MIKE ASHEY PUBLISHING

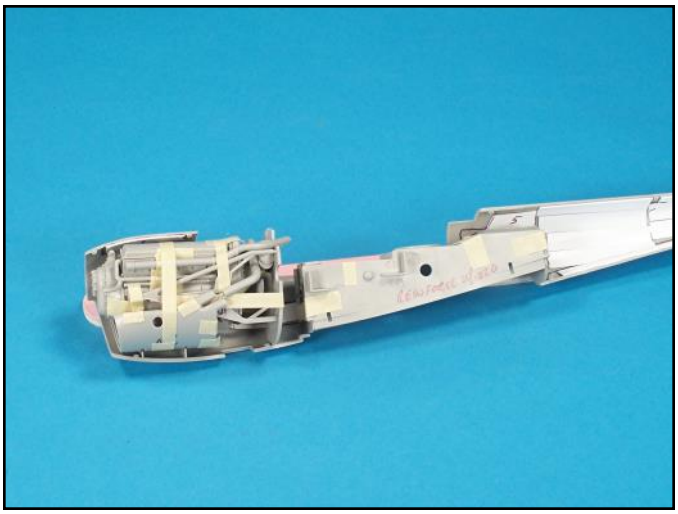
COMPREHENSIVE SERIES SCALE MODEL AIRCRAFT MANUAL
NUMBER 4

BUILDING AND DETAILING THE TRUMPETER 1/32 SCALE P-38 LIGHTNING

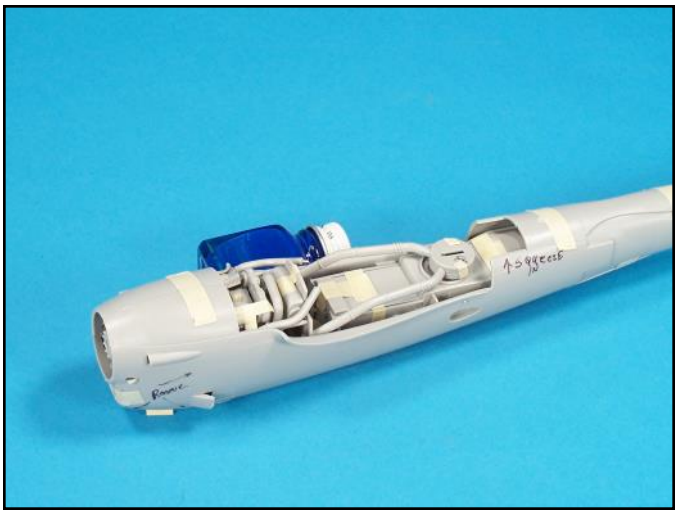
The Trumpeter 1/32 scale P-38 L-5-LO is a great kit with excellent surface detail. The wheel wells and landing gear are well detailed as well as the cockpit. The forward section of the fuselage has a great deal of interior detail for the guns, but the inside area is needed for lead weight to make the aircraft sit correctly on its landing gear so the detail was not added. The "L" series had rocket brackets and wing landing lights, which were removed for this build to backdate the aircraft to a "J" series. The kit has beautifully detailed engines and I removed some nacelle panels on the outside areas of the booms to display them in addition to not installing the polished landing gear mirrors. I used the Eduard cockpit photoetch detail set and their pre-painted seat belts to add a high level of realism and detail to the cockpit. I replaced the guns with plastic rods and the kits propellers were replaced with ones from a Revell kit, which had a better shape. The kit's plastic is rather thin for a 1/32 scale model so I added interior reinforcement to prevent flexing, which can crack seams. The separate control surfaces and flaps are a nice touch, although some of the parts need some tweaking to improve their fit. The kit was painted with Testors enamels and minimal weathering was done with drybrushing techniques and a badger 200 detail airbrush.

The initial test fit of the kit showed that there were no alignment issues between the booms, which is a typical problem with many P-38 kits. Notes were made on the kit's instruction sheet where voids and fit issues were identified.

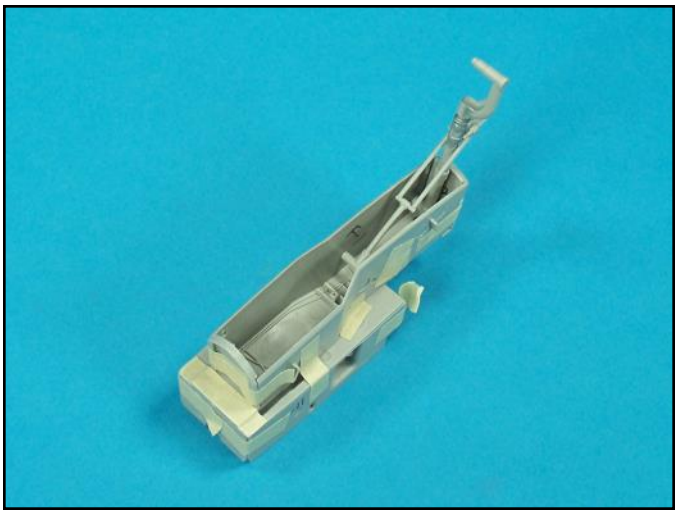
There was considerable flexing between the center fuselage and the engine booms due to the thin plastic. I like to add notes to the surface of the model to identify where reinforcement is needed.



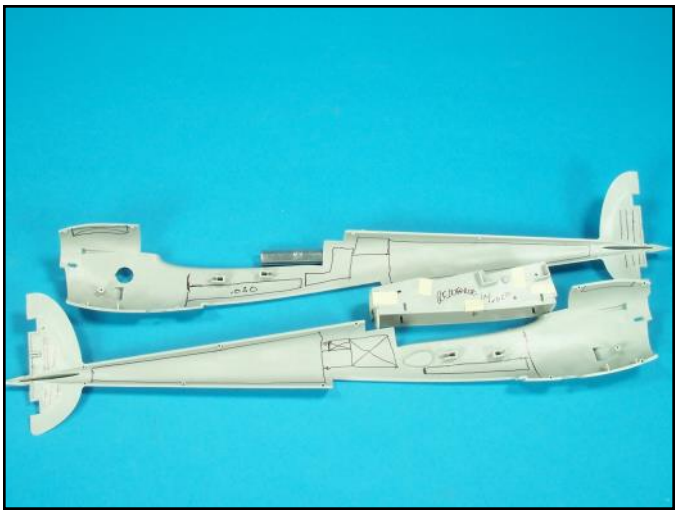
The engines are well detailed and the fit is excellent. Test fitting the assembled engines and landing gear bays inside the boom sides is crucial to preventing major alterations during construction.



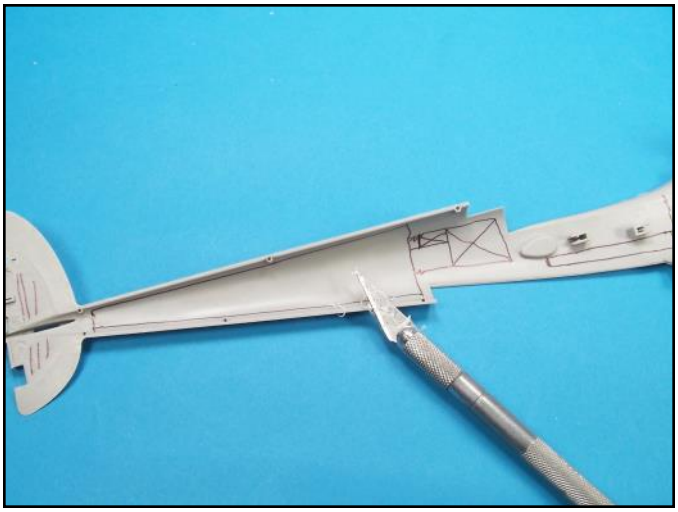
With the booms taped together, all the interior parts fit together without any alterations to the booms. Here again I made notes on the surfaces of the plastic.



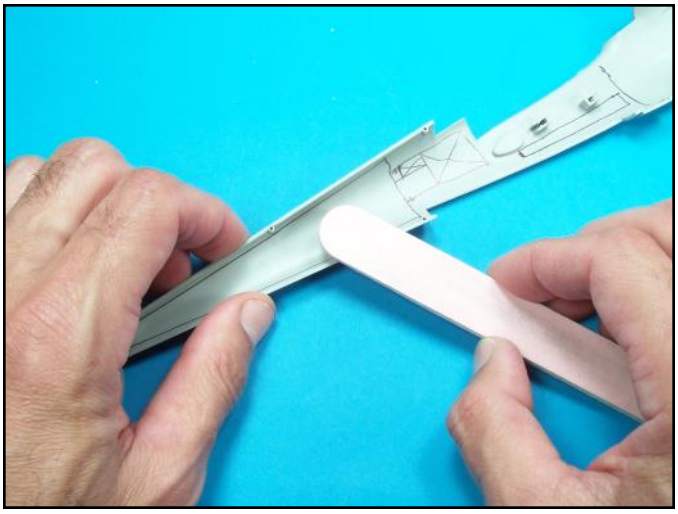
The nose landing gear parts should also be checked for proper fit.



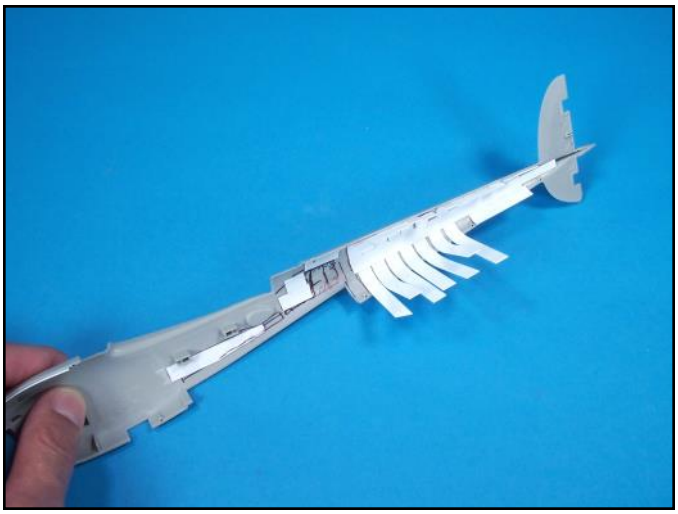
The interior areas of the booms were marked for additional plastic reinforcement as well as the landing gear bays.



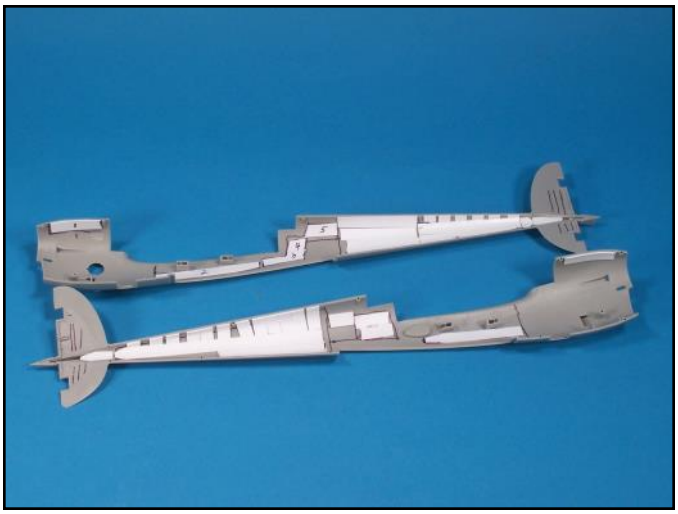
All the gluing surfaces were checked to ensure they were flat. Tiny bumps populate some of the gluing surfaces. Careful light scraping with a number 11 X-Acto blade will ensure the surfaces are flat.



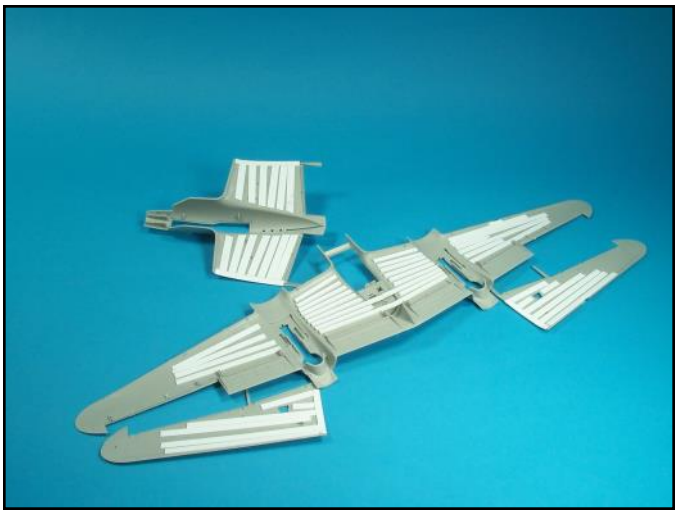
Some of the tiny bumps are best flattened out with a sanding stick before the surfaces are scraped flat.



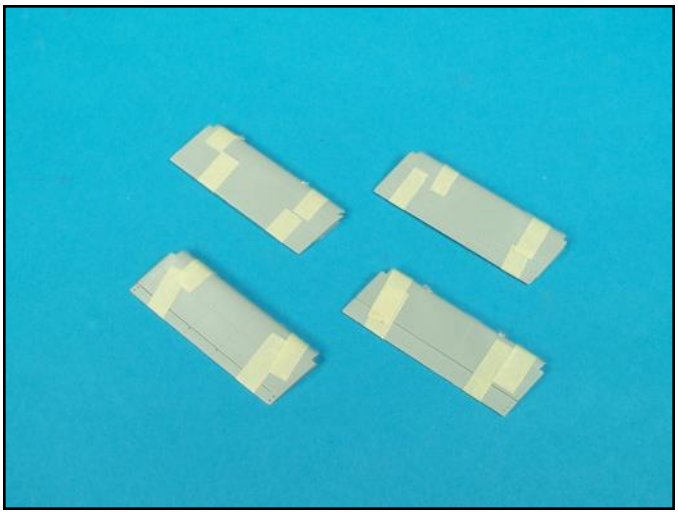
Strips and sections of .030 inch thick plastic were laminated to the inside areas of each boom half. Super glue works great for these types of lamination applications.



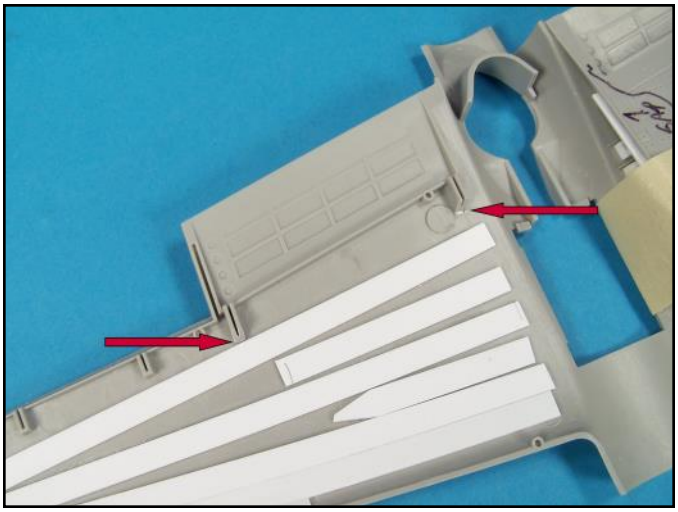
Note that the edges of the laminations on the aft sections of the booms have increased the gluing surface between the part halves, which will also add strength to these assemblies.



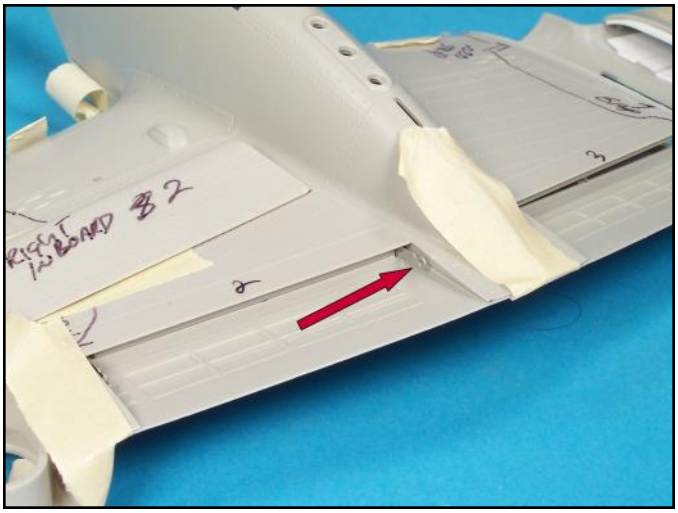
The wings received various sizes of plastic to strengthen them. The thicknesses of these strips ranged from .030 to .060 inches.



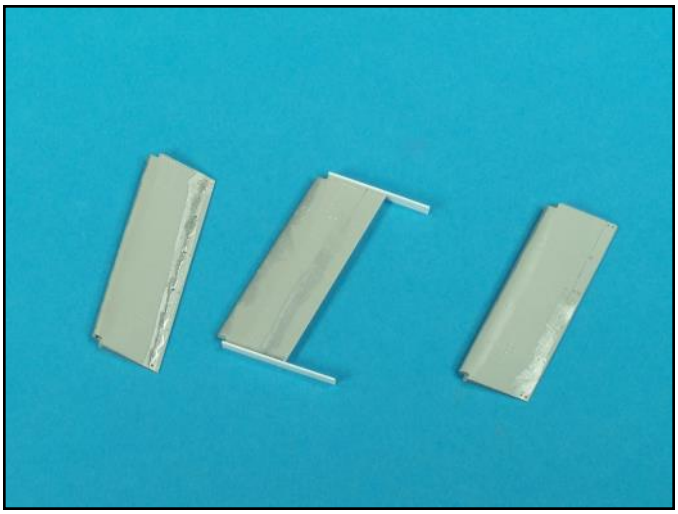
The flap assemblies have voids that will need to be filled with super glue and then sanded smooth.



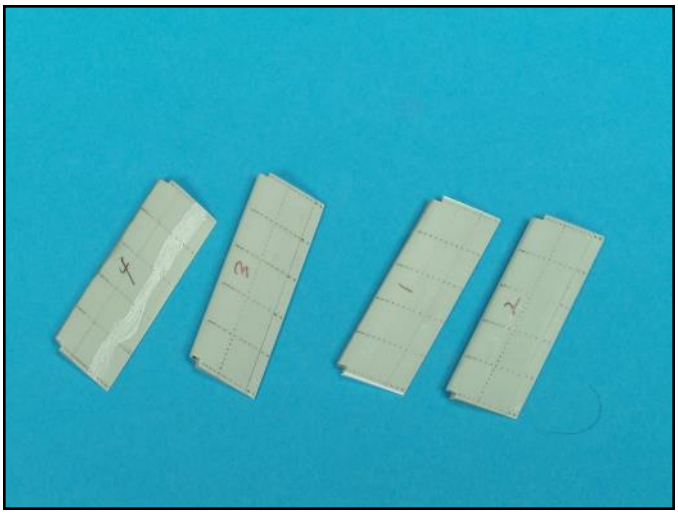
The flaps are held in place with metal strips, which are glued to the edges of the flaps. The flap assemblies fit into these interior grooves. The ends of the grooves were cut off so that the metal could slide inside the wings.



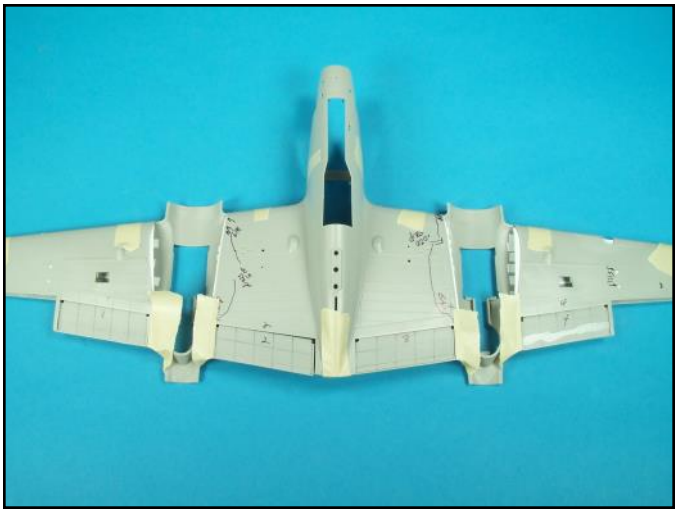
The metal strips were test fitted to be sure that nothing interfered with their positioning.



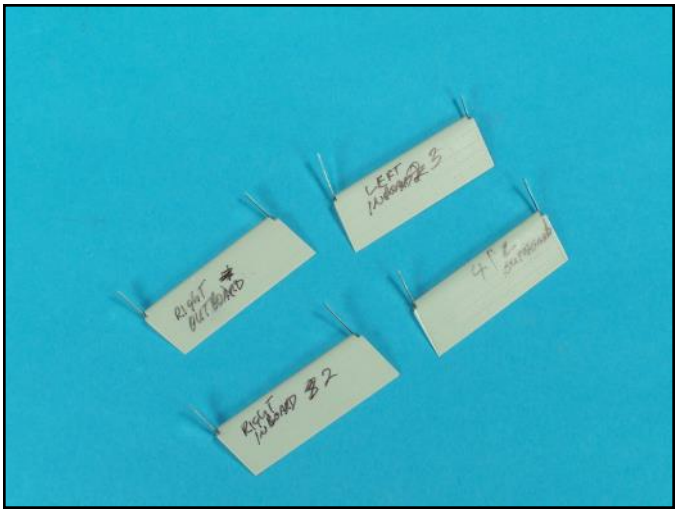
One of the flaps was slightly short in length so I added .020 inch thick plastic strips on both sides.



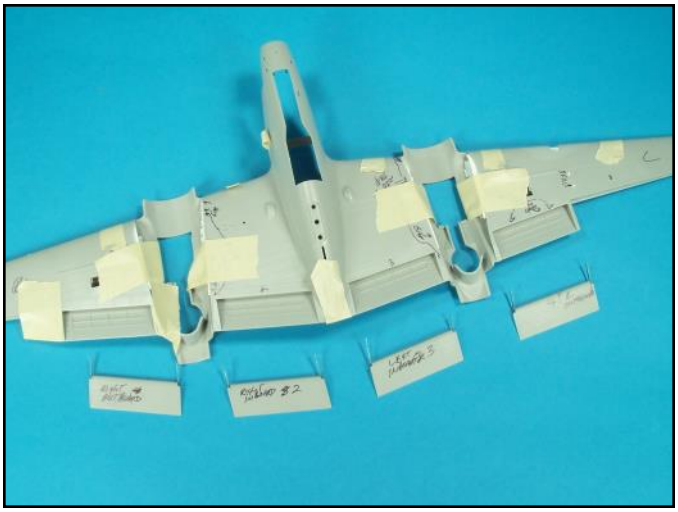
The flaps have been glued together and the rivet surface detail has been restored. Note the pencil lines to guide the surface restoration effort.



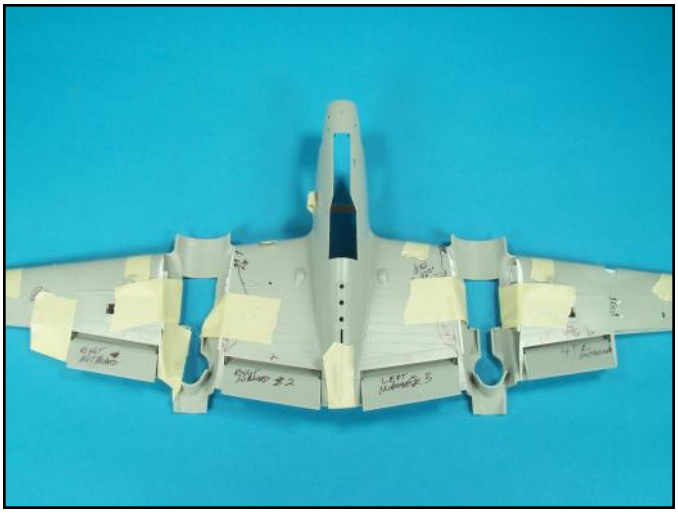
The flaps get another fit check and now its time to glue the metal strips onto the flaps.



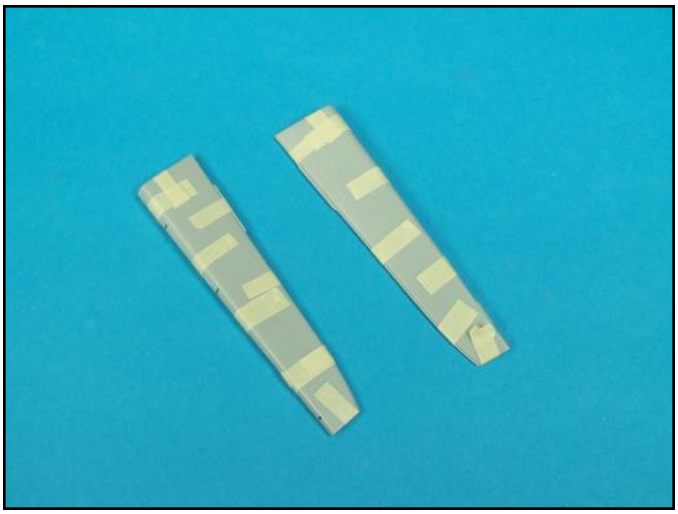
The metal strips on one flap were glued into place first. The remaining metal strips were then glued into place one at a time duplicating the angle of the metal strips on the first flap.



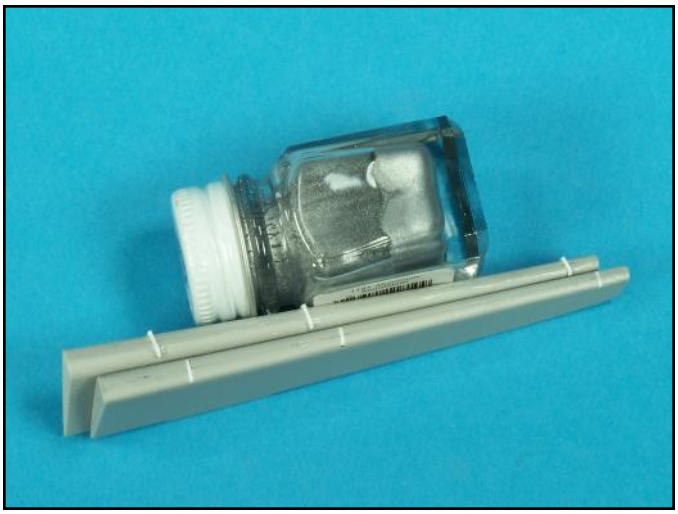
The flaps were marked prior to a final test fit.



The final test fit demonstrated that the angles of the metal strips were perfect on each flap and that they slid easily into the inside areas of the wing.



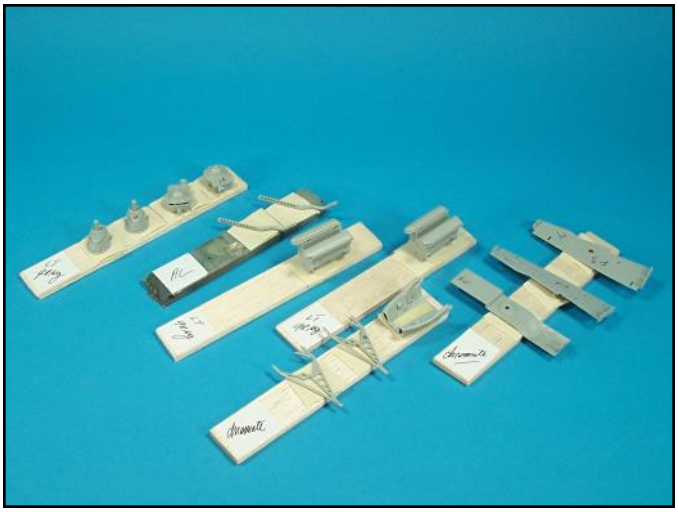
Tiny beads of super glue were applied along the seam lines of the ailerons between the tape. After the glue dried, the tape was removed and additional glue was applied. The seams were then carefully scraped and sanded smooth.



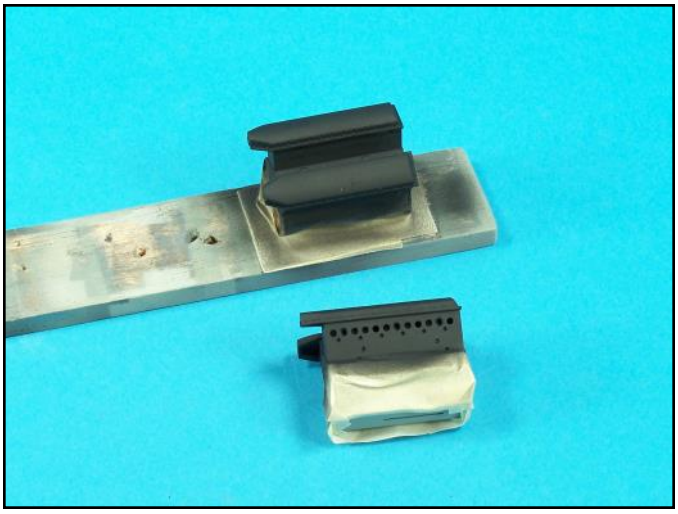
The inside areas of the ailerons had grooves for hinges. These were filled with plastic strips.

The rudders and outer elevator wings were also assembled just like the ailerons.

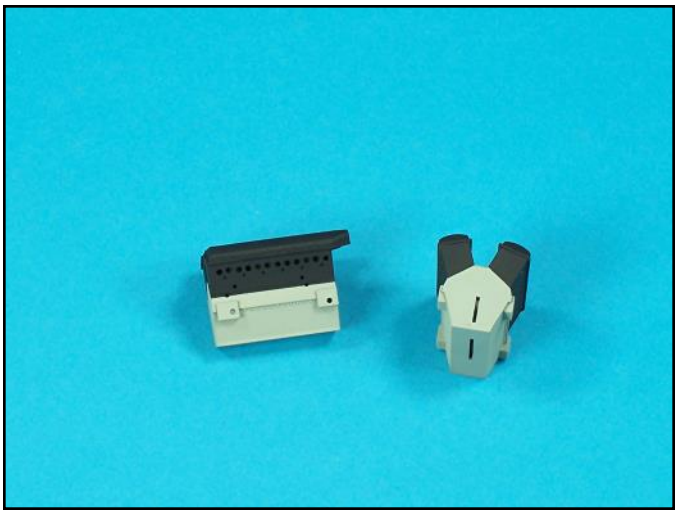
The engines are forward of the center of gravity of the model so I started adding weight using their interiors areas. The copper bee bees were glued into place with Elmers white glue.



With the engine sub assemblies complete its now time to start priming and painting.



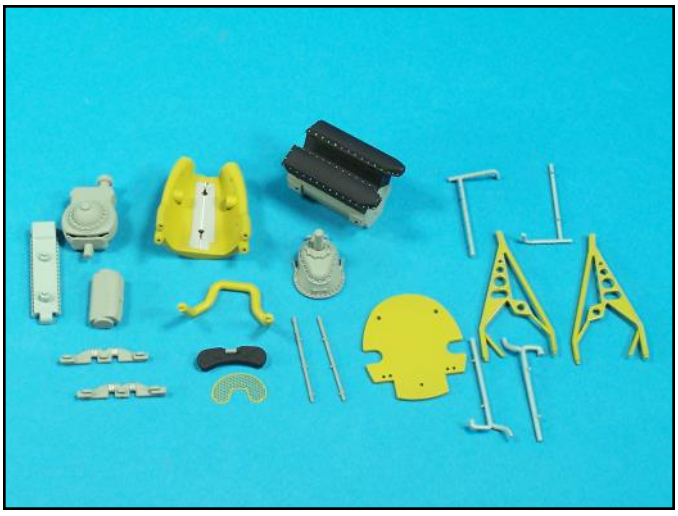
The engine blocks were airbrushed light sea gray and then the lower areas were masked off. The upper block areas were airbrushed flat black with a few drops of flat white added to lighten up the color.



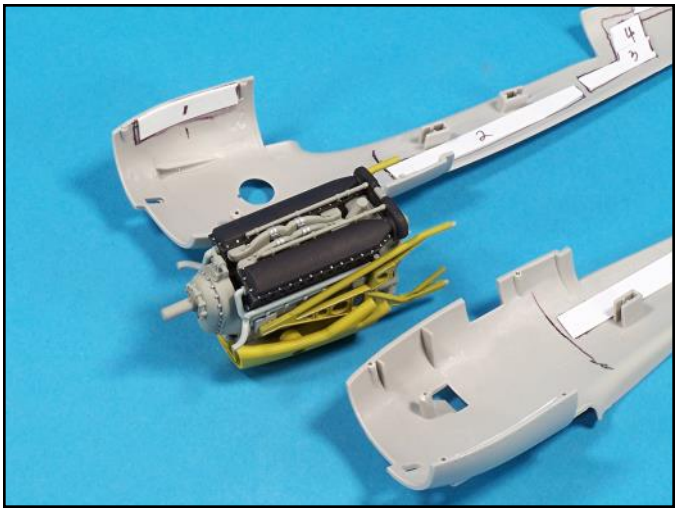
Note the sharp demarcation lines between the colors. Careful masking will always yield excellent results.

The engine saddles/air ducts needed extra plastic strips to close up the voids. The thicknesses ranged from .010 to .030 inches.

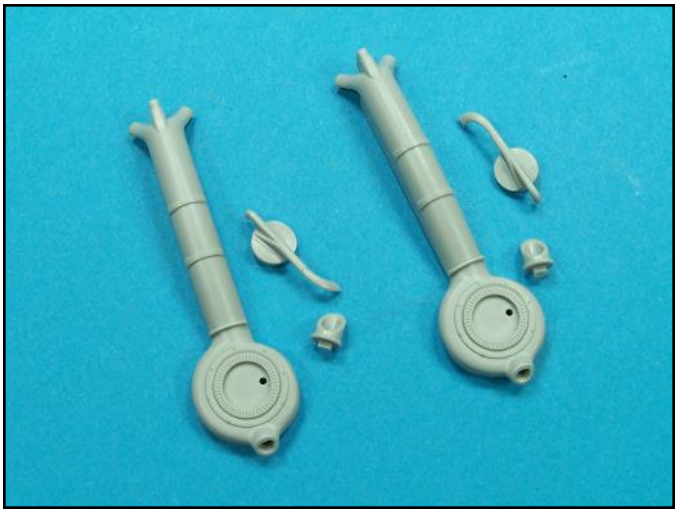
With the engine saddles completed, they need to get a final fit check prior to painting.



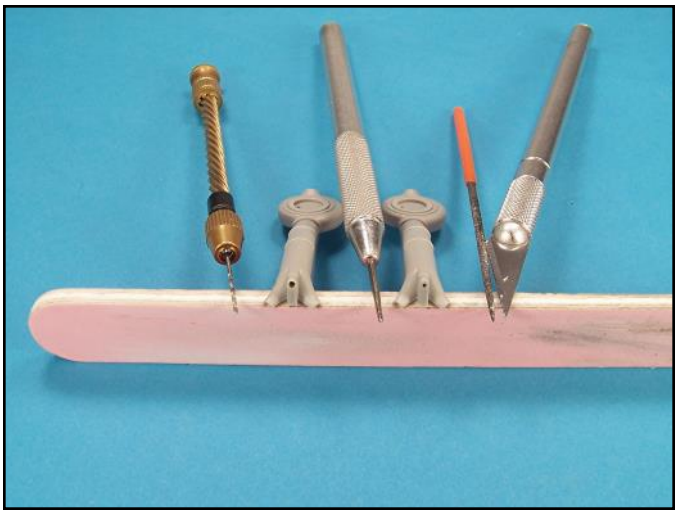
All of the interior parts for the engines have been painted and now its time to assembly them. Note the silver highlights on the engine block bolts.



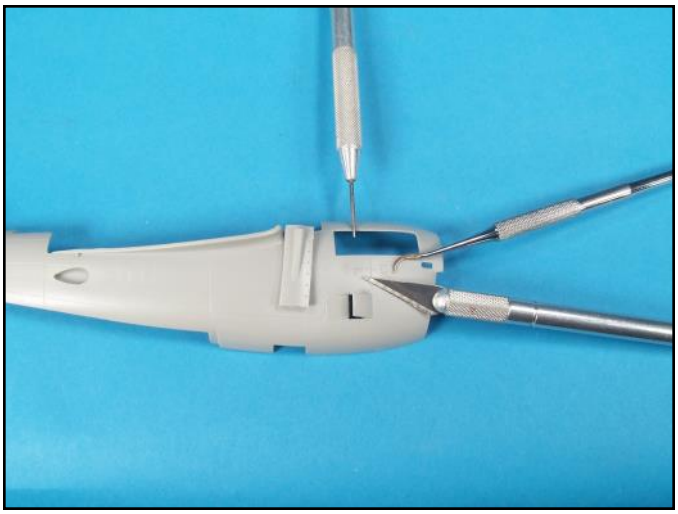
With the engines assembled one final fit check was done to ensure they fit tightly inside the booms.



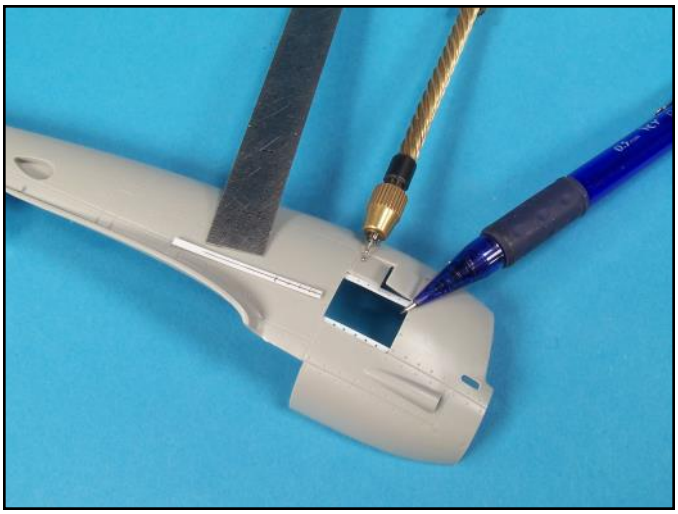
The engine supercharger parts were carefully cleaned up and now its time to make some minor modifications.



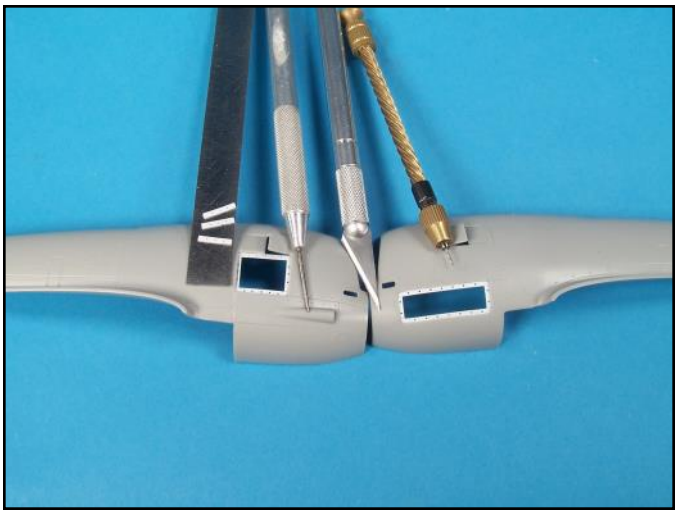
The air inlet ports on the superchargers were carefully drilled out.



To display some of the engine on each boom, I carefully cut out an access panel on each side of the outside booms. I then thinned the plastic around the cut out areas by scrapping the surface with a number 11 X-Acto blade.

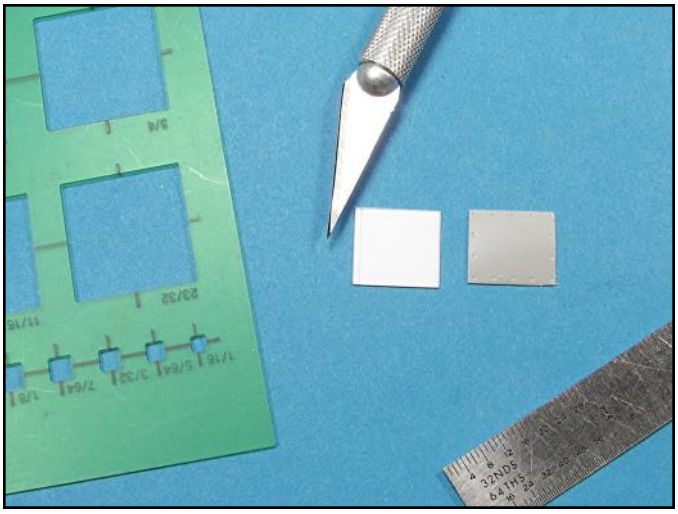


Interior framing for the access panel quick release fasteners was made from .015 inch thick strips. The holes were measured, marked and then drilled out. I also cleaned up and thinned the already opened vent flaps.

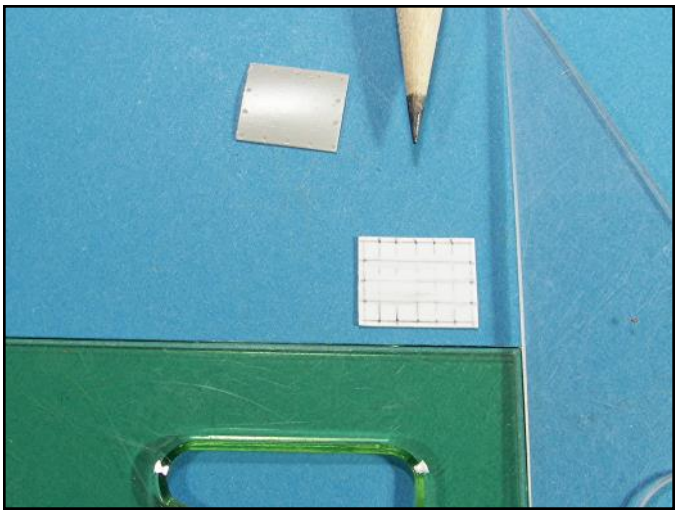


With the framing complete its time to clean up the removed panels.

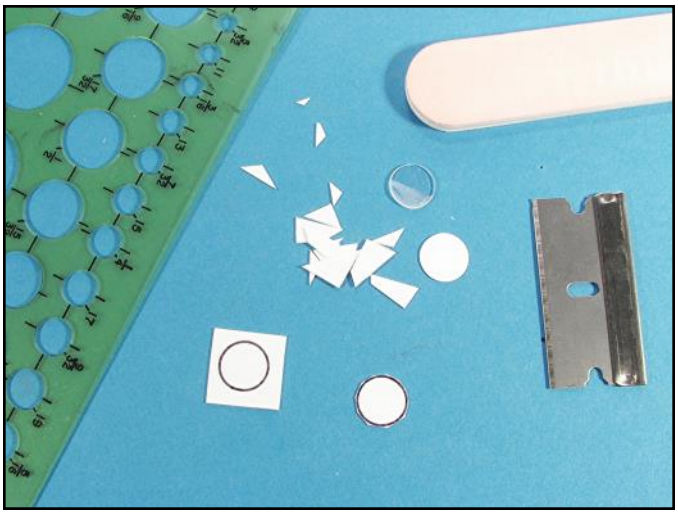
The air scoop panel was thinned out by running it across a wood dowel wrapper with sandpaper.



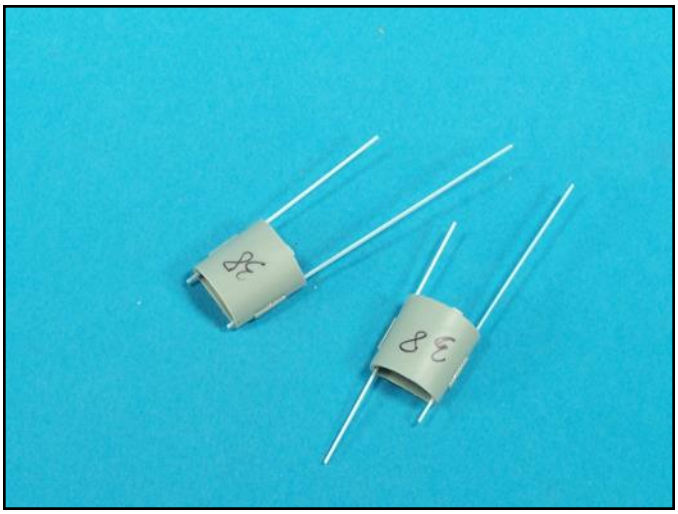
The slightly curved panel was replaced with a piece of .015 inch thick plastic cut to the proper dimensions.



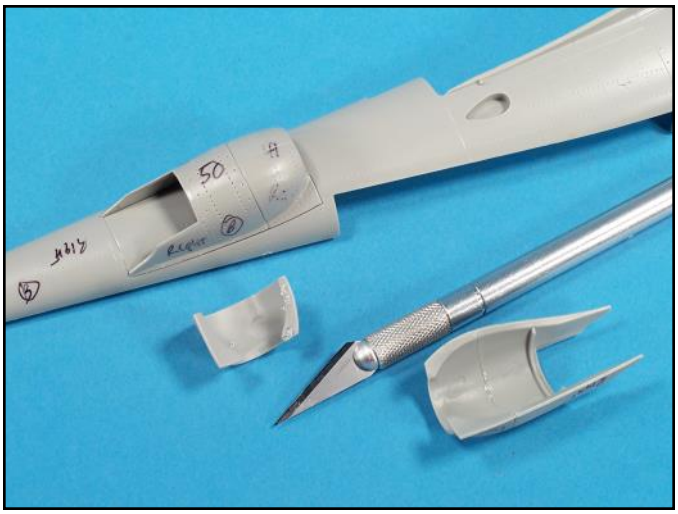
The quick release fastener hole locations were carefully measured and drilled out. The plastic was then given a slight bend.



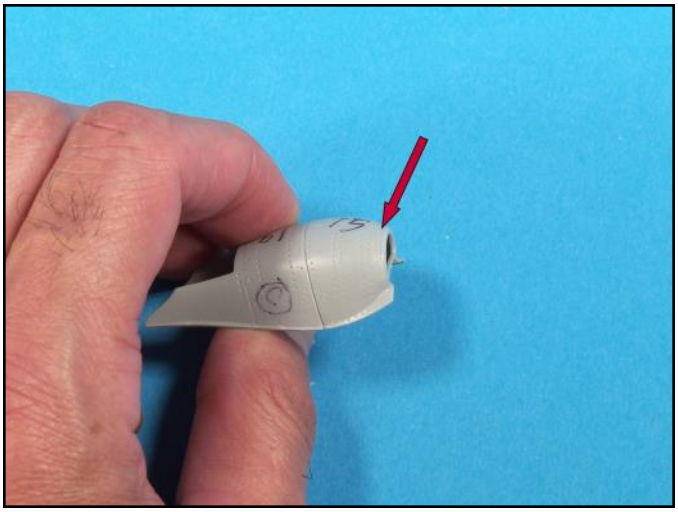
The reflective mirrors on the inside areas of the booms were slightly distorted due to the tree tabs so I made new ones. It took several tries before I got a perfect round shape.



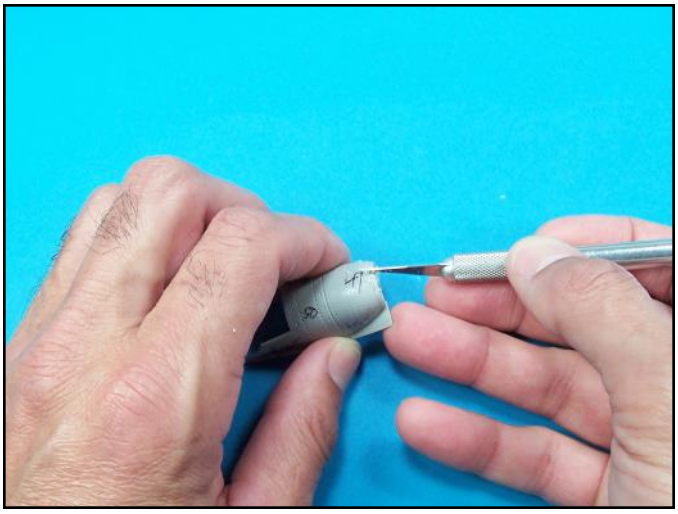
The interiors of the boom side air scoops had voids that were covered with .030 inch half round strips.



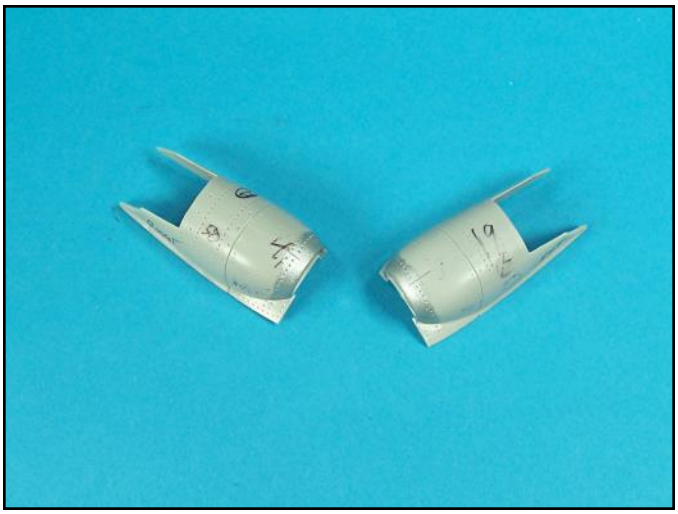
The gluing surfaces of the boom side scoop parts had to be flattened and adjusted to get them to fit into the depressions on the boom surfaces.



The exterior air scoops were assembled and the forward lips had seams that need to be filled, scraped and sanded smooth.

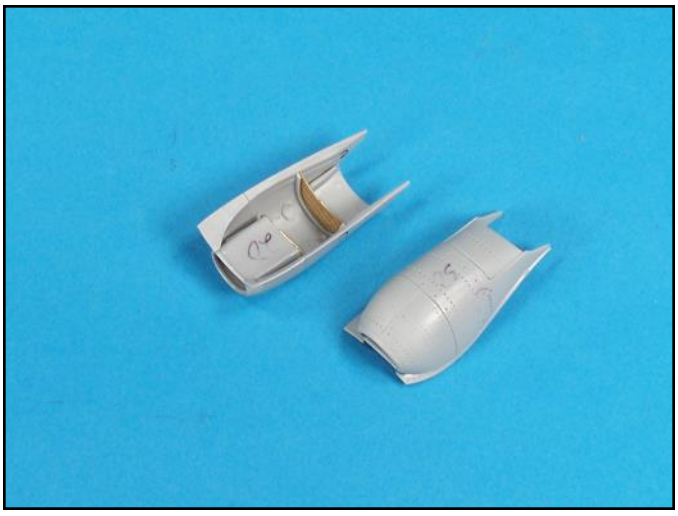


The seams were carefully and lightly scrapped with the tip of a number 11 X-Acto blade. The surfaces were then wet sanded smooth.

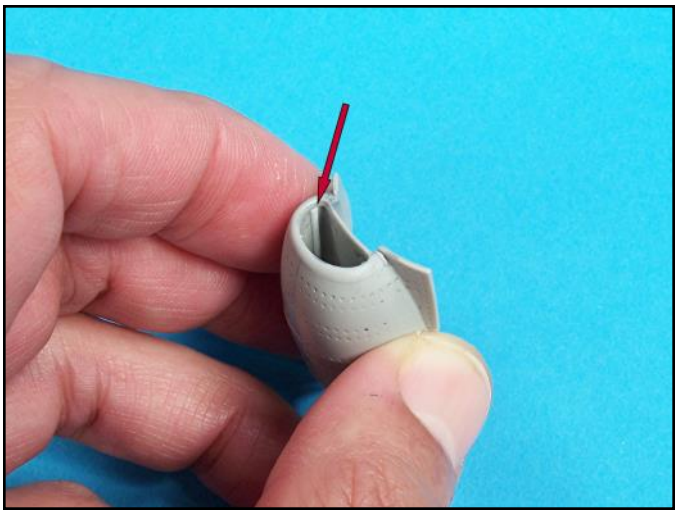


Silver paint was applied to check for flaws. Some areas needed additional super glue.

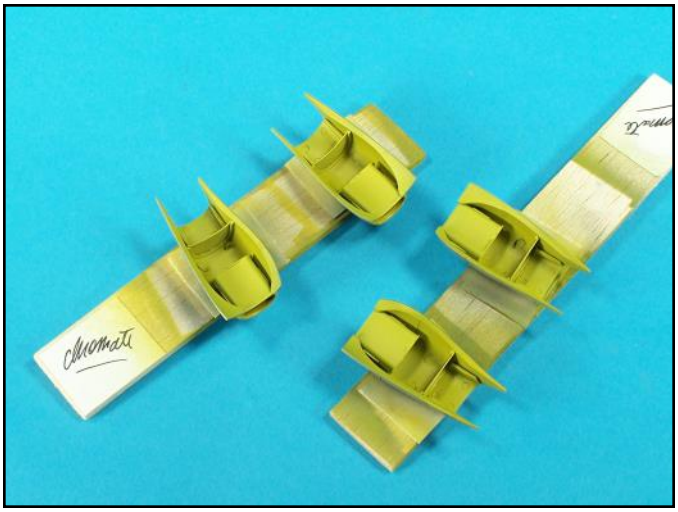
Once I was satisfied with the seam work, the surfaces were polished with 0000 steel wool.



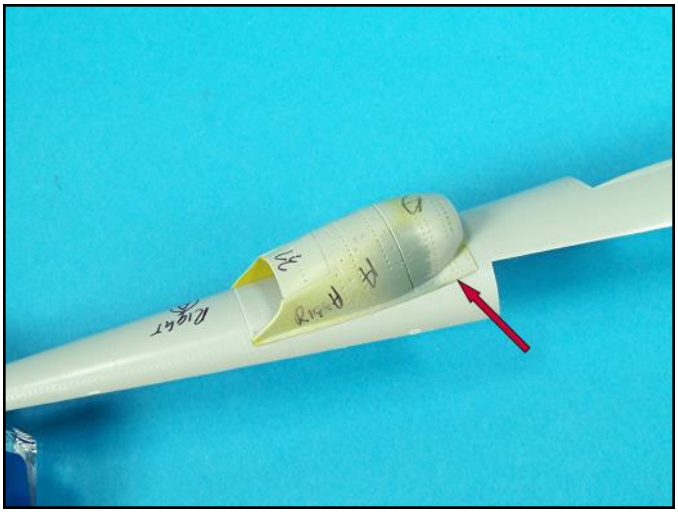
The interior components were then added to each assembly.



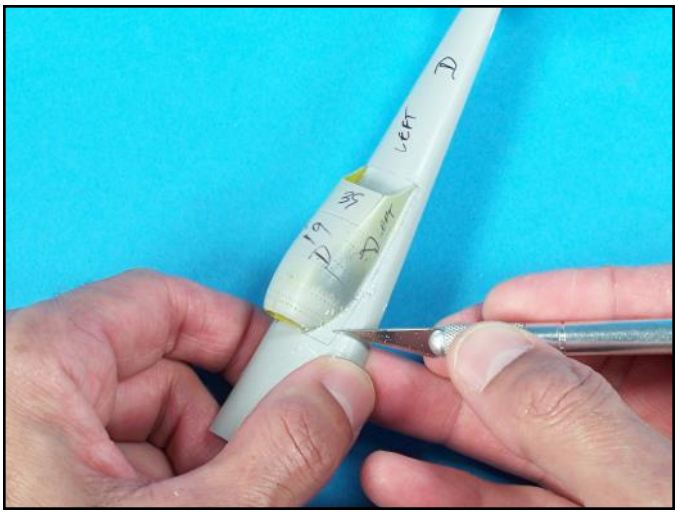
The .030 inch half round strips that were used to hide the interior seams will not be noticeable once the interior areas are airbrushed.



The interior areas were then airbrushed with zinc chromate.

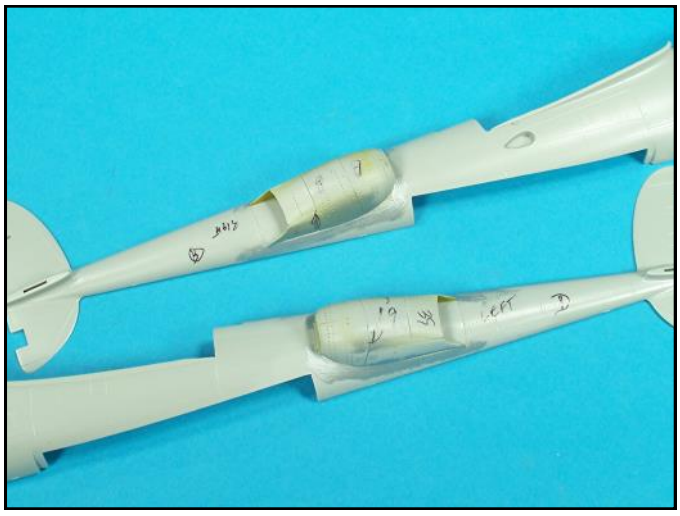


The assembled air scoops were then super glued to their respective locations on the boom sides. The thickness of the edges of the air scoops needed work.

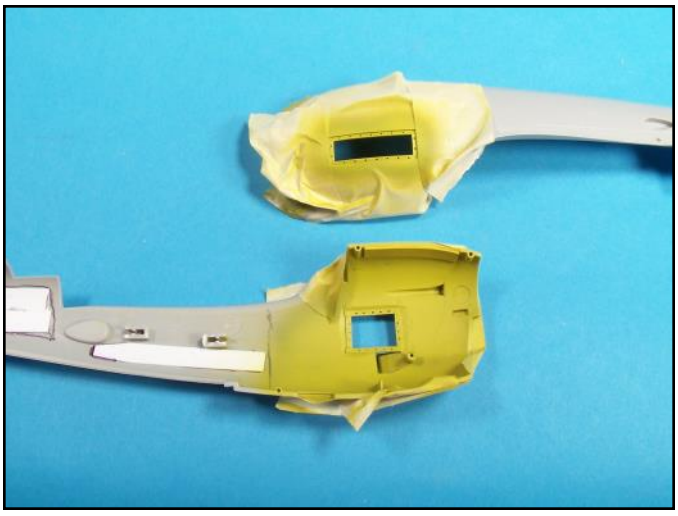


The seams were filled with super glue and then the edges were carefully scraped flat. Be careful not to let the tip of the blade gouge the air scoop.

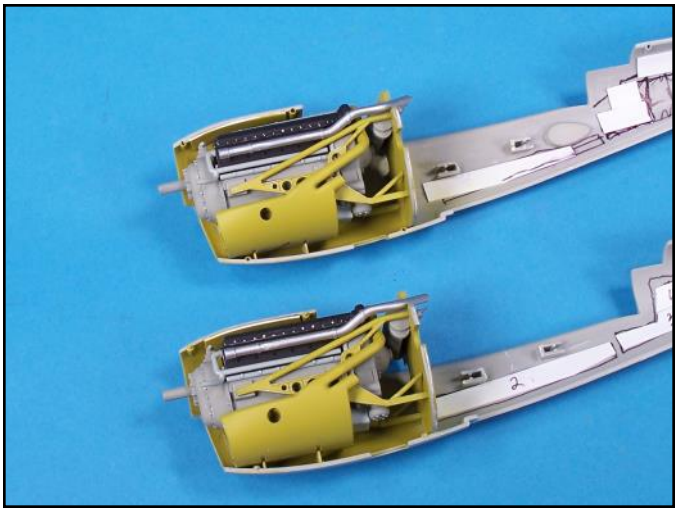
The surfaces on the air scoops and the surrounding surface of each boom was carefully wet sanded smooth and then polished with 0000 steel wool.



Silver paint was applied to identify any flaws, which were then fixed.



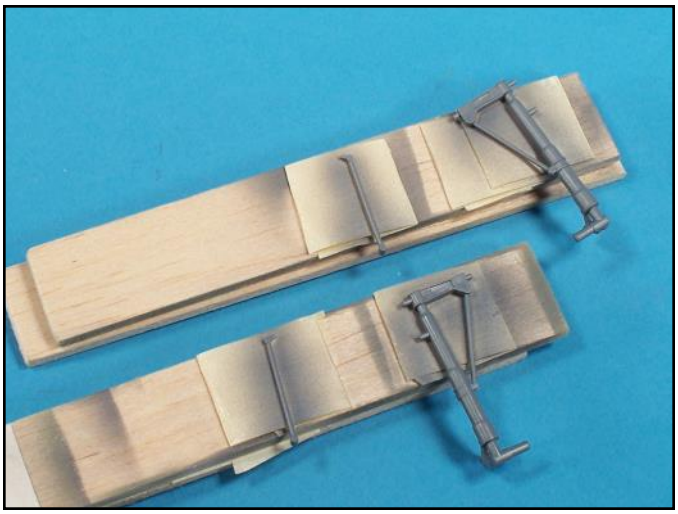
The interior areas of the engine locations were airbrushed as well as the exterior access panel fastener framing with zinc chromate.



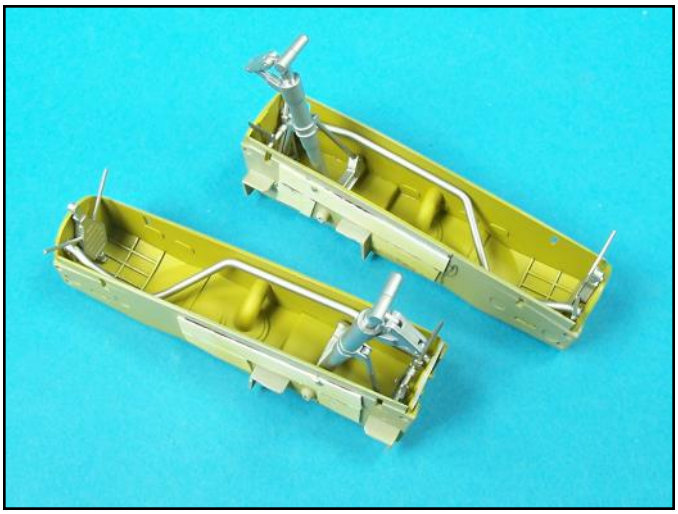
The engine sub-assemblies have been glued into place.

The landing gear had round depressions. I drilled the depressions to a slightly deeper depth and then filled the holes with a corresponding diameter rod. The rods were then cut and sanded smooth.

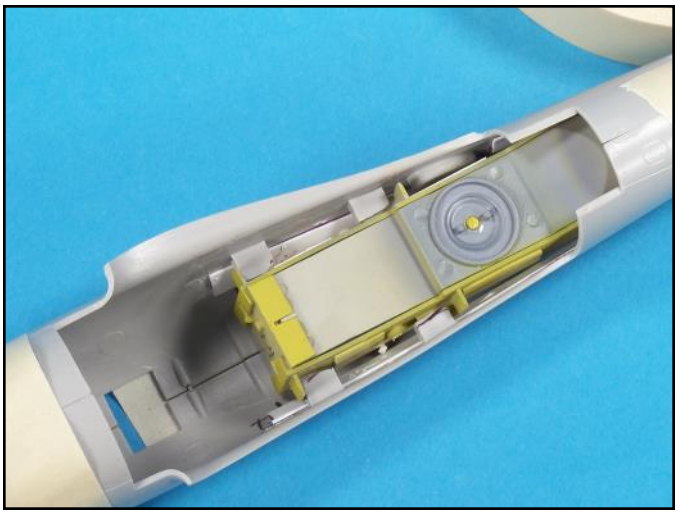
I painted the landing gear with silver paint to check for additional flaws. Having found none, I polished the plastic with 0000 steel wool.



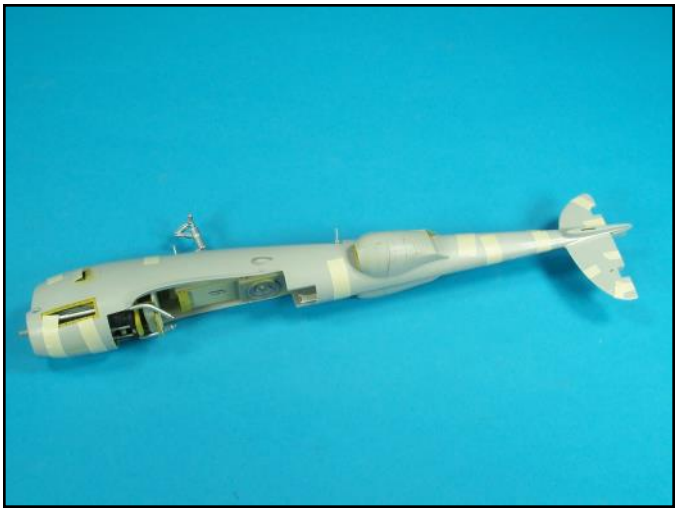
After priming the landing gear assemblies they were airbrushed with aluminum buffing metalizer.



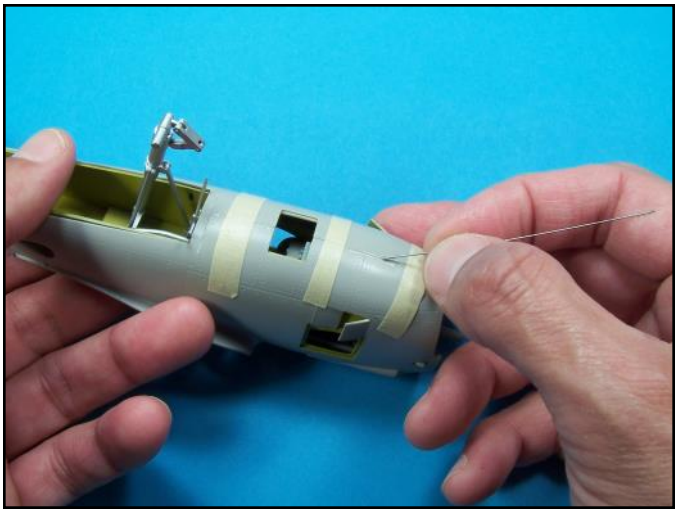
The remaining landing gear parts were airbrushed, the raised interior surface detail of the landing gear bays dry brushed, and then everything was glued together. Note the plastic sheeting laminated to the outside areas for added strength.



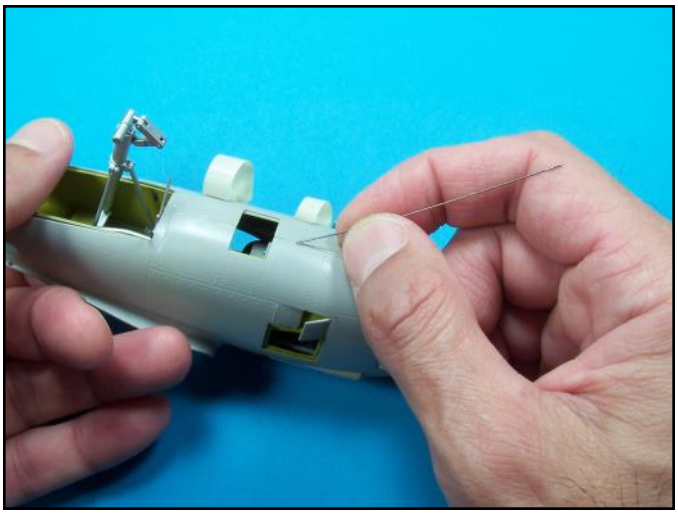
The positioning tabs for the landing gear bays had to be cut for a better fit. The bays were positioned on one side of a boom, and then the boom halves were taped together tightly. The bays were then glued into place.



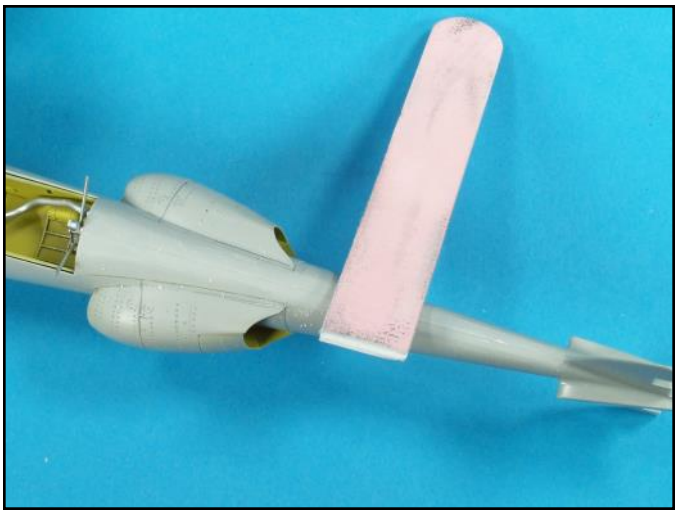
With the booms taped together its time to glue the halves together.



Tiny beads of super were applied with the tip of a .015 inch diameter stiff wire. Puddles of super glue were applied to a piece of paper and the tip was dipped into the puddle and then applied along the seam line.

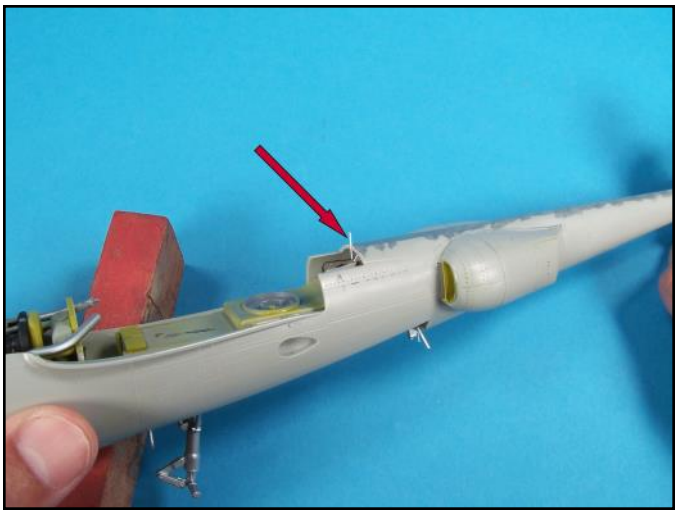


Once the glue was dried, the tape was removed and additional super glue applied along the remaining seam lines.
.

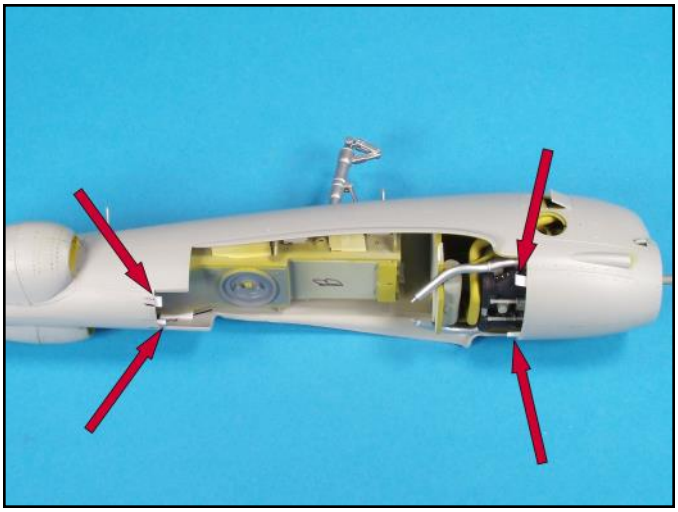


The seam lines were carefully scrapped and sanded smooth. Silver paint was used to check for flaws. The scraping and sanding process was repeated until all the flaws were addressed.

With the seams completed its time to address some other minor issues.

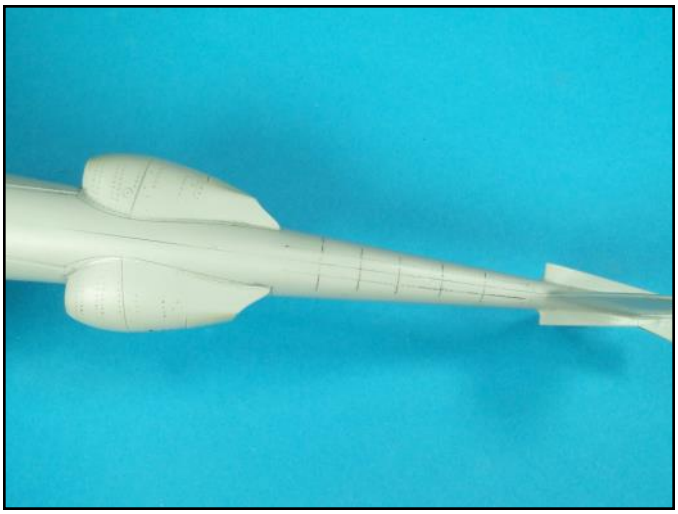


The edges of the seams has tiny voids which were filled with strips of plastic, which were cut flush with the surface and then sanded smooth.

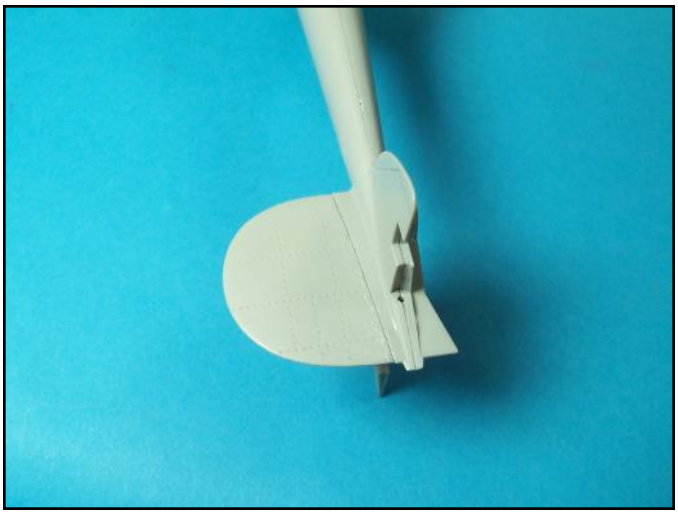


To add strength to the connection between the booms and the wing, I added additional gluing taps.

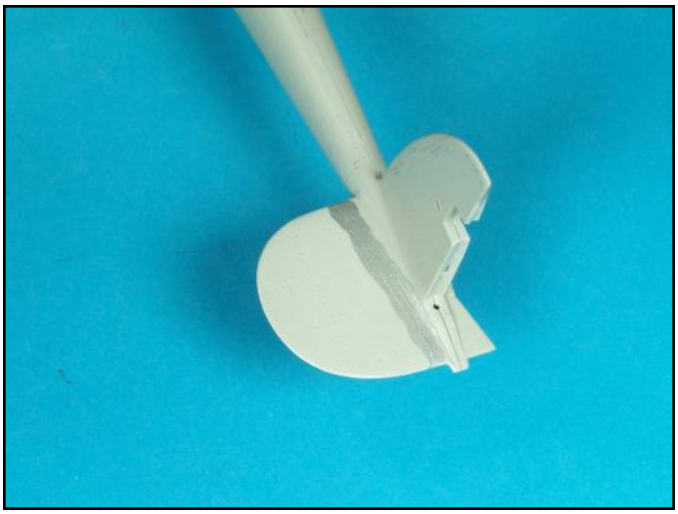
There were tiny voids between the bottom areas of the landing gear bays and the booms. These areas were filled with white glue applied with a .015 diameter stiff wire and contoured with a damp Q-Tip.



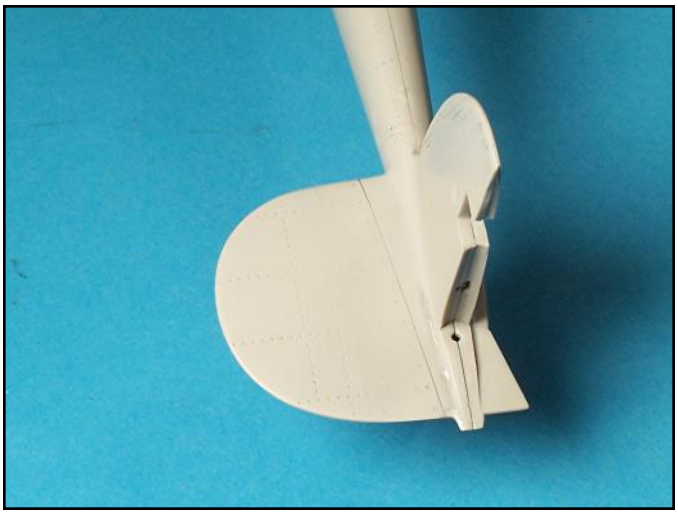
The panels lines and rivet detail were then replaced. The pencil lines were set using labeling tape which was applied to each panel line.



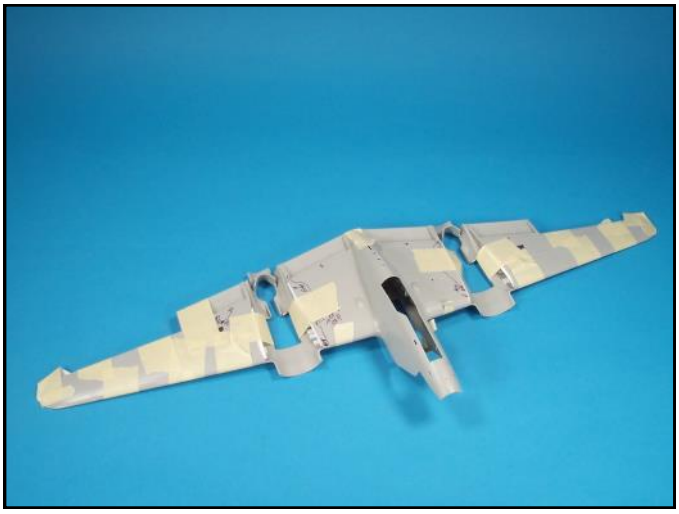
The outer elevator wings were glued into place with Testors tube glue so that minor adjustments could be made to their positioning. The voids were filled with super glue.



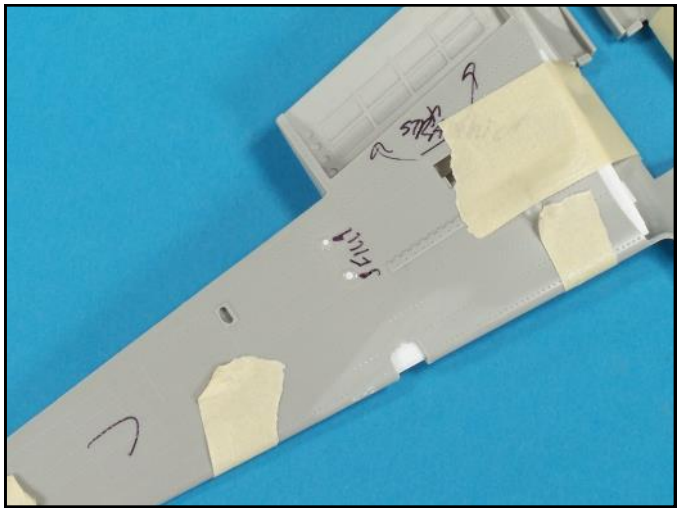
The voids were carefully and lightly sanded smooth and silver paint applied to check for flaws.



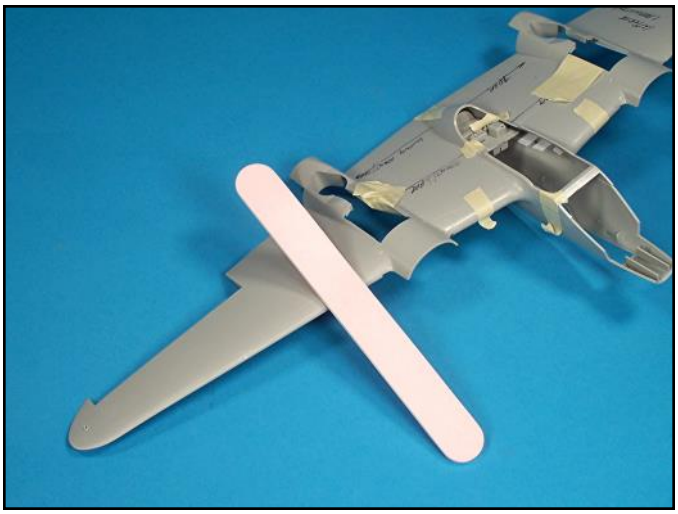
The silver paint was removed with 0000 steel wool, which also polished the plastic.



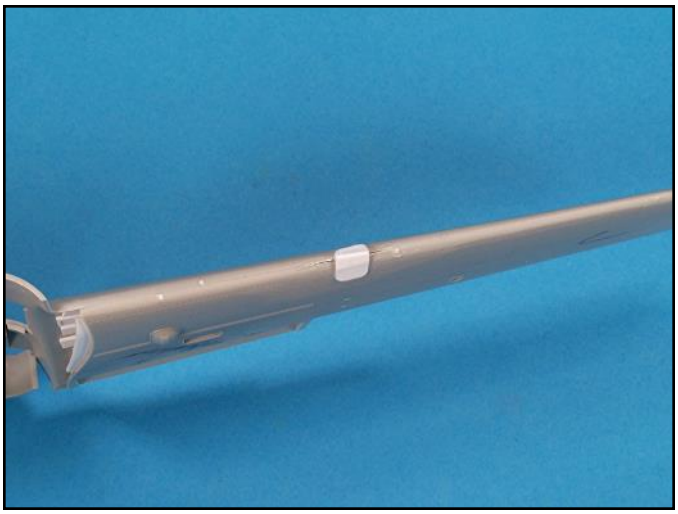
The outer wings were taped together and beads of super glue were applied along the seam with a .015 inch stiff wire applicator.



The rocket pylons were filled with plastic rod and the wing landing light openings were filled from the inside with plastic strips to add strength.



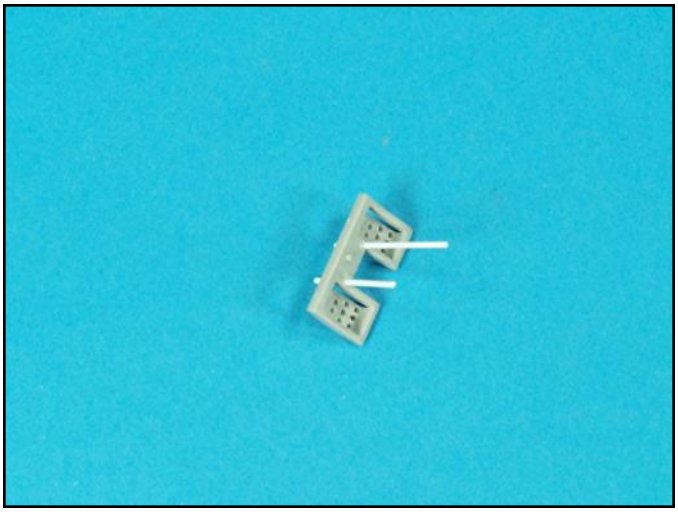
The super glue along the seam was carefully and lightly scraped smooth and then a wet sanding stick was used to finish the job.



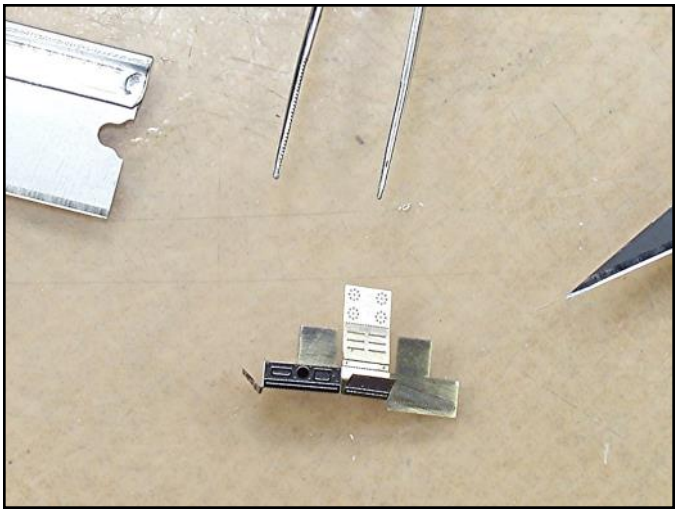
The wing lights were filled from the outside with small lengths of plastic strip and super glue. The surface was then shaped and sanded smooth.

Note the additional super glue applied along the seams after silver paint was applied to detect flaws.

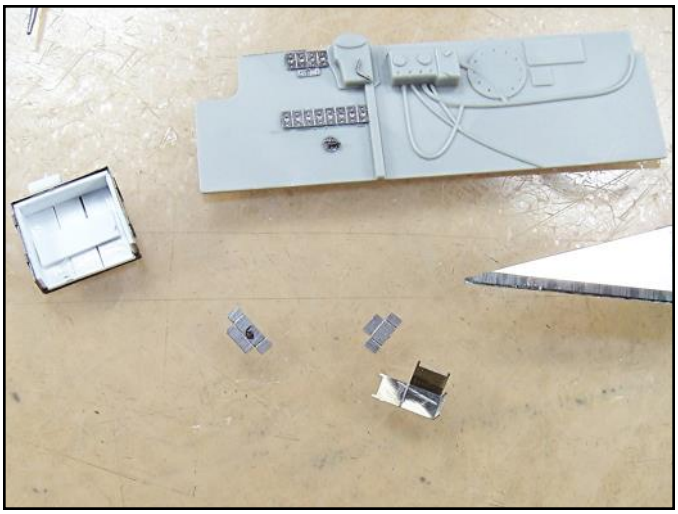
The filled wing lights are now complete and the rivet detail has been restored.



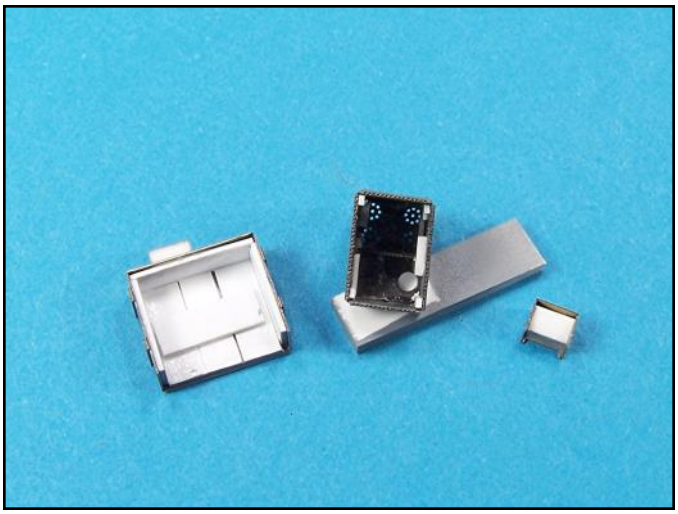
There are tiny mold punch out depressions on some cockpit parts. The depressions were drilled through and then plastic rod was super glued into place, trimmed and carefully scraped smooth.



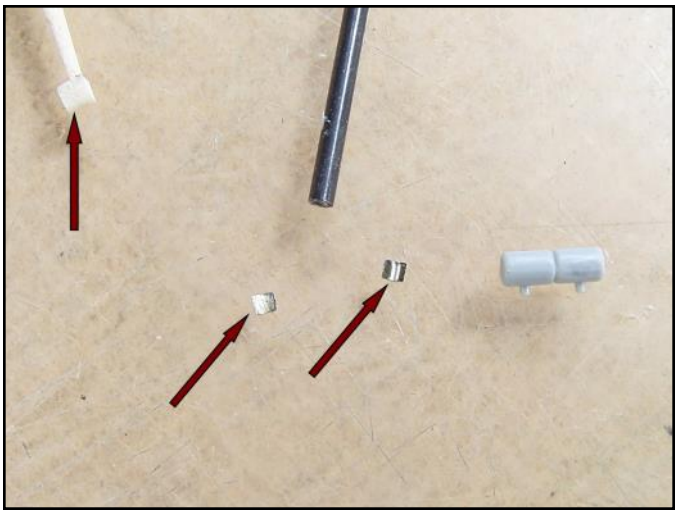
The Eduard photoetch box shapes are partially bent along their fold lines. Once the metal is slightly "worked" along the bends, they can be completed with tweezers and the tip of a number 11 X-Acto blade.



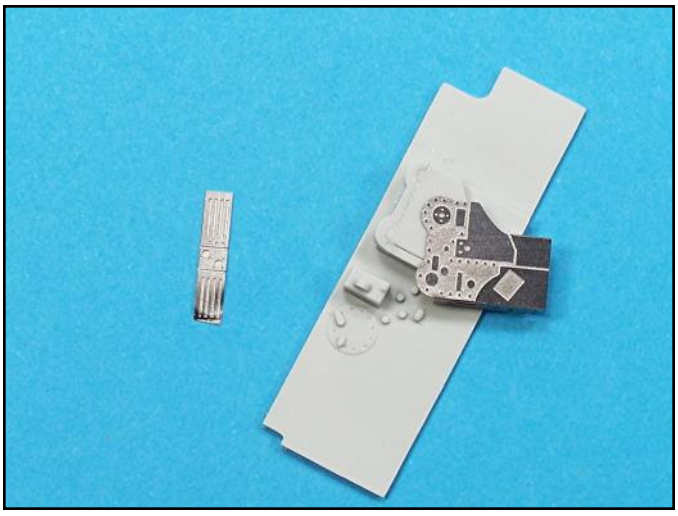
These photoetch parts are being glued into place one at a time. Working slowly in a stepped process will always yield better results with photoetch parts.



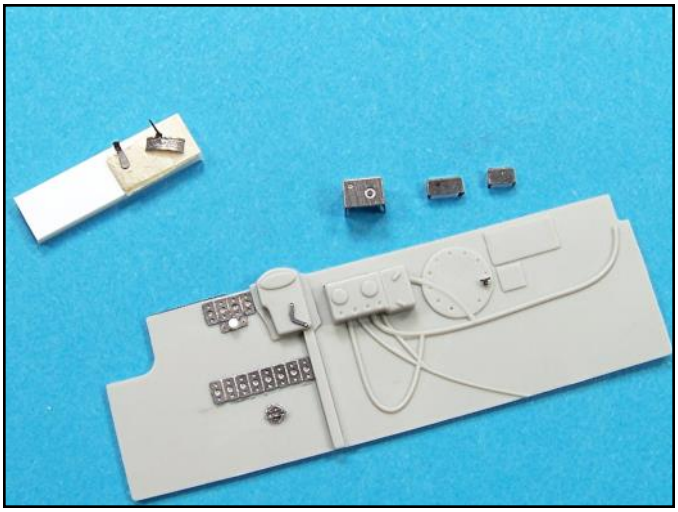
These box shaped photoetch parts had beads of super glue applied along the interior seam and fold lines. Small lengths of .020 inch plastic strip were then added to strengthen the parts and provide for a wider gluing surface.



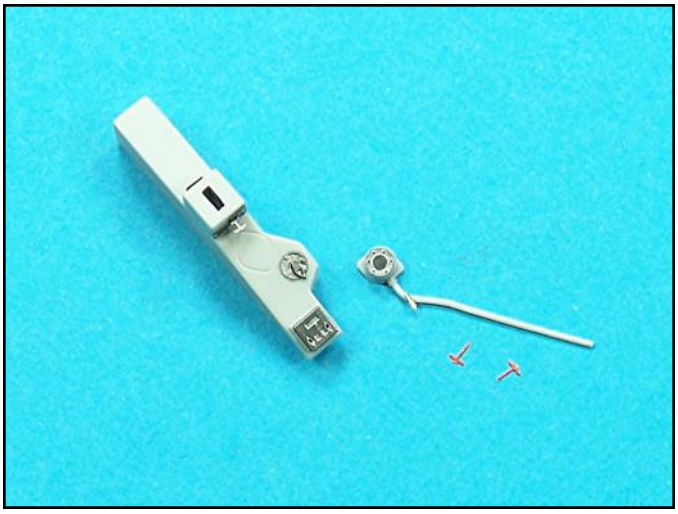
These small name plates were shaped by rolling a Drill bit end across the part. Use a slightly smaller diameter for rolling so that the photoetch parts will fit snugly into place.



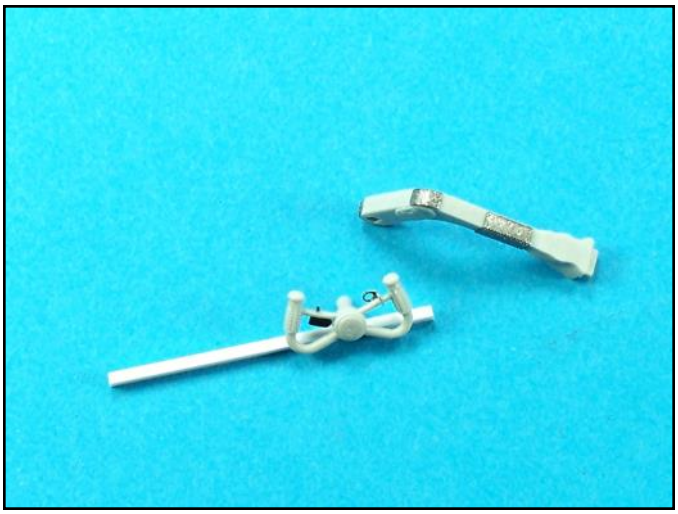
I do not always use all of the photoetch parts. The upper face plate on the throttle quadrant would be very difficult to shape and place correctly. I decided to just use the larger side plate.



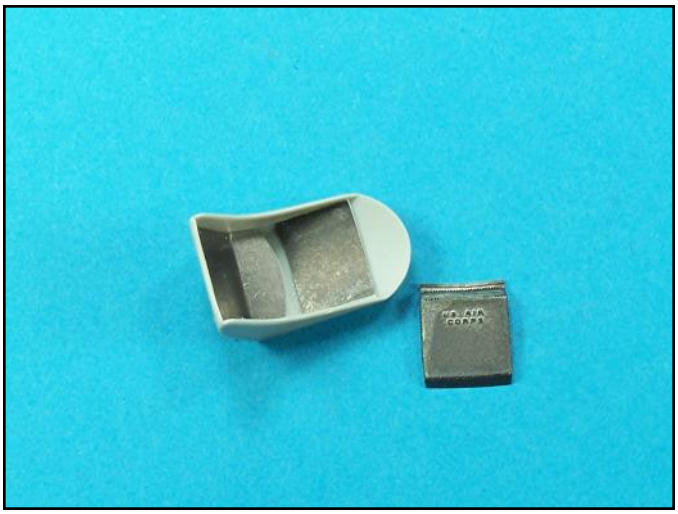
The sides of the cockpit were greatly enhanced with the addition of the Eduard photoetch parts.



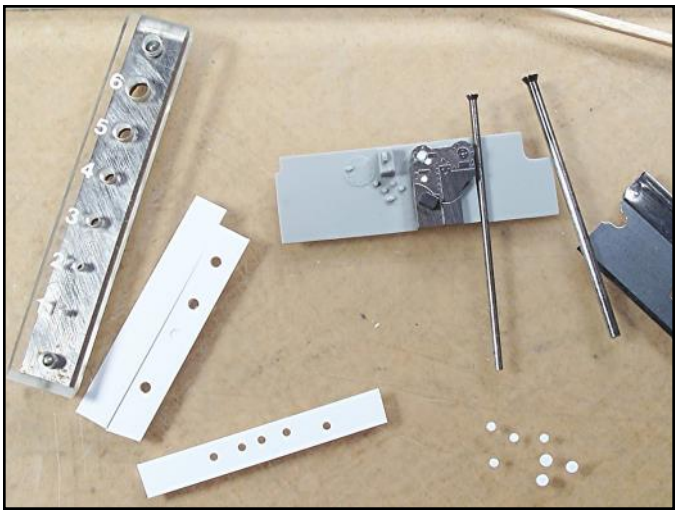
To help position small photoetch parts, use tiny drops of slow set super glue, which will give you a few seconds of working time to adjust the parts position.



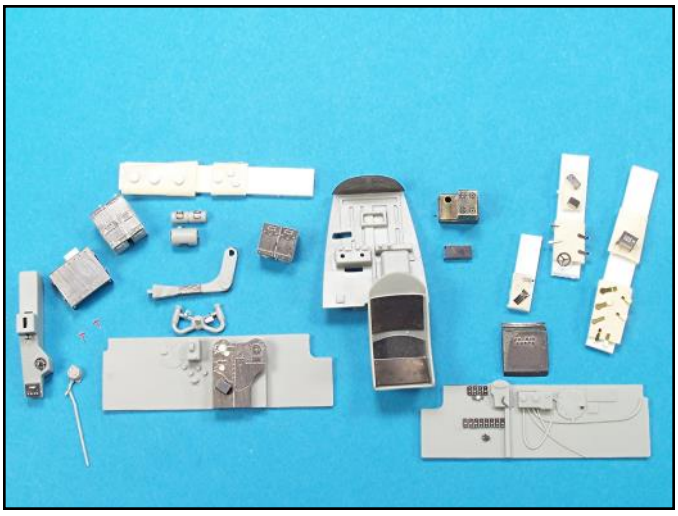
These parts will look much better once they are airbrushed and the small Eduard detail parts are painted with the tip of a round toothpick.



Although the photoetch detail set included a seat, I used the kit's seat. I thinned out the sides and the back by running it across a stationary piece of fine grit sandpaper and used the photoetch details to enhance the seats appearance.

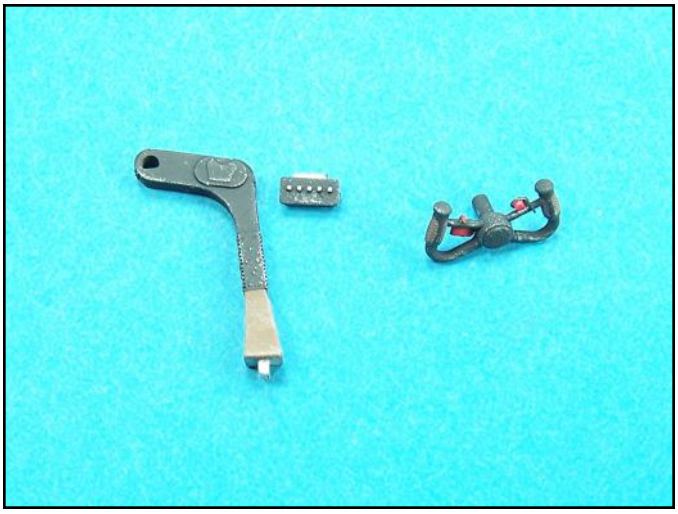


To enhance the appearance of the dials on this photoetch part, I used a Waldron Punch Tool to make some different size disks to add depth to the overall appearance of the dials.

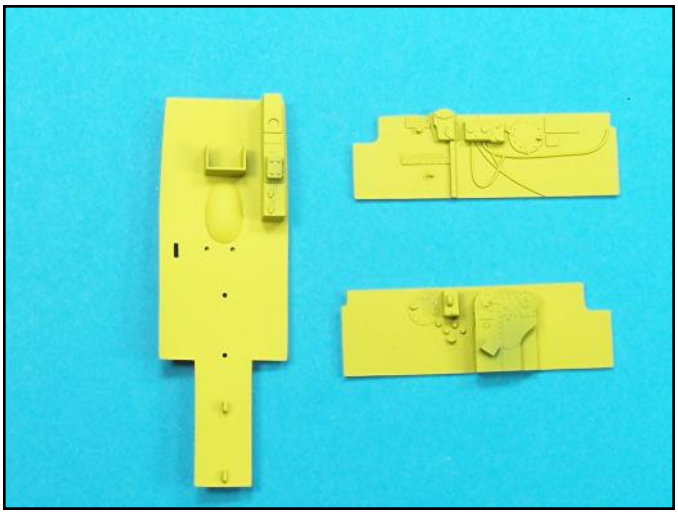


All of the kit parts for the cockpit have received their photoetch details and they are now ready for priming and final painting, detailing and weathering.

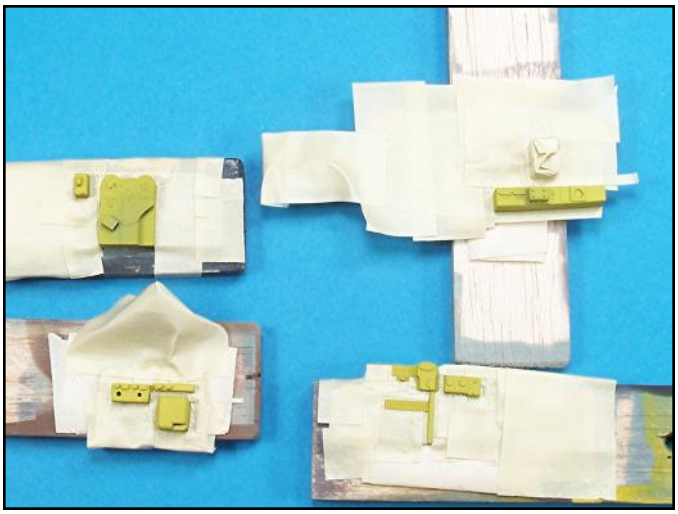
These parts have been airbrushed and then drybrushed with either silver paint or a lighter shade of the brown canvas color.



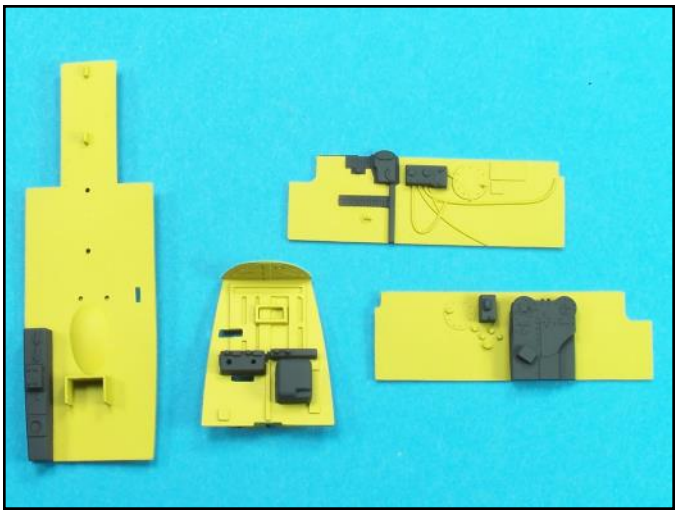
The tiny detail parts on the switch box and the control yoke were picked out with the tip of a round toothpick. The tiny amounts of paint prevented it from bleeding onto the surrounding surfaces.



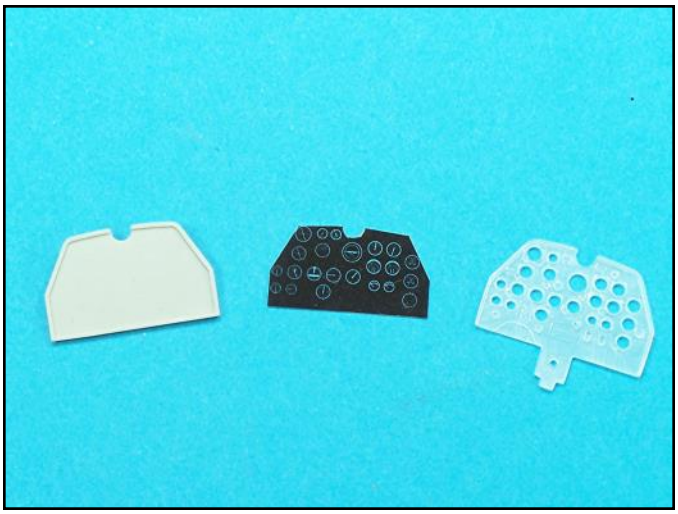
The sidewalls and the floor of the cockpit have been airbrushed with a base coat of zinc chromate.



The raised surfaces on the sidewalls and the floor were carefully masked so that they could be airbrushed flat black with a few drops of flat white added to lighten up the flat black color.

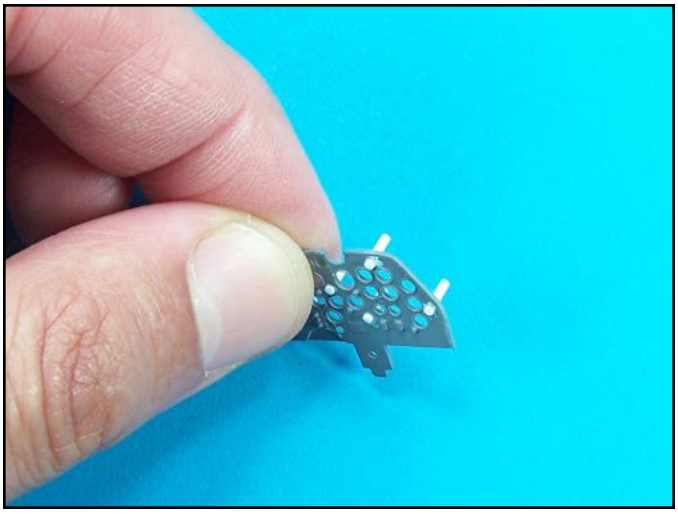


With all of the masking tape removed, the raised surfaces are now ready for detail painting and drybrushing. Note the sharp demarcation lines between colors thanks to careful masking.

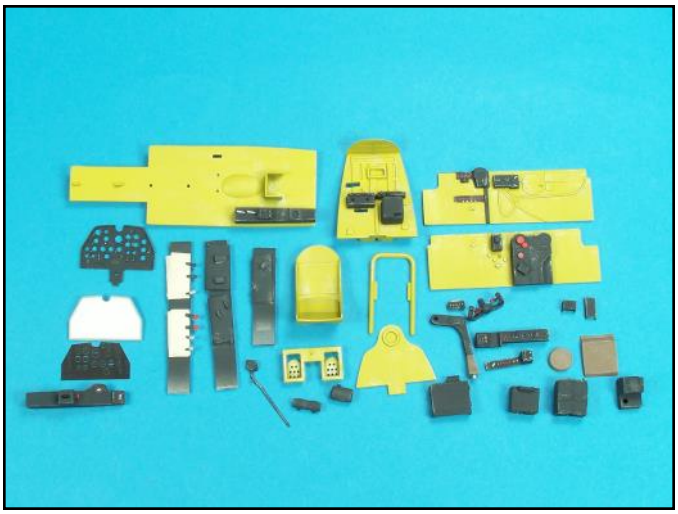


The three part instrument console will need some enhancements to improve its appearance.

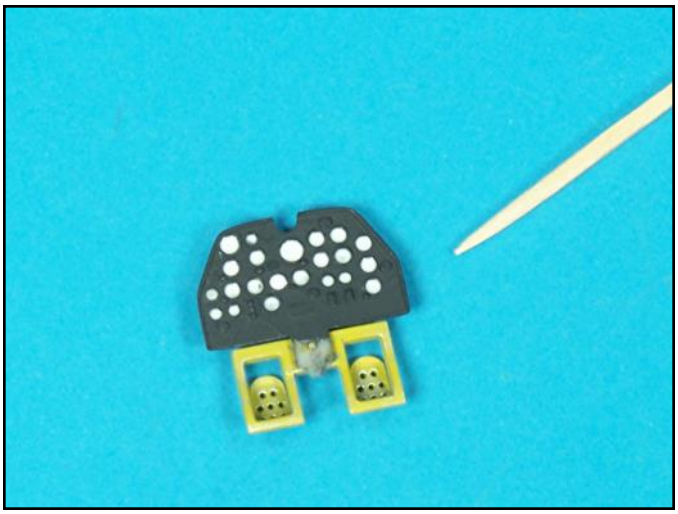
The clear plastic console part was a bit too thick, so I thinned it by running it across a stationary piece of sandpaper.



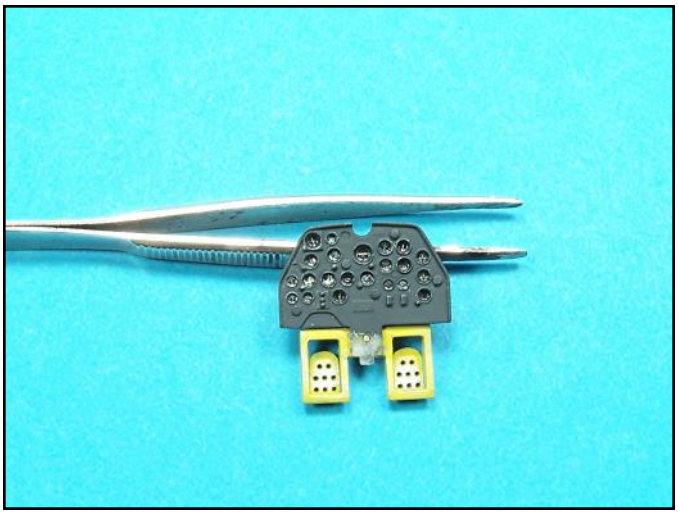
After the console was primed I noticed a few mold punch outs on its surface. To fix the problem I drilled out the punch marks, super glued the rod in place, trimmed them and then sanded the surface smooth.



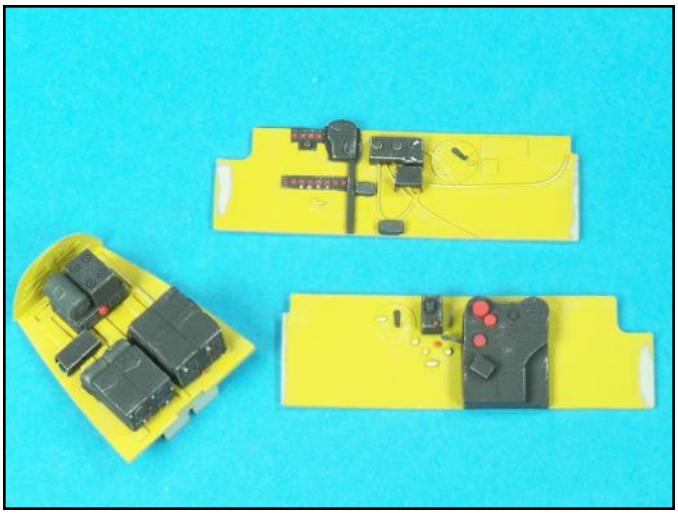
All the interior parts were airbrushed, detail painted, drybrushed and weathered. Note that the backing for the instrument console is painted white so that the acetate details can be clearly seen once the console is assembled.



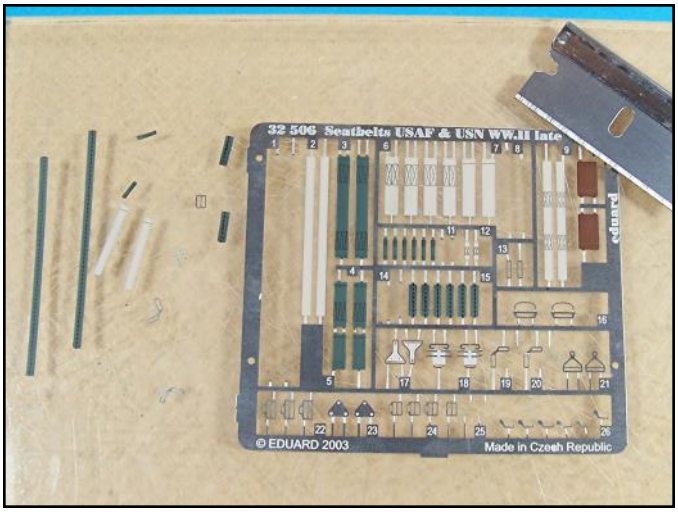
The three part console was assembled and then drops of white glue were placed onto each instruments face to replicate the glass cover plates of the instruments.



With the instrument console now complete it will look great once it is installed inside the cockpit



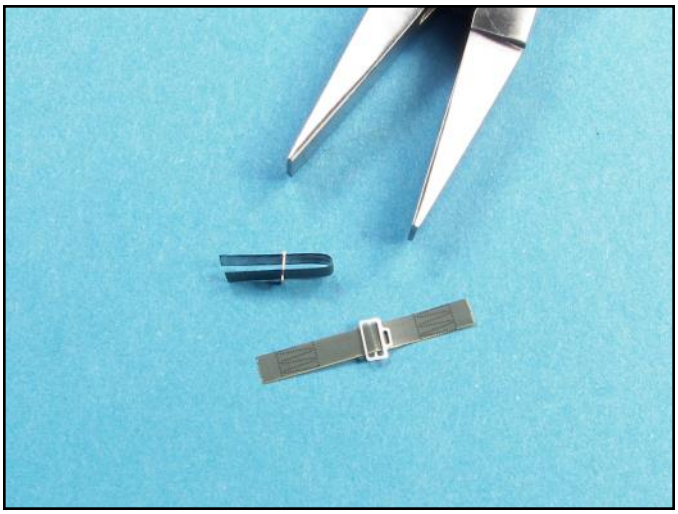
These parts were detail painted first with the tip of a toothpick and then the edges were drybrushed with silver paint.



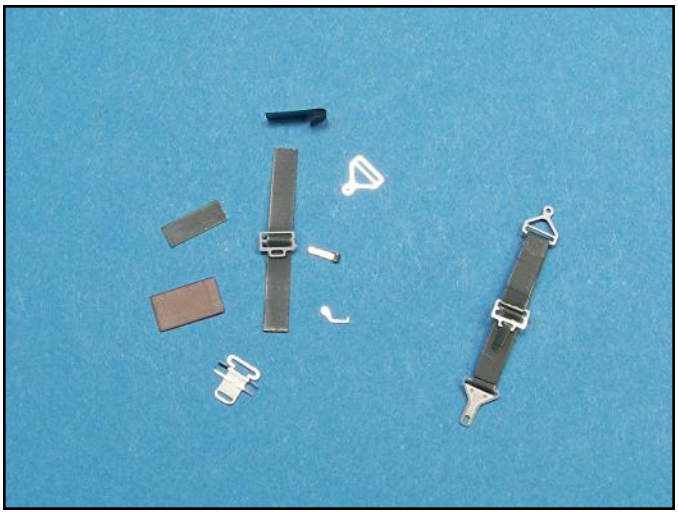
Eduard's pre-painted seat belts are sometimes printed on stainless steel. Removing them with a single edge razor blade is easier than using the tip of a number 11 X-Acto blade, which can break off.

Positioning the adjustment buckles on the long shoulder straps can be very tedious and you need to be careful to not scrape off the paint.

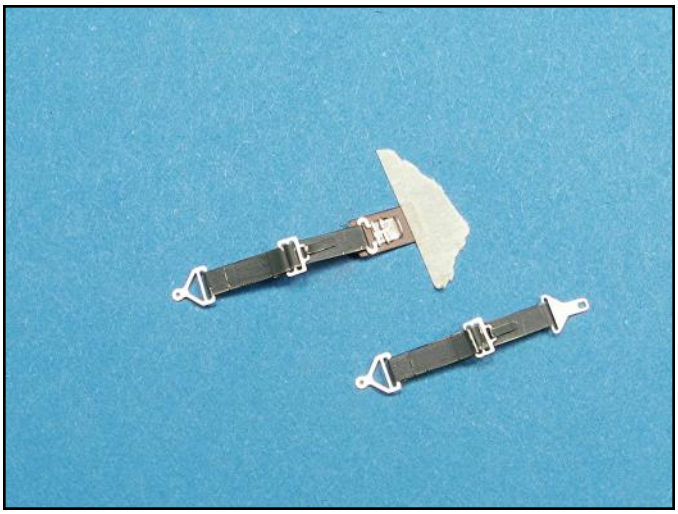
These shoulder straps are now complete and ready to be glued to the seat.



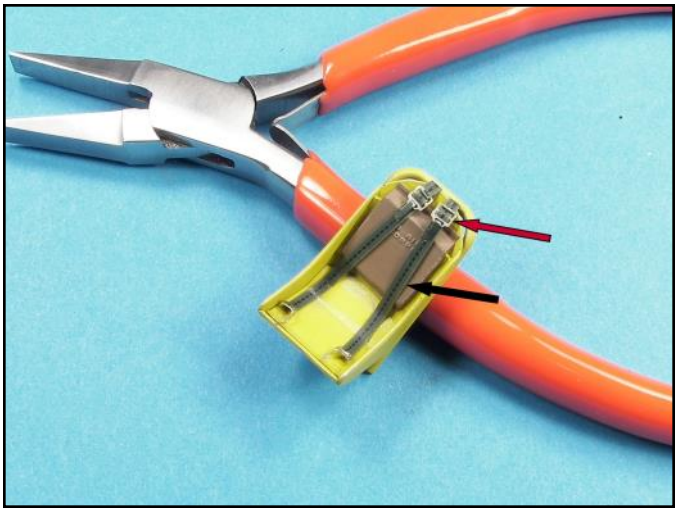
The secret to working with separate adjustment buckles is to carefully bend the seat belt, slip the buckle through the belts on both ends and then flatten the belt once you are satisfied with the buckles location.



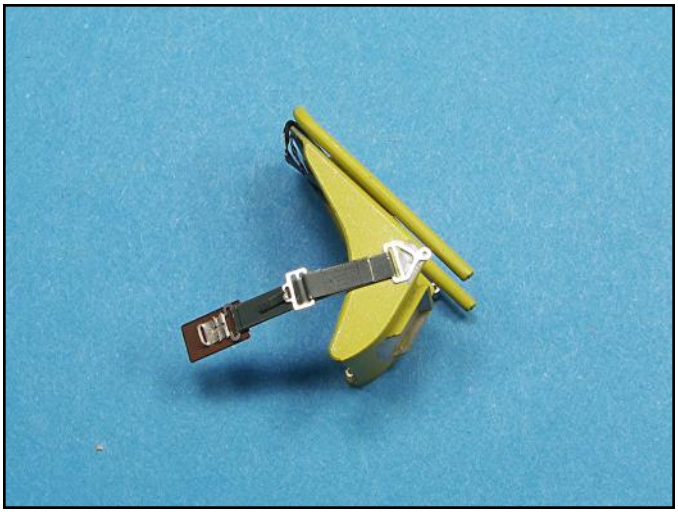
These lap seat belts have several pieces and you have to be very careful when bending the ends of the belts for the locking buckles.



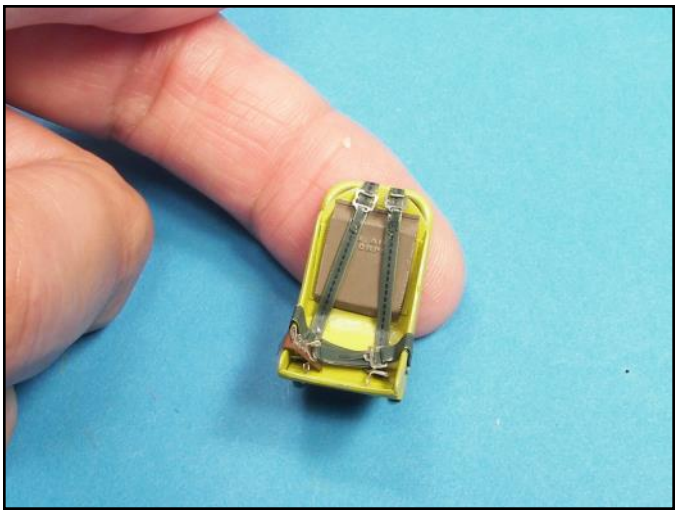
Taping one side of the belt while you position the buckle on the other end helps keep the belt assembly steady while you work on it.



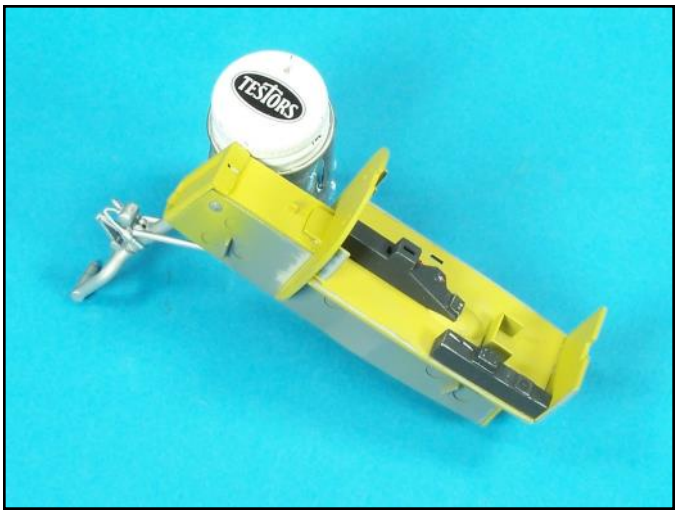
The shoulder belts on the seat were added first. The adjusting buckles should have been positioned further down on the belts.



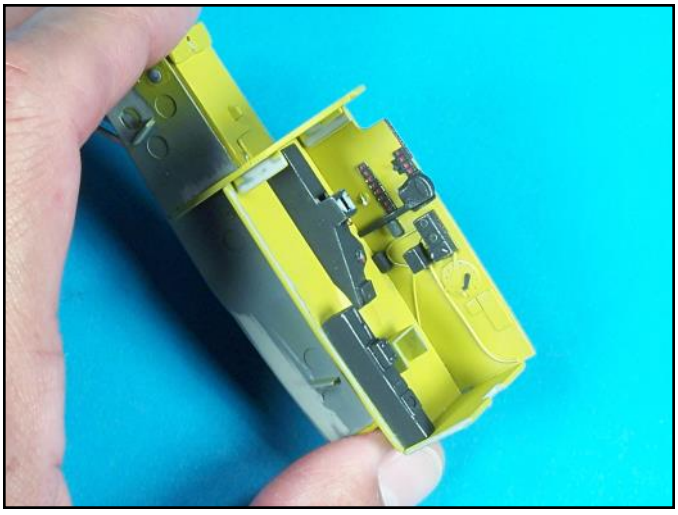
The lap belts were super glued on the sides of the seat first and then carefully folded over the edge of the seat frame.



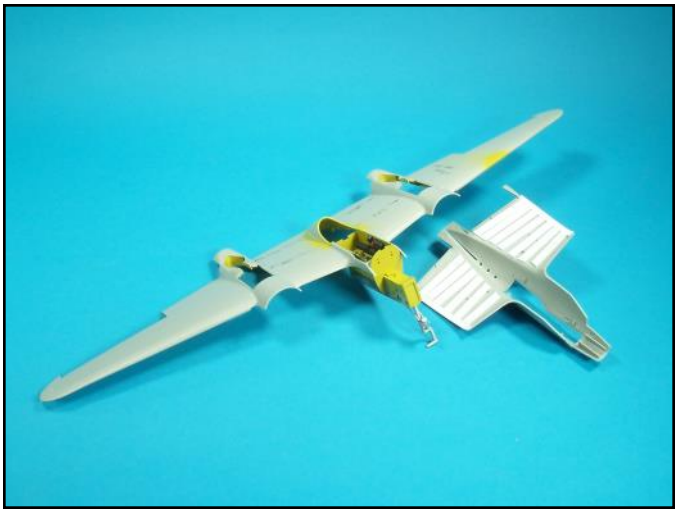
Note how the lap belts sit under the shoulder belts. Positioning the belts this way displays more of the details on them.



Now that all the sub-assemblies are complete, its time to completely assemble the cockpit. The cockpit floor attaches to the assembled forward wheel well sub-assembly.

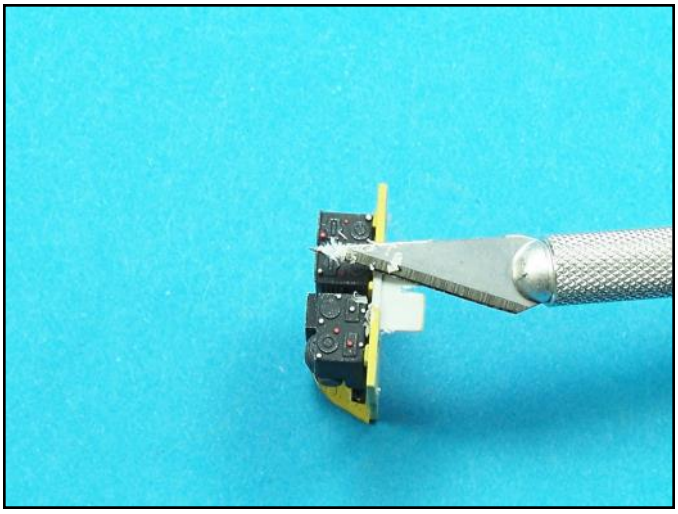


The cockpit sidewalls were added next. The gluing edges of each part were carefully scraped so that the super glue would stick to the plastic.

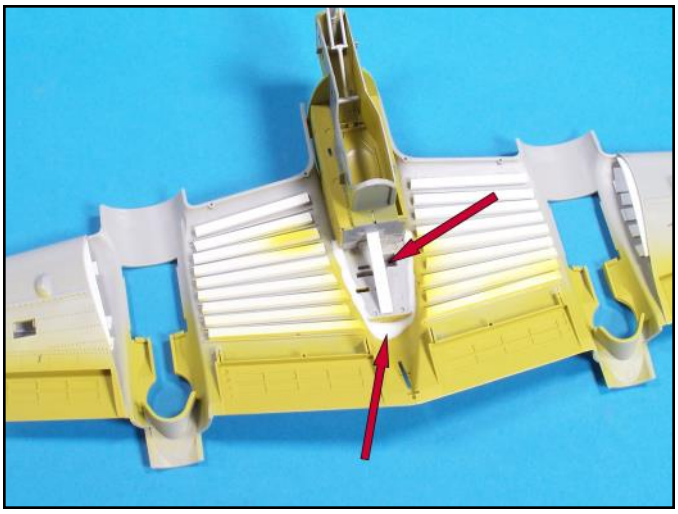


The cockpit was test fitted to be sure that it did not interfere with the upper and lower fuselage after they were taped together.

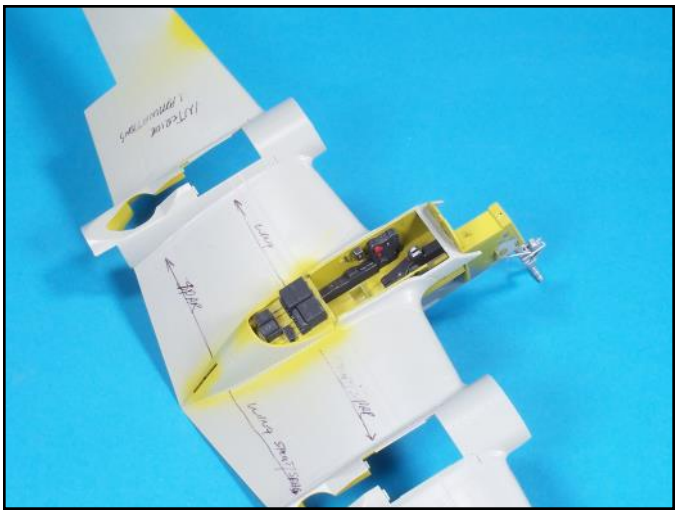
The fuselage, lower wings and engine booms were taped into place for a test fit. Minor adjustments were made to the positioning of the cockpit and then it was glued into place.



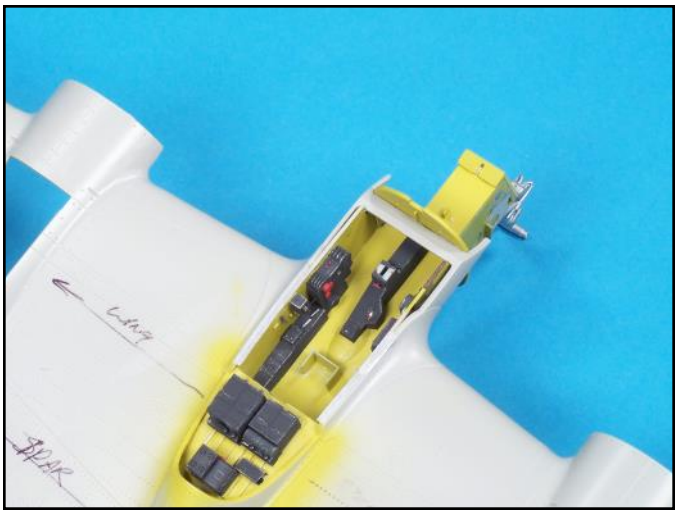
The aft electronics shelf for the cockpit was a bit too wide so I scraped off some plastic so that it would sit flush against the back of the cockpit tub. It took several fit checks to get the right amount of plastic removed.



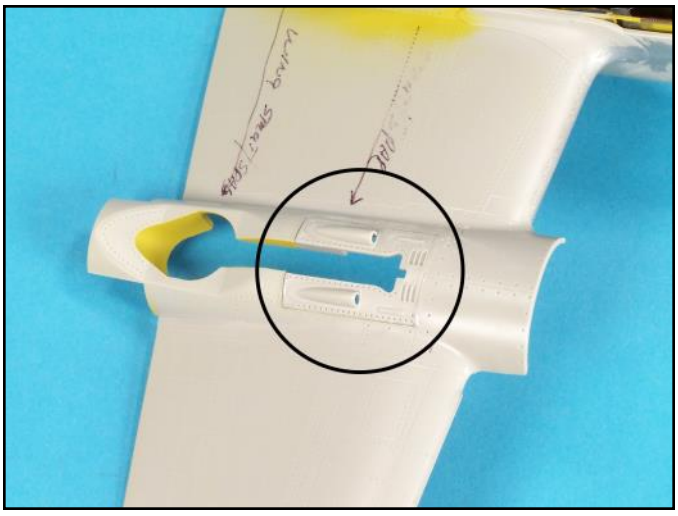
To add strength to the cockpit, I added a plastic strip to the backside of the cockpit tub. There were also voids around the perimeter of the cockpit which I filled with white glue.



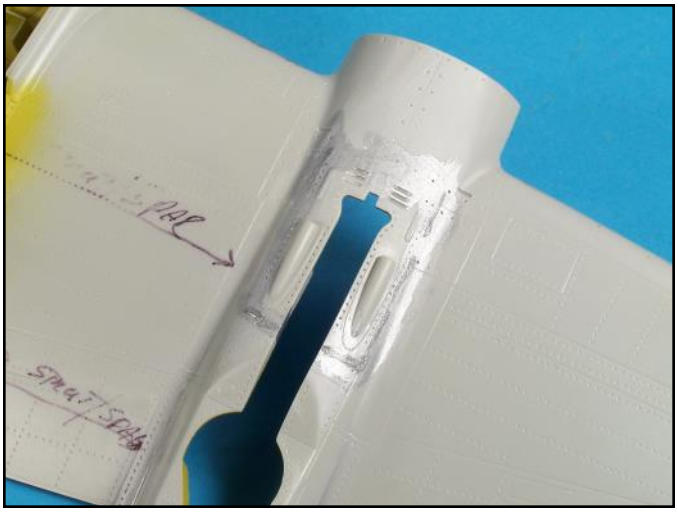
After the white glue dried I used a detail brush to touch up the filled voids.



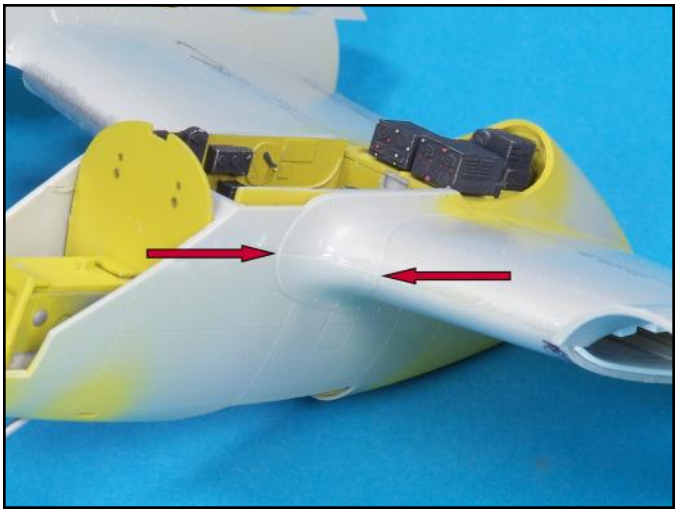
Note the paint that was scraped off so that the glue would stick better.



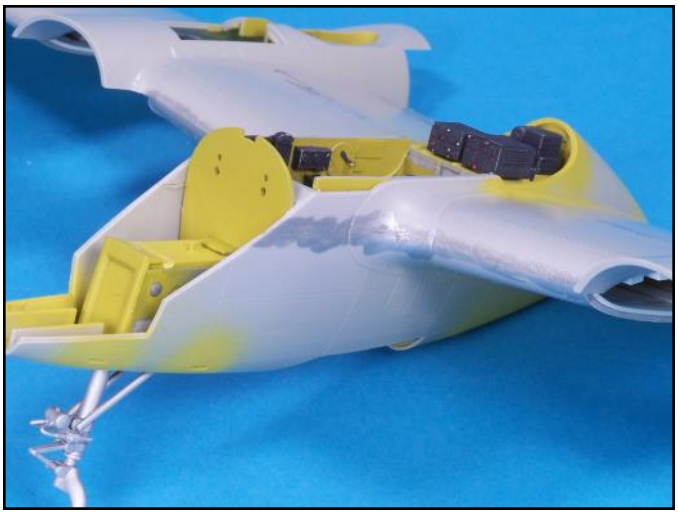
The upper wing covers for the engines were carefully positioned and then super glued into place.



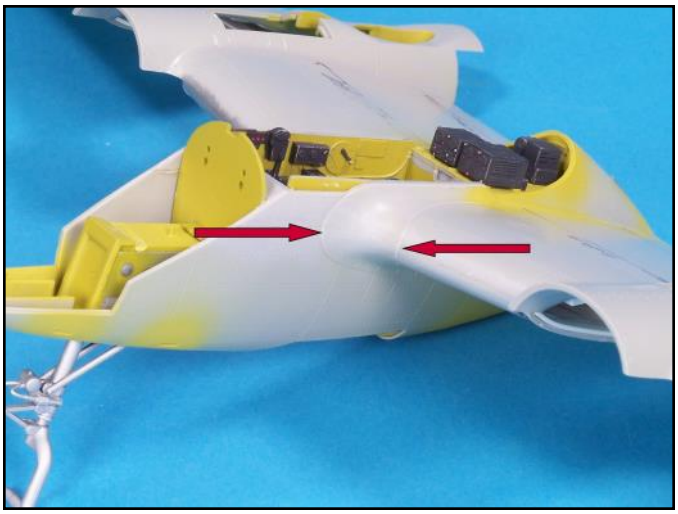
The silver paint detected additional flaws along the seam lines which needed several applications of super glue.



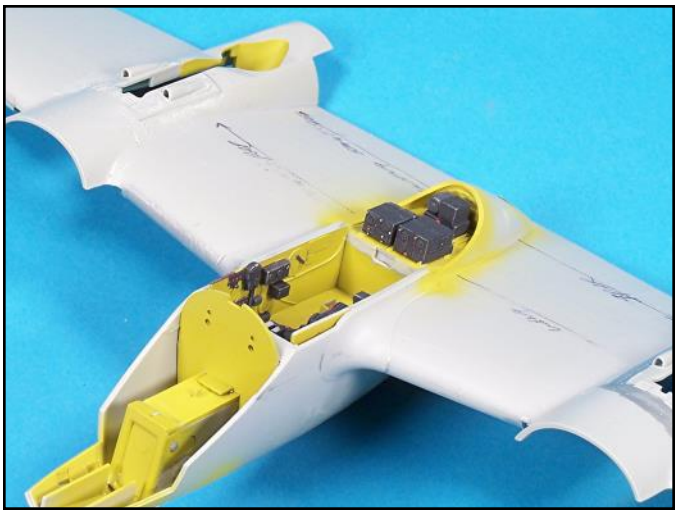
The lower inner wing was super glued into place. The wing to fuselage fillets have very distinct raised lines along the leading edge so be careful when using super glue at these locations.



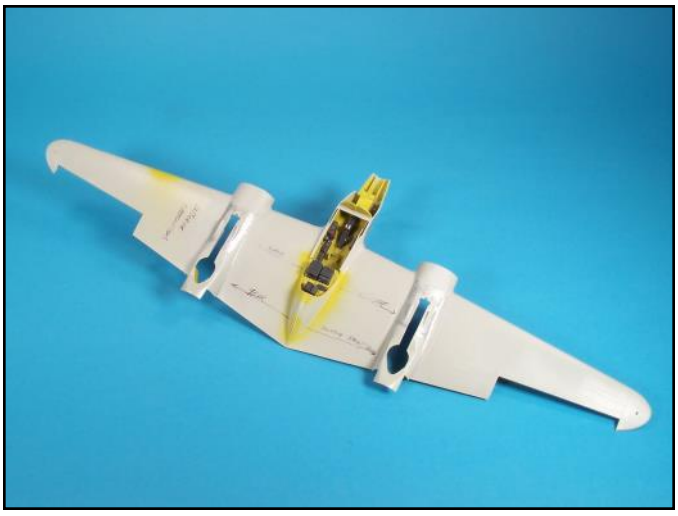
Silver paint shows that the raised lines along the leading edge of the wing/fuselage fillet looks good. Careful scraping and sanding resulted in a good looking leading edge.



With the silver paint removed with 0000 steel wool and the plastic polished, the assembly is now ready for the next step.



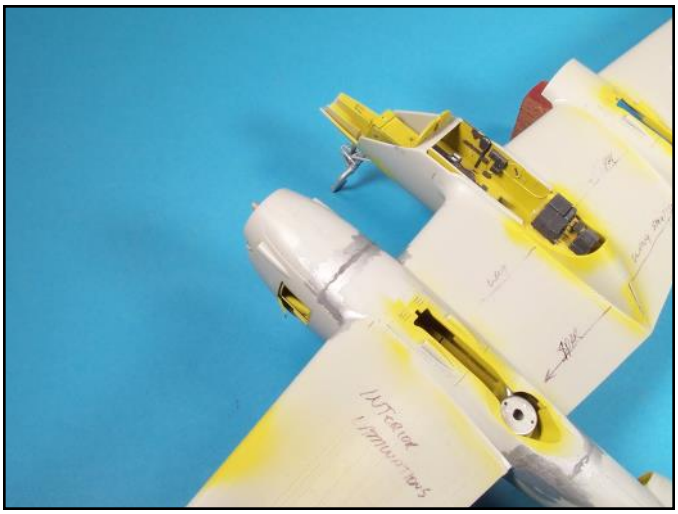
Note the scraped surface which will need to be corrected.



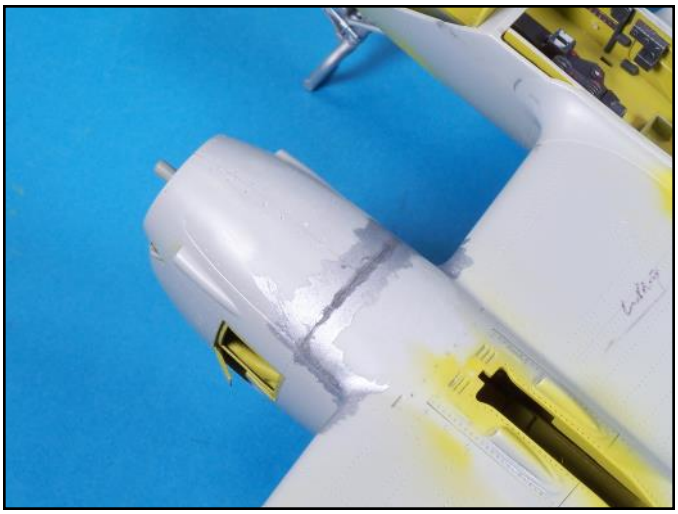
With the center fuselage complete its time to install the booms.

The booms and elevator tail were taped into place, minor adjustments were made and then the port boom was glued into place first.

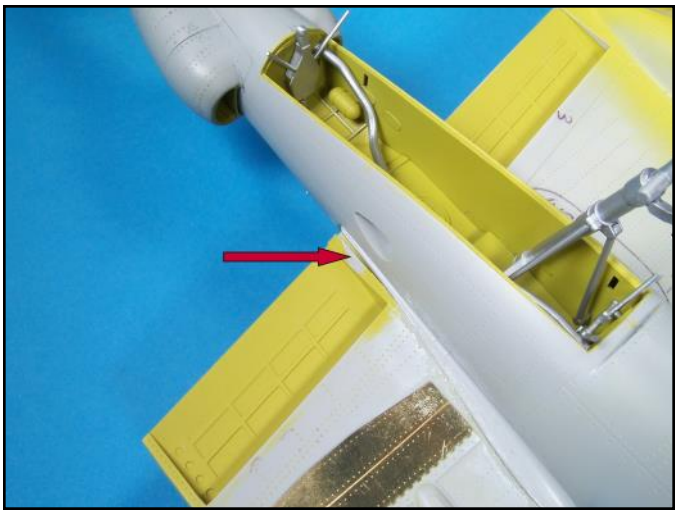
There were tiny voids between the boom and wing connections that were filled with different thicknesses of plastic. It took several applications of super glue to fill the seams. The seam lines were scraped and wet sanded smooth.



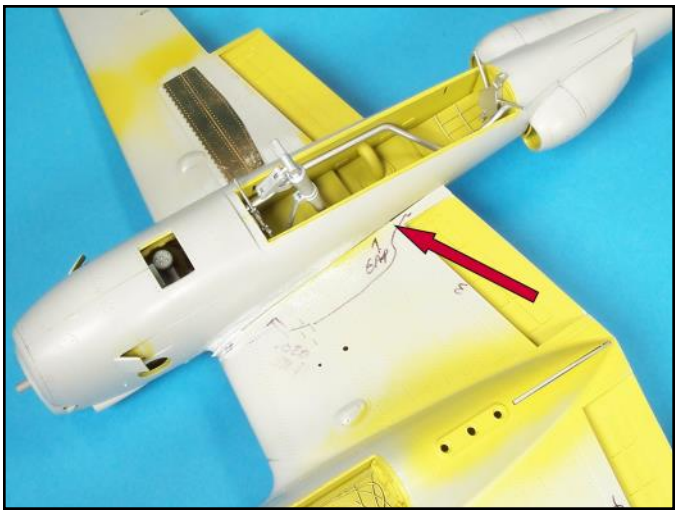
Silver paint detected lots of tiny flaws, so additional applications of super glue were applied.



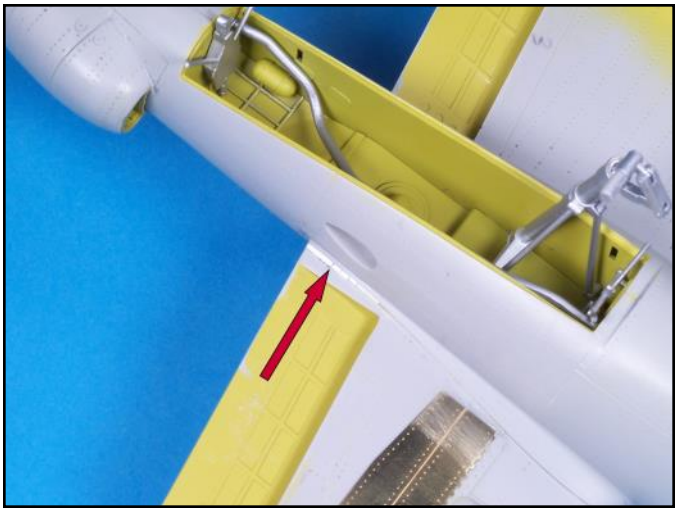
Note how the additional super glue is localized along the seam line. Careful application of super glue reduces the amount of scraping and sanding.



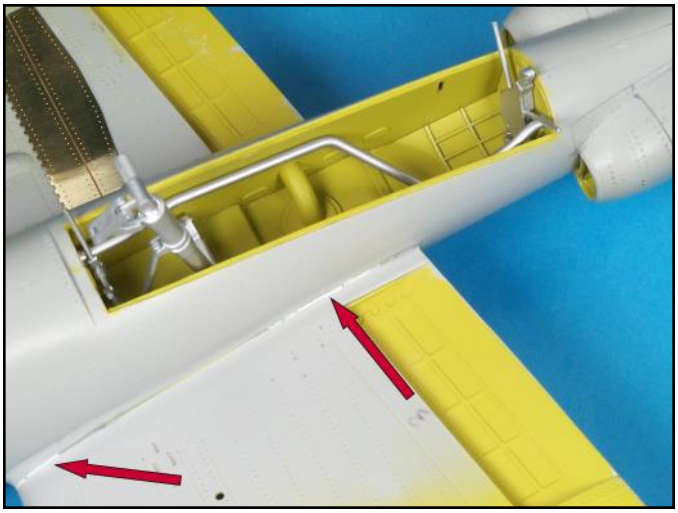
The outside area between the boom and the wing had voids that needed to be filled.



The inside area also had voids.



The voids were filled with tiny strips of plastic and super glue was applied to the entire seam line. The seam was then sanded smooth with wet, fine grit sandpaper wrapped around a length of thin balsa wood.

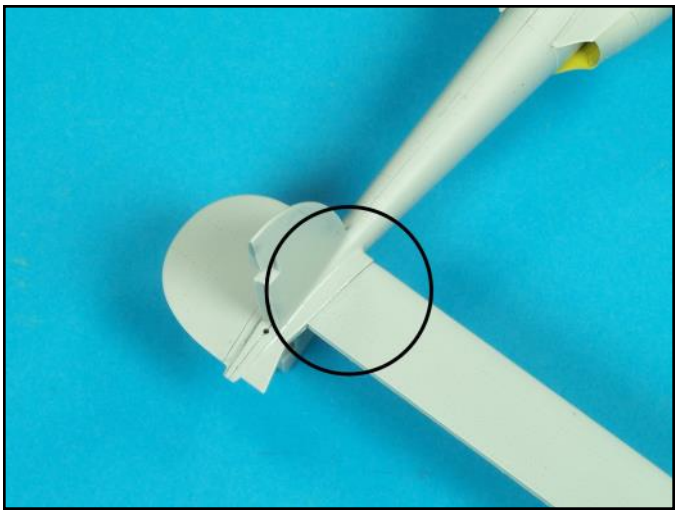


The inside area of each boom had more voids than the outside areas. The same technique was used to smooth out the interior voids.

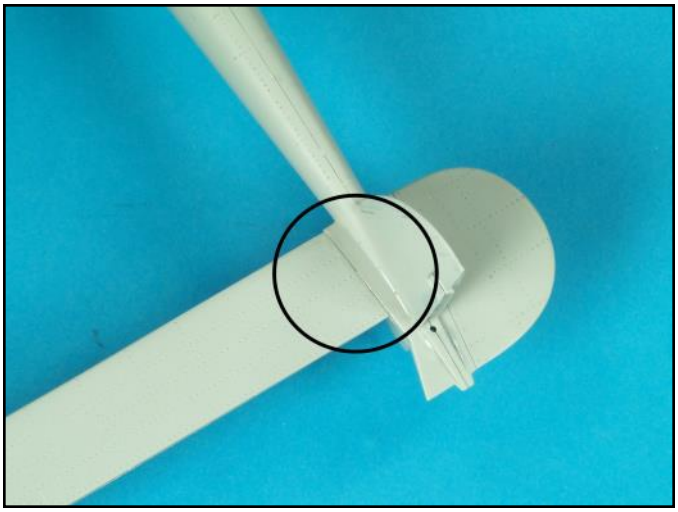
With the port boom now complete its time to position and attach the other boom and the wing elevator.

With the remaining boom and the wing elevator taped and positioned, several applications of super glue were applied along the seam lines.

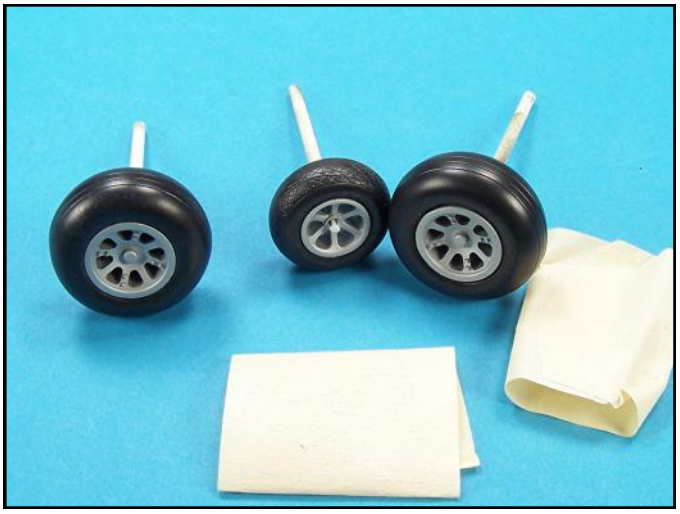
The seams and voids along the boom to wing connection points on the starboard side were the same as on the port side.



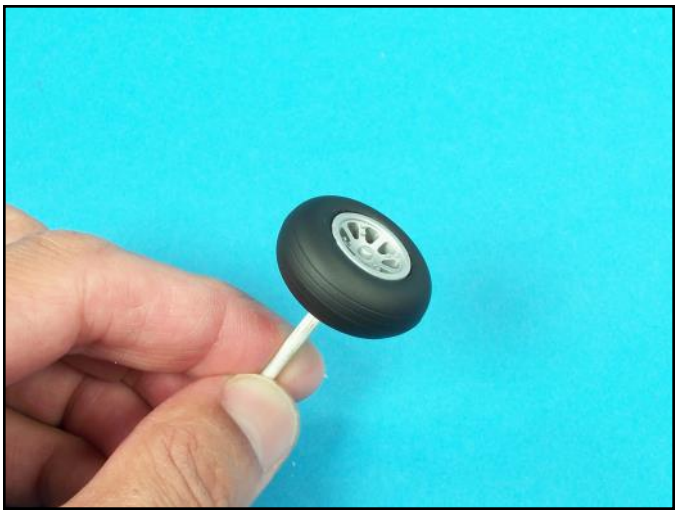
The connection point between the port wing elevator and the boom needs some reshaping.



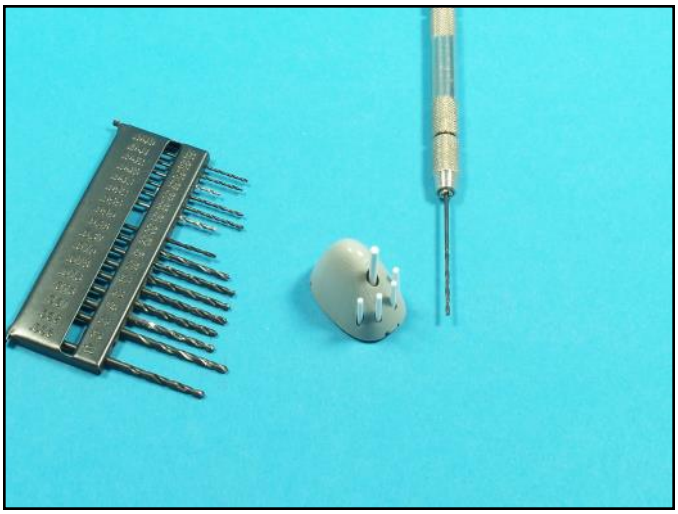
The connection point between the starboard wing elevator and the boom also needed some reshaping.



The wheel rims were airbrushed with metalizer aluminum and then glued into place. The flexible tires were perfectly cast, however they were dust magnets. Masking tape was used to remove the dust.



Once the dust was removed with masking tape, they were then immediately airbrushed with a clear flat finish to seal the flexible tires and tone down the metalizer color.

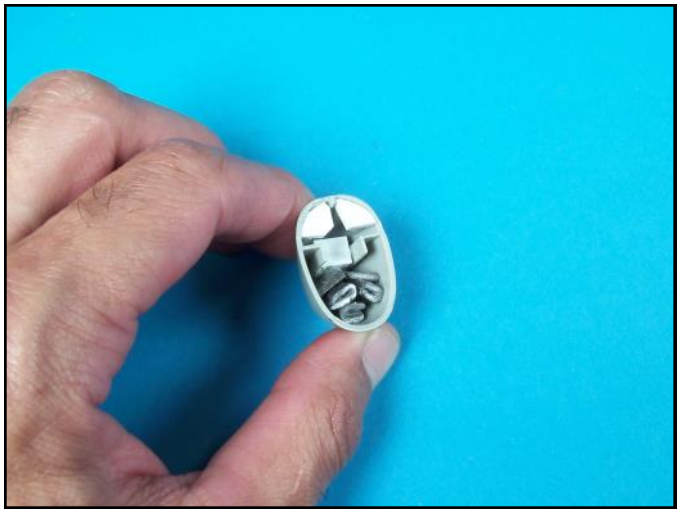


The kits supplied guns had minor misalignments between the halves so I chose to use plastic rod as replacements. The tips of the rods were drilled out using various drill bitt diameters.

Since I planned to fill the nose with weight I started taping parts at their approximate locations on the upper wind to help determine the proper amount of weight that will be needed.

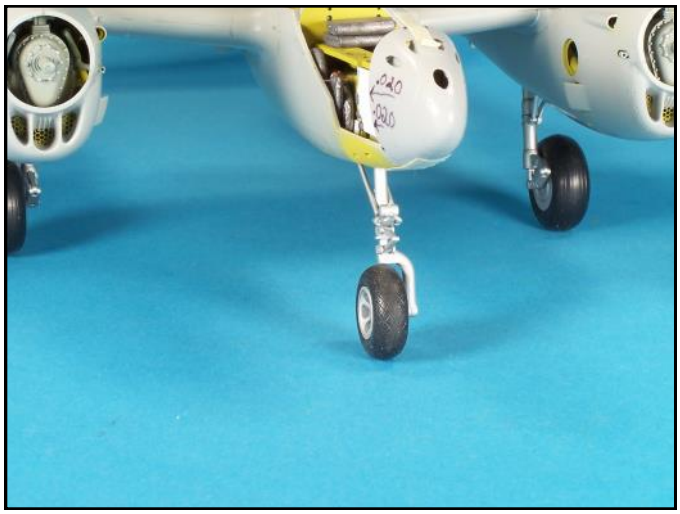
I also taped the nose and the forward fuselage halves in place to check the fit and made notes on the parts. There were voids on these parts that will need to be filled with plastic strips once they are glued into place.

With the forward fuselage panels removed I started to add weight. I flattened fishing weights and then cut and shaped them to fit inside the tight areas of the forward fuselage.

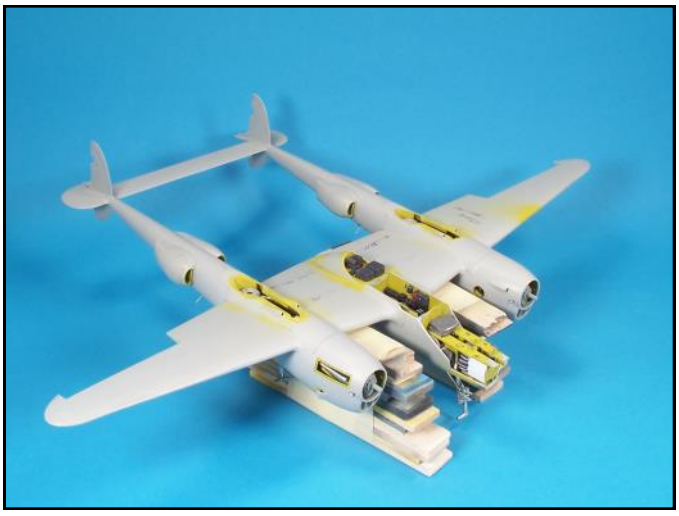


A considerable amount of weight was also added to the nose.

With the weight added, the aircraft seemed to be properly balanced on its landing gear.



To be sure there was enough weight in the nose area, I slipped on the wheels. I also wanted to be sure the forward landing gear would not bend due to the amount of weight.



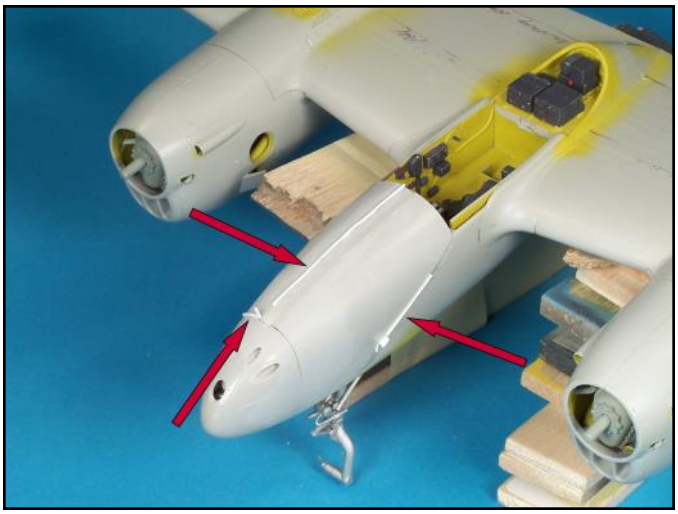
With the weight issue addressed I made two cradles out of balsa wood to complete the construction of the fuselage nose area.

Additional plastic was added to the starboard side of the nose to fill the void and then the nose and upper frame were glued into place.

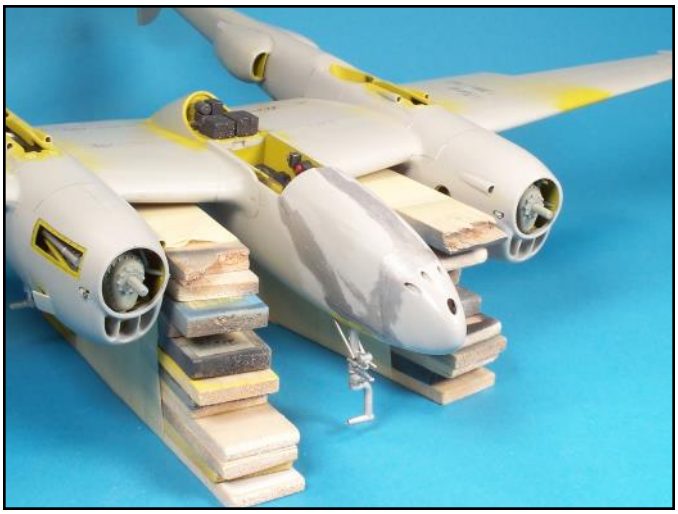
The forward fuselage panels were then glued into place.

There are misalignments between the upper forward fuselage panels and additional voids along the seam area where the forward fuselage halves meet the lower fuselage.

The portside forward fuselage panels were slightly worse than the starboard side.



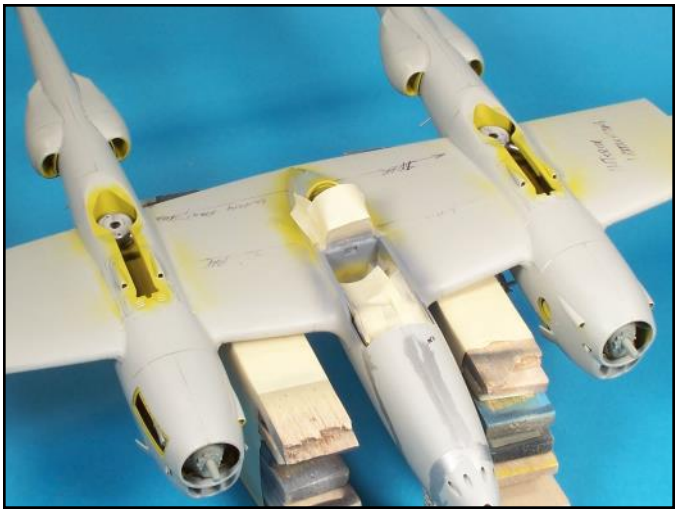
Various lengths and thicknesses of plastic were inserted into the voids and then super glued into place.



It took several iterations of super glue, scraping, wet sanding and rechecking with silver paint before the nose was smooth.

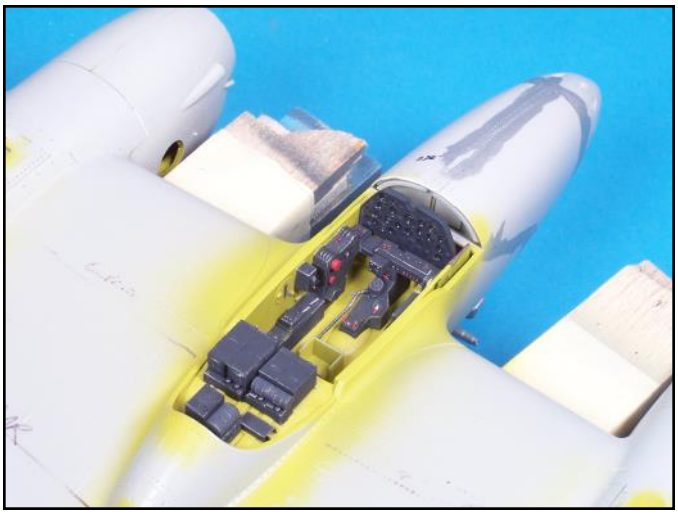
The seam between the cockpit tub and the electronics shelf was carefully filled with tiny drops of super glue and then scrapped smooth. I used a tiny ball of 0000 steel wool to polish the plastic and smooth it out.

The cockpit area was then carefully masked for airbrushing the seam area.

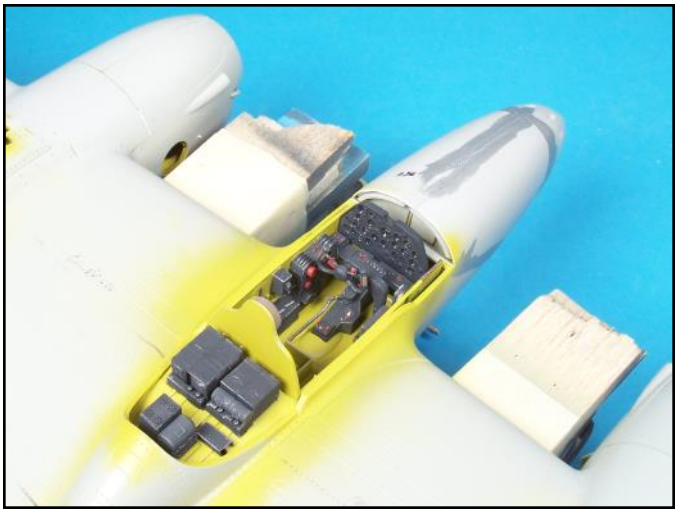


The area was first primed.

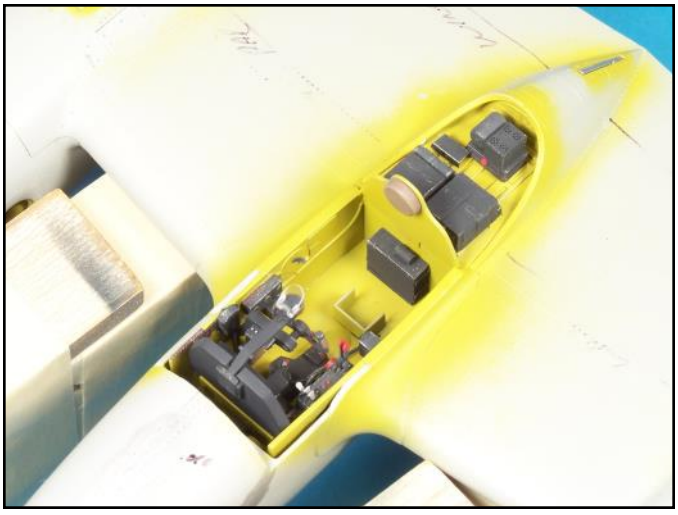
The area was then airbrushed with zinc chromate.



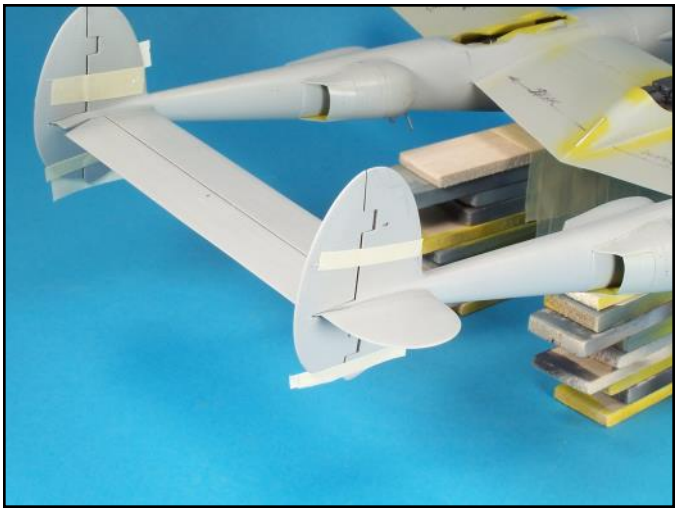
The instrument console was installed first.



The control yoke was next along with some of the small photoetch details.

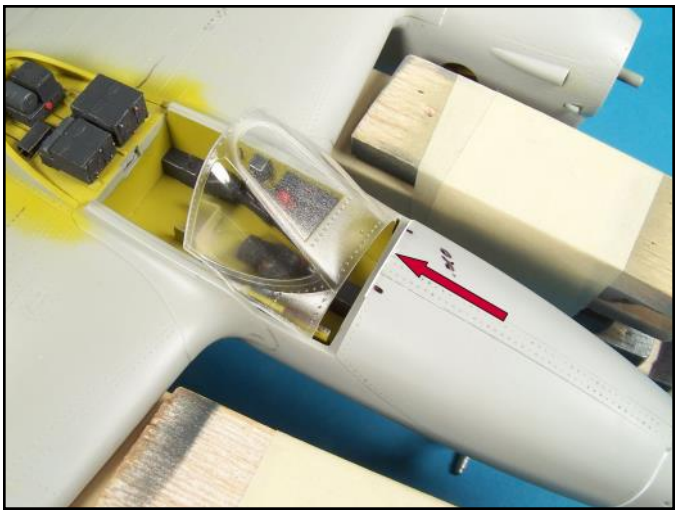


The gun sight was installed along with the photoetch engine controls.

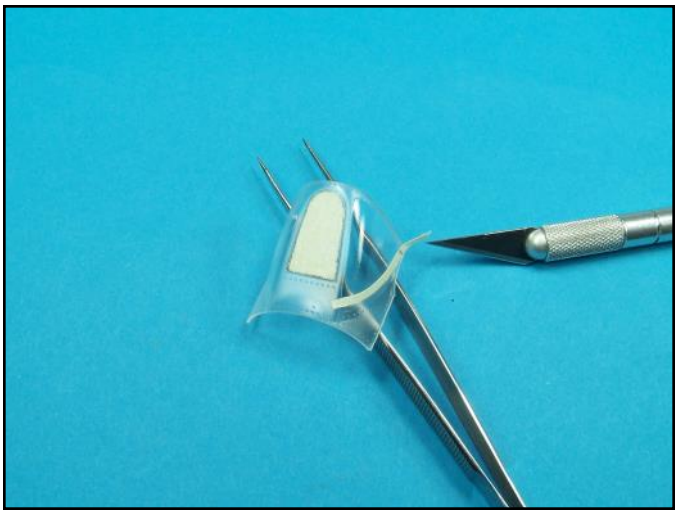


Next, the rudders and elevator were taped into place, carefully positioned and then super glued with tiny drops of glue.

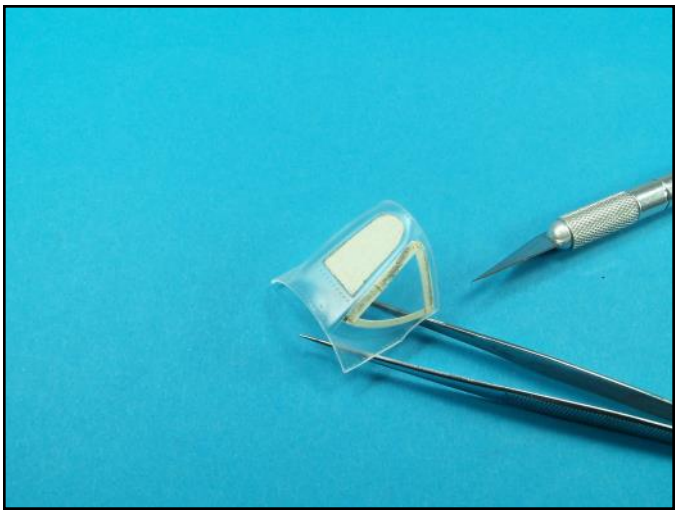
The balsa wood cradles really helped with the construction of the forward fuselage area and the aft control surfaces.



The canopy windscreen/fuselage part was test fitted.

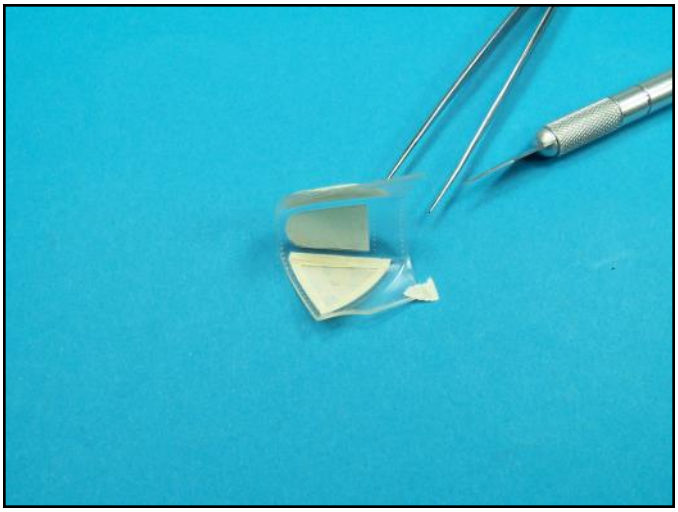


To mask the windscreen I used a piece of masking tape for the forward area. The framing was high enough for a pencil to outline the edge. I then carefully cut the tape along this pencil line.



Thin strips of masking tape were applied along the edges of the framing on both sides of the windscreen.

Smaller sections of masking tape were added to fill in the areas outlined by the masking tape.

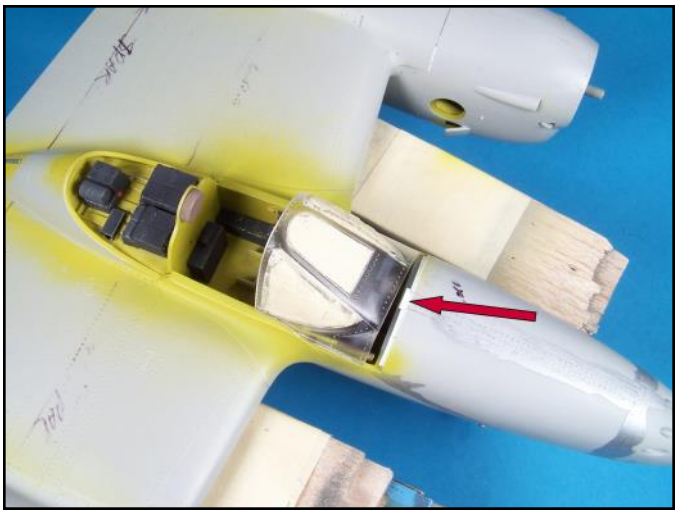


Once the outside masking was complete, the exterior edges of the masking were used as a guide for the interior masking.

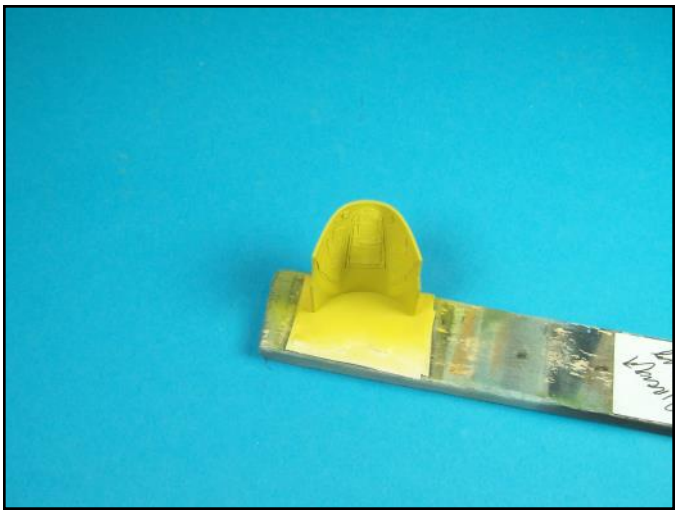
Note how tiny strips of masking tape were used to outline the center windscreen panel.

The interior panels are now completely masked.

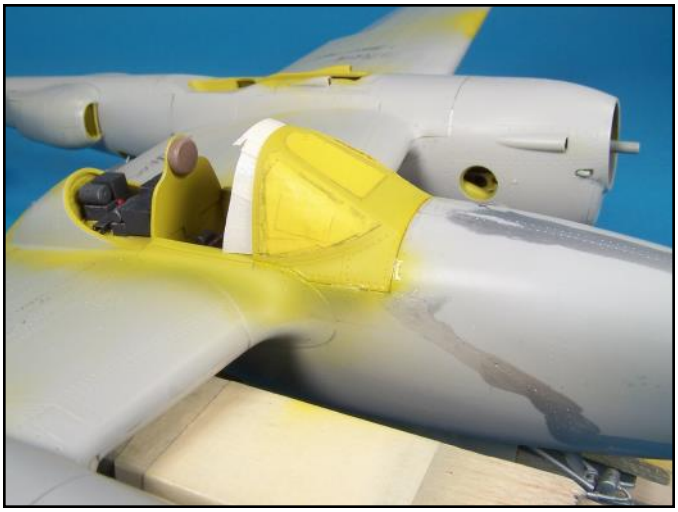
I made a final close inspection of the masking and made minor adjustments to the edges of the interior masking.



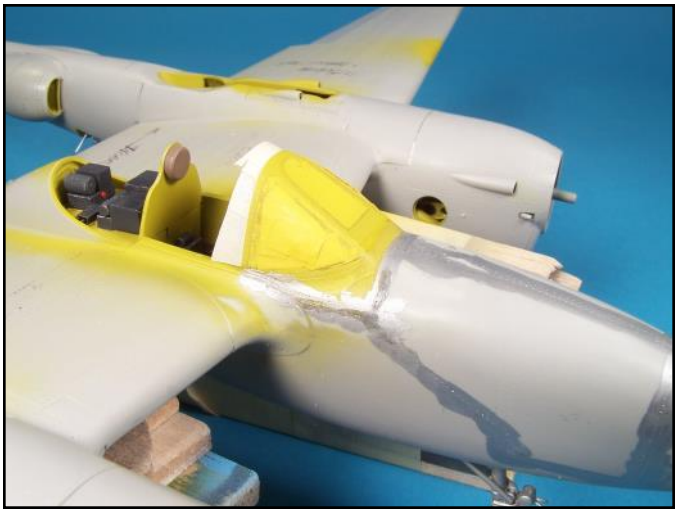
I added a gluing lip using a .015 inch thick plastic strip to strengthen the canopy seam.



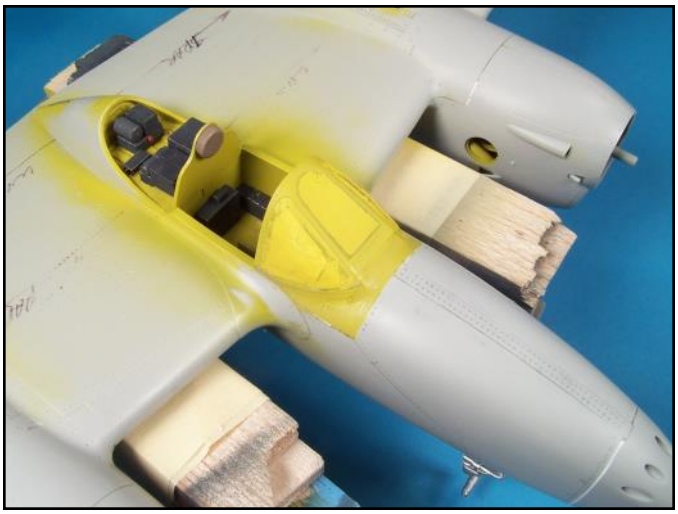
The windscreen interior was airbrushed with zinc chromate. The interior masking was then removed.



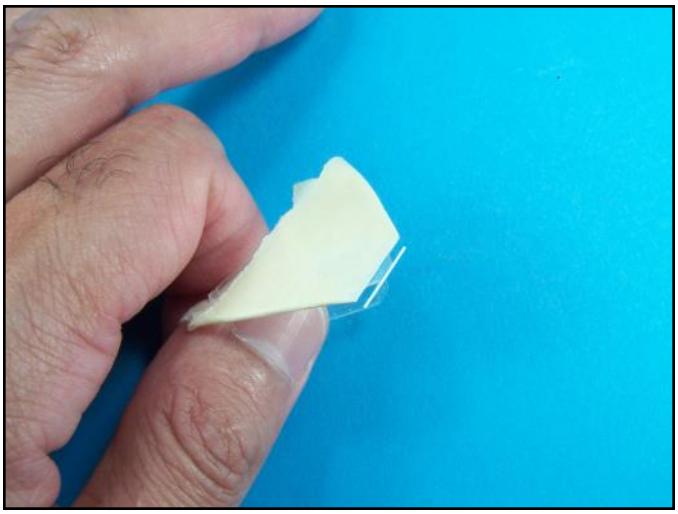
To prevent the clear plastic from being fogged by super glue, I covered the inside areas with large strips of masking tape. I made the lengths long enough so they could be removed after the seam work was complete.



Several iterations of super glue applications and wet sanding were needed to fill the seem between the windscreen and the fuselage.

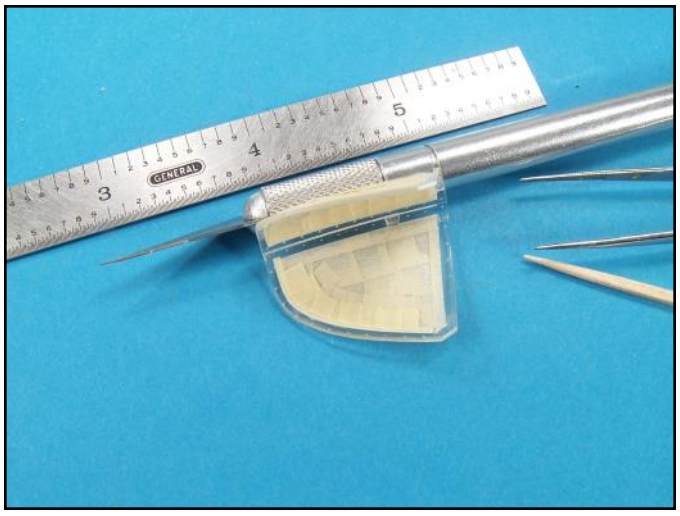


With the windscreen complete, the interior masking has been removed.

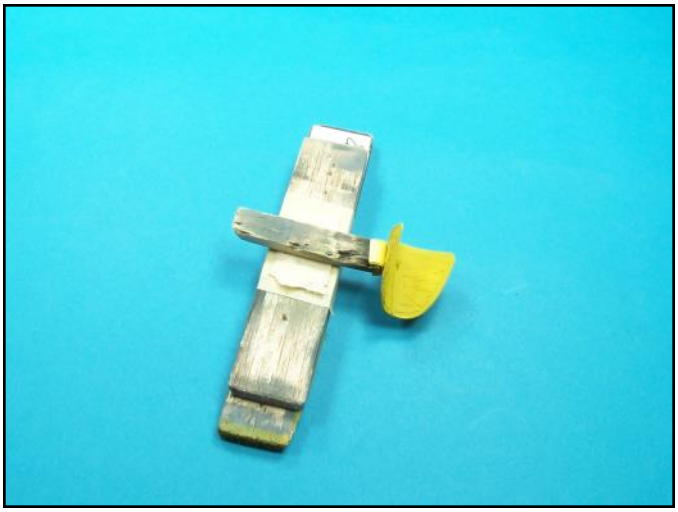


One side of the aft canopy was slightly short so I added a tiny strip of .015 inch thick plastic.

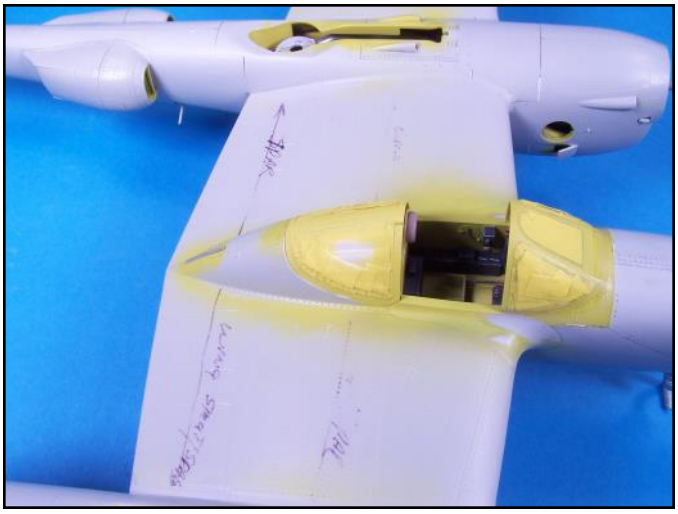
The exterior area of the aft canopy was masked first.



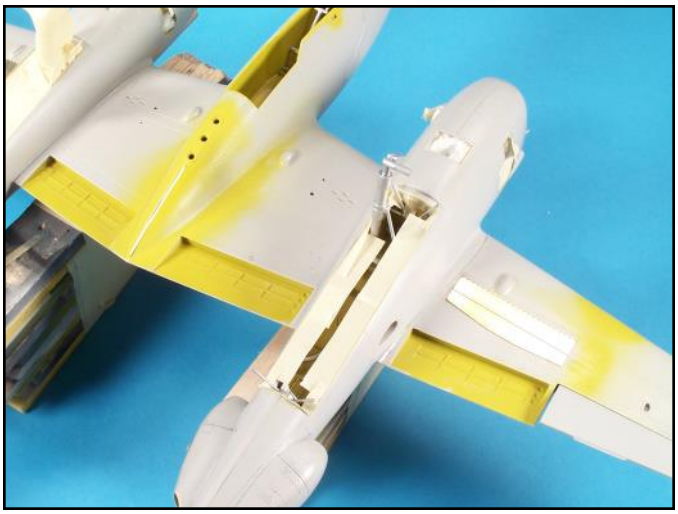
Then the interior area was masked.



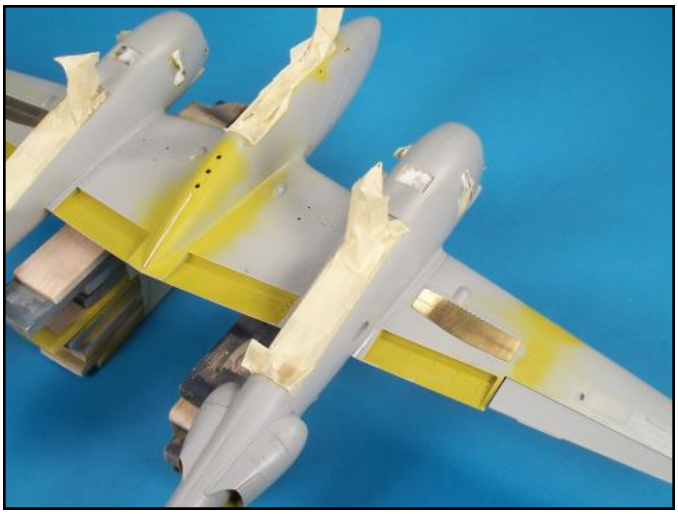
The aft canopy interior was airbrushed with zinc chromate and then the interior masking was removed.



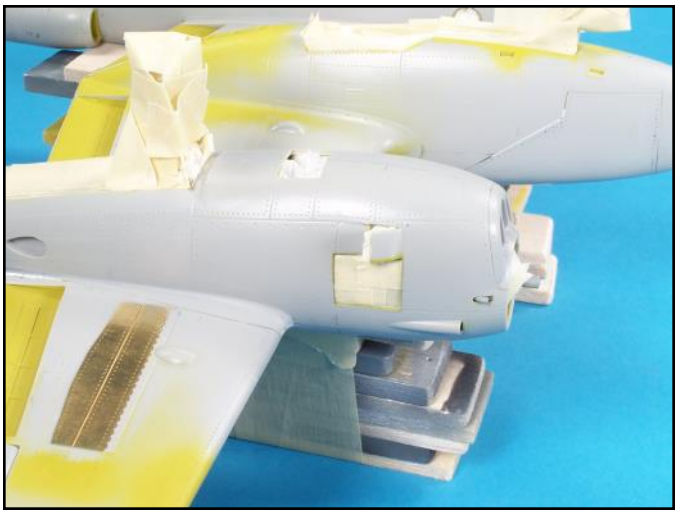
The aft canopy was then glued into place.



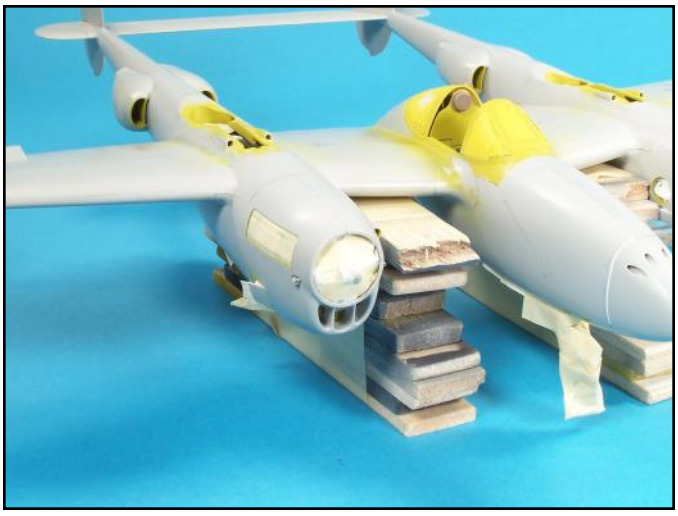
To prepare the aircraft exterior for airbrushing I started masking the landing gear bays first.



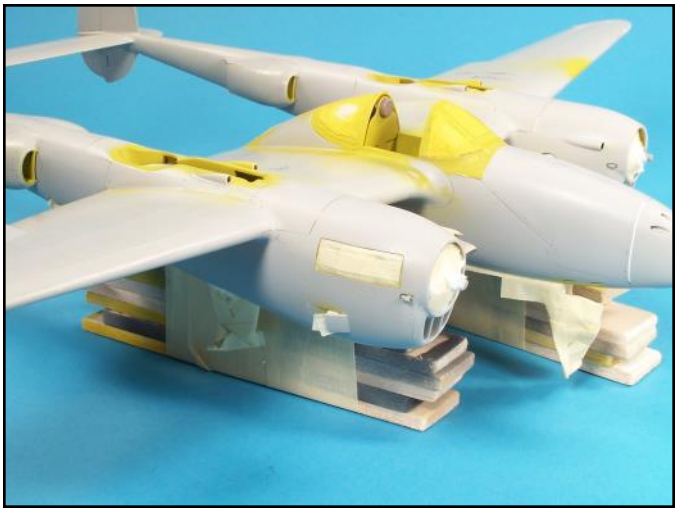
The landing gear masking is complete and now it is time to start on the engine areas.



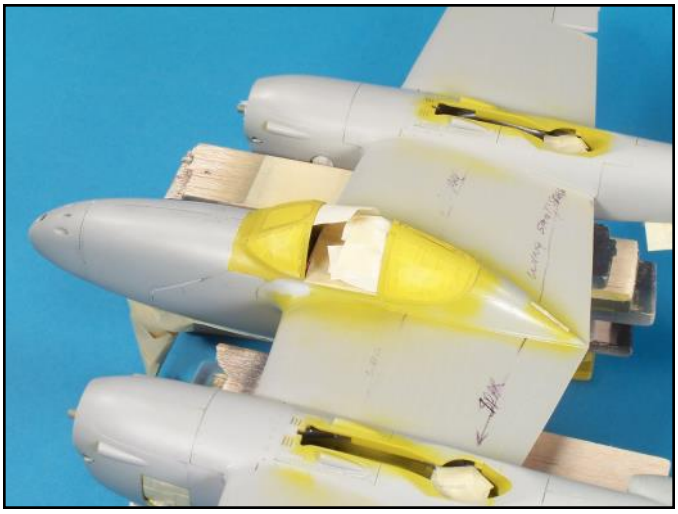
Careful masking of the open engine areas will prevent airbrush overspray from ruining the painted interior areas.



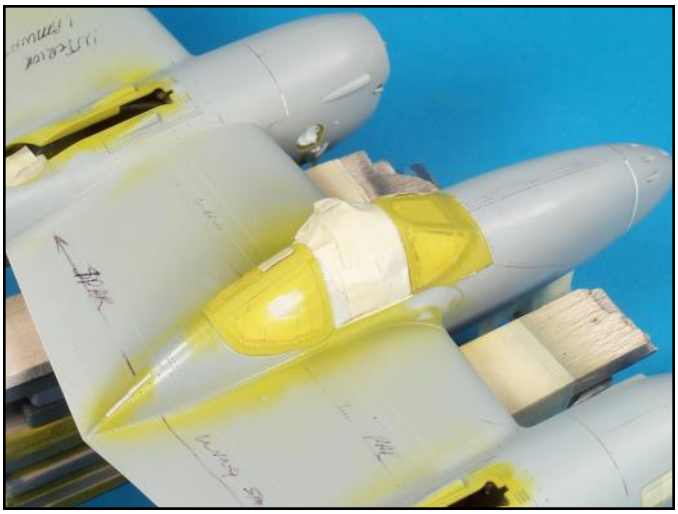
The engine openings were stuffed with tissue paper and then covered with small strips of masking tape.



The engine masking is now complete.



The cockpit interior was carefully stuffed with tissue paper and then covered with masking tape. The large sections of masking tape were applied to the canopy opening.

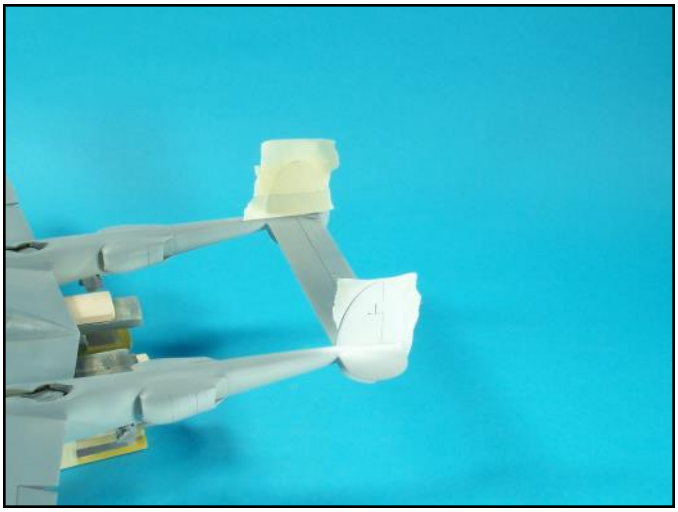


The masking of the cockpit area is now complete.

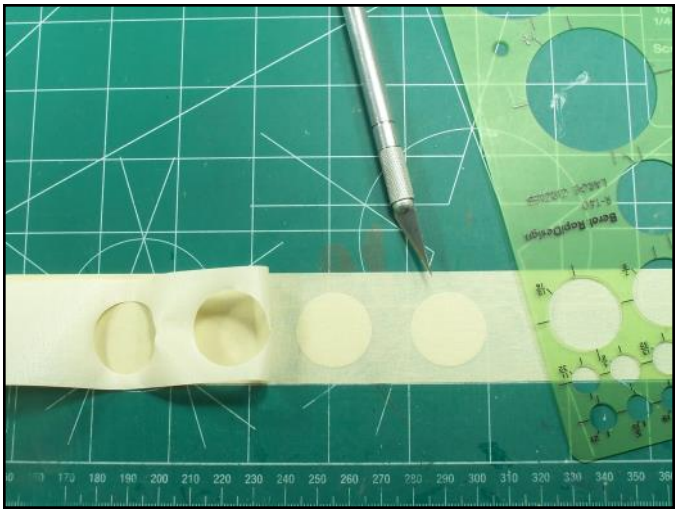
The balsa cradles will also be used for the airbrushing of the aircraft. A final check of all the masking was done prior to priming the surfaces.

The entire aircraft was primed and a final check of the fuselage and wing surfaces was completed prior to applying the final paint colors.

Two coats of light sea gray were applied to the underside of the aircraft. This color was also applied along the sides of the booms.

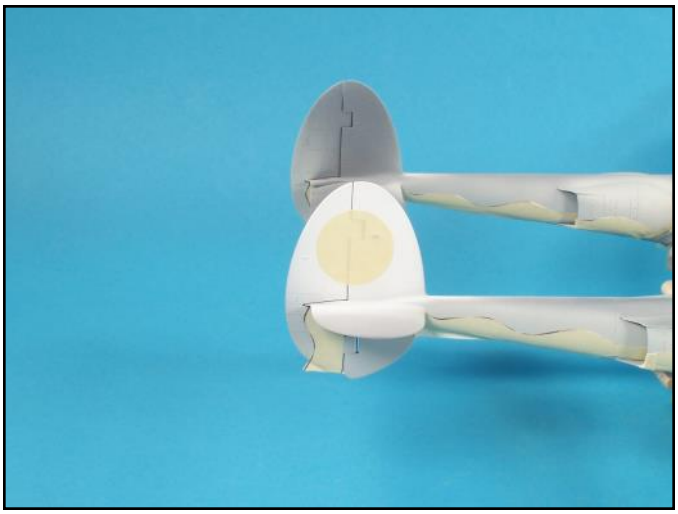


I decided to replace the white circle decals with painted ones. The outer rudder surfaces were airbrushed with flat white.

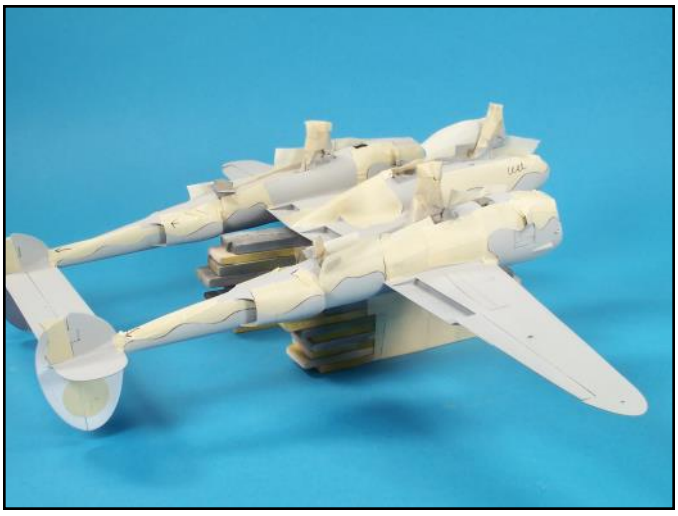


I used a drafting circle template to make circle masks. I had to make several before I got two that were perfect round shapes.

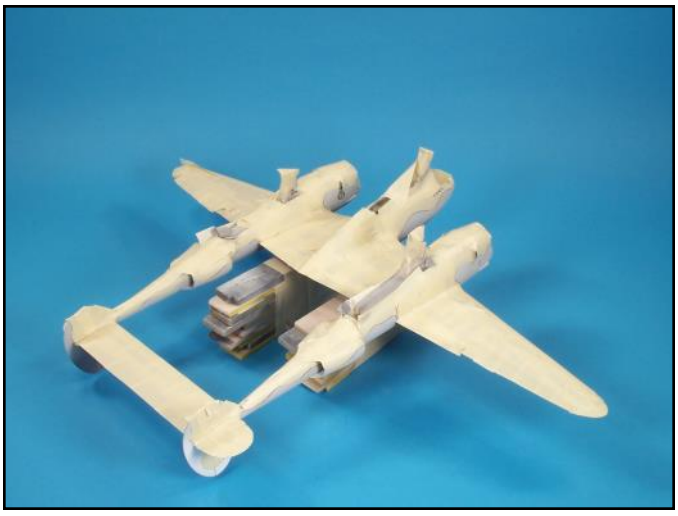
I made templates for the demarcation lines between the light sea gray and the olive drab colors with cardstock and then traced the shapes onto masking tape.



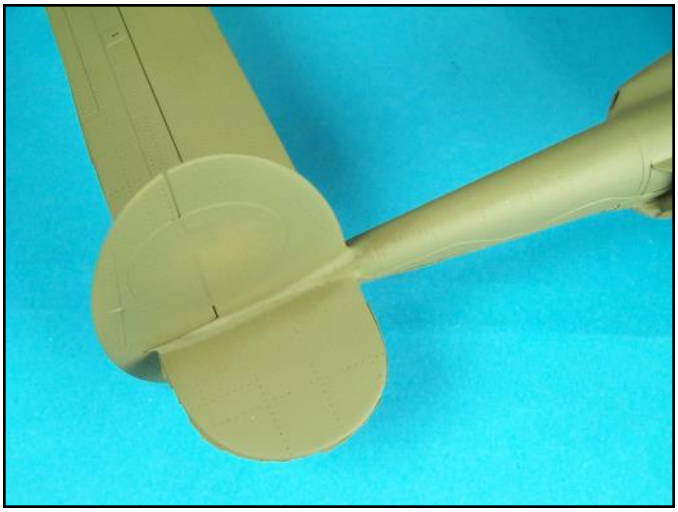
The circle masks were applied to the sides of the rudders and then I started applying the shaped masking tape lengths to the booms.



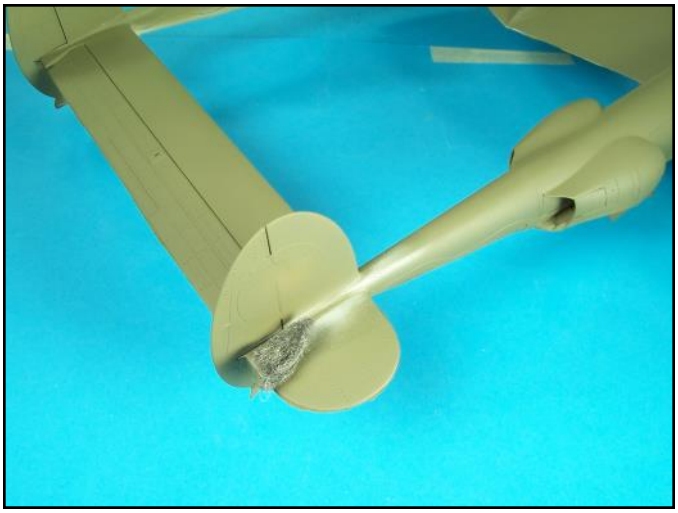
The shaped masking tape lengths applied on the booms were completed and then the remaining areas were masked with large sections of masking tape.



The aircraft underside and lower boom areas are completely masked and it is time to apply the olive drab color.

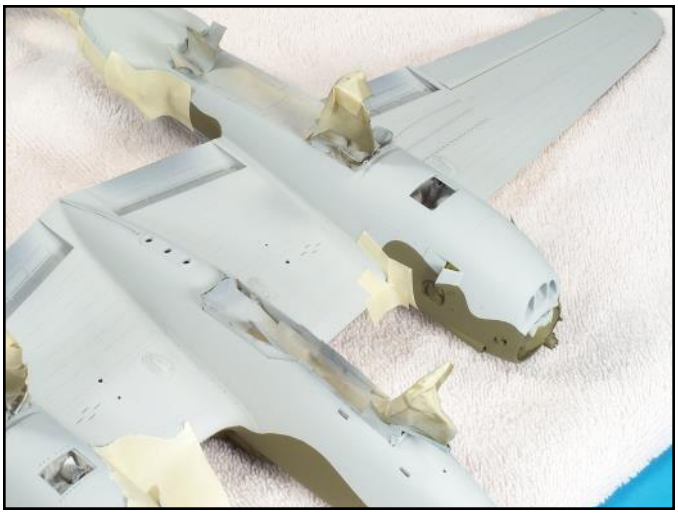


There was a little orange peel effect from the airbrush on the starboard tail area.



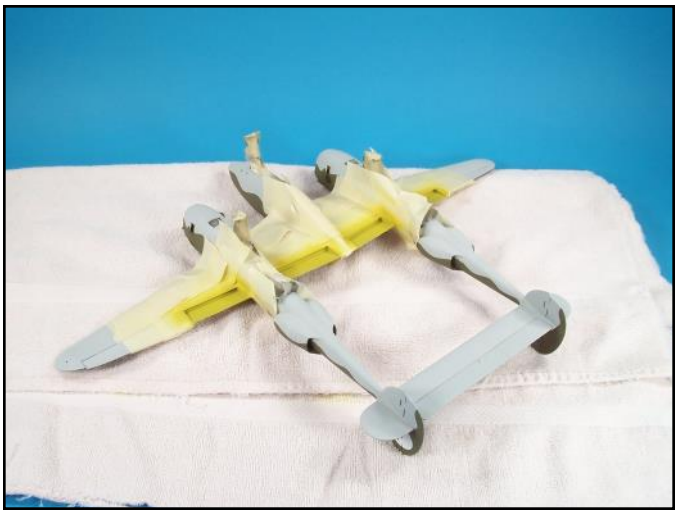
This area was lightly rubbed with 0000 steel wool to remove the orange peel. The area was then airbrushed again.

The olive drab color was slightly lightened with a few drops of flat white.



There was a tiny amount of bleeding of the olive drab color, so I applied strips of masking tape in those areas and touched up the paint.

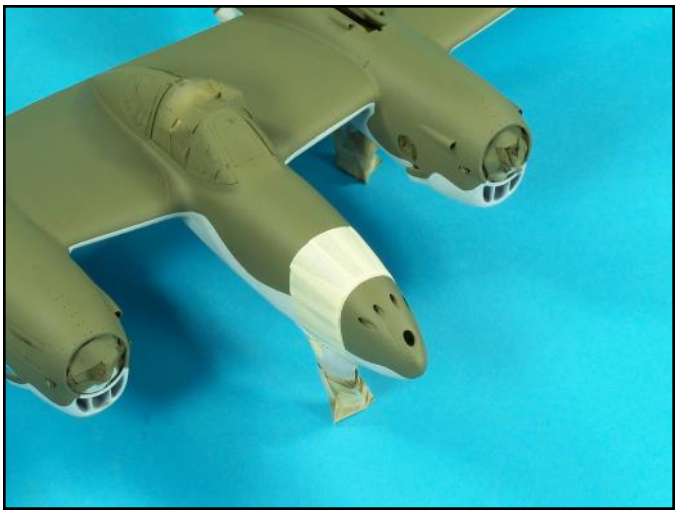
The areas around the interior flap areas were masked off and then zinc chromate was airbrushed at 15 PSI.



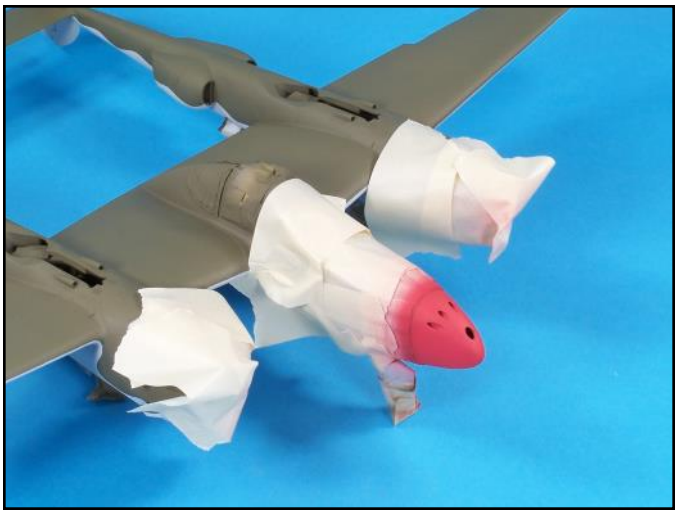
Careful masking and airbrushing at a low pressure resulted in a smooth, clean paint application.

The tape around the interior flap openings was removed to check the surfaces around the flap openings for paint bleeding.

Note the sharp demarcation lines between the light sea gray color and the zinc chromate color.

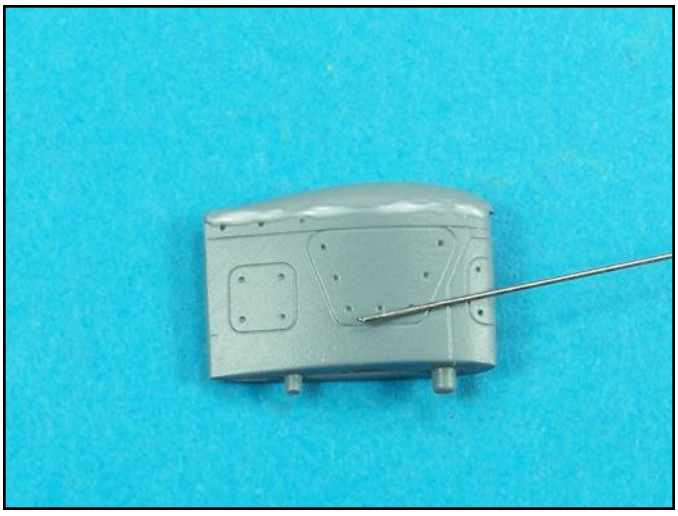


The nose area was masked off so that this area could be airbrushed.

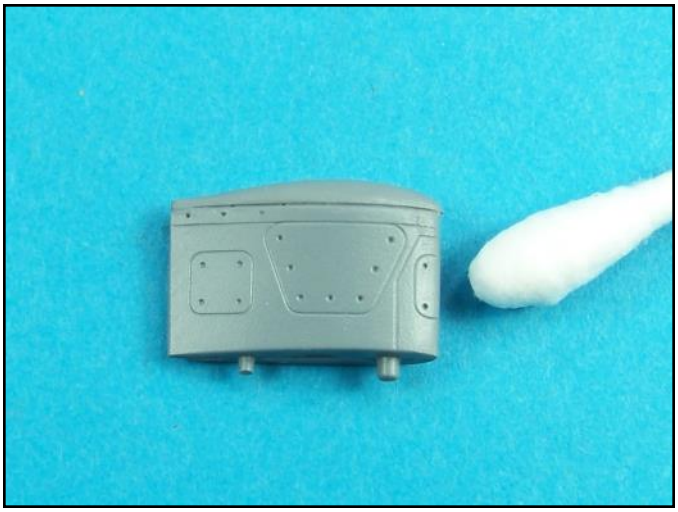


The flat red color was slightly lightened with a few drops of flat white.

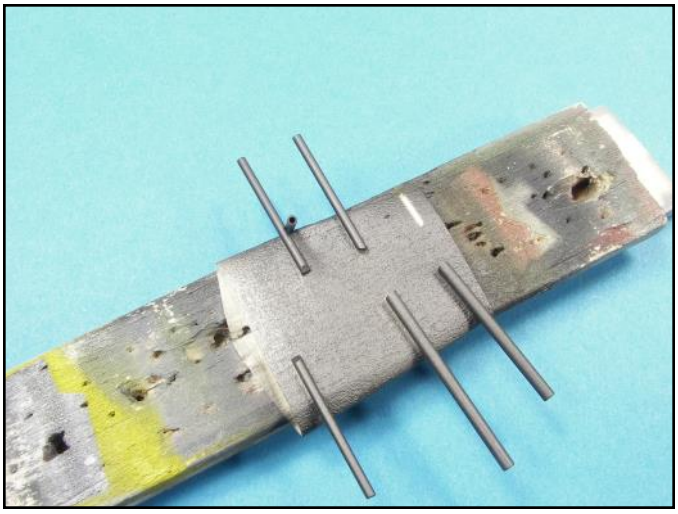
The entire surface of the aircraft was given a coat of clear gloss for the application of the decals.



The under wing pylons had voids which were easily filled with white glue.

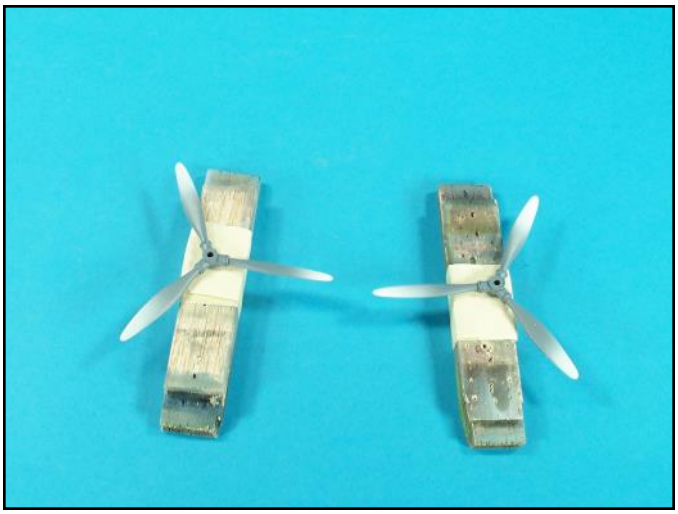


The white glue was contoured with the tip of a damp Q-tip and then the area was primed to seal the dried white glue.

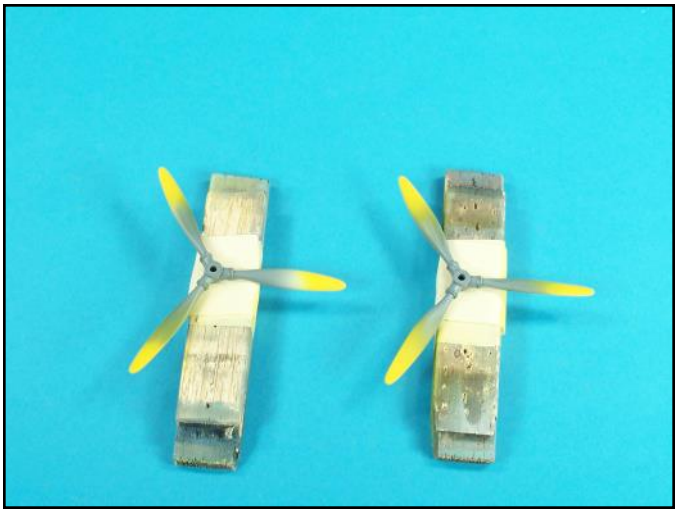


The guns were airbrushed with Testors metalizer gun metal color.

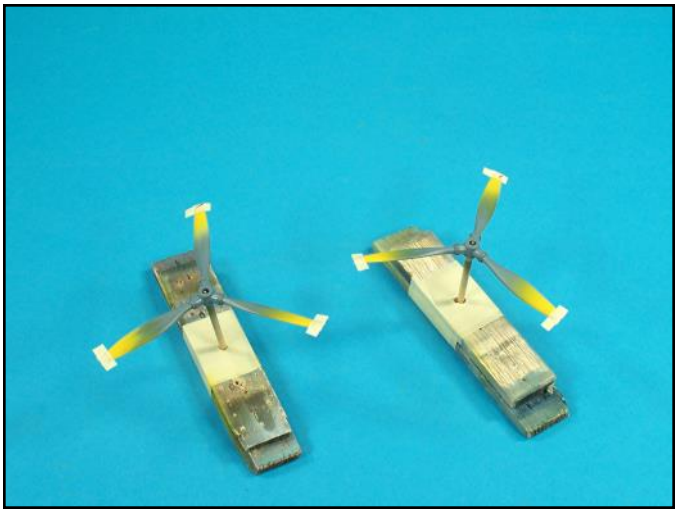
Revell P-38 propellers had a better shape than the kit's propellers, but each blade had a depression, which was filled with a small strip of plastic. The surface was then wet sanded smooth and then primed.



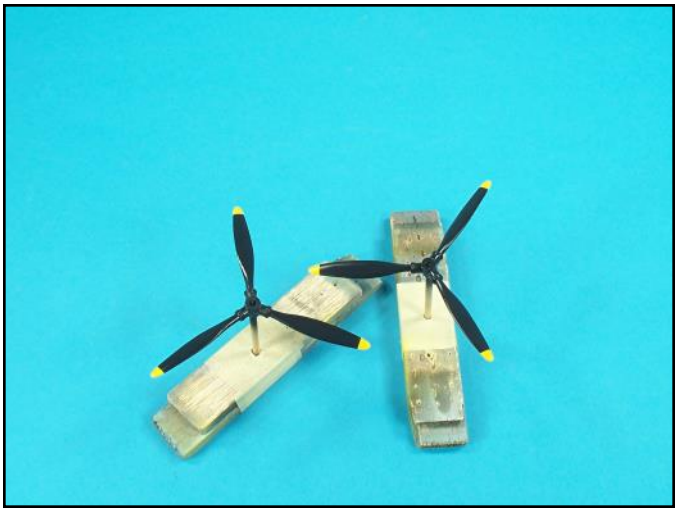
Flat white was airbrushed on the propeller tips as a base color for flat yellow. Airbrushing flat yellow over flat white yields a much brighter yellow.



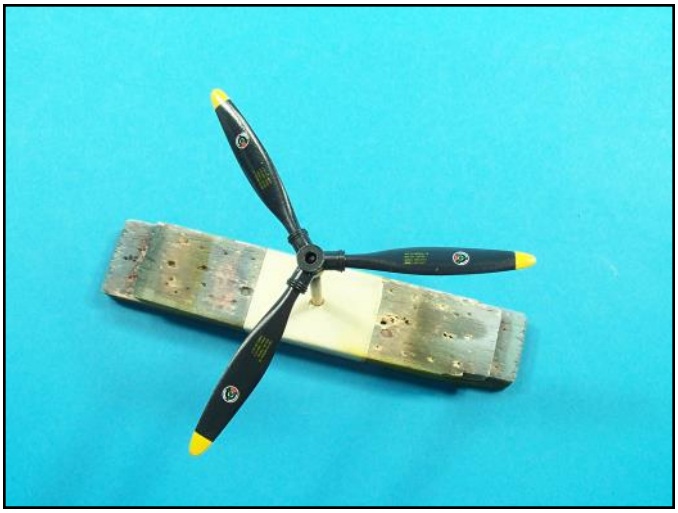
The tips were then airbrushed flat yellow.



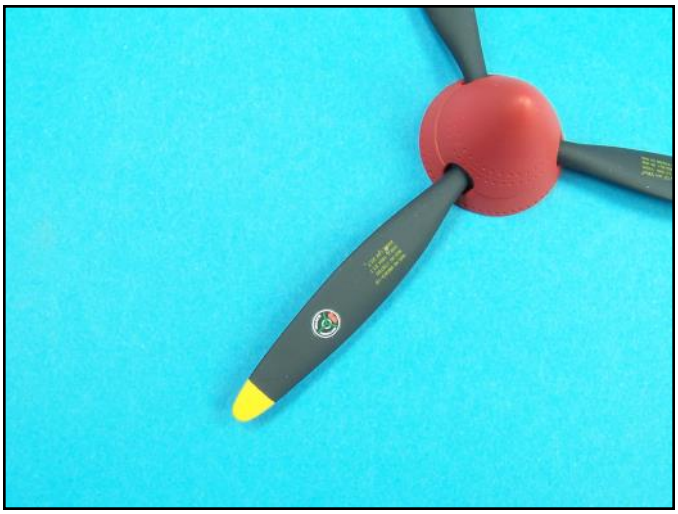
The flat yellow tips were then masked off.



The propellers were then airbrushed with flat black and then the masking tape on the yellow tips was removed.

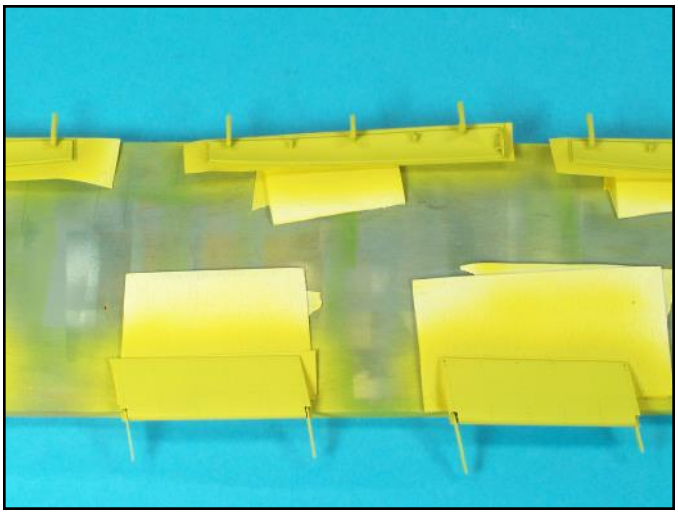


The propellers received a coat of clear gloss and then the propeller decals were applied.

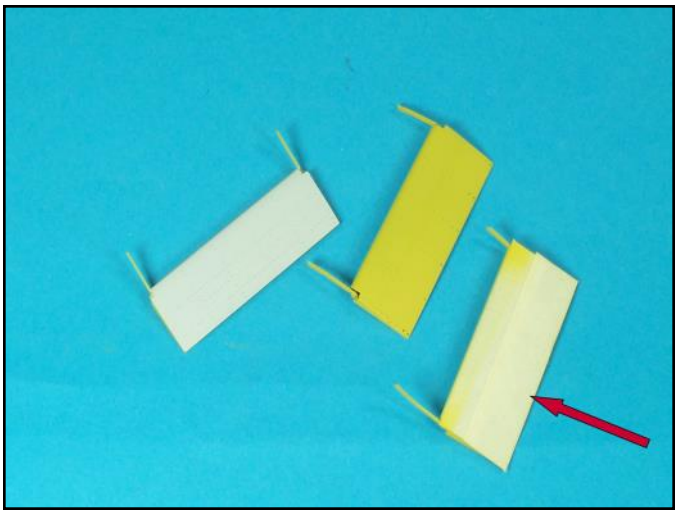


The propellers were airbrushed with a clear flat and then the hubs were airbrushed with the same flat red color as the fuselage nose area. The hubs were then glued to the propellers.

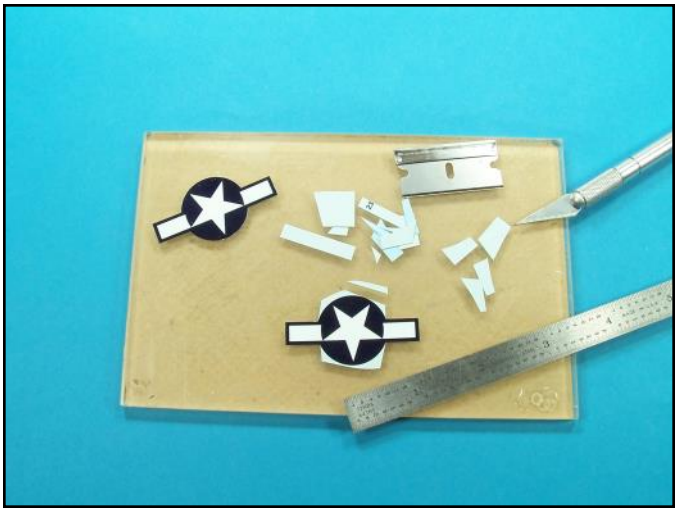
The flaps, landing gear doors and other parts were attached to a length of balsa wood and then primed.



The exterior of the landing gear doors and the flap areas were airbrushed light sea gray first. Then the surfaces were masked over and the inside areas airbrushed with zinc chromate.



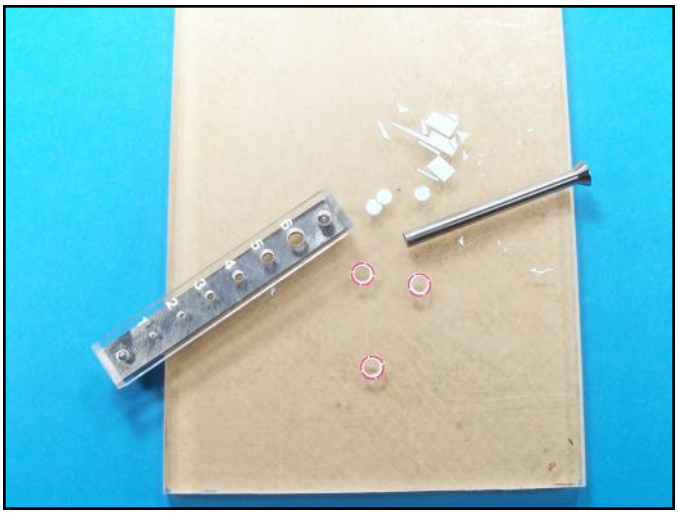
The demarcation lines between colors is sharp.



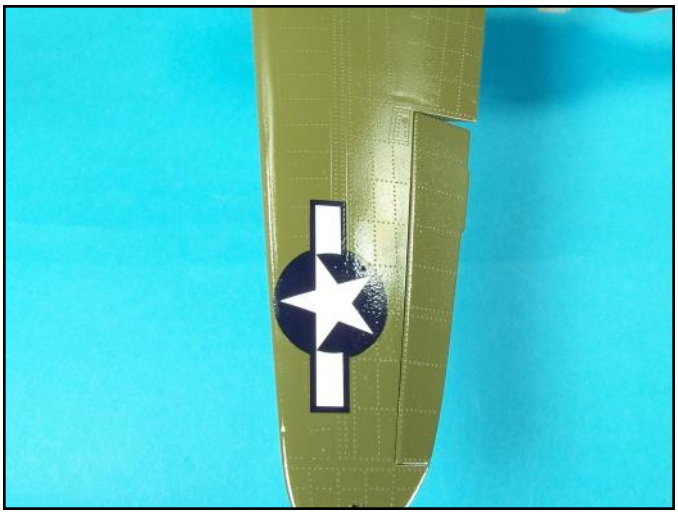
The clear film around the decals were cut off with a sharp number 11 X-Acto blade. Removing as much of the clear film on the decal reduces the chances of these areas silvering.

Even small decals should have as much of their clear film removed.

Larger decals can also benefit from removing as much clear film as possible.

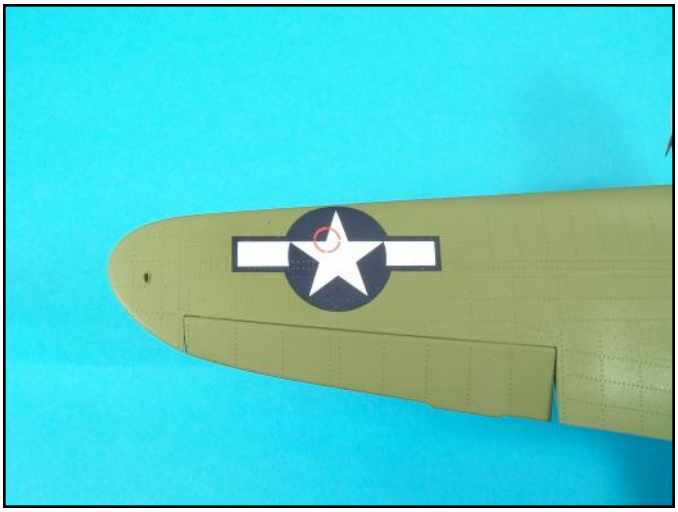


The round circles around fuel ports can sometimes silver so to prevent this from occurring, use a Waldron Punch Tool to remove some of the clear film from the center area.



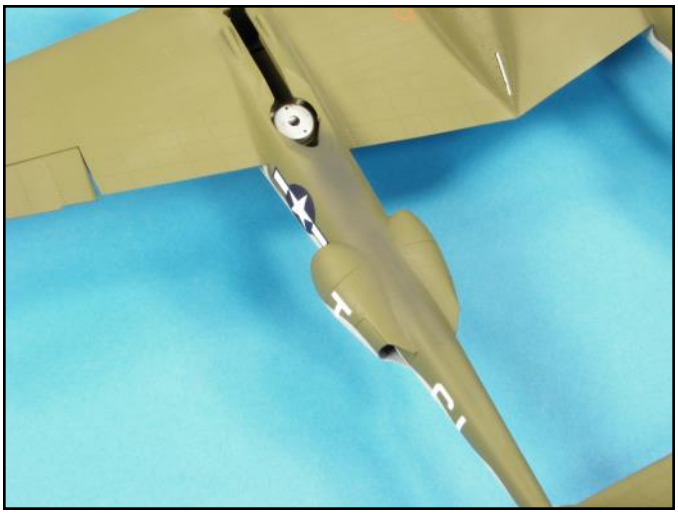
Two part Mirosol decal setting solution was used to set the decals and then soften them to get them to snug down around all the surface detail.

With all the decals applied, its time to seal them and restore the flat olive drab color with a clear flat overcoat.



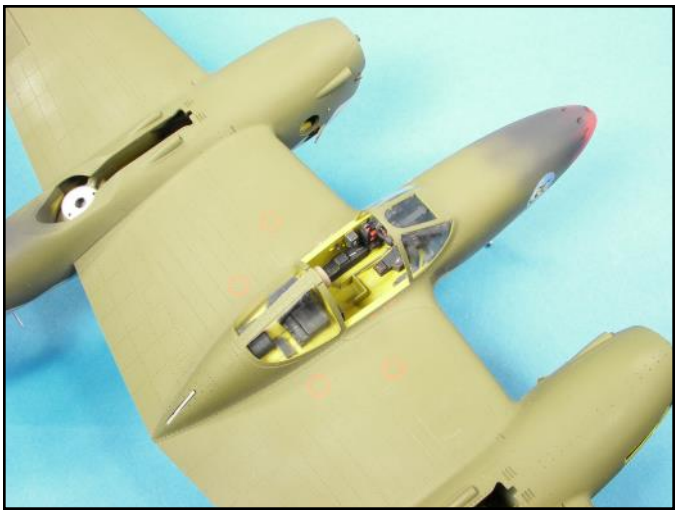
Note the difference in appearance of the wing insignia now that the surface has been airbrushed with a clear flat overcoat.

The aircraft is now starting to look like a P-38 Lightning.



I airbrushed a very light flat black color across the tops of the booms to represent exhaust stains.

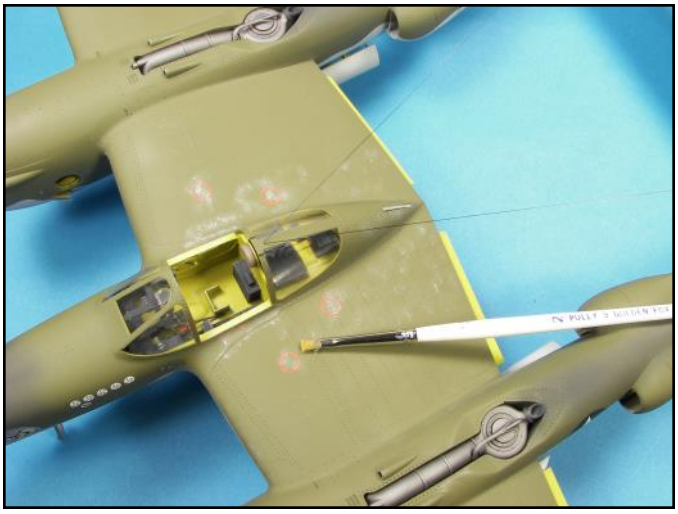
I used a slightly darker shade of flat black to represent the gun power stains across the nose area of the fuselage.



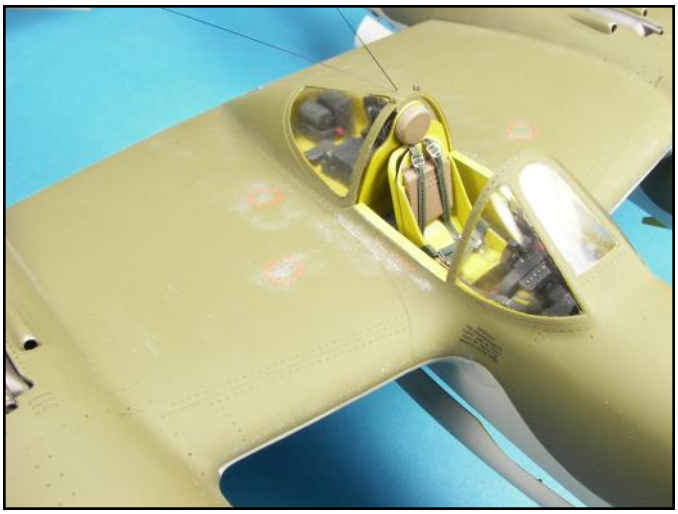
I should have applied the gun power stains in more of a streaked appearance rather than across the surface of the nose area.

The flaps and the landing gear doors were attached with tiny drops of white glue. White glue sticks very well to flat paint colors.

I used a small flat brush to apply tiny amounts of silver paint along the leading edges of the wings and around the engine openings.

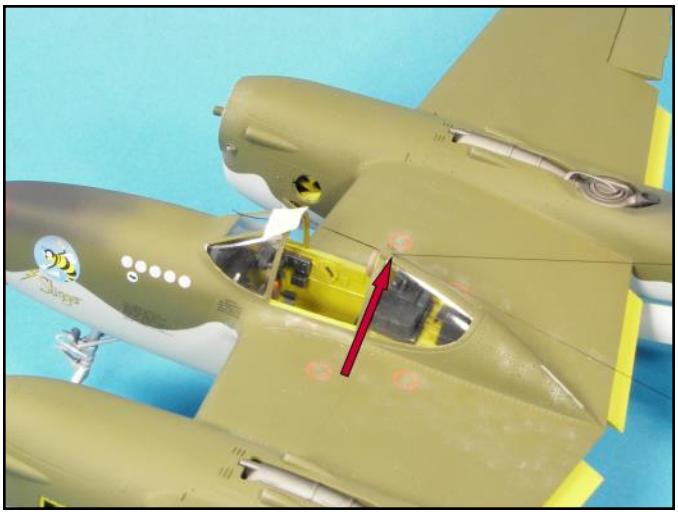


I used the same flat brush to stipple the surface of the wing areas around the canopy.

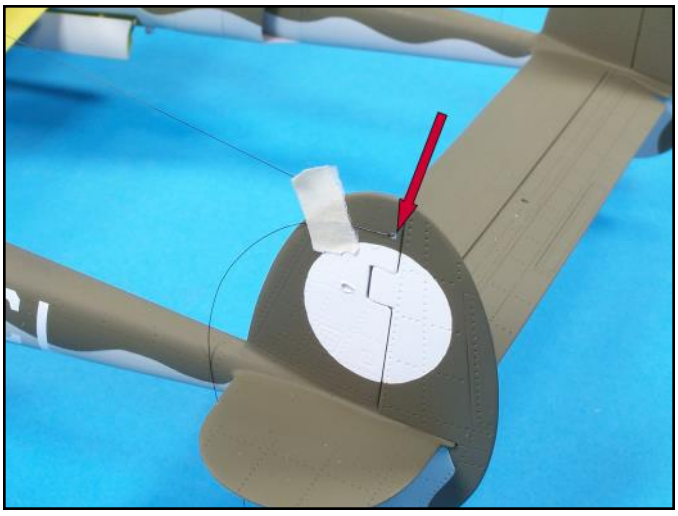


The seat was given a final fit check.

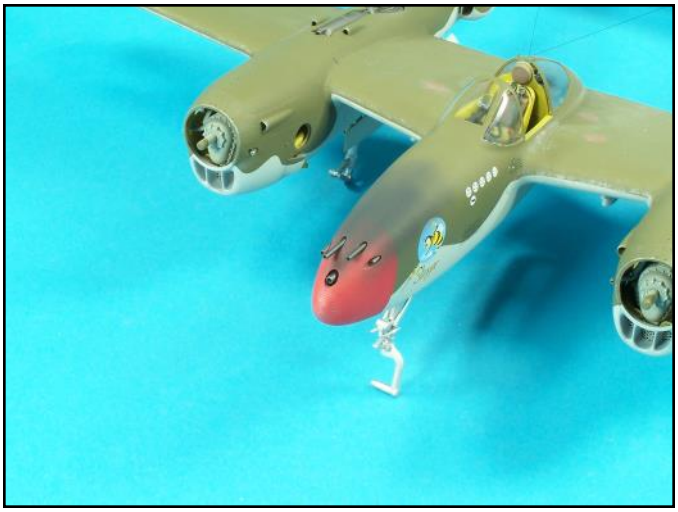
I drilled a hole through the canopy and through the tails using a .0136 (number 80) drill bitt for the antennas.



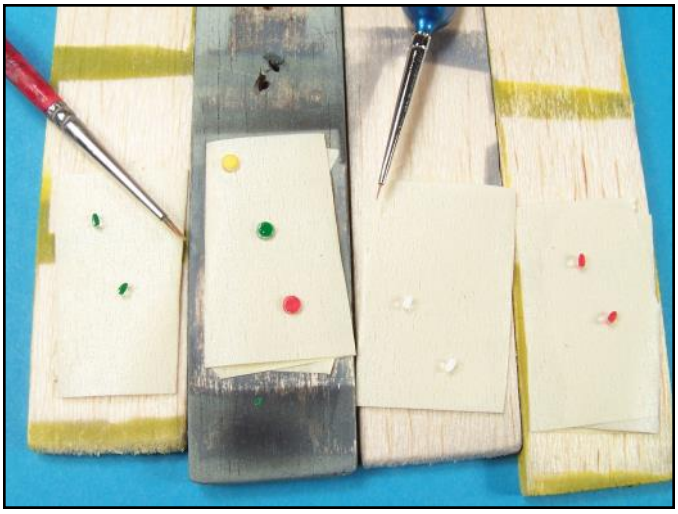
Nylon sewing thread stained with a black indelible marker was used for the antenna wires. The antenna wires were threaded through the hole in the canopy and then taped.



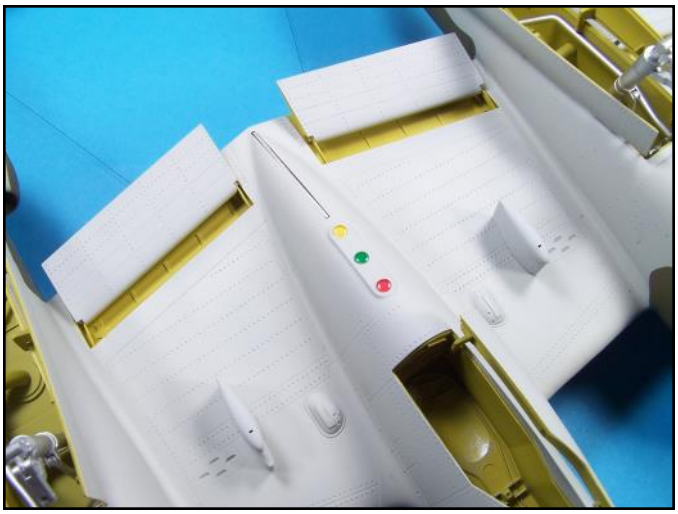
The antenna wires were then threaded through the holes in the tails, taped and then a tiny drop of super glue was applied to each hole. The excess was carefully cut off and the area touched up with detail brush.



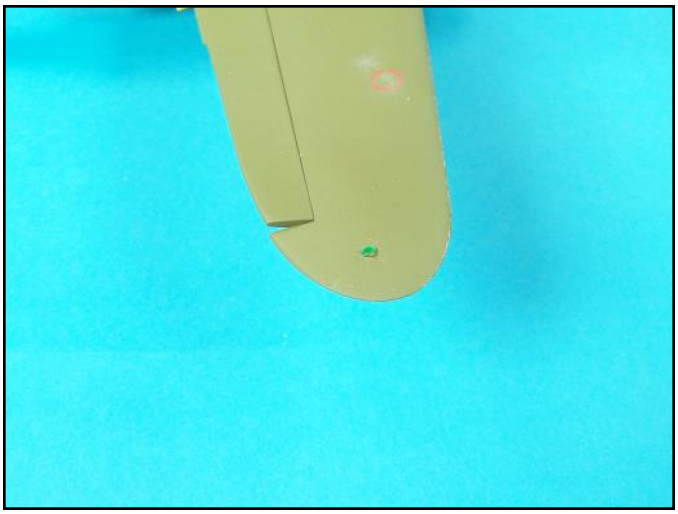
The guns were installed using white glue.



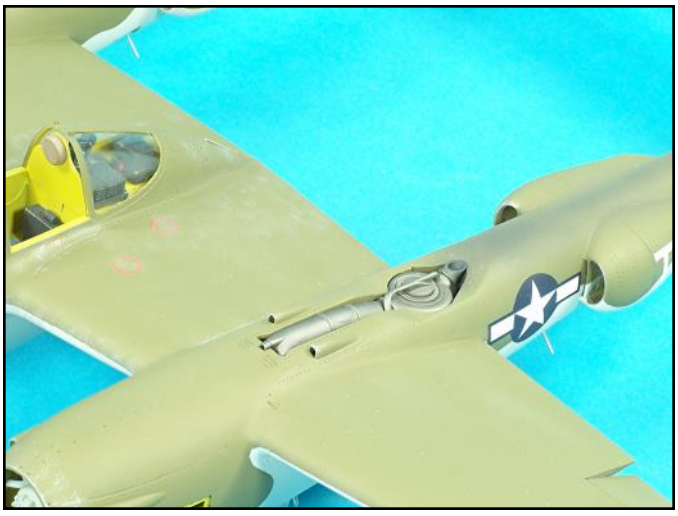
The navigation and formation lights were painted on the inside surface with a detail brush with flat yellow, red and green.



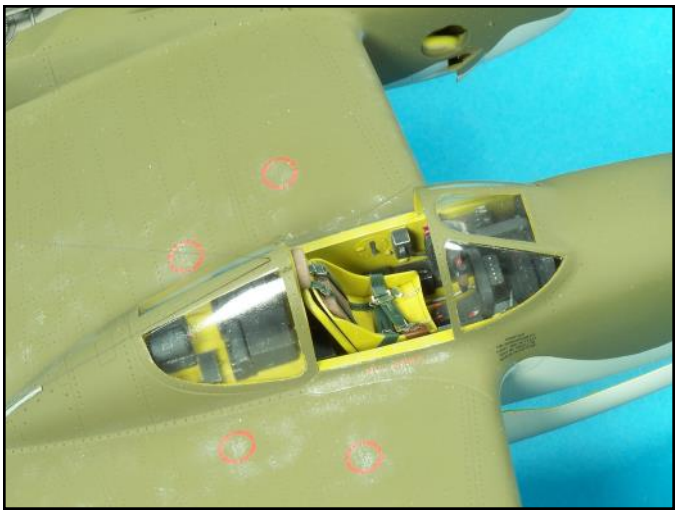
The formation lights were attached with tiny drops of white glue.



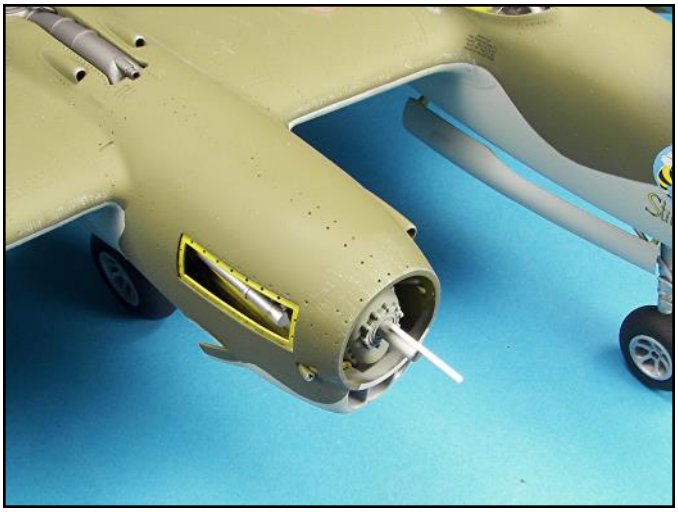
Be careful when positioning and attaching the wing lights.



The super chargers were glued into place with tiny drops of super glue.



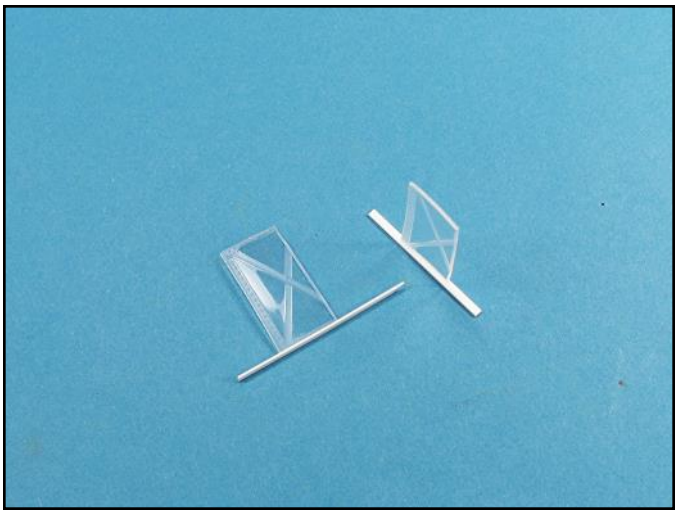
The seat was attached with white glue so that I had some working time to properly position it. The wheels were also attached with white glue.



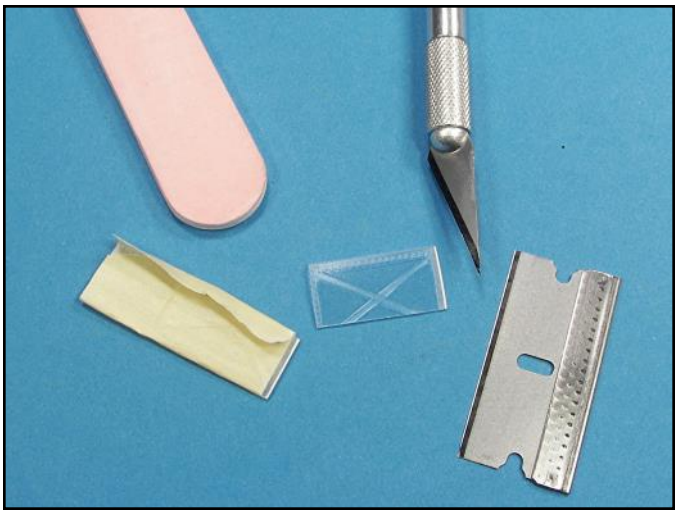
The propeller shaft diameters were too small so I glued shims to them for a tight fit.

Note the hollowed out air injectors.

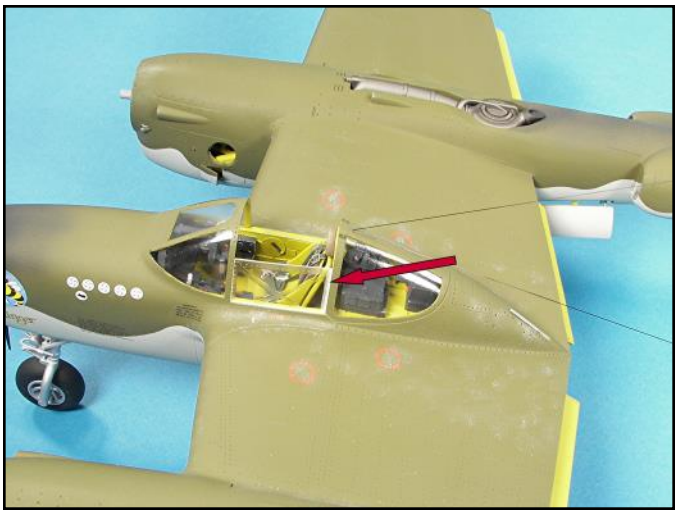
The propellers now have a tight fit. They were attached with tiny drops of Testors tube glue.



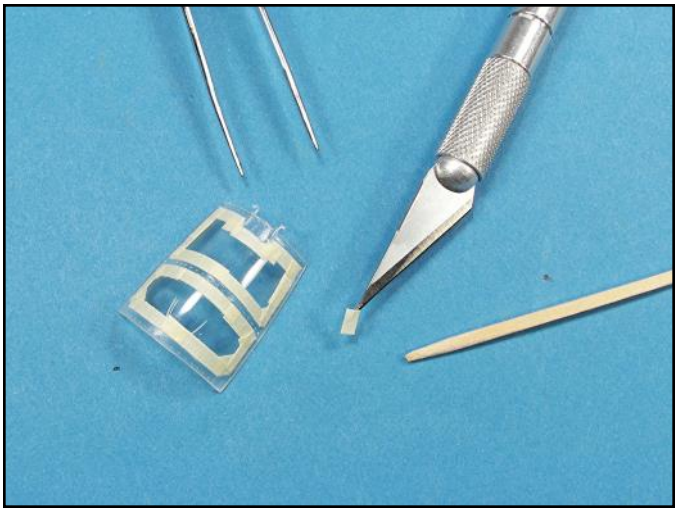
The width of the side canopy parts were to narrow so I glued lengths of .015 inch thick plastic to the frame edges.



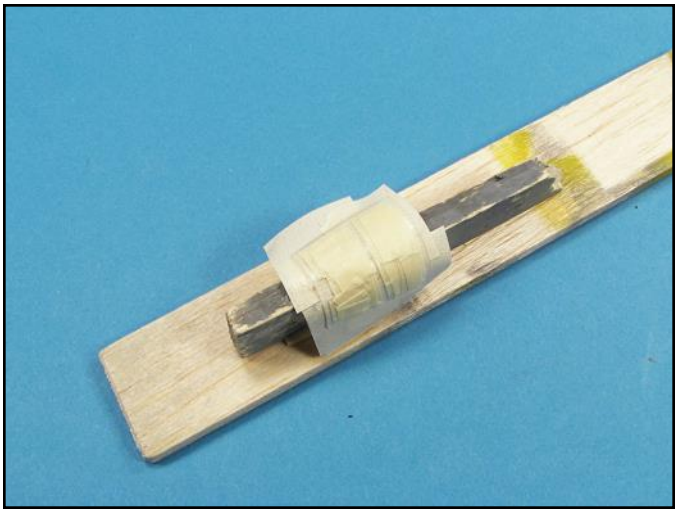
The clear areas were masked to protect them and then the plastic strips were cut to length.



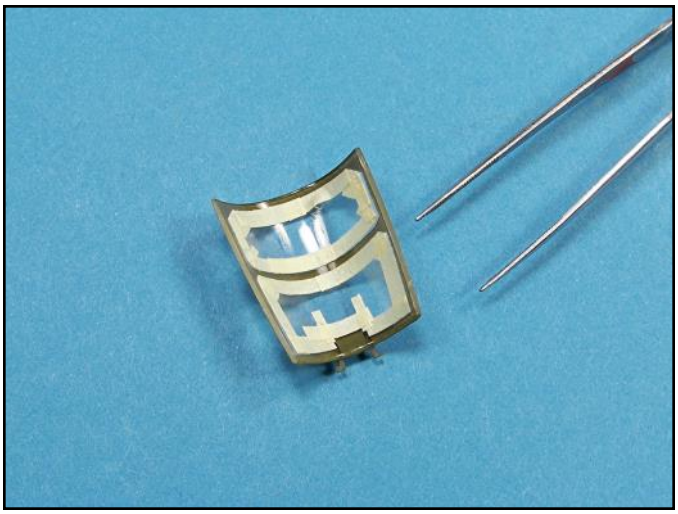
Now the side canopy parts fit snugly into place. They were carefully masked and airbrushed.



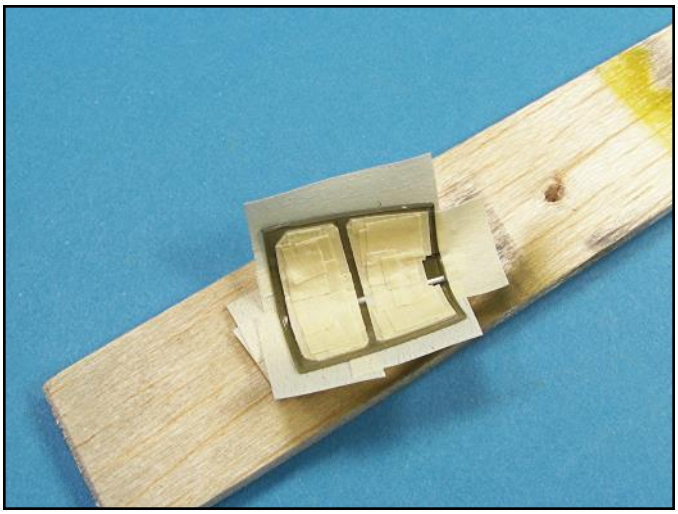
The canopy top was masked from the outside first.



The top was airbrushed with the olive drab color.

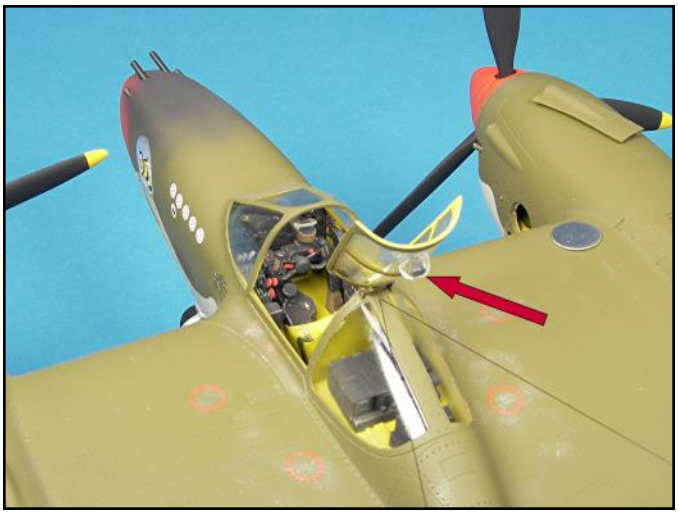


The inside of the top canopy was then carefully masked using the painted exterior frame as a guide.

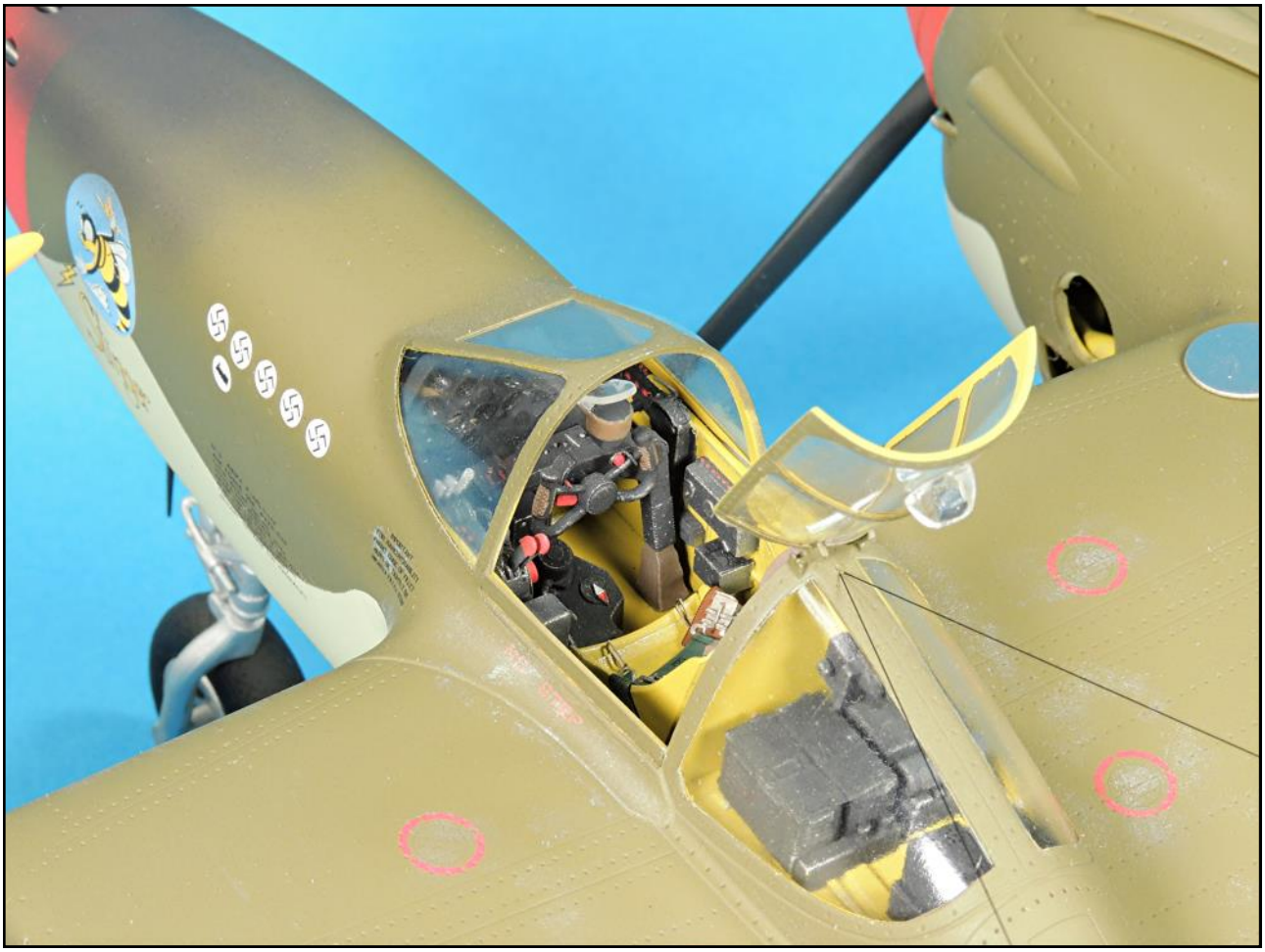


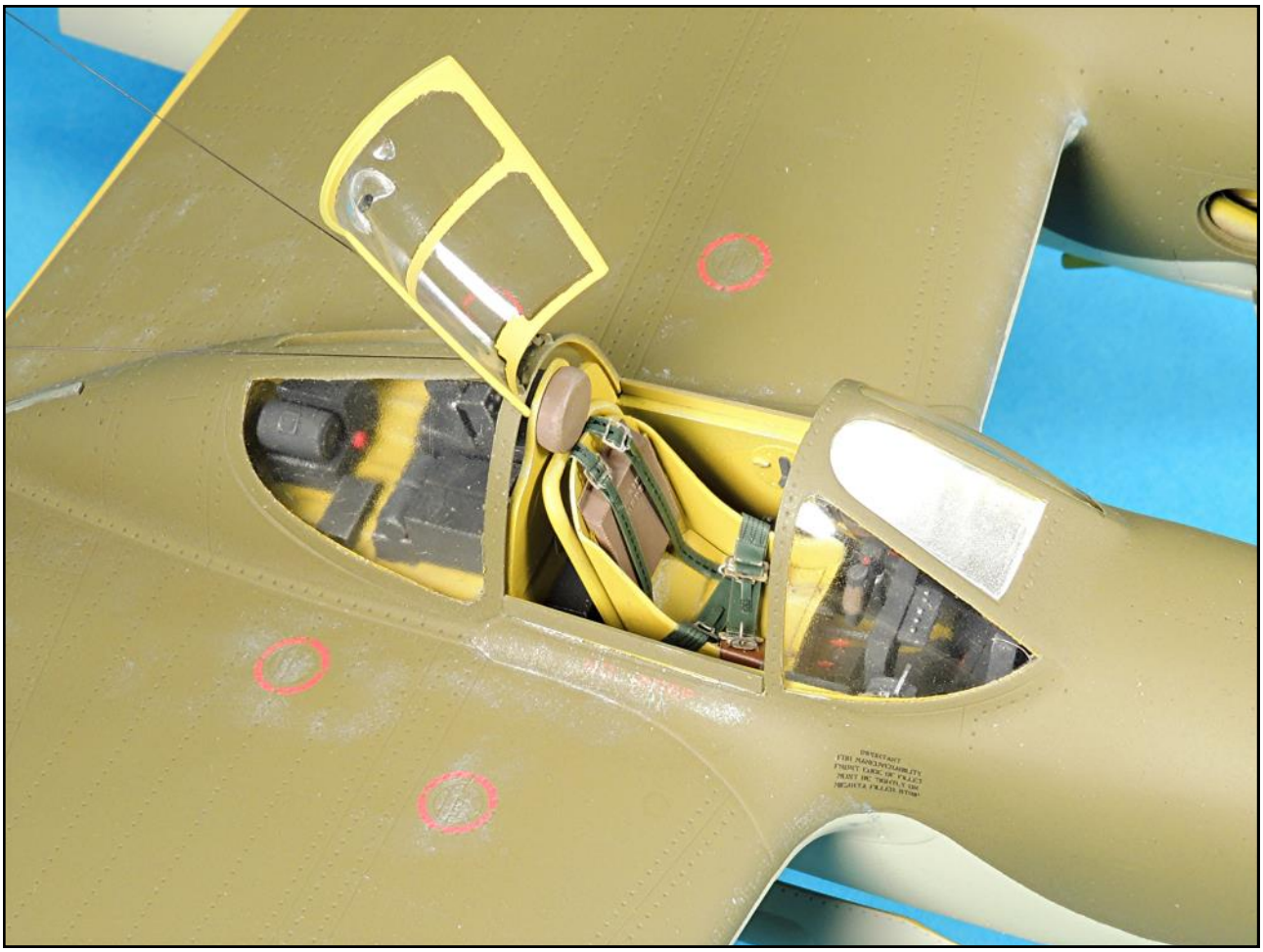
The exterior was masked and then the interior was airbrushed zinc chromate.

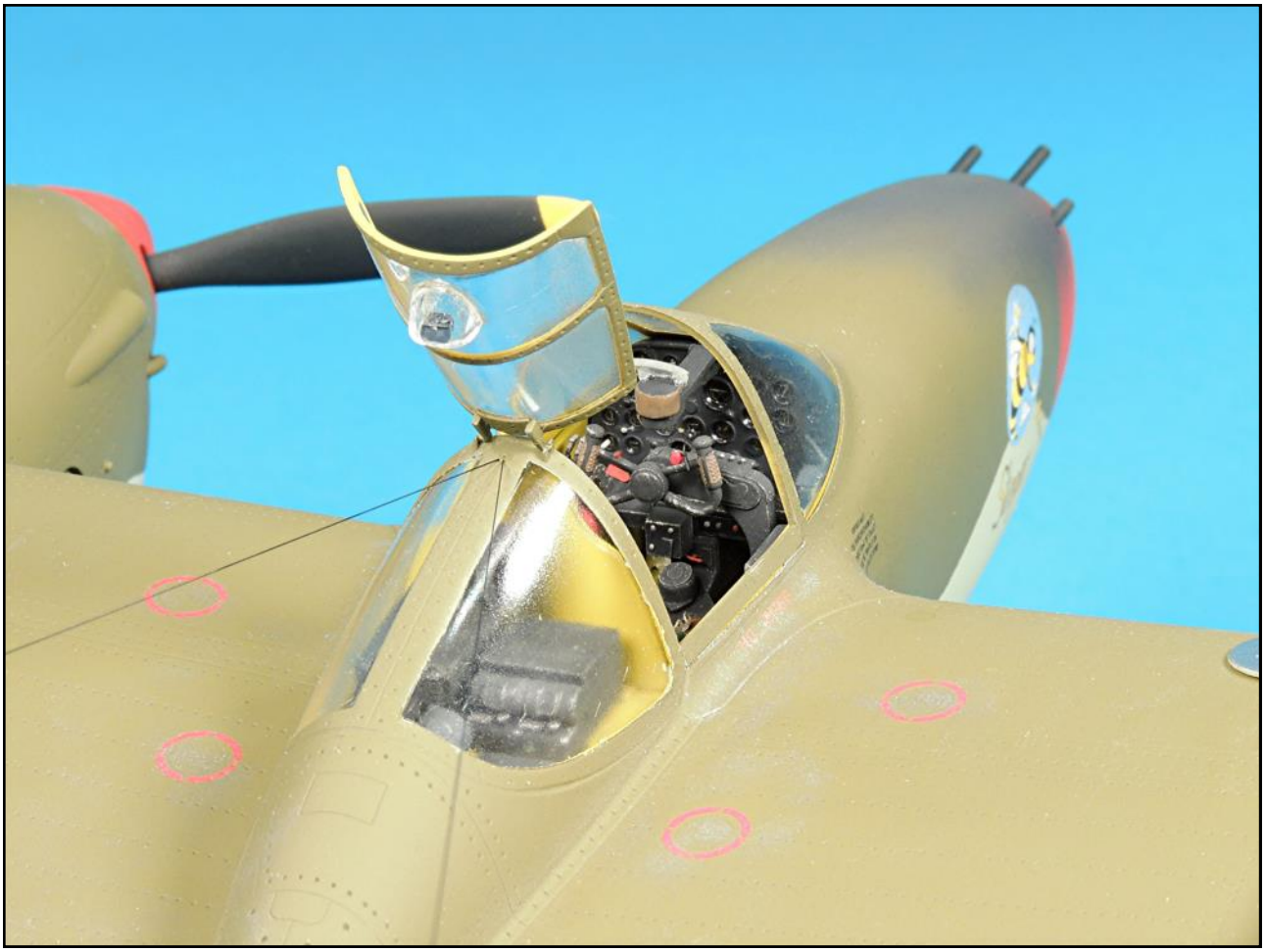
The rear view mirror glass has a tiny outline for the actual mirror so I used a detail brush and a tiny drop of silver paint to color it.



The rear view mirror glass was attached with white glue and then the assembly was glued into place with a tiny drop of super glue. The two side windows were then positioned and glued with tiny drops of white glue.







PAINTS

(All paints listed are Testors enamels)

Primer.
Flat red.
Flat white.
Flat green.
Flat yellow.
Silver.
Flat black .
Light sea gray (FS-36307).
Gloss coat (Lacquer).
Dullcoat (Lacquer).
Olive drab.
Zinc chromate.
Gun metalizer (buffing).
Aluminum metalizer (buffing).

AFTERMARKET DETAIL SETS

Eduard cockpit photoetch detail set.
Eduard pre-painted USAF WW-II seat belts.

REFERENCE MATERIAL

IN DETAIL & SCALE, THE P-38 LIGHTNING
VOLUMES 57 & 58 ISBN 1-888974-10-9

THE GREAT BOOK OF WORLD WAR II AIRPLANES
BONANZA BOOKS ISBN 0-517-459930

TOOLS AND SUPPLIES

X-Acto number 11 blades.
Single edge razor blades.
Waldron punch set or generic punch set.
Snippers, cutters and flat faced pliers.
Flex -I-File & various sandpaper strip grits.
Round toothpicks
Tweezers.
Plastic bin organizers.
Square and circle drafting templates.
Small drafting triangles.
Photoetch cutting base.
Drill bits (#46 - #80).
Twist drill, pin vice and scribing needles.
3M masking tape #2050 (2 inches wide).
Black indelible marker.
Various sizes of plastic strip & rod.
Half round plastic strip-.030 inch diameter.
Various diameters of wood dowels (1/16-5/8 inches).
Regular super glue.
Medium set super glue.
Testors red tube plastic glue.
Elmers white glue.
0000 steel wool pads.
Waterproof sandpaper (various grades).
Metal sewing ruler -6 inch.
Nylon sewing thread.
Balsa strips.
Decal application and setting solution.
Cardstock for creating painting templates.
Q-Tips

MODELER'S NOTES