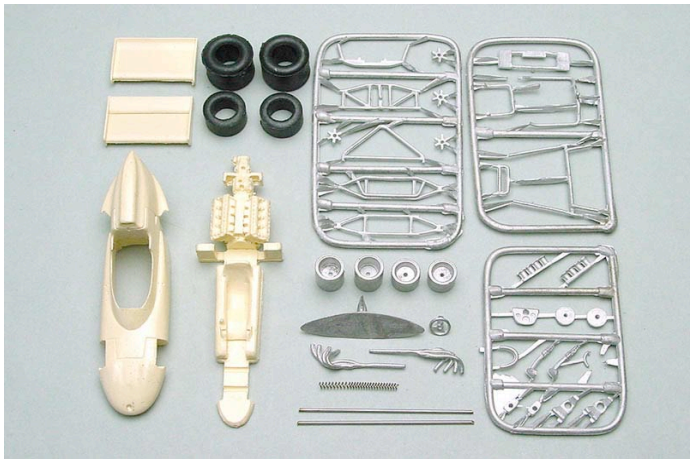
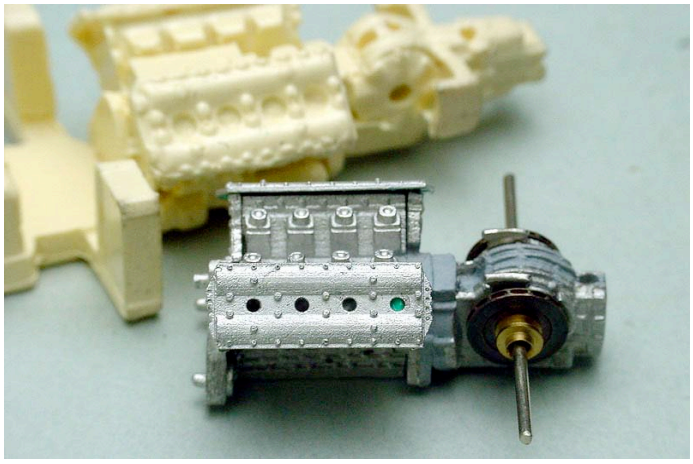
March Ford 721

Akihiro Kamimura builds Tenariv's kit

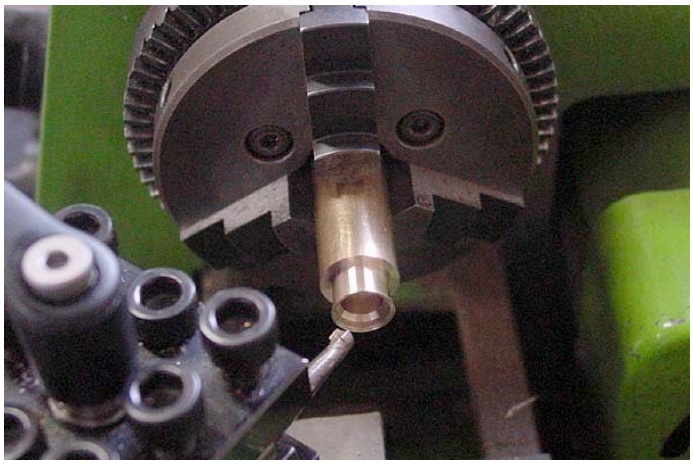


Let's take a look at the building process of this March 721 for a friend in Italy. The body and the underbody are made of hard resin. The white metal parts seem dull... I'll redo most of them with brass or nickle silver.



This DFV motor and the gearbox came from Tameo's March 761 kit. The cam-covers were left over pieces of my original moldings when I built Meri's Lotus 49.

The front wheels came from Tameo, too. I bent each spokes to give them minus-offset like a real one.

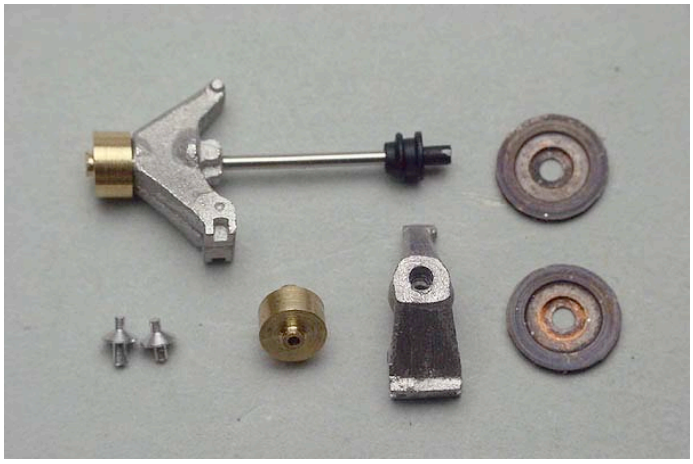


The rear inner and outer rims were made on a lathe.

The center spokes were cut out from a brass circle. I made this aluminum jig to set the spoke on the rim's center before soldering.

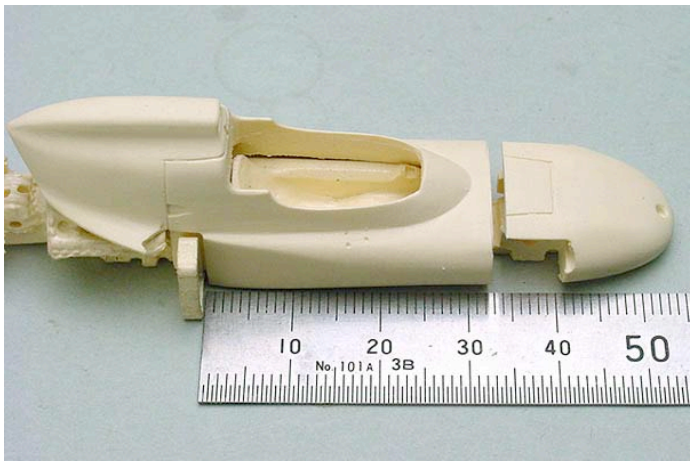
Then I painted them matt black and put them into Fujiya's tires.

The front wheels were also black. These brake units came from Tameo's March.

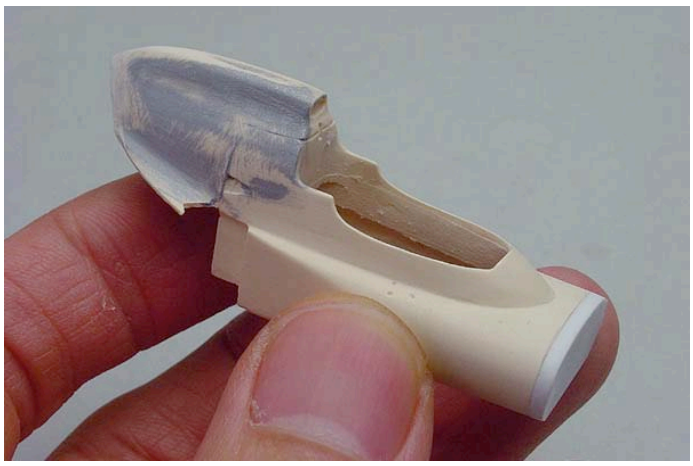


The rear uprights were based on Tameo, but I had to add brass spacers to adjust the offset of the oridinal.

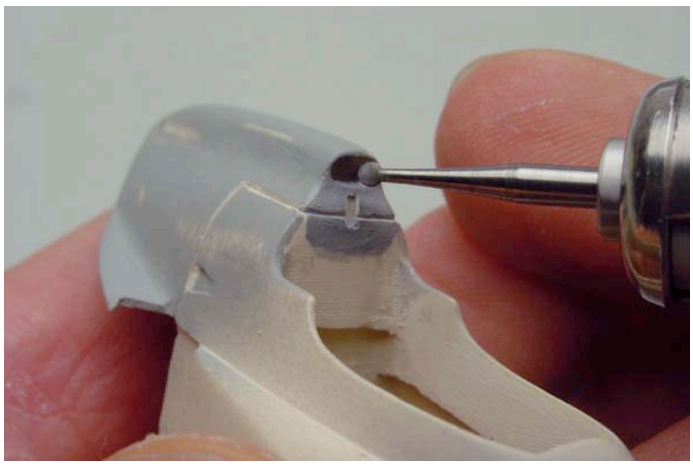
I washed the body and rear wing with heavy detergent.



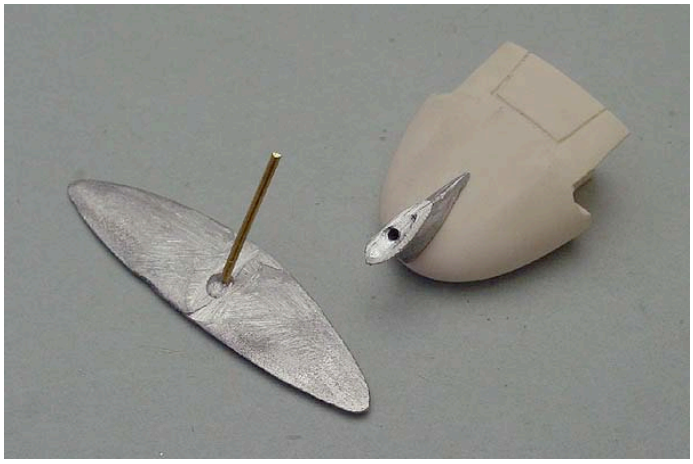
I felt that there was something different about this body... The allover length looked short so I chopped it around the front bulkhead.



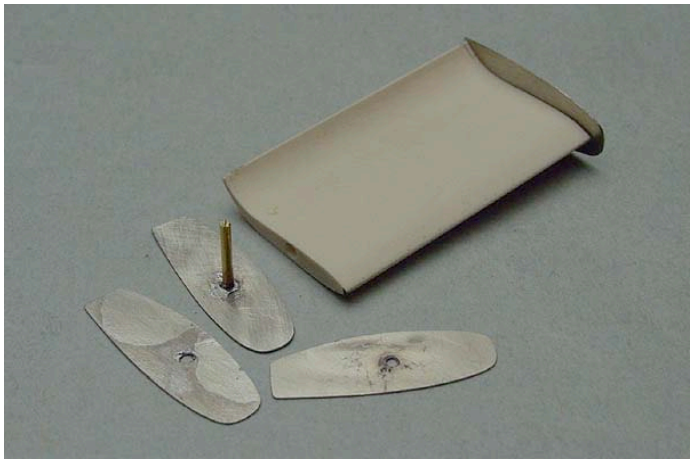
Then I attached 1.5mm styrene board on it by superglue. Once the shape of the airpod had been modified, I brushed grey putty liquid to assess its outline.



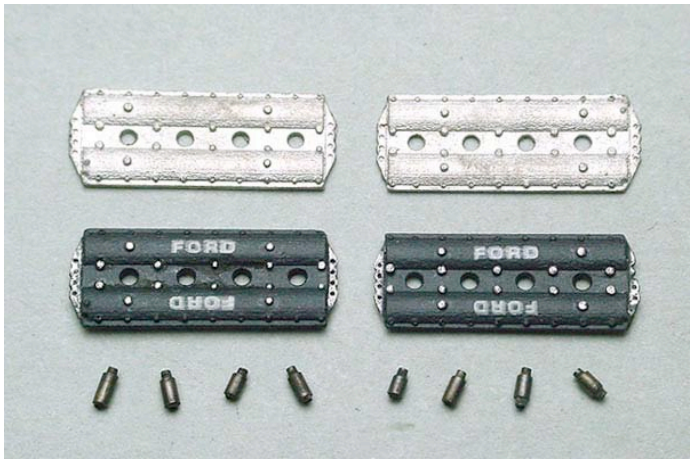
I engraved the recess lines and bored the oval hole of the air pod with a motor tool.



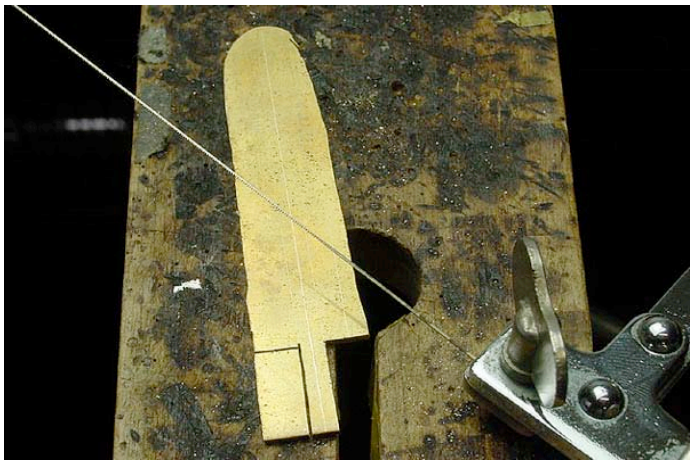
The front wing needed "solid structure" as I wanted this model break-proof to send it safely to Europe. I separated the stem part from the wing and bored a hole to allow free passage of the brass rod which I soldered under the wing.



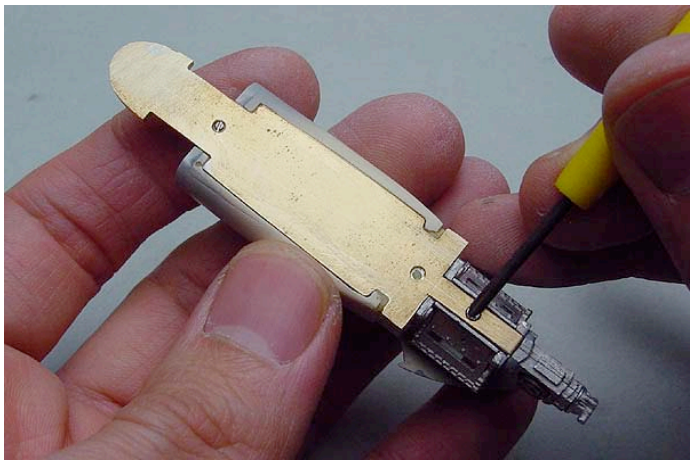
I removed the molded end plates and remade them with 0.15mm nickel silver plate. Some prototypes were made before I got a good pair...



I painted the DFV cam-covers dark grey and applied Ford decals. The plug caps were made with a combination of two different diameters of brass tubes.

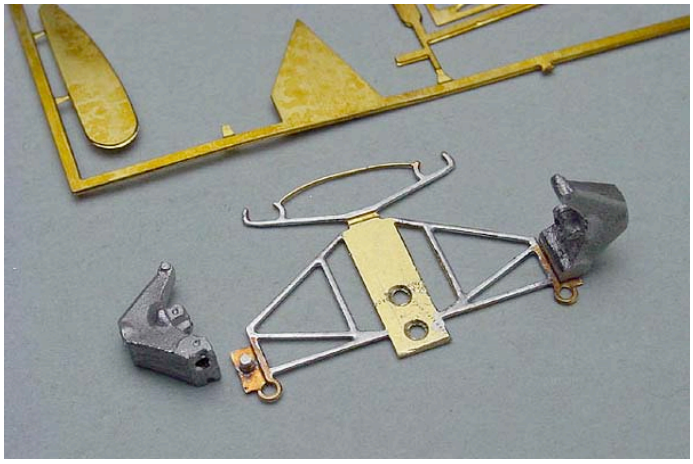


I cut out the underbody from thick 1.0mm brass plate. Looks hard? Yes, it was hard work with a lot of elbow grease!

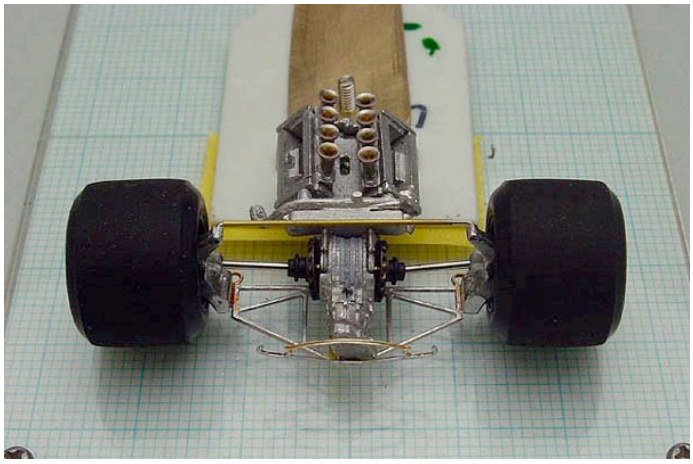


I attached the underbody to the body with micro screws. The engine block was also attached.

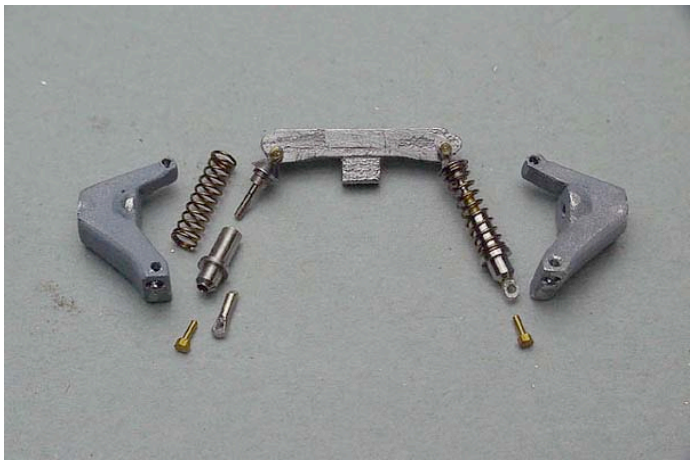
Well, I needed to purchase another March 711 kit by MG MODEL for reference.



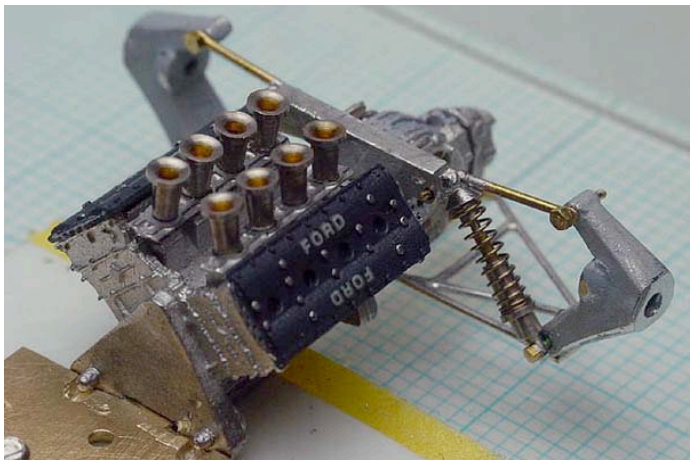
The photo-etched parts of the MG kit seemed nice, especially the suspension parts. I used its lower arm to fit the Tameo's uprights.



I fixed the lower arm to the backside of the gear box by solder, and then set the ride height. I often put the underbody on a styrene plate and add some thickness to adjust the height with Tamiya's masking tape.

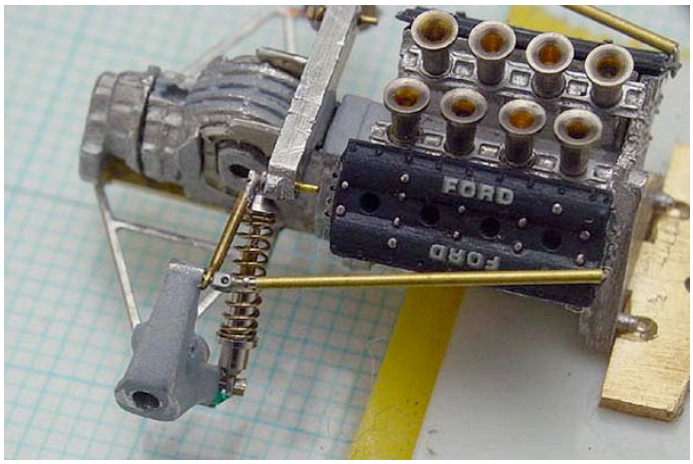


The shock absorber units came from Tameo's March kit. Of course they needed some modifications to fit this model.

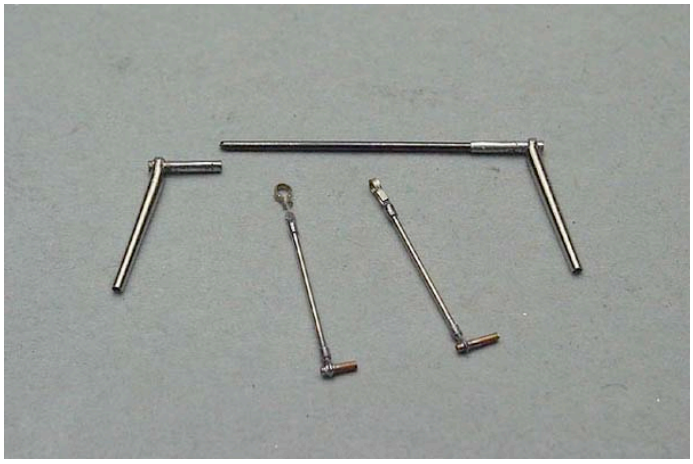


I made upper arms with 0.55mm brass rods and joined them to the shock absorbers with small hex head bolts.

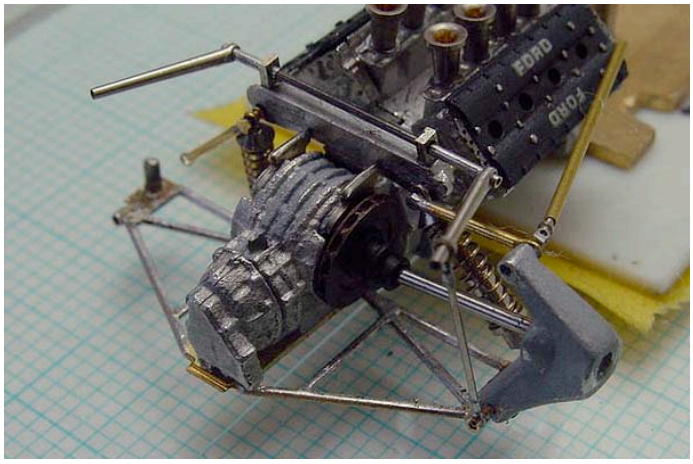
This is the radius rods joint to the upright, made from 0.7mm nickel silver rod. I carved its shape with a moto tool.



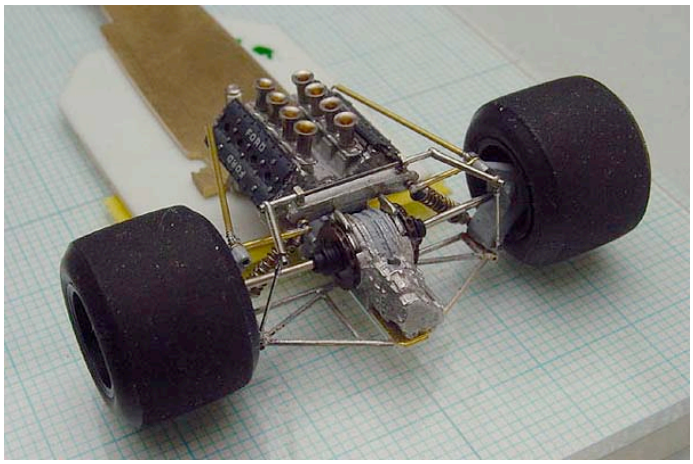
I added a junk PE part to that nickel silver piece and a 0.8mm brass tube. The other end of the tube was fixed to the forward end of the cam-cover.



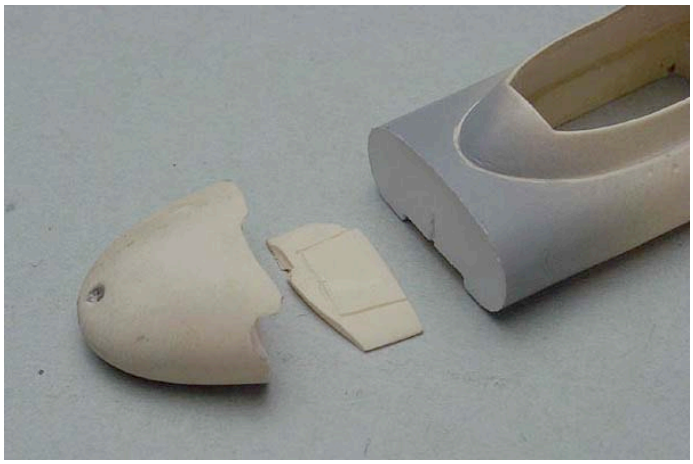
The stabilizer arms look like long-tapered pipes. How did I make it? First I drilled a micro hole to the end of a 0.8mm nickel silver rod, and then carved a tapered shape by moto tool. The tension rods were made with 0.35mm lines, decorated with chopped brass tubes.



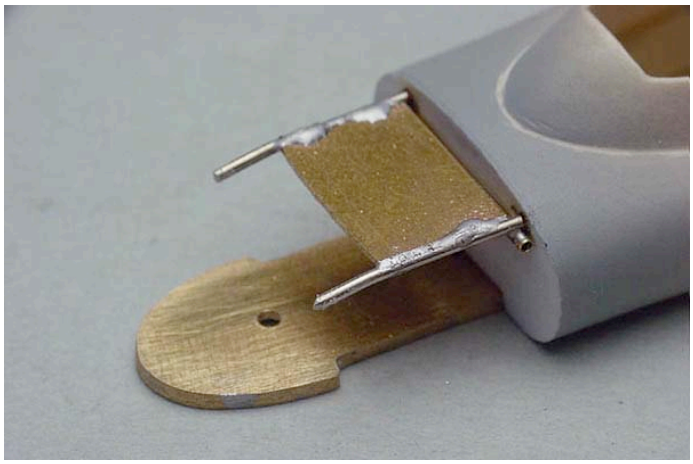
I made the stabilizer mount with two small blocks of nickel silver. A bit hard drilling a micro hole on their center accurately, however, I had to do it by some means or other.



Well, the rear suspension unit has been built up and prepped for paint. I'm so happy to see it!

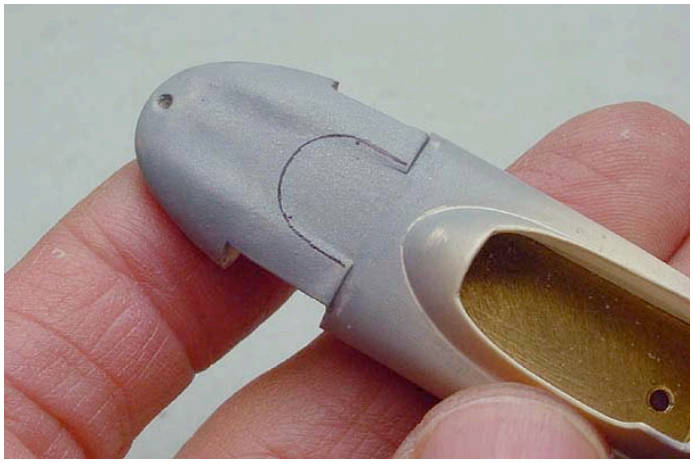


Oops! I accidentally broke the front nose. Tenariv's resin is so fragile... I almost forgot.



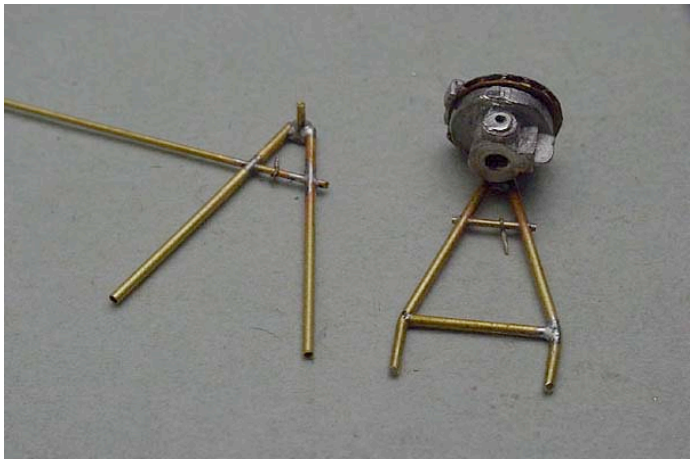
Okay, I inserted two nickel silver rods into the bulkhead and soldered a square brass plate between them. I also added a brass tube under the stabilizer mount...

And then, I covered the brass plate with Tamiya's epoxy filler, and waited for it to harden.

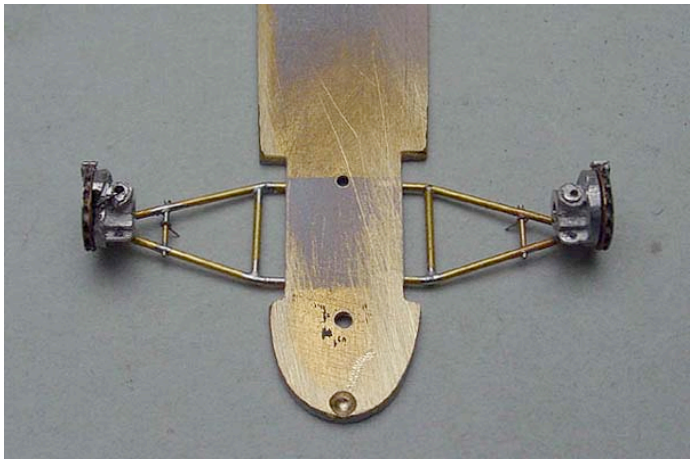


A few days later I removed the excess filler and made the shape. The recessed line around the car number circle was engraved by a needle scraper.

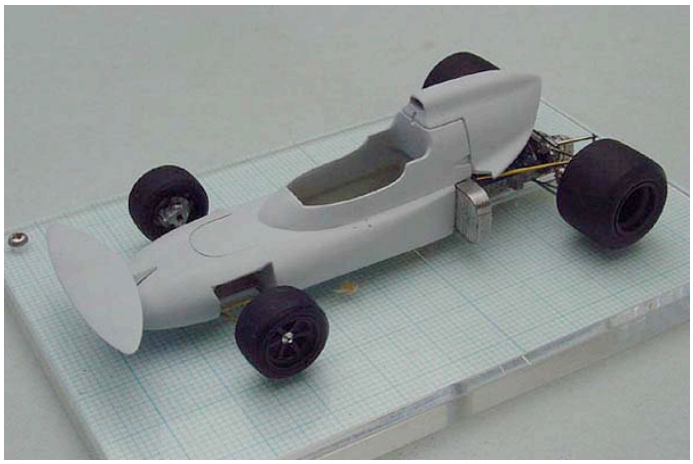
This is the attempt at the lower arm of the front suspension by bending a brass tube. It looks somewhat funny as you can see...



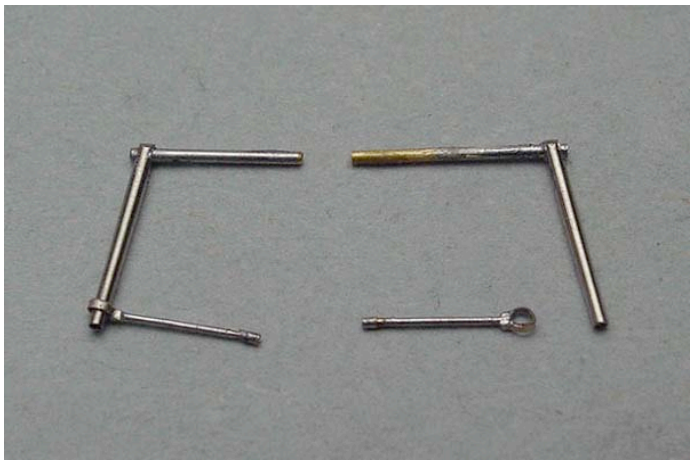
Then, I bent a thin nickel silver like a "Vee" and put over the two brass tubes. After soldering a connecting pin for the upright, I added two reinforcing rods between them.



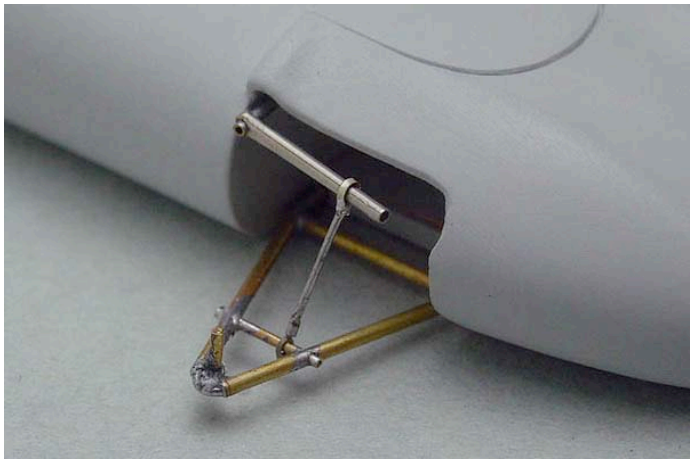
I drilled four holes on the edge of the underbody and test-fitted both lower arms.



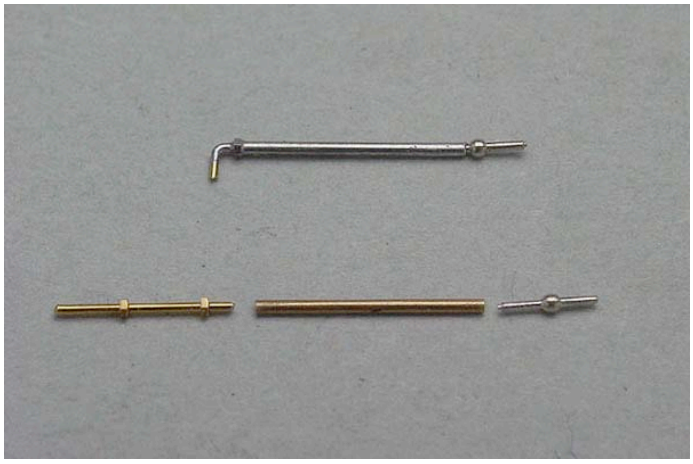
The body and the front wing had been coated with gray primer already. I temporarily built them up with the tires to check the overall dimension.



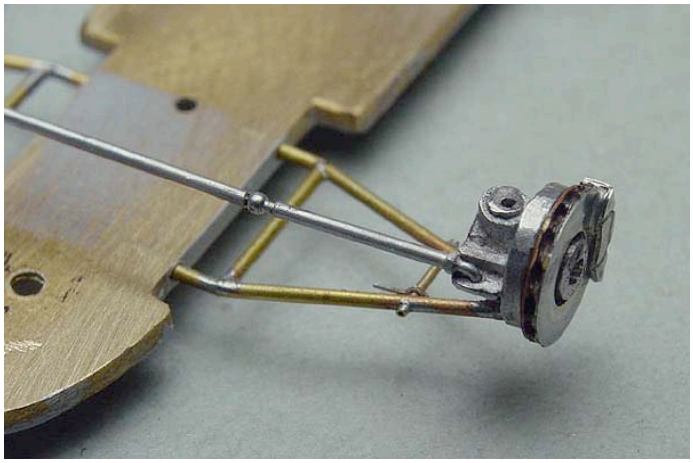
The front stabilizer unit was made in much the same way as the rear.



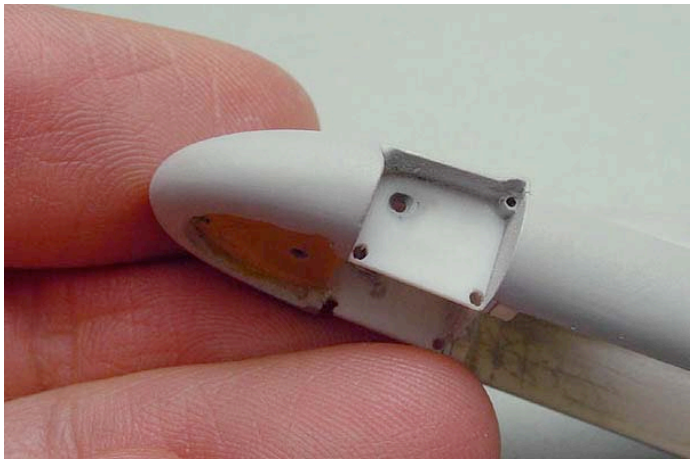
It was hard adapting such a thin connect rod to the small joint on the lower arm!



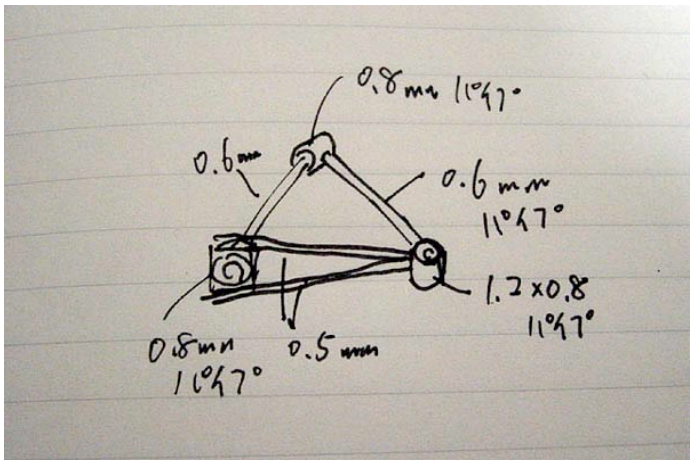
The tie rod consists of 0.6mm brass tubes and hex head bolts with double long stems. The "micro lollipop" was carved from 0.8mm nickel silver rod by moto tool.



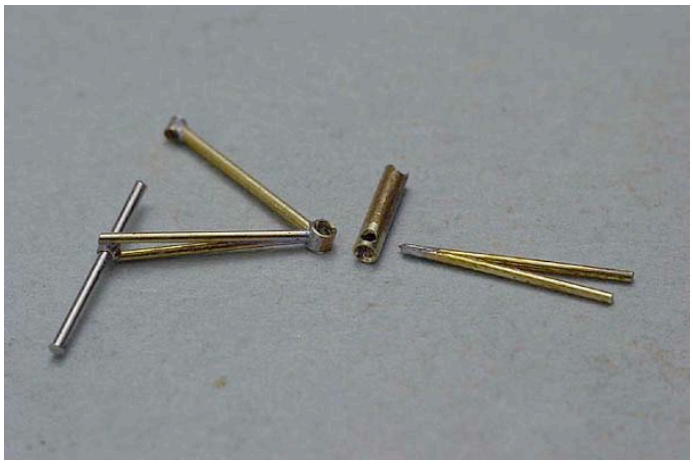
I bent a free end of the hex bolt and joined it to the upright. The total length of this rod is adjustable by sliding both lollipops against the tubes.



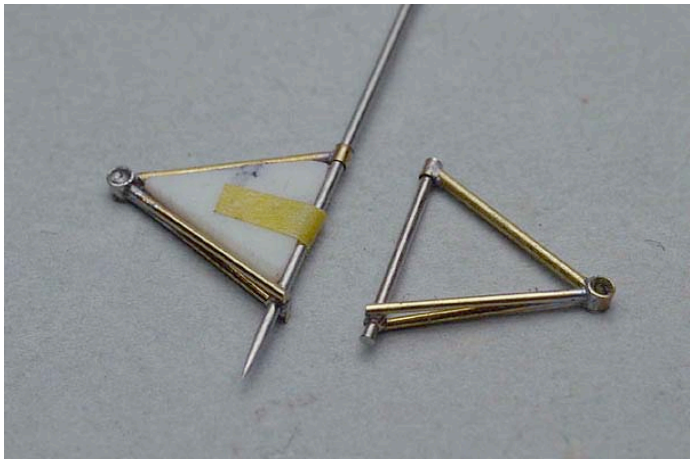
The lengthwise bulk heads were added with 0.5mm styrene plate. I drilled some holes to clear the lower arms and the tie rod.



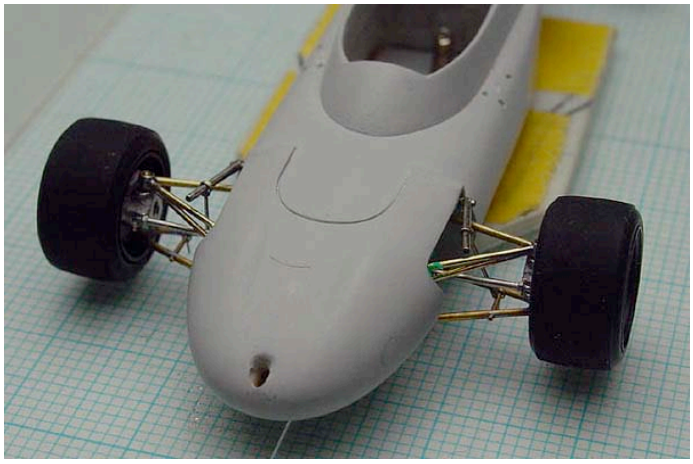
This is a rough sketch for the upper arms to get the perspective and check the size of components.



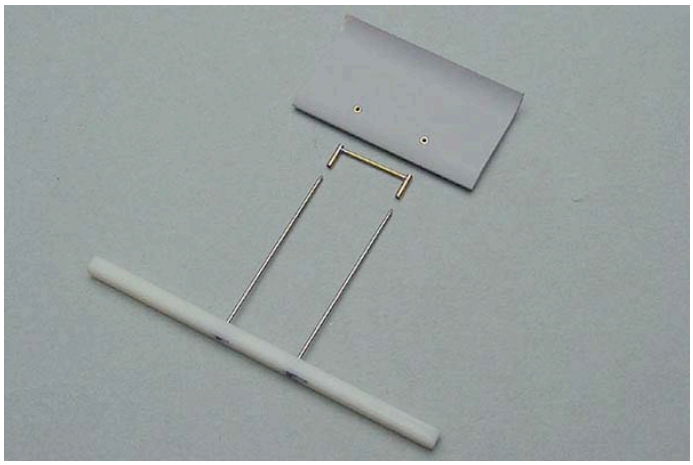
Then, I cut out each brass line and tube, and soldered them inch by inch.



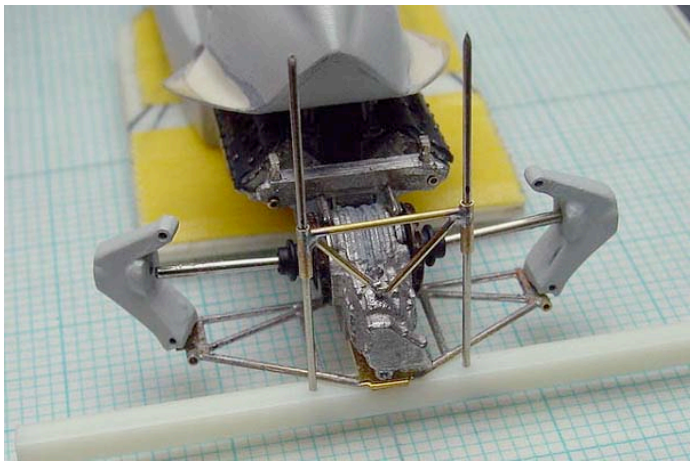
A triangle styrene plate was a jig, useful for aligning the brass pieces and also aligning both L-R shapes.



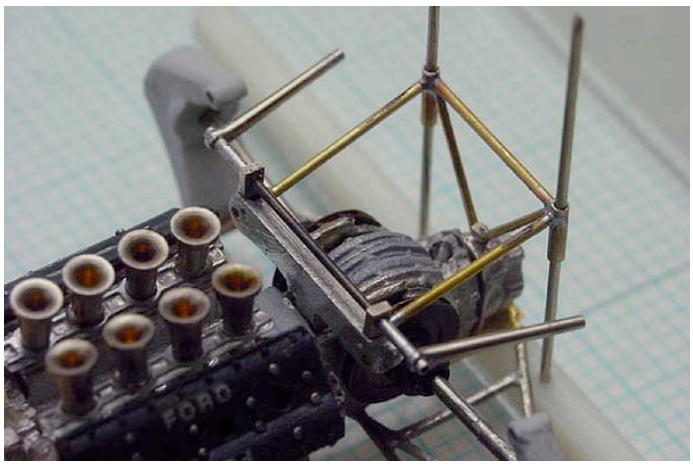
Almost looking good but I guessed it would be hard to build them up again after painting...



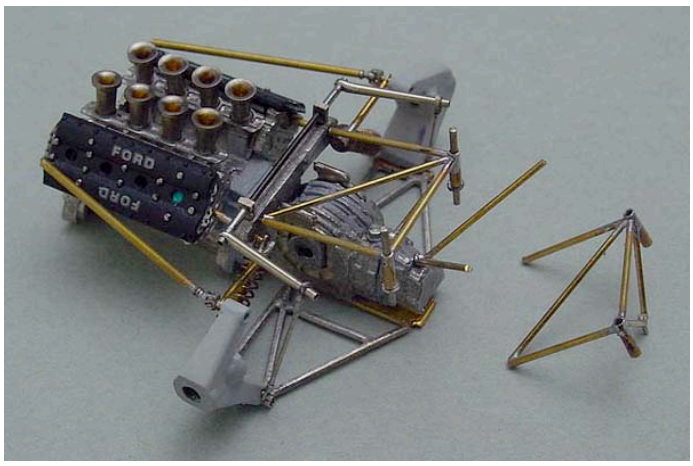
This is my original jig for locating the rear wing. The base mount was made of three brass tubes, combined into one by solder.



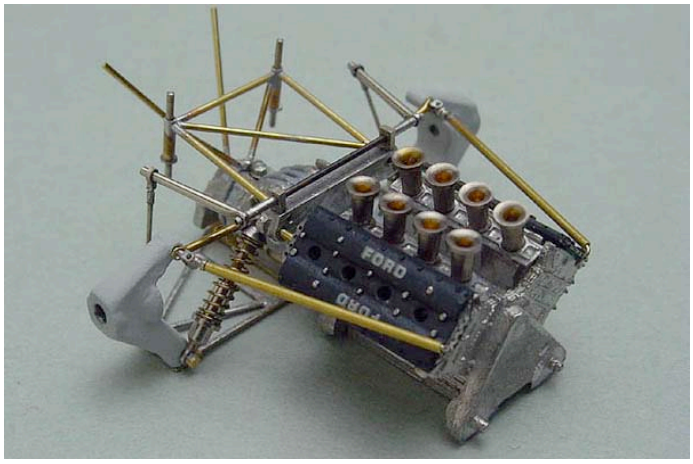
The mount tubes can slide along the jig, up or down. I fixed the mount height and then soldered two brass stems to the gearbox.



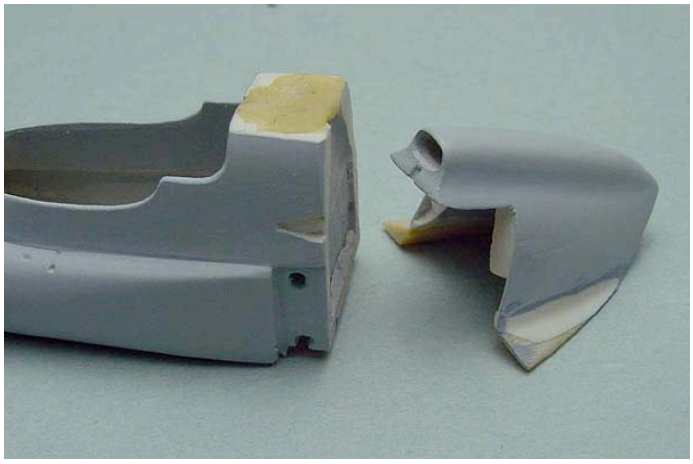
Another two stems were added to the sub-frame of the shock absorbers.



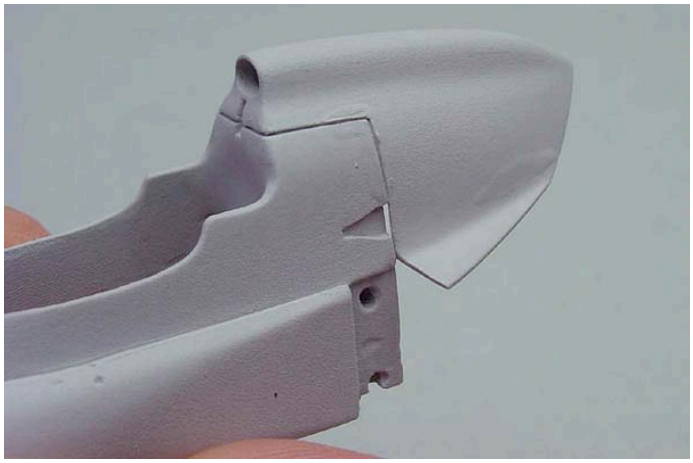
I finally soldered another oblique brace. But some slight dimensional mistake made me repeat the same work...



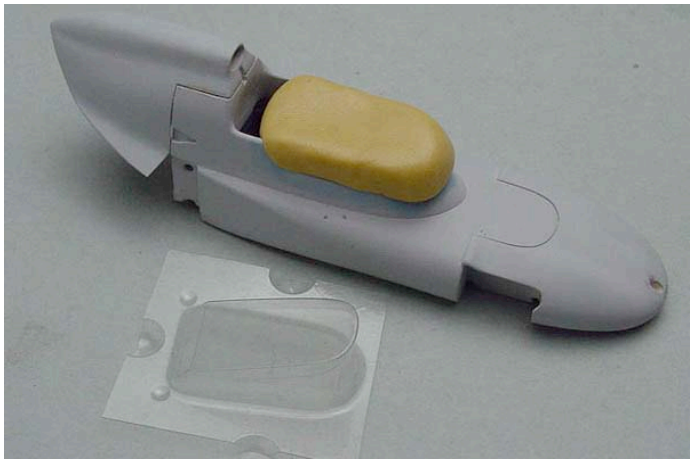
Anyway, I am so glad to get a nice result. A few good reference photos from Auto Sport Magazine No.89-Japanese edition and some imagination helped me.



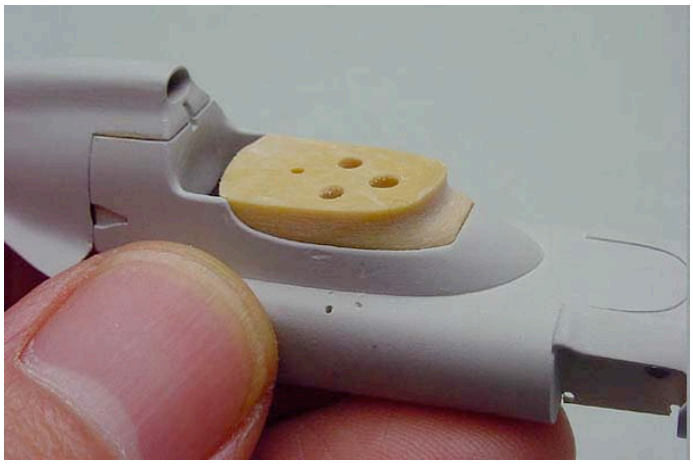
Regarding the body, I decided to remove the air pod to emphasize the depth of the NACA ducts.



I reatattached the air pod with Tamiya's epoxy filler as I wanted a slight gap to the body. After the filler hardened, I trimmed the recessed lines and lightly sprayed grey primer.

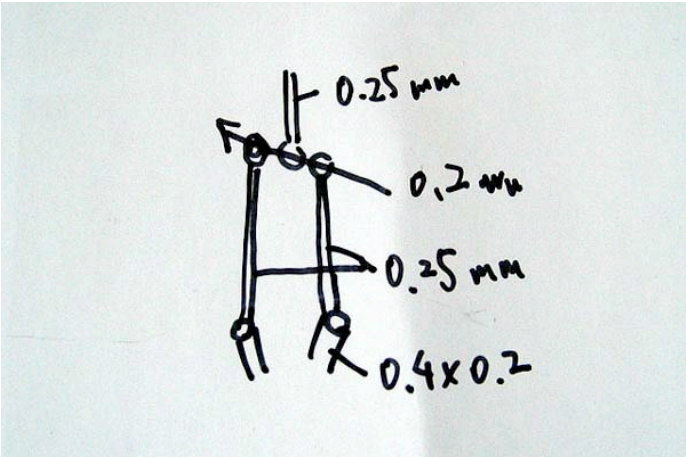


The original windshield would not be fitted to the body so I had to make a mold for vacuum-forming.

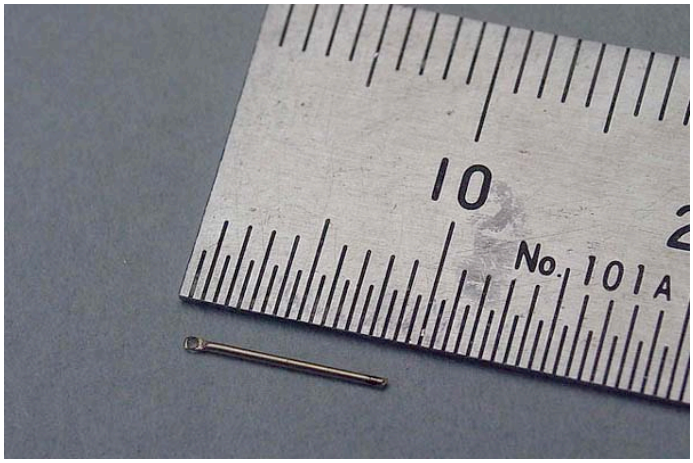


I brushed Masking-Sol around the cockpit and packed up some epoxy filler at first. About 12 hours later, I removed the filler and began to curve it as the real shape.

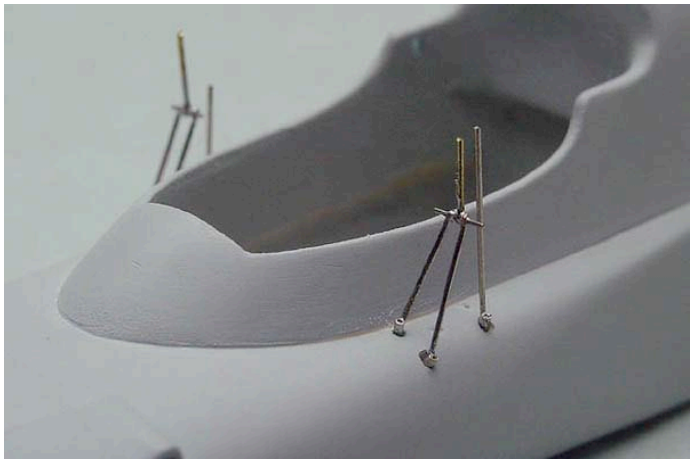
After polishing the mold, I heated 0.3mm clear PVC sheet and then vacuum-formed. It is easy to remove the blank space by scissors, to trim roughly by this kind of motor tool bit. I finally finished these edges with #1500 sandpaper and compound paste.



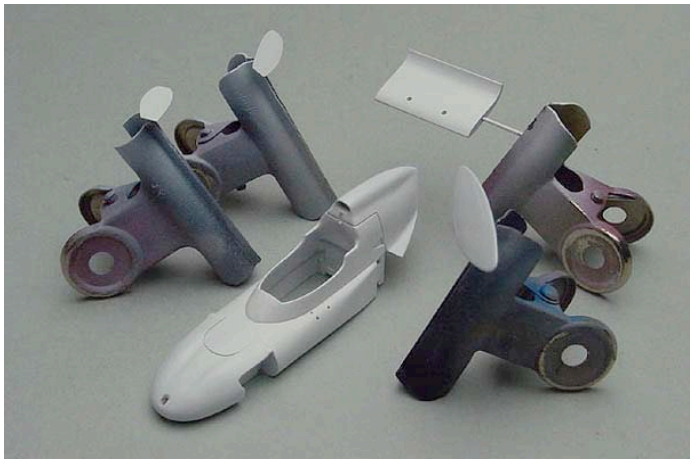
The stems of the rear view mirror confused me. I made a prototype, and then checked its dimension.



Here is the main stem, 0.25mm nickel silver wire. I had to make a hole with 0.2mm in diameter on it. Sensitive work as you can see...

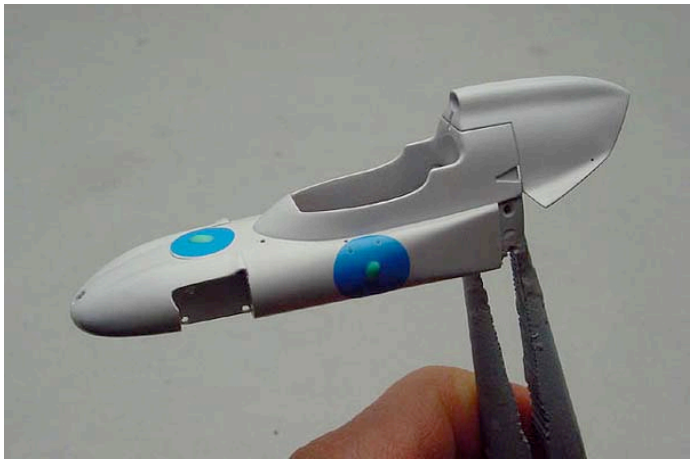


Each stem end was joined with 0.4mm brass tubes and dryfited to the body. I aligned the stem height and passed 0.2mm short wire through the holes. After the top angle had been set, I unified them with solder.



Okay, it is about time to paint. I washed the body and the wings with mild detergent, and then airbrushed white acrylic lacquer.

Unfortunately there were a few dust specks on the paint surface. I had to sand and polish them smooth after the paint hardened.



I polished large parts of the body and masked the number circles before spraying the red paint.

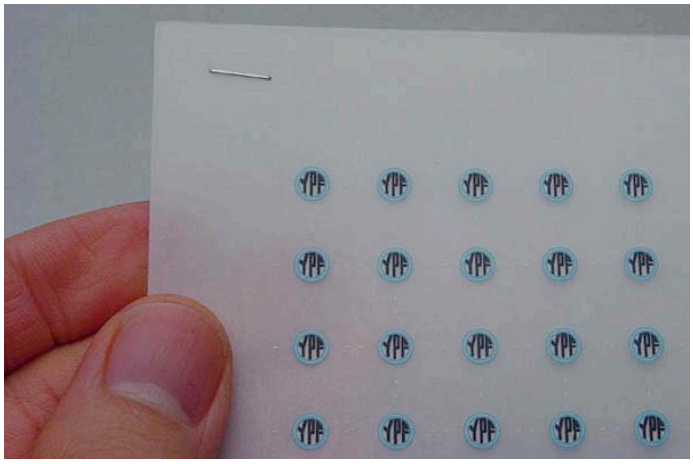
Here are my favorite acrylic lacquer paints, GSI Creos and FOK, for your information.

I started applying decals. An enjoyable time but I was disappointed with these original Tenariv decals...

Most of the "STP" logotypes came from the MG MODEL kit as you can see. The originals seemed too bold and their sizes were incorrect.

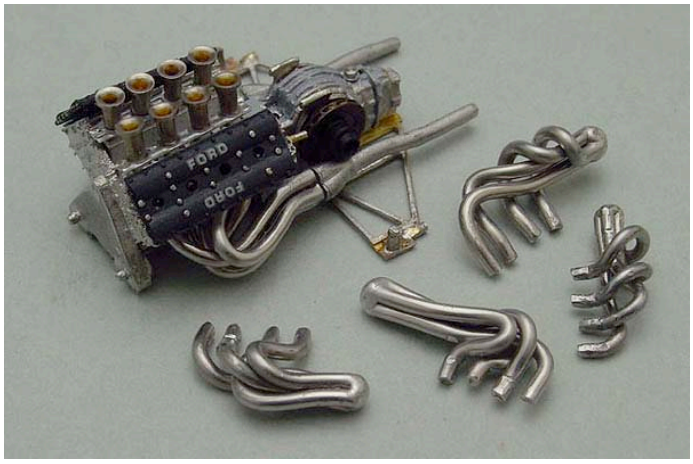
Oops, I was inattentive to such old decals "breaking down". The car number and "YPF" logo came apart when I put them into water.

I carefully gathered left over pieces of the car number by narrow brush and fixed them all.

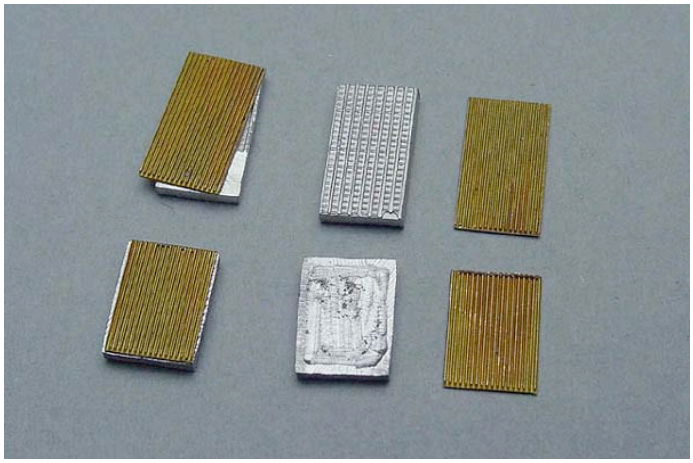


Regarding the YPF, I had drawn an outline data by a friend and then sent it to a design lab to make an alternative sticker.

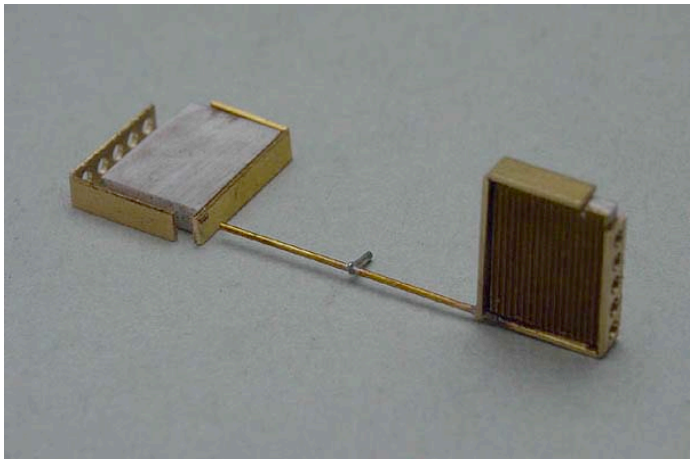
It is kind of dry decal, just apply with mild pressure. I then sprayed several layers of clear coat.



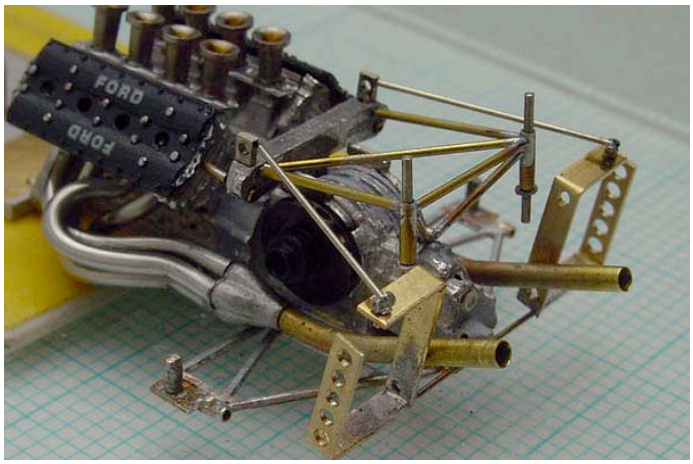
As I'm finishing the body work, I started building the other parts. The exhaust manifold was made of 1.0mm solder lines. After some effort, I got a good set!



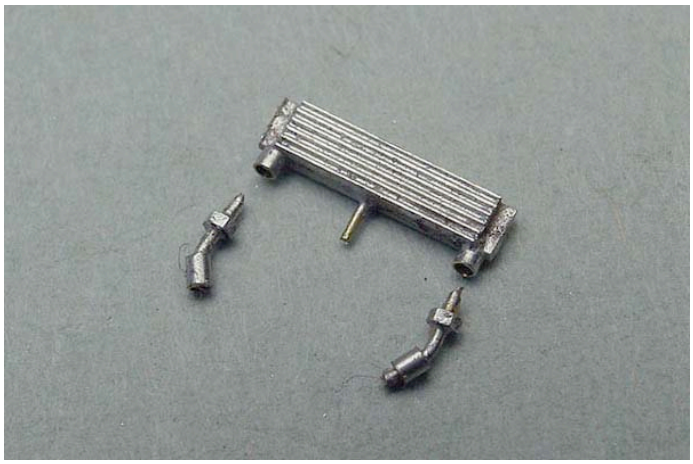
The surface panels of the oil cooler and the radiator were photo-etched. I glued them on the metal pieces from my junk box.



I made the outer frames of the oil cooler with a combination of brass strips. The support bar between the frames was 0.5mm brass line. I added a small hook on the center to engage the gear box end.

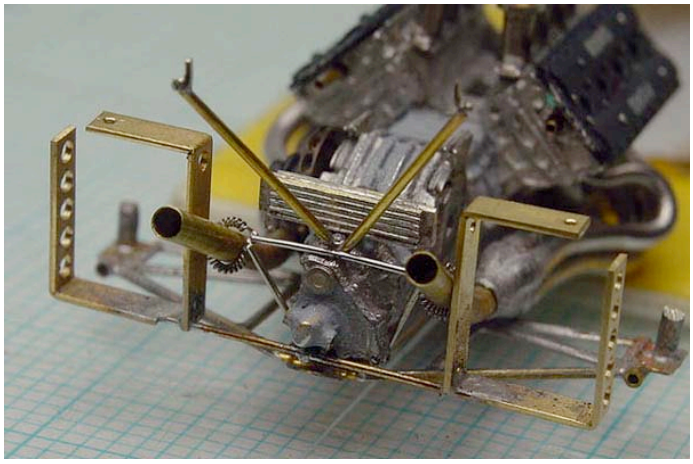


I set the frames behind the gearbox and added thin stays to the stabilizer mount.

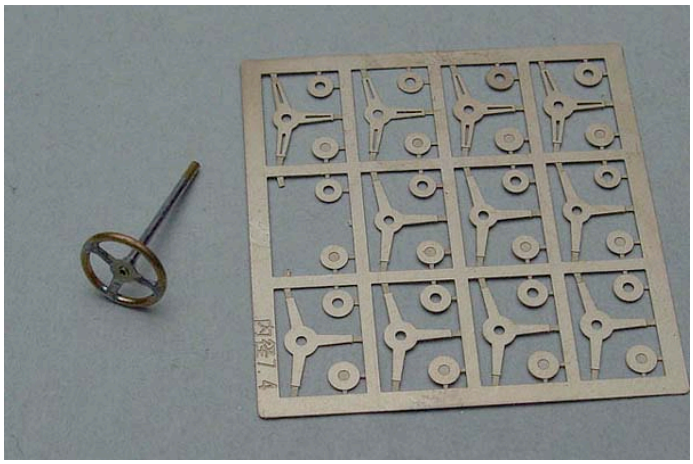


The sub-cooler on the gearbox was made with PE plates, too. I soldered two chips of the brass tube to the bottom which accept both oil lines.

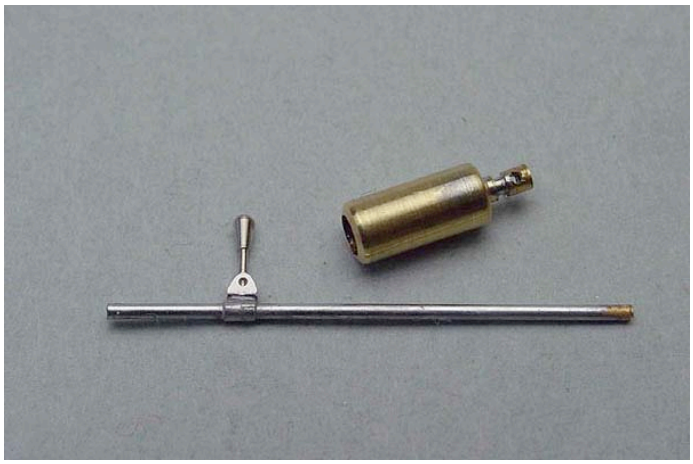
The exhaust pipes were 1.3mm brass tubes. You can see the micro-spring rings on the end of nickel silver stay. I made it by twisting thin line which was picked up from coated wire, around the 0.2mm drill.



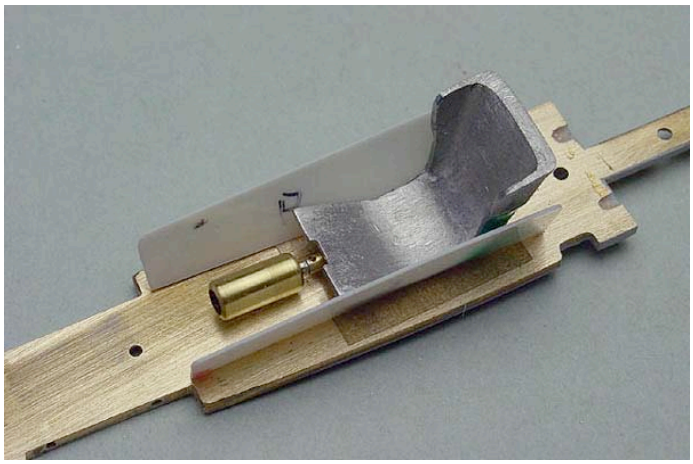
It took plenty of time to adjust the length of these stays, correcting their relative position... Now I have got a good result.



It took a few more weeks for the clear coat to harden, I began to make the cockpit. The steering wheel was a combination of brass ring and PE by Zmodel.



The gear lever came from Tameo, I soldered brass tubes to the bottom as the linkage. The extinguisher was a mixture of brass tubes, too.



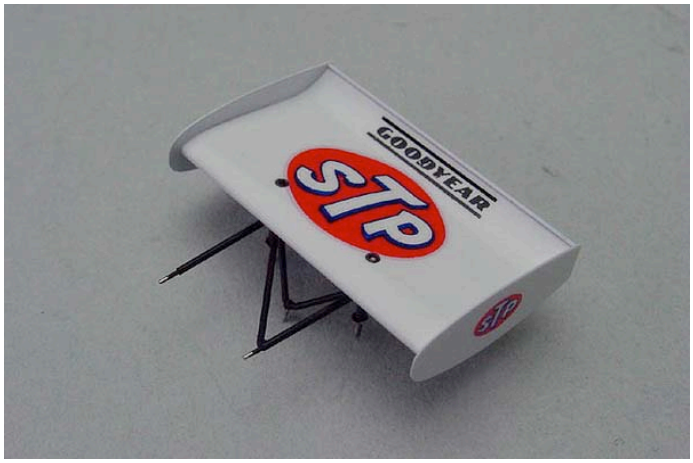
I set the extinguisher and the driver seat on the underbody. Both sidewalls were dry fitted with styrene plates, I remade them with aluminum later.

I sanded the surface of the clear coat with #2000. Some of the edges of the decal were not flat, however, I didn't chase them up at this moment.

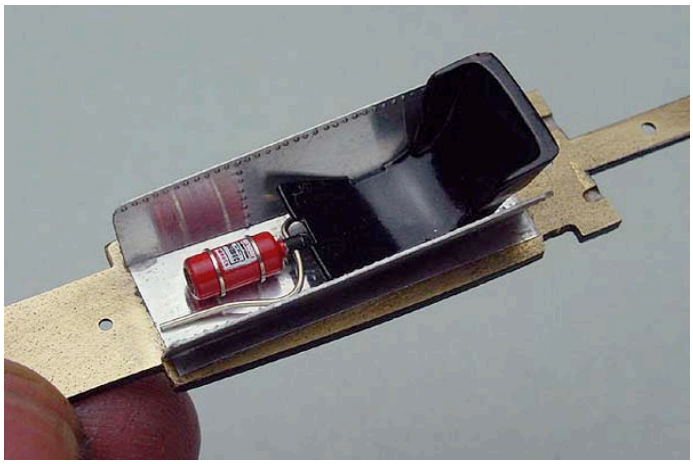
I painted the inner wall of the cockpit surround with matt black and then glued the windshield with epoxy. Some scratches from the sanding were there, but...

I did the final clear coat. It not only filled a gap between the shield and the body, but also brought back the clarity of the PVC.

The rear wing didn't require a second clear coat. So I began to polish the surface with buffing compound.

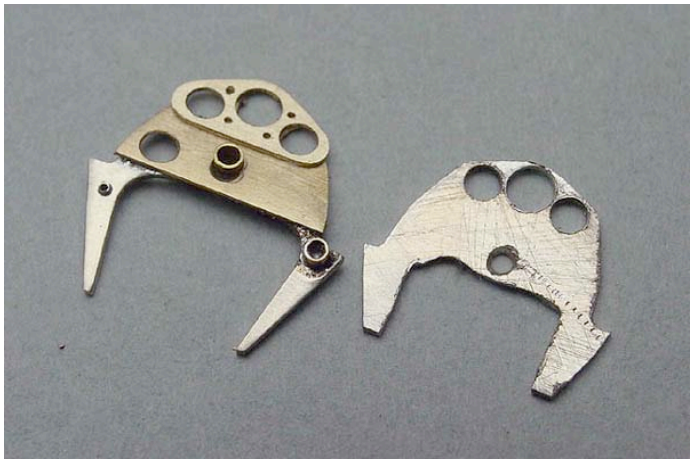


After gluing the endplates and the Gurney lip, I test-fitted the stay to the wing.

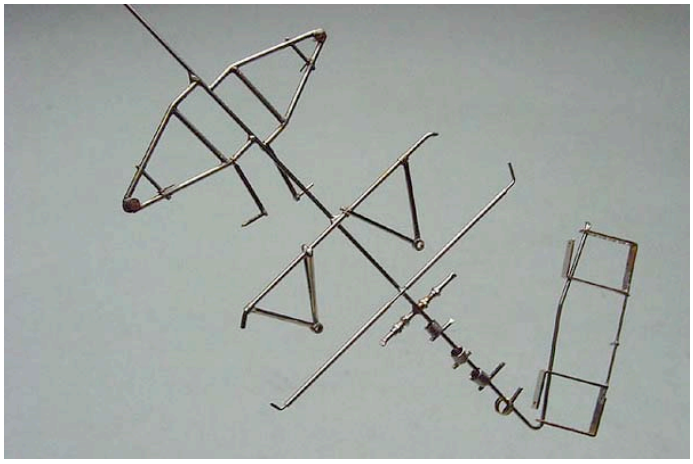


I painted the extinguisher red and the seat black. The side panels were made with 0.1mm aluminum sheet.

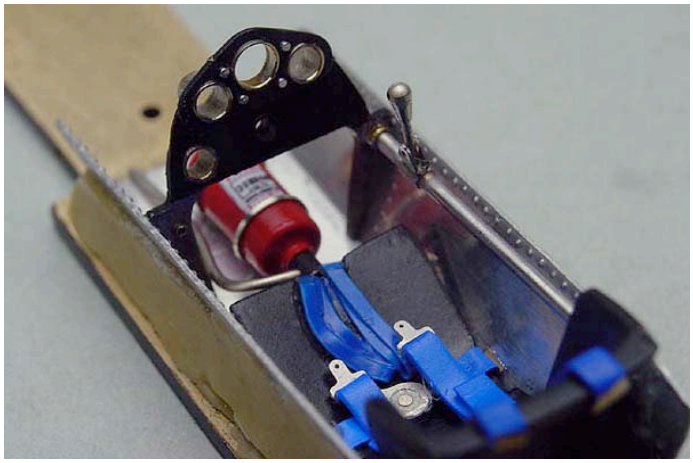
The harnesses were made with 0.3mm brass strips... they may look too solid but I prefer them rather than the cloth material.



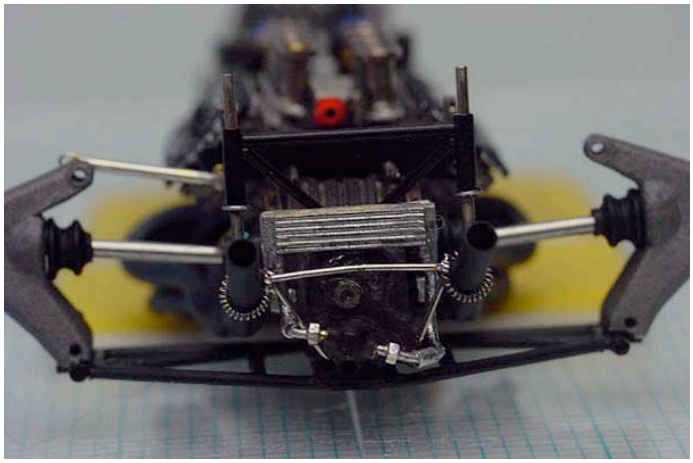
I made the instrument board with different thickness brass plates and the nickel silver legs. The test piece was made with a nickel silver but not much to my taste.



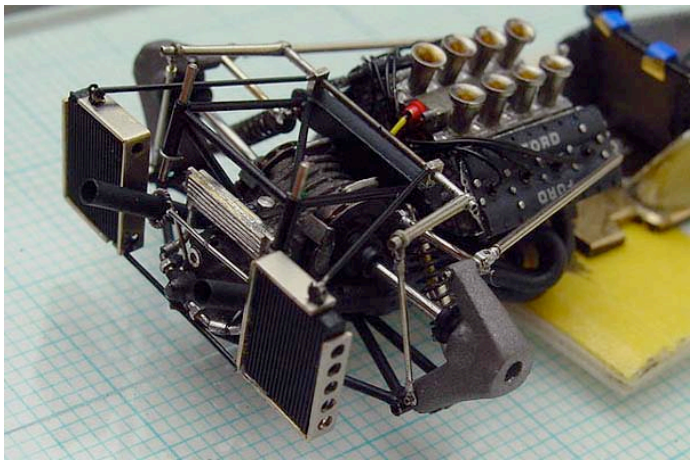
The meter rings were made with slices of brass tube. I electro-plated them with the other suspension.



After painting the instrument board black, I put the rings and the rivets on it. The meter decals will be applied later.

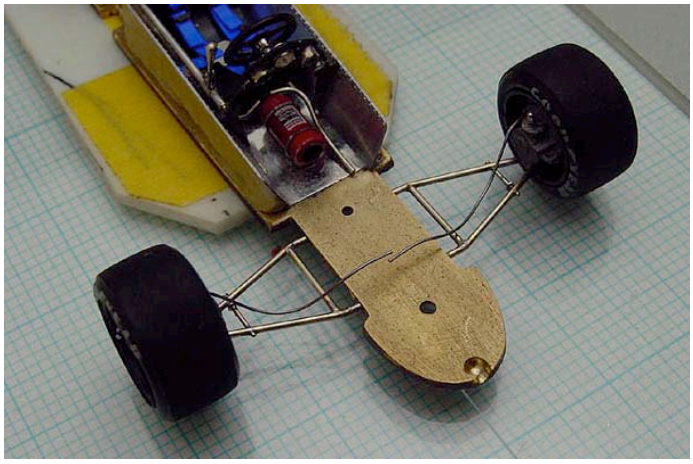


I attached the gear-oil cooler and the lines to the gearbox before building up the rear suspension.



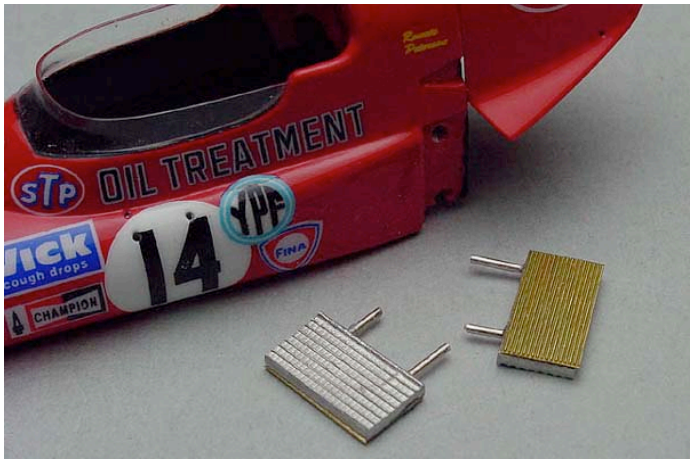
Despite the extensive pre-build, I spent lot of time adjusting the length of the upper arms and the stabilizer rods.

I put the "Goodyear" decals on the side wall and oversprayed some dust color on them.



Then, I fixed the lower arms of the front suspention. The brake lines should be an effective detail for this kind of Formula One model car.

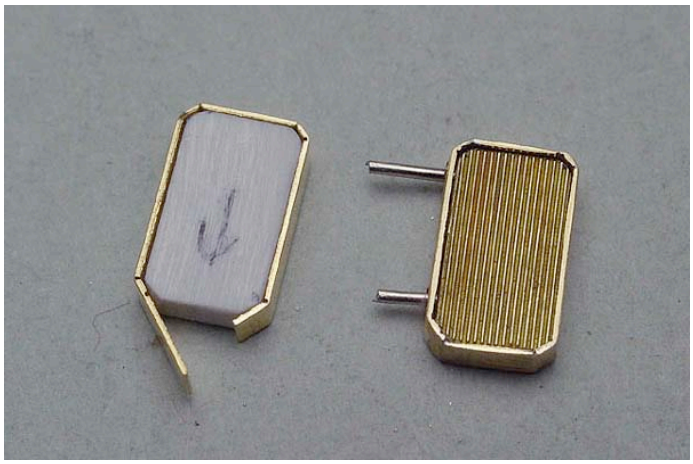
Polishing the surface of the final clear coat was done sectionally. The yellow tape was to avoid improvident contact of the cotton swab to the prominent area.



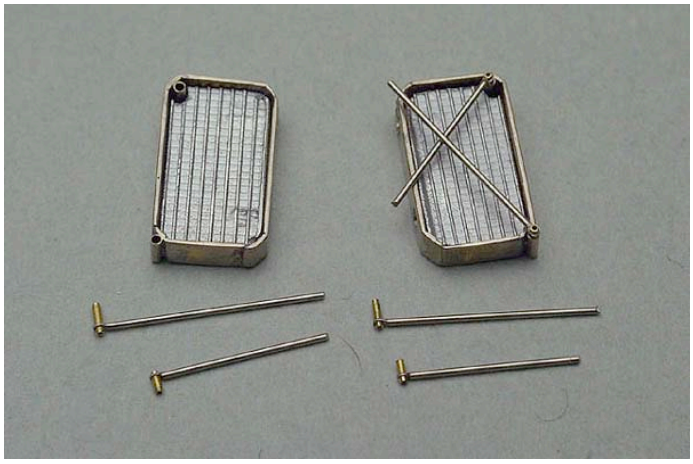
As I showed before, the side radiators were made of junk pieces of white metal and photo-etched plates. I drilled holes in the body and just dry-fitted them.

I glued the body and the underbody. And then the front suspension unit was built up. It was much harder than the rear...

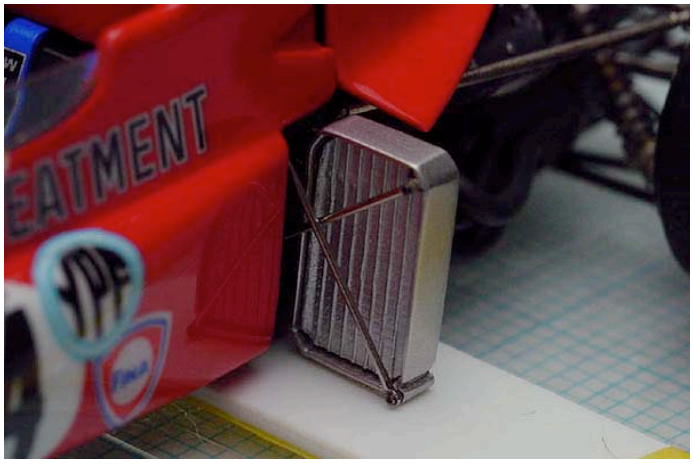
I fixed both th wings and tires. It looked almost complete, however, I had to add more details.



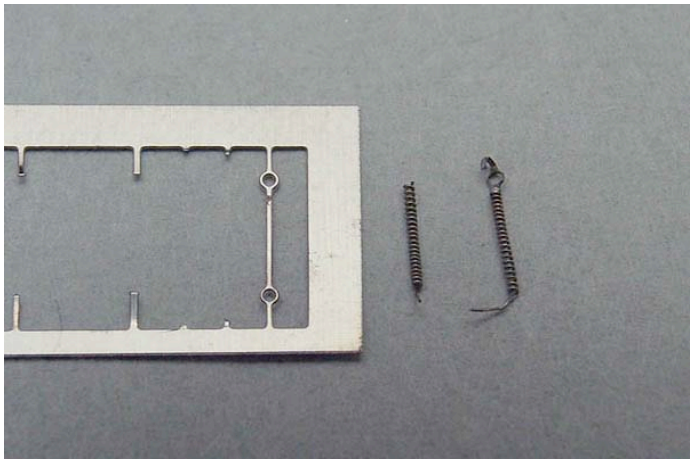
Regarding the radiators, I made their outer frames with bent 2.0mm width brass strips.



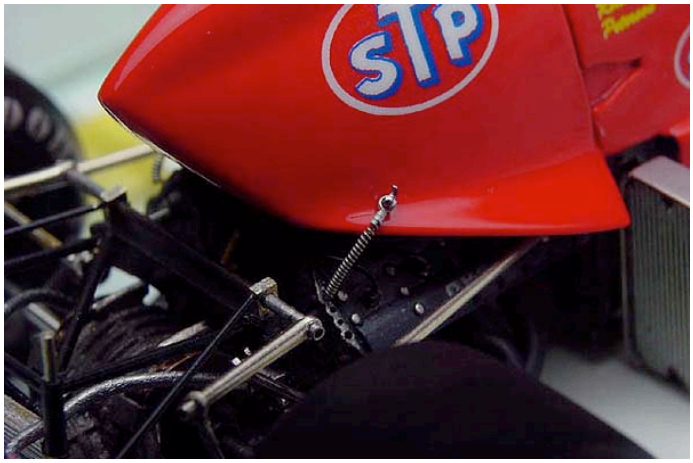
The support stems of the radiators were made of 0.35mm nickel silver lines and 0.4mm brass tubes. I soldered brass tubes on the outer frame for attaching.



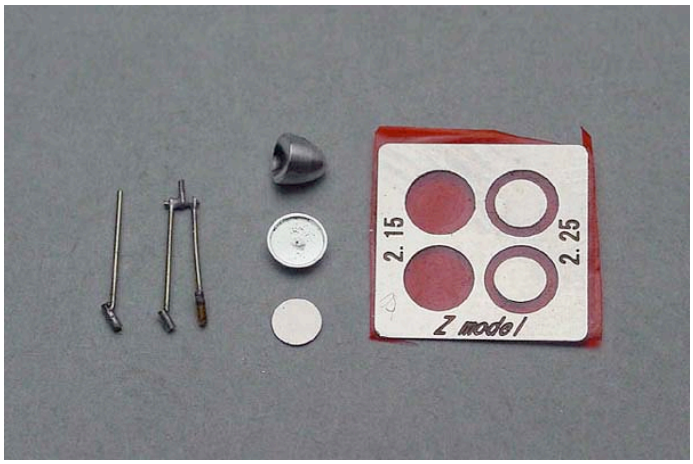
I glued the radiators to the body. The white styrene plate was helpful to keep them in the correct position while gluing.



These are the catch hooks on the air pod. I made the microspring by twisting 0.1mm soft line around 0.2mm diameter drill at first.

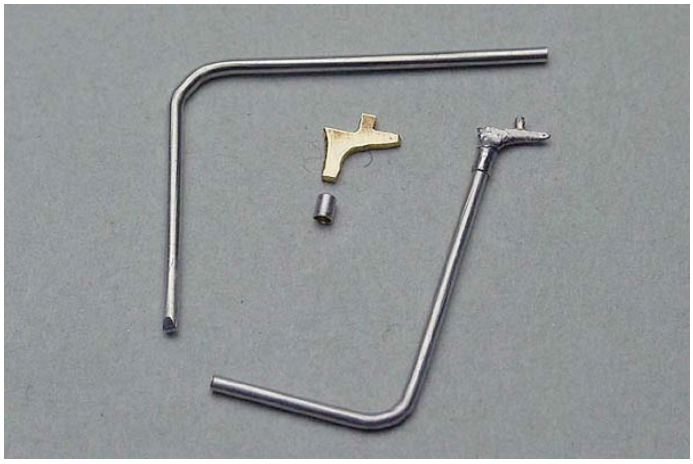


Then I soldered a junk photo-etched part to the end of it. There was a small hole on this PE part as you can see, so I installed a 0.35mm nickel silver pin to the air pod.

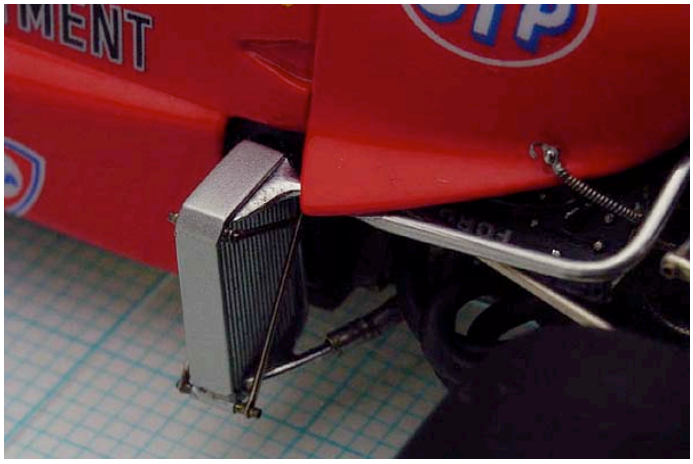


I bought the special parts by Z-model(Z-11), they consist of very excellent turned aluminum pieces and PE.

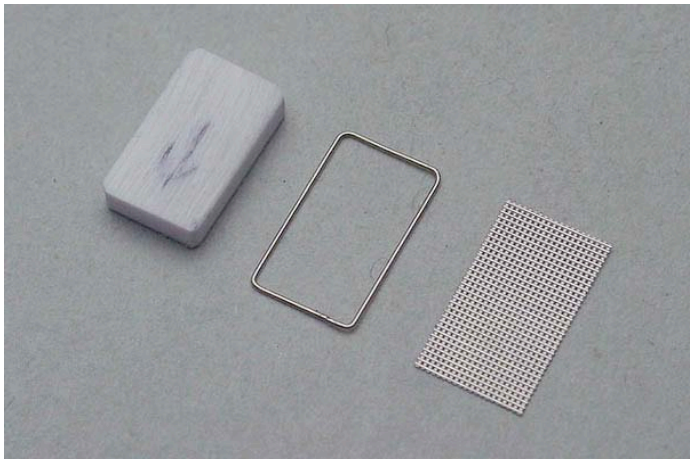
I built them up and got a nice view! But it could be a bit big for this model...



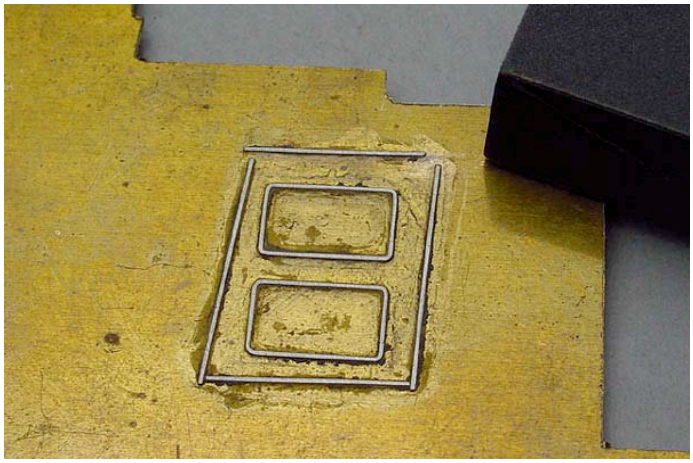
Regarding the water hoses between the radiator and the engine, I made connectors with brass chips at first. Then I soldered 1.0mm tubes to them and joined the 0.8mm aluminum rods.



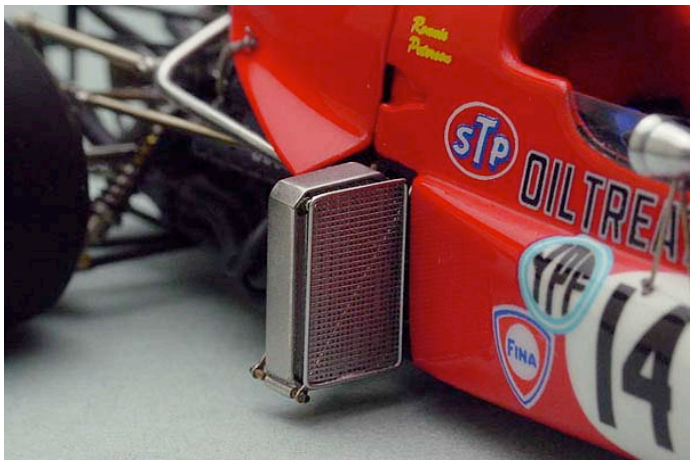
I glued the hoses and the connectors to the back side of the radiators.



I bent 0.25mm nickel silver line along the styrene jig and made a thin rectangle. This is the outer frame of the stone guard panel in front of the radiator.



I made a pair of rectangle and attached them on the solid brass plate by superglue, to shave their backsides flat.



After removing the superglue perfectly, I soldered Tameo's PE mesh to the rectangles. And rasped off the excess PE edges by moto tool.

Well, I glued the stone guards on the radiator and completed this project.

Here is a special photo with the real car at Retromobile 2009. What a nice surprise!