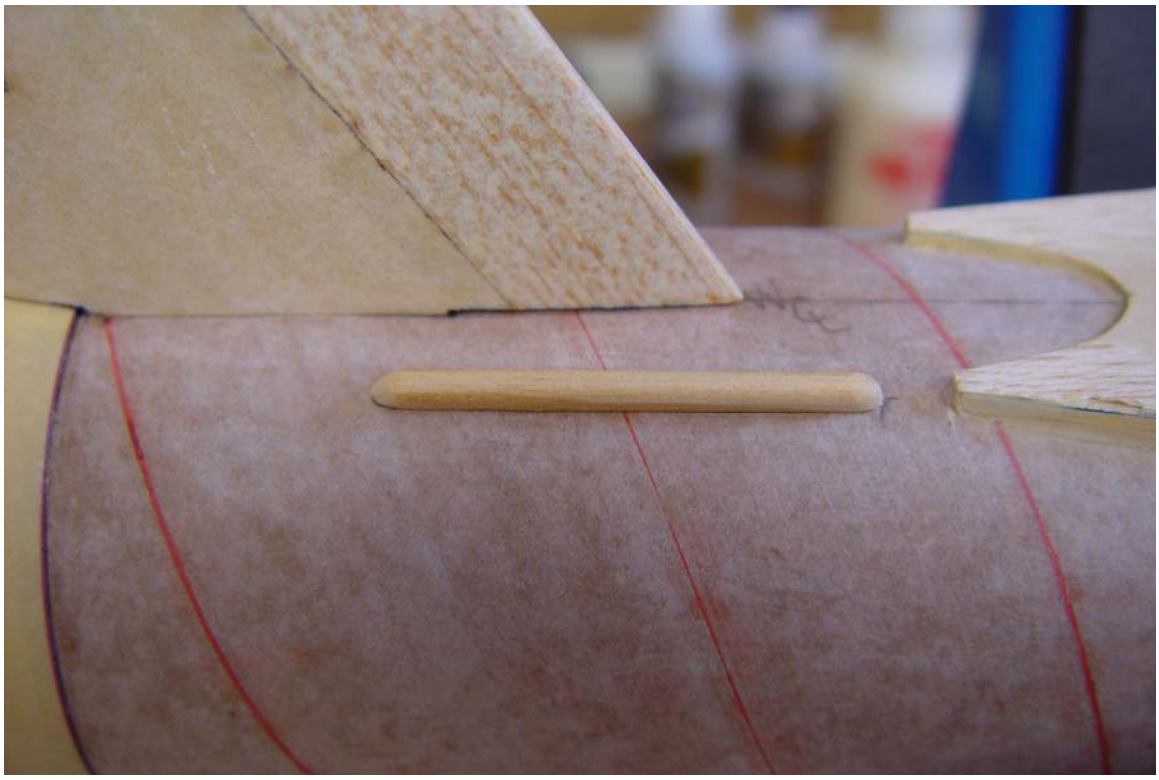

Photo 4: Rear Conduit Installed

With this step complete, the model will be prepared for priming and painting. The next report will cover these items in more detail.

John Brohm
June 16, 2008

TMRK Kit Review

Kit No.: 9808	**Reviewer: John Brohm**
Model: 1:20 OSC Pegasus	
Report #7	**Date: June 21, 2008**

This report focuses on the preparation of the model for priming.

Fins:

As described earlier in Report #6, the fins were sealed with Silkspan tissue and 3 coats of Nitrate dope, the fins being sanded with #320 grit in between coats. This was completed before the fins were installed in Step 13.

Following two yellow wood glue fillets at the fin/airframe interface, a small gap was noticed at the leading point of each fin; this was filled with Bondo® Glazing & Spot Putty and then sanded smooth. The same was done for the front and end points of each conduit piece. Photo 1 highlights this detail.

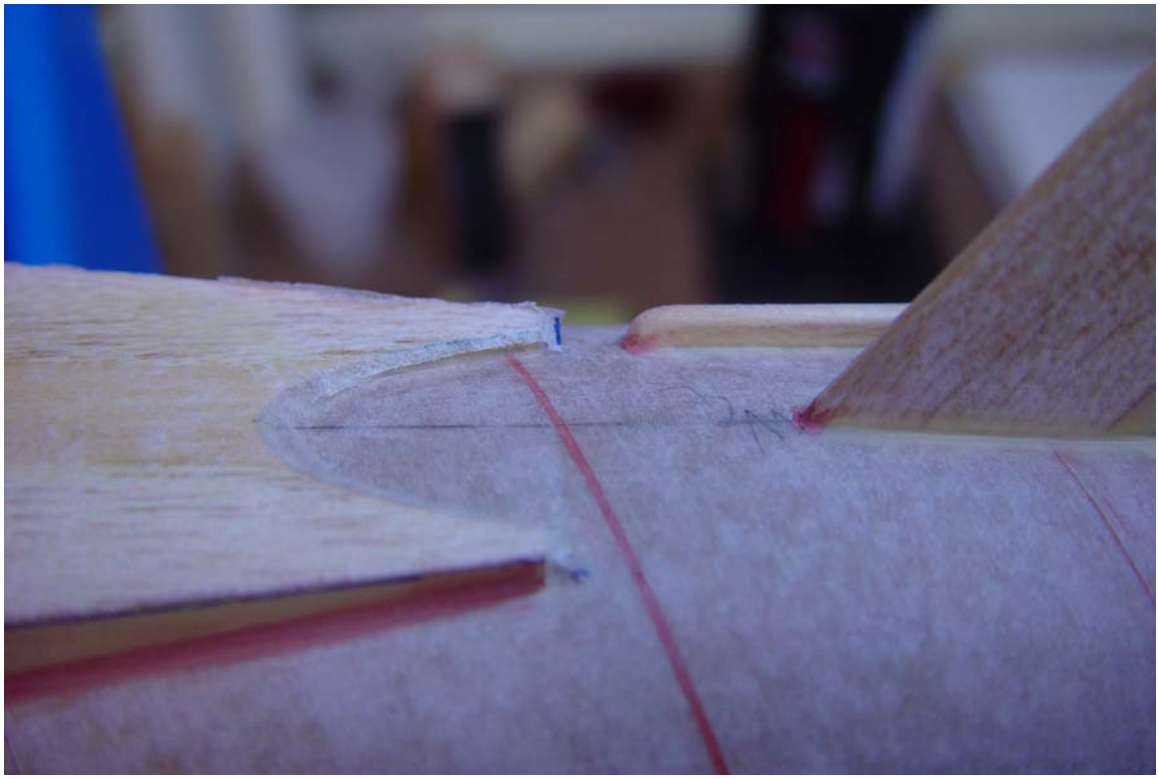

Photo 1: Filling the Gaps

Tail Cone/Fin Interface:

After the fins were installed, it was found that while the rear of each fin was flush with the tail cone, there was still a tiny gap between the base of each fin and the tail cone. This gap was filled with Bondo®. The filler also helped to square up the fin base, as shown in Photo 2. All three fins were treated this way.

Photo 2: Filling the Fin Aft Face

The epoxy fillet around the rear centering ring was also filled with Bondo to smooth out the ring joint, as can also be seen in Photo 2.

The step joint between the front edge of the tail cone and the airframe was also filled with Bondo®. It was found that a gap of 1/16" was just the right distance for setting a feathered edge – a strip of masking tap was laid down to provide a sharp line, the exposed area filled, and then sanded and feathered for a blended joint, as shown in Photo 3.

Photo 3: Tail Cone/Airframe Fillet

Wing Assembly:

As described in Report #5, following installation, the Wing/Saddle interface was filled with a 3/32" epoxy fillet. The wing itself was then covered with Silkspan and two coats of Nitrate dope. Because of the heavier grain in the leading and trailing edge balsa pieces, these were subsequently filled with Sig Sanding Sealer, and then sanded smooth with #320 grit.

Saddle:

Following installation, the airframe/saddle interface joints were initially filled with Hobbico® Hobbylite™ Balsa Filler. After sanding smooth, these joints were then re-filled with Bondo®. As a rule, Balsa Filler dries hard and is more difficult to sand than Bondo®, so Bondo is used for the final seam fillets for a smoother, feathered edge.

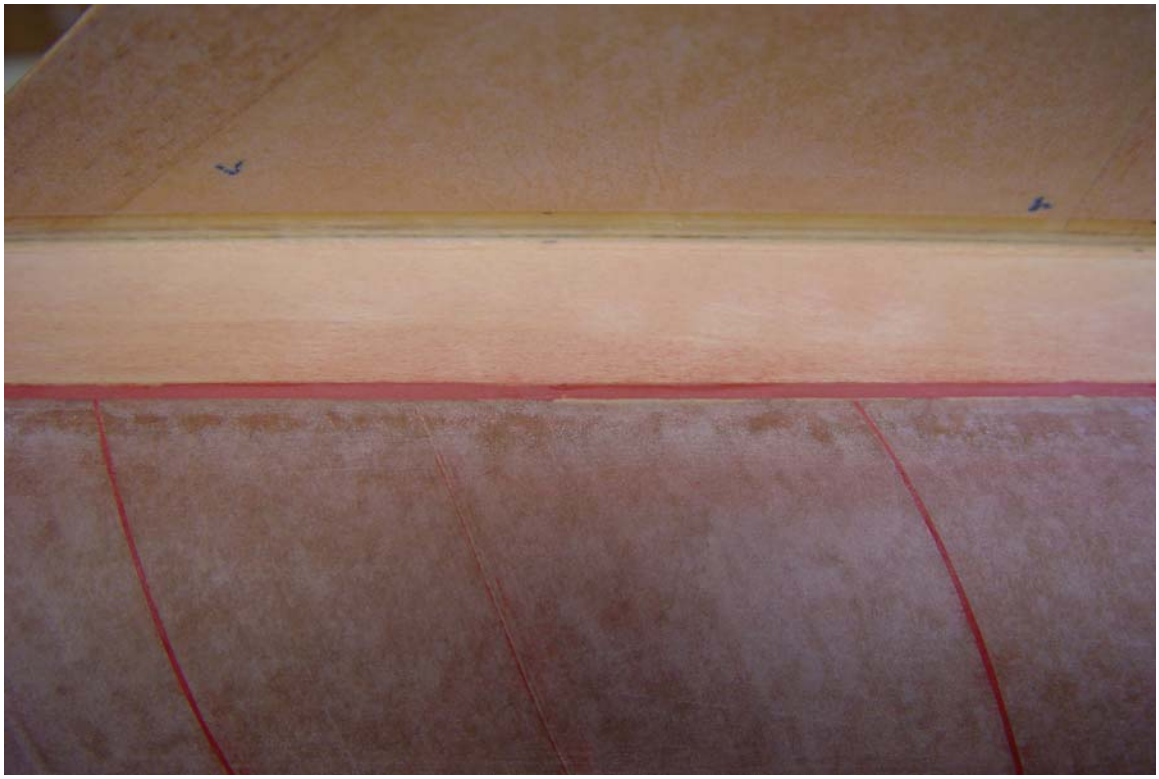

Photo 4: Saddle Seams Filled

The front and rear top surfaces of the saddle were covered with Silkspan and two coats of Nitrate dope; the surfaces were then filled with Sig Sanding Sealer and sanded smooth with #320 grit. The side basswood pieces were filled with one coat of Sanding Sealer and then sanded smooth.

Launch Lug Assembly:

The Launch Lug assembly was installed with epoxy as per the kit instructions. The joint between the base of the standoff and the airframe was filled with a 1/16" epoxy fillet. The joint between the aluminum launch lug and the standoff was filleted with JB Weld, as shown in Photo 5.

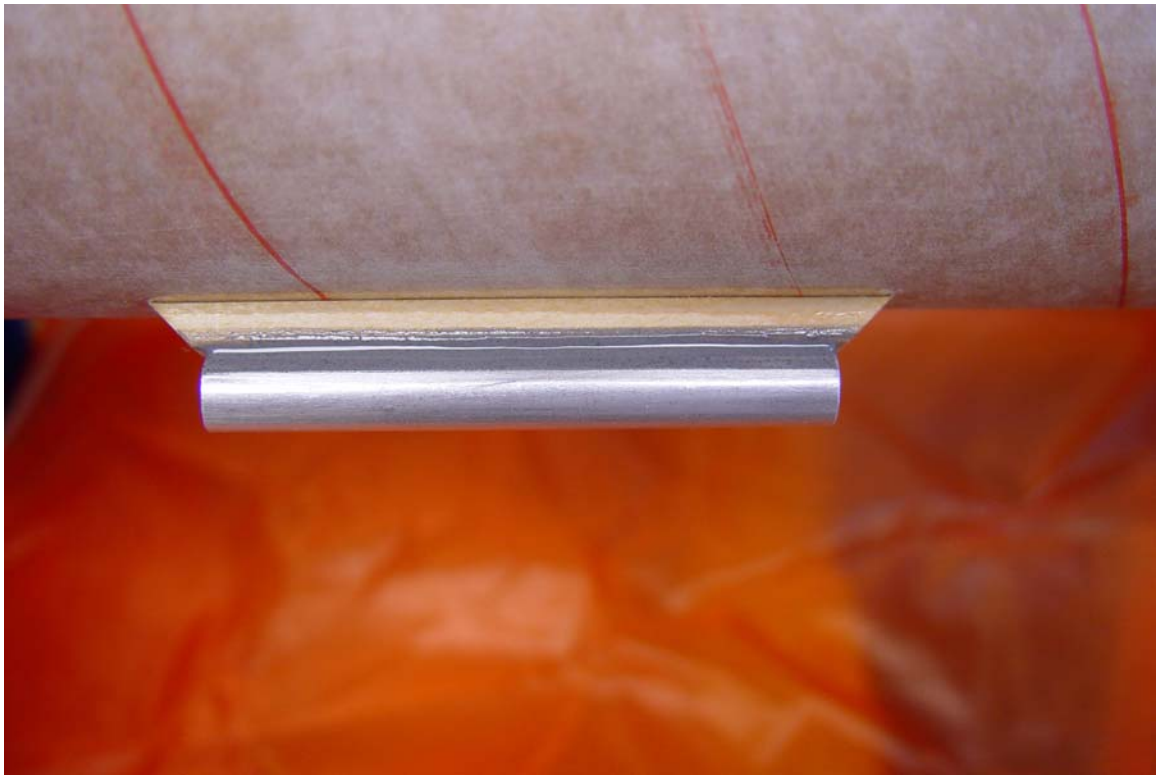

Photo 5: Launch Lug Fillets

This concludes the surface preparation for priming; the next report will deal with painting.

John Brohm
June 21, 2008

TMRK Kit Review

Kit No.: 9808	**Reviewer: John Brohm**
Model: 1:20 OSC Pegasus	
Report #8	**Date: November 27, 2008**

Priming the Airframe:

The surfaces of the completed model were wiped clean of dust and debris, and the model was then mounted on the paint stand. Models are normally rear-mounted on this stand via the engine mount, but in this case, since the model is a 3-engine cluster, the stand was fitted with a centering assembly that would permit mounting the model from the front end.

The model was given two coats of Krylon Flat White (Krylon #1502) as the base primer; I prefer to use Krylon Flat White paint as opposed to an actual primer, as Krylon flat White cures within a few hours to a hard, smooth finish. It's the hardness that makes the difference in later finishing stages. There's absolutely nothing wrong with regular primers, and I use them when total compatibility between paint types is imperative, but the preference remains with Krylon Flat White as the primer of choice.

The first two coats were applied with just the regular recommended drying time in between coats. The reason for two initial coats is that one coat is not enough to protect the underlying airframe surface from the wet-sanding process, wet-sanding being my finishing method of choice.

Once the second paint coat was dry, Squadron White Putty was applied to fill in any remaining divots, nicks, and crannies. There will be some, of course, as a complex model such as this seems to attract bangs and dings just from being handled. Also, a drawback with the Bondo® Glazing & Spot Putty is the slight shrinkage that occurs when subjected to paint solvents – this often leaves a few seam sections that require further surface filling.

The Squadron putty is applied with a Tamiya putty spatula, it being just about perfect for the types of problems to be found in the surface at this point. Photo 1 illustrates the points:

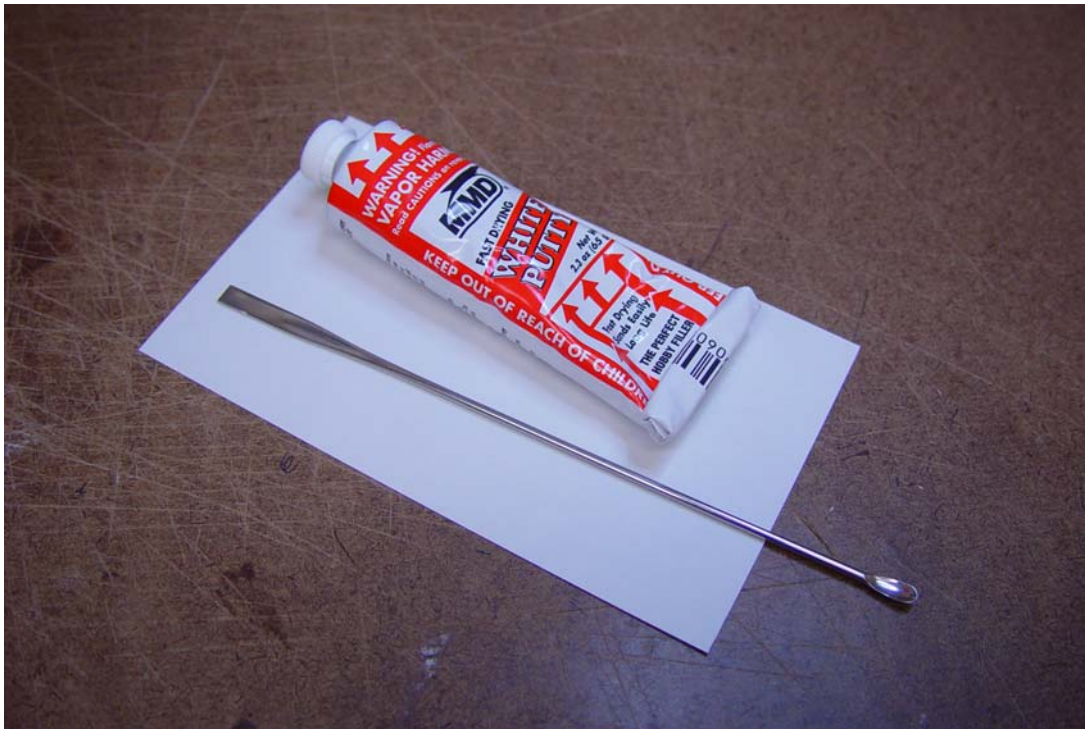

Photo 1: Squadron Putty and a Tamiya Spatula

Photo 2: Spot Filling with Squadron Putty

Once the putty had dried, the entire model was wet sanded with #400 W/D sandpaper. The model was then re-primed with another coat of Krylon Flat White and checked for any remaining surface defects. As the surface defects are iteratively eliminated, I find it helpful to "candle" the surfaces to find the smaller defects. Candling is a process where light (daylight or incandescent are the best sources) is shone obliquely upon the surface, and readily reveals surface imperfections. The putty, wet-sanding, and re-priming process was repeated until the model obtained a uniform surface finish.

Priming the Nose:

At the outset of construction, the nose had been filled with Sig Sanding Sealer and Butyrate dope. Even though multiple coats had been applied and most of the grain filled, there remained a number of deeper surface defects leftover from the nose turning process. These were filled with Bondo® Glazing & Spot Putty, as shown in Photo 3.

Photo 3: Filling the Nose

The process and materials described above to finish the airframe surface were then applied to the nose. After several iterations, the process resulted in a fully primed nose:

Photo 4: Spot Filling the Nose

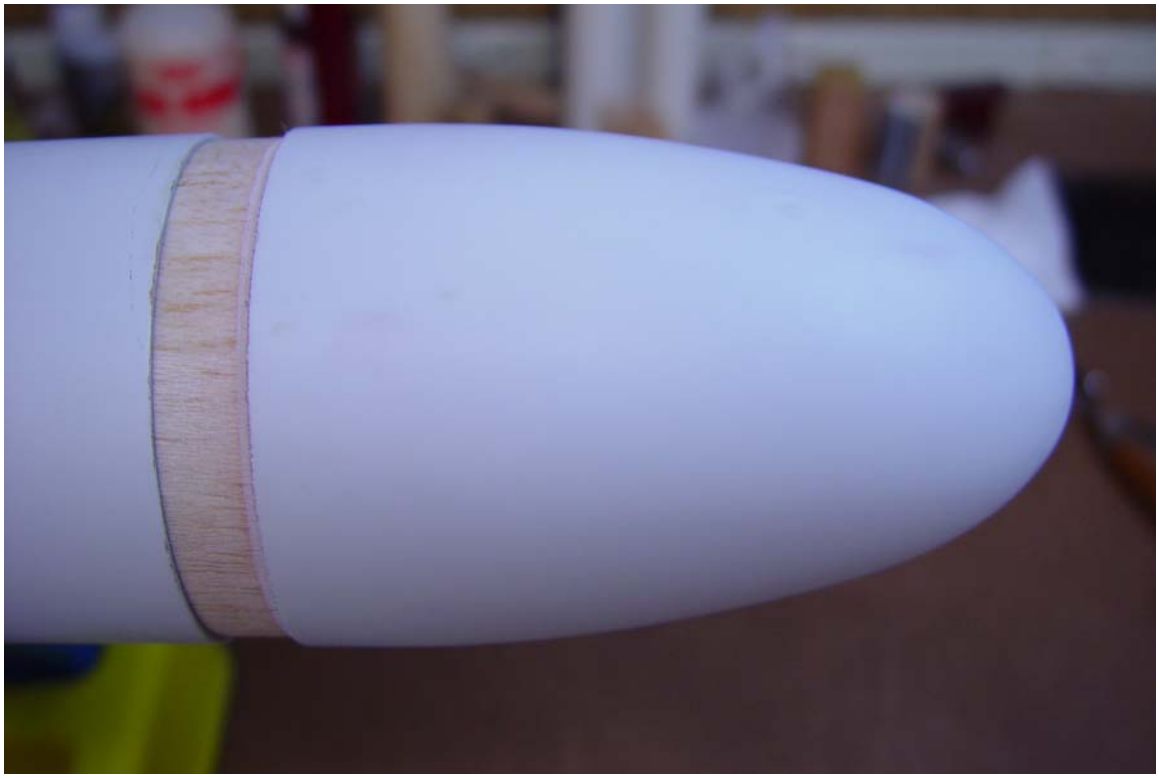

Photo 5: The Fully Primed Nose

Painting the Airframe:

After the final wipe down, the model was mounted on the paint stand, and shot with Rustoleum Gloss White (#7792). After the first coat, the model began to take on a finished look:

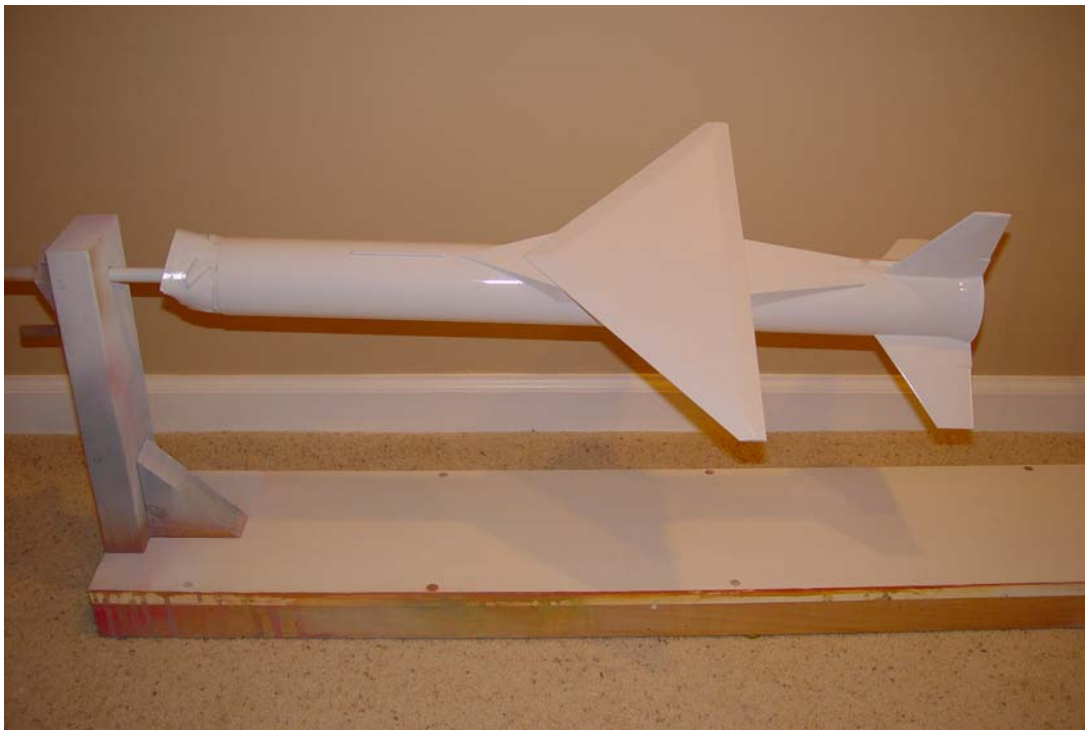

Photo 6: First Gloss Coat, Port Side

Photo 7: First gloss Coat, Aft View

The model will be wet-sanded with #600 W/D between further paint coats. This result will be shown in the next Build Report.

Painting the Nose Cone:

The same process was used to paint the nose – finished result as follows:

Photo 8: The Finished Nose

With this, painting is almost complete. The next build report will highlight the final painting results.

John Brohm
November 27, 2008

TMRK Kit Review

Kit No.: 9808	**Reviewer: John Brohm**
Model: 1:20 OSC Pegasus	
Report #9	**Date: January 25, 2009**

Finishing the Paint:

Once the first coat of paint had cured, the model was wet-sanded with #600, wiped down, and re-sprayed. This process was applied a third time, resulting in a deep gloss finish. The following photos illustrate the final paint finish; the concluding step to this build will be the decals and the clear coat, to be covered in Report #10.

John Brohm
January 25, 2009

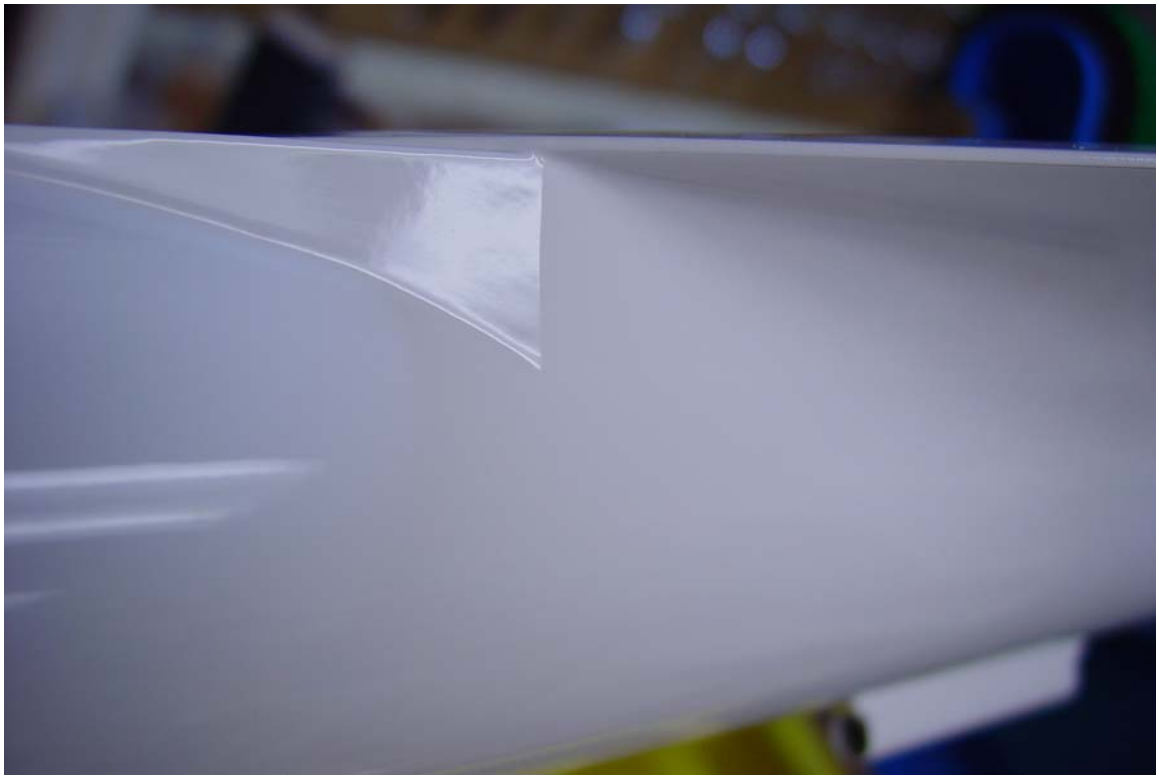

Photo 1: Front Saddle Panel, Facing Aft

Photo 2: Saddle Front, Top View

Photo 3: Port Side, Under View Facing Aft

Photo 4: Aft End, Facing Forward

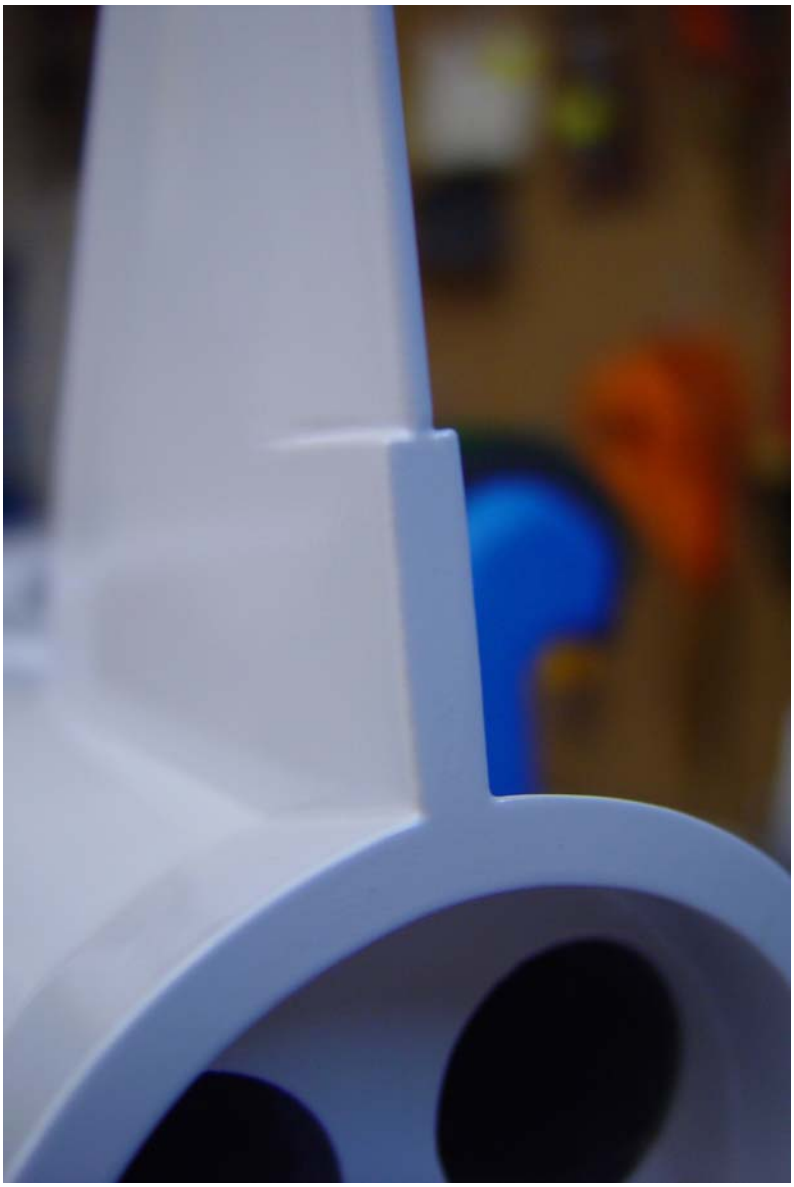

Photo 5: Dorsal Fin

Photo 6: Rear Details, Top View

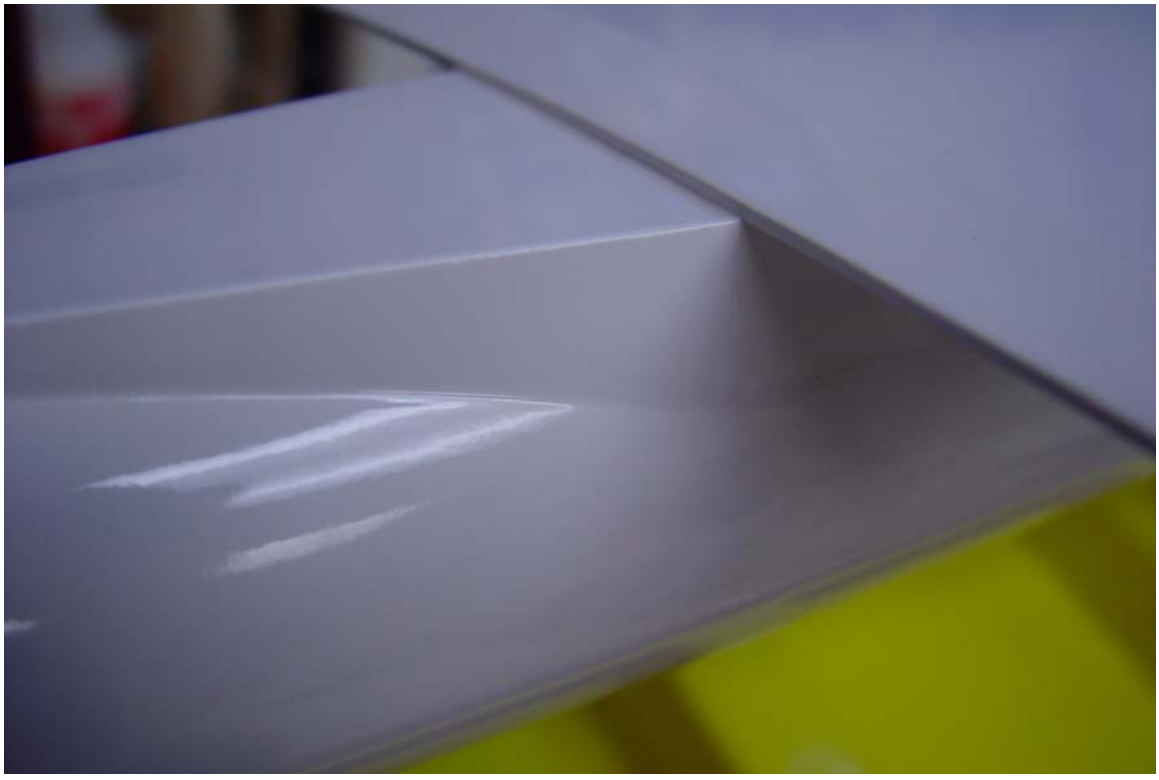

Photo 7: Starboard Side, Rear Saddle, Facing Forward

Photo 8: Starboard Side, Rear Saddle, Facing Aft

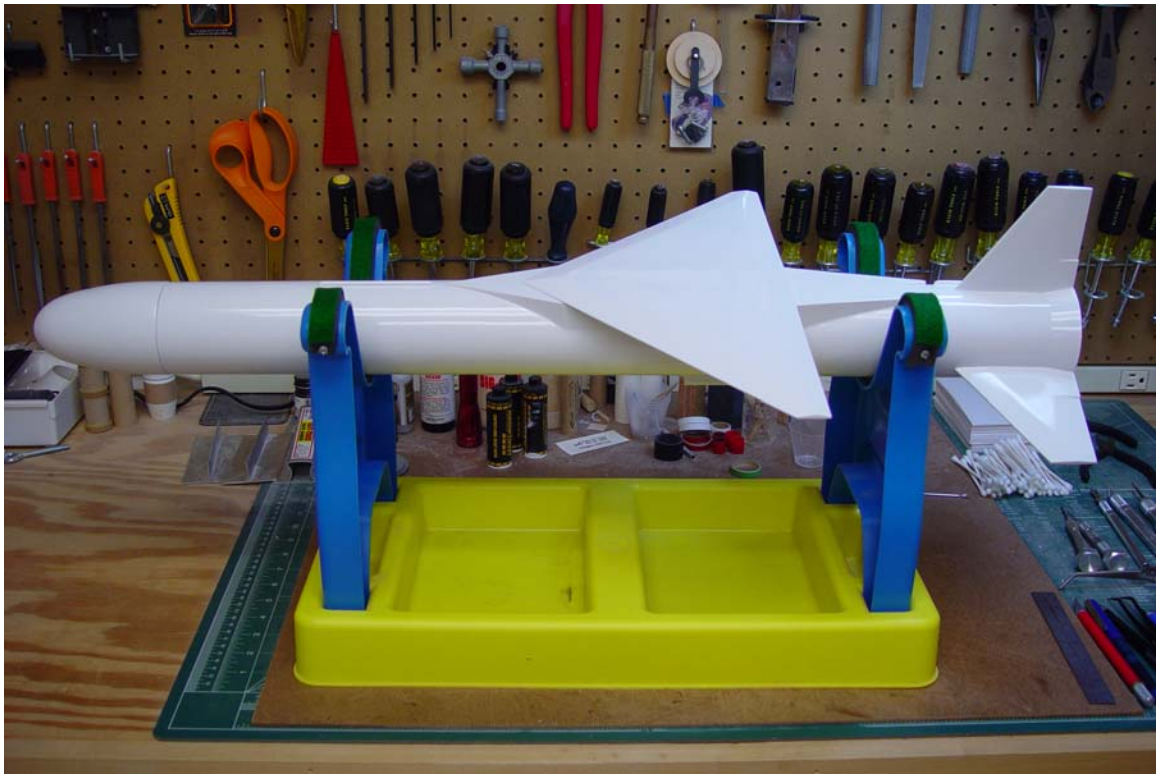

Photo 9: Ready For Decals

TMRK Kit Review

Kit No.: 9808	**Reviewer: John Brohm**
Model: 1:20 OSC Pegasus	
Report #10	**Date: February 5, 2009**

Some Final Painting:

Just before moving on to the decals, the decision was taken to spray the nozzle area silver in an effort to add a little more contrast to the model.

The nozzle area was masked with Tamiya 18 mm masking tape and then the interior masking was carefully trimmed away with an Xacto knife and a fresh #11 blade. The taped edges were then burnished with a fingernail to ensure a tight masked edge. In this regard, Tamiya masking tape performs exceptionally well. Photos 1 and 2 show the nozzle masking process.

Photo 1: Masking the Nozzle

Photo 2: Interior Mask Removed; Engine Mounts Plugged

The rest of the model was masked with plastic grocery bags to protect the model from overspray and spray dust. Krylon "Short Cuts" Chrome (SCS-032) was used to spray the nozzle area; Photo 3 shows the final result.

Photo 3: The Finished Nozzle

Decals:

The decal sheet was printed by Tango Papa Decals, and for the most part the sheet offers a set of reasonably crisp waterslide transfers representing the key markings of the Pegasus as displayed in its roll out debut on August 10, 1989 (ref: Pegasus User's Guide). The detail resolution in the US flags and the NASA Meatball insignia was found to be a little mushy as compared to some after-market decals found in the spare decal drawer; Photo 4 highlights the difference.

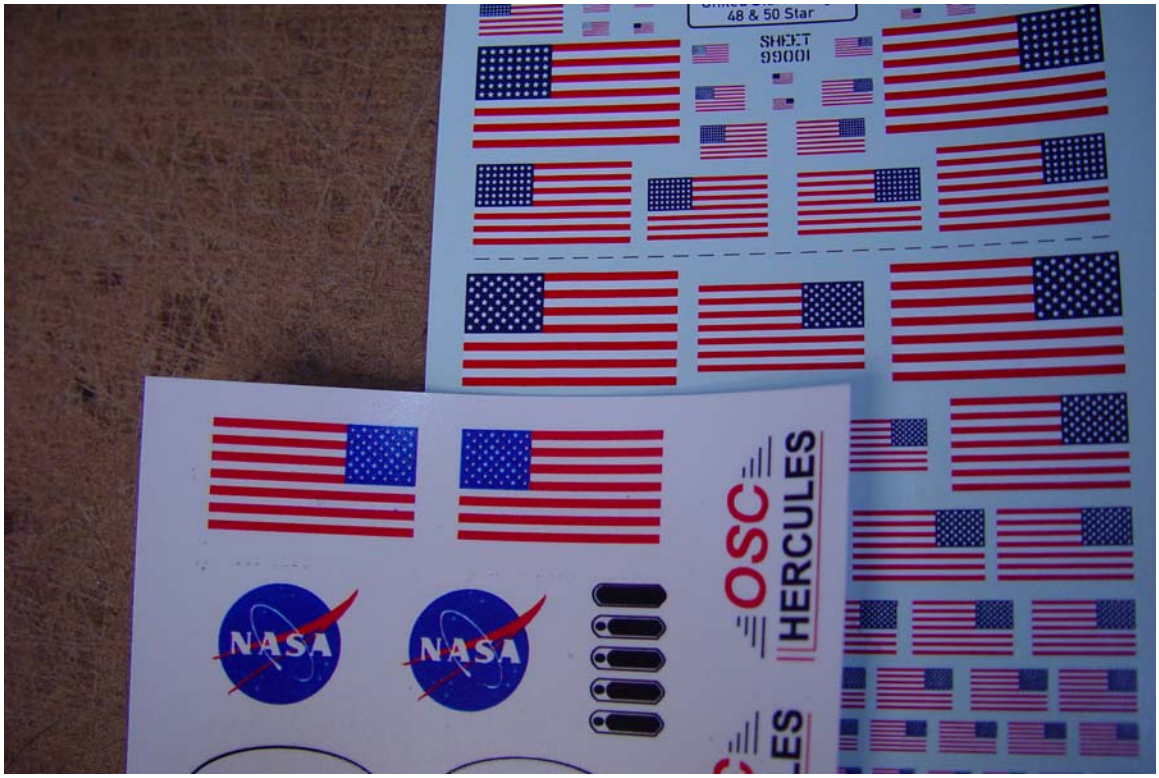

Photo 4: Kit Decals to the Left; After-Market Flag Decals to the Right

Step 17-3 illustrates the decal layout for the model. The side airframe decals are to be centered on the model's longitudinal axis, and to establish this reference a strip of paper was cut, wrapped around the airframe, and the overlap marked. Next, the strip was folded into quarters relative to the overlap mark, and then wrapped again around the model, this time with the overlap mark aligned with the top front conduit. Viewed from the starboard side, the first fold mark would then sit exactly 90° from top center, thereby establishing the starboard center reference for decal placement. This was lightly marked with a pencil, and then a light line was drawn along the airframe side using an aluminum angle. The marking process was repeated for the port side. Photo 5 shows the set up.

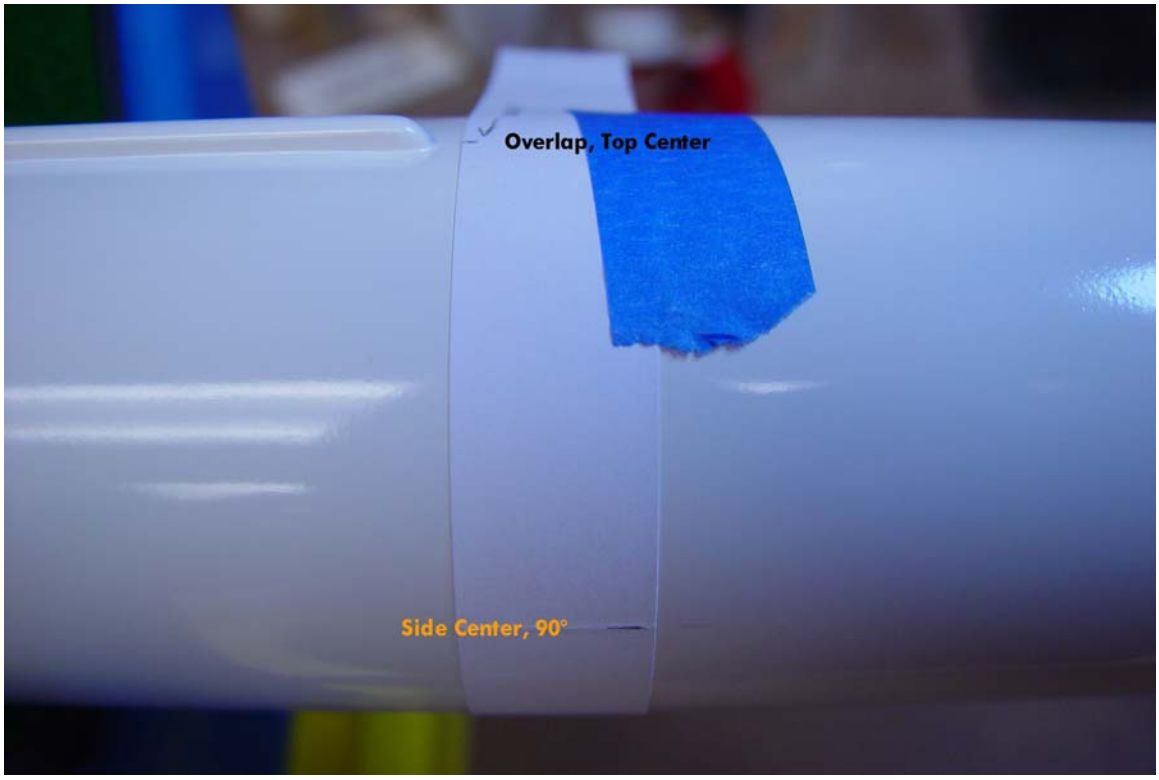

Photo 5: Decal Reference Line Setup

Vertical centering lines were then drawn per the location guide provided in Step 17-3. To prevent the reference lines from showing through the clear portion of the decal film, the lines in the relevant areas were erased with a white synthetic drafting eraser before laying the decal down. The lines were erased after a masking tape reference was substituted in the affected area. The following photos show the process.

Photo 6: Masking Tape Reference

Photo 7: Decal Laid in Place

Photo 8: Masking Tape Removed

Step 17-3 provides an orientation indication for the US Flag on the dorsal fin, however there is no vertical dimension specified for the gap between the top edge of the fin and the top of the Flag. In this case, I chose to set this vertical gap to 3/8". I also opted for the after-market flag decal rather than the kit decal, as the following photo shows.

Photo 9: After-Market Flag Decal

Photo 10: Aligning the Wing Mount Decals

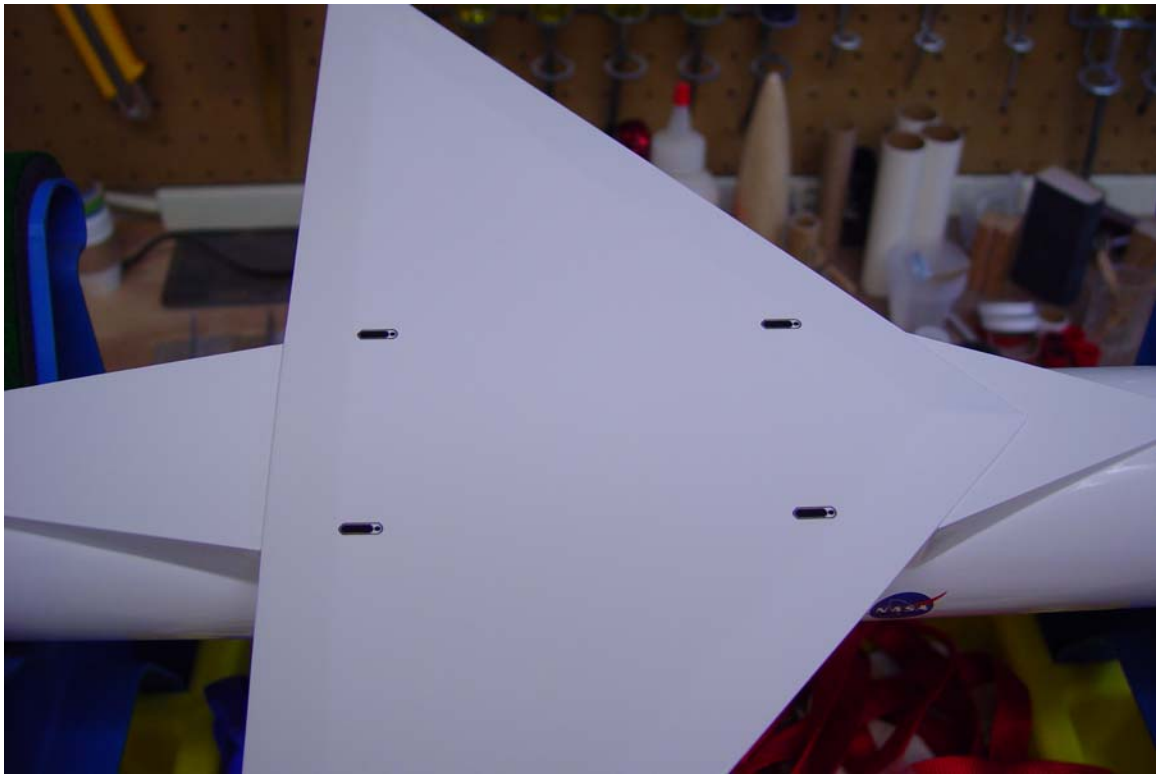

Photo 11: Wing Mount Decals Complete

As the final look for this model relies heavily on its markings, the decals deserve a few remarks. As mentioned earlier, the print quality is reasonably sharp and the color density very good, the exceptions being the US Flag and the NASA insignia. The "U.S. AIR FORCE" font looks strikingly like a bold Arial font, it therefore being a somewhat dubious choice for the model (although I must acknowledge that I haven't checked the references to verify the correct font).

From a handling perspective, the decal film is robust, there being little risk of breakage or tearing while being handled wet. The paper backing is a little thick, and I found that the decals required immersion for a good 60 seconds or more before the film would slide; there's nothing wrong with this so long as the modeler is patient. More importantly, decal mobility was excellent while wet, allowing for easy placement and adjustment. Because the decal film finish is on the matte side, a gloss clear coat will be necessary to visually suppress the decal film in the final finish.

In summary, the handling characteristics of the decal film are excellent, and suitable for a broad spectrum of modelers; however, the print quality and resolution of the US Flag and NASA insignia is not as good as that offered by some after-market providers, and the modeler may wish to consider making substitutions for these. Overall, I rank the decals 4 out of 5.

Chrome Vinyl Strip:

A strip of Tamiya masking tape was used as a guide to lay the chrome vinyl body strip. The rear edge of the tape was set 7-3/4" from the seam between the airframe and the nose cone; this distance centers the body strip in the space between the saddle front and the top conduit. Photo 12 shows the tape in place.

Photo 12: Masking Tape Guide in Place

The vinyl strip was then carefully applied, butting it up along the rear edge of the tape. Photo 13 shows the final result.

Photo 13: Body Strip in Place

Clear Coat:

Rustoleum Crystal Clear Enamel (#7701) was used for the clear coat. Before application, the decals were allowed to dry overnight, and the model was carefully wiped down with a damp cloth. While waiting for the model to air-dry, the clear coat was tested in combination with the decals as shown in Photo 14. No ink bleeding, crinkling, shriveling, wrinkling, or any other noticeable compatibility defect was observed; the decals appeared to be completely compatible with the Rustoleum Clear Coat. What *was* noticed was the decal sheet was printed with an incorrect kit number – it should be kit #9808, not #9805.

Photo 14: Decal/Clear Coat Test

Once the model had air-dried from the wipe down, it was mounted on the paint stand and sprayed. After an even clear coat had been applied, the model was allowed to cure. Photo 15 shows the finished model.

Photo 15: The Pegasus Complete

The shock cord was installed next, completing the assembly. The parachute was assembled as per instruction step 16-5. No difficulties were encountered in the completion and final preparation of the model.

This completes the construction of the TMRK 1:20 OSC Pegasus, and I'd like to conclude by thanking TMRK for graciously permitting me to participate in this Beta Build. I found the entire build to be a very satisfying experience, this being largely due to the quality of the kit, the very thorough and well thought out instructions, and the challenge that comes from a subject of this complexity. I'll be eagerly looking forward to the next scale release from TMRK.

John Brohm
February 5, 2009