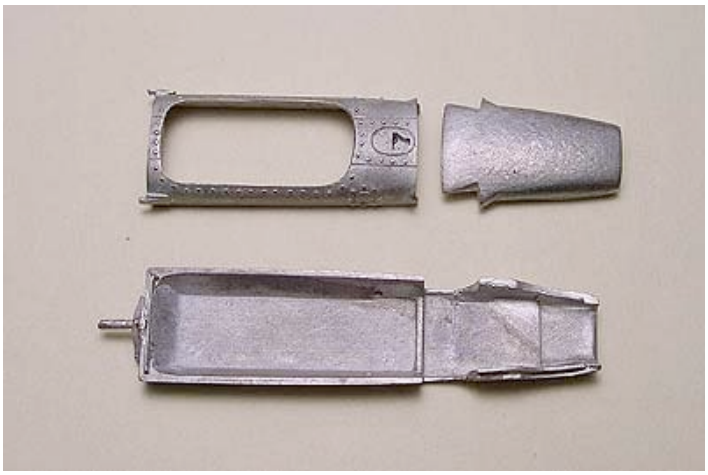
Lotus 49

Akihiro Kamimura builds the Meri kit

It is so famous the master-model of this kit is made by Vincenzo.Bosica. I love! Vincenzo and his works, however there would be some modification points to build the early Lotus 49 in the Dutch GP,1967. Additionally, this "Ford DFV" seems too much for the body.

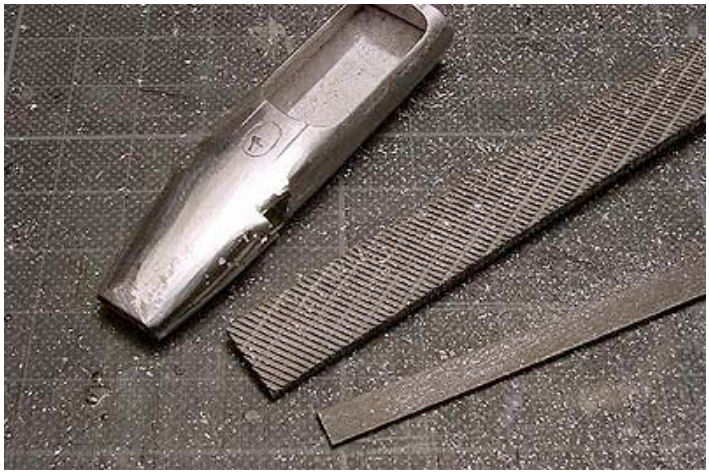
I pre-assembled the main chassis, engine and gearbox to see the relationship and adjust the gaps between them. Part of the center diffuser is missing... what should I do to make it?



However that may be, I began to build it. The body parts were separated as we can build any types of 49 or 49B, so it was the first step that I unified them with a solder.

Surprisingly, I could soldered them without even a drop of flux. It was very easy to melt... I guess the material of this white metal includs a lot of plumbum. Anyway, I removed the excess metal with a rotary tool.

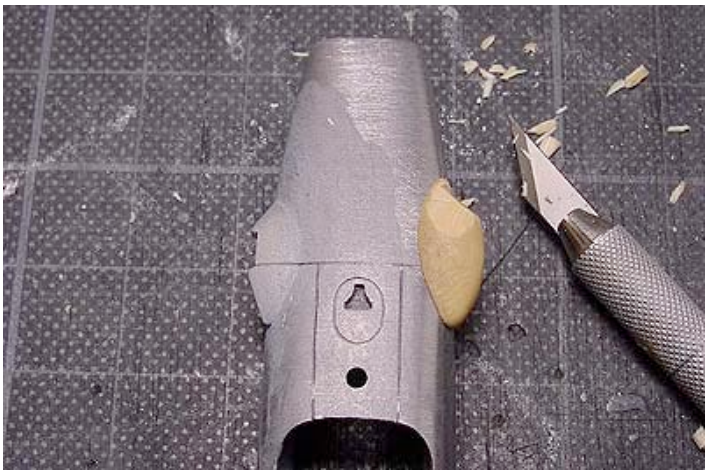
I added some volumm to the side body with a solder, and also did the same work to the upper nose.



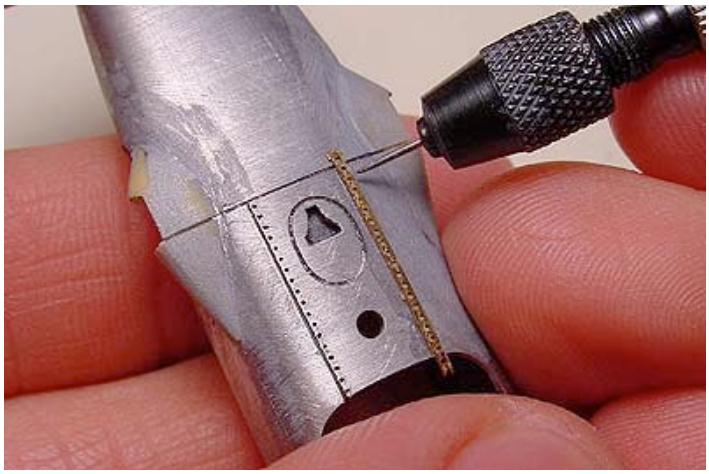
I made a good shape, a good line on the body. I always use a rough file like this!

I felt the anterior length of the cockpit was too short, so I extended it with a solder. Be careful! Don't get a burn on your left fingers.

After shaving the excess metal, I added the front suspension covers with epoxy filler.



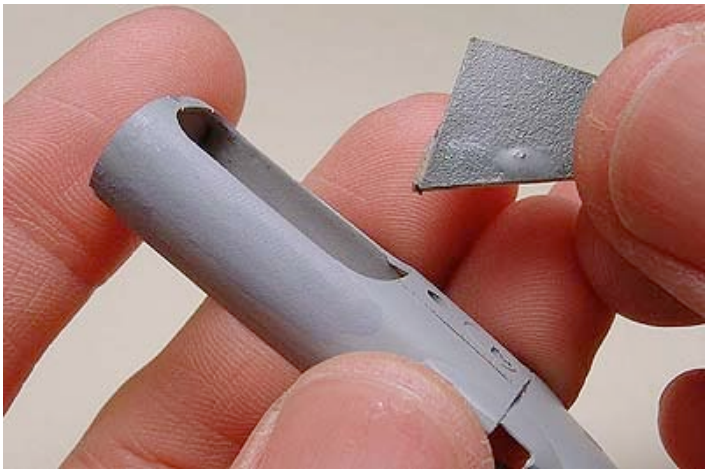
I used two or three knifes, about ten files and a rotary tool to emphasize the details of the body. It's so difficult to keep a desktop as clean. But, I do my best!



The picky details were added on the body. But to avoid too much decorations, I put the rivet hole on these particular erea.

The side air vents are very fine p-e parts, so I soldered them carefully to the upper cowl. It is better I guess, the output of my soldering iron is 25 watts, and the shape of the tip is rather blunt.

I remade the fuel cap with the combination of a brass tube and an aluminum rod. All right, it's time to spray the first primer.



After the first primer coat, we can easy to find some gaps and scars. So I applied thinned-out Tamiya's gray filler with a brush and sanded them flatly after a while.

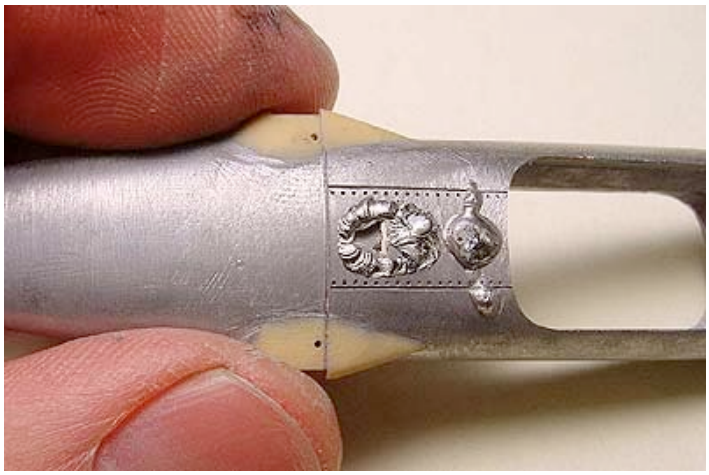
I adjusted the ride height and inserted the 0.75-mm plastic sheet between the under tray and the ground. The upper and lower monocoque were already joined by solder.

The second primer has been sprayed on the body. "It seems to be perfect doesn't it?"I thought at this morment.

I like to build this kit as the debut version at Dutch GP, 1967. So I had to work out the surrounding shield of the cockpit.

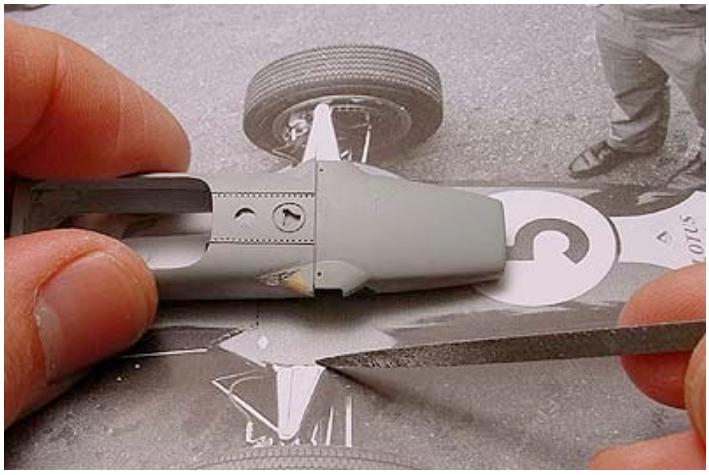
I beated a thin brass sheet with a hammer and a dull chisel bent it along the cockpit opening.

I joined the back end of the brass each other and gave it some ajustment to fit the opening of the cockpit. Against an expectation, you know this work didn't need much difficulty.



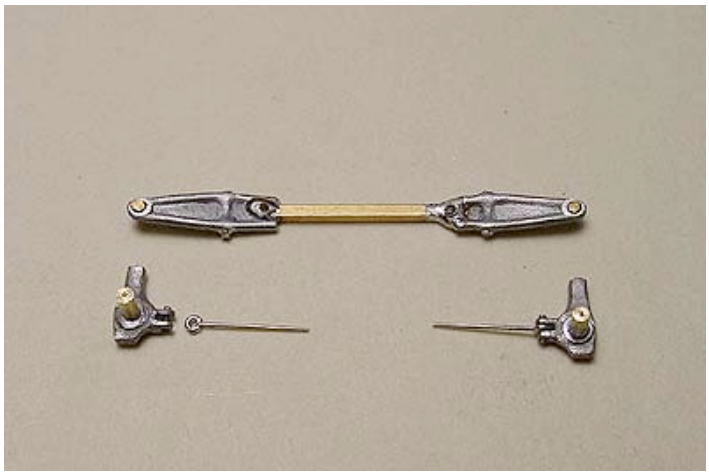
I got an email advising for Meri's Lotus49 from a friend. He said " If you wanna build early version of 49, should check the line of access hatch!"Soon I understood what he say, and removed the primer. Then I corrected the fault of the engraved lines.

I re-engraved the acess hatch as a circule. Is it all set to spray a primer coat?



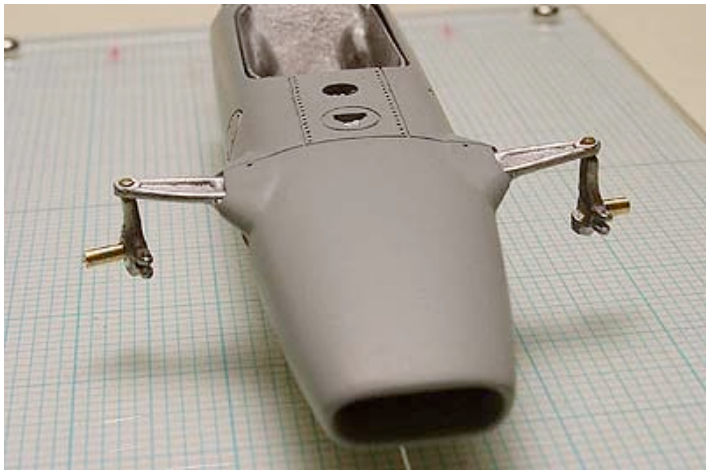
After the primering, I found another delicate distinctions on the suspension covers. The early Lotus49 had a bit smaller covers than the late one.

I corrected the suspension covers and added the recessed lines of the fuel tank, in passing.



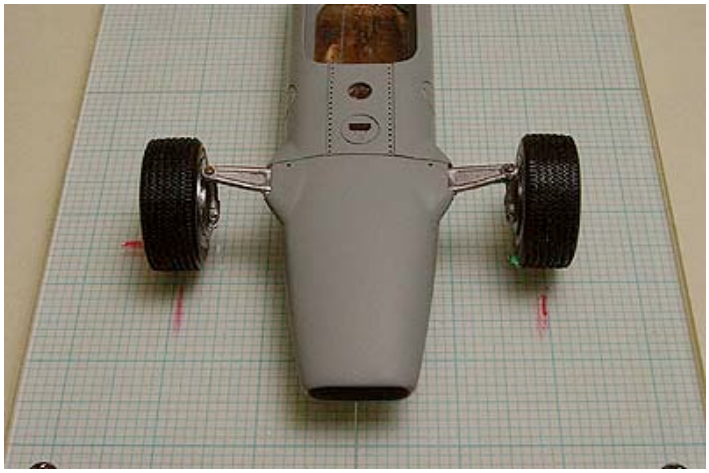
Breathing a sigh of relief for about the body, I started to build the front suspension. I integrated right and left upper arms and put the brass rods as axles into the front uprights.

I made the bulkhead with a thin nickel silver sheet and put it from the backside of the body. I also shoved some structures in front of the bulkhead.

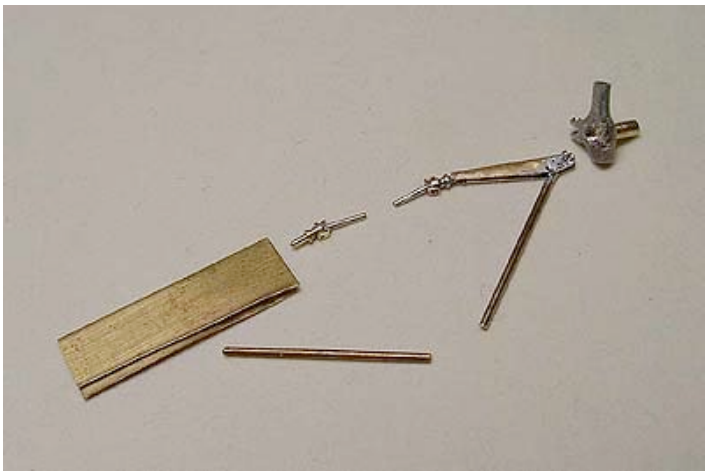


Then I attached right and left uprights to the upper arm with small rivets.

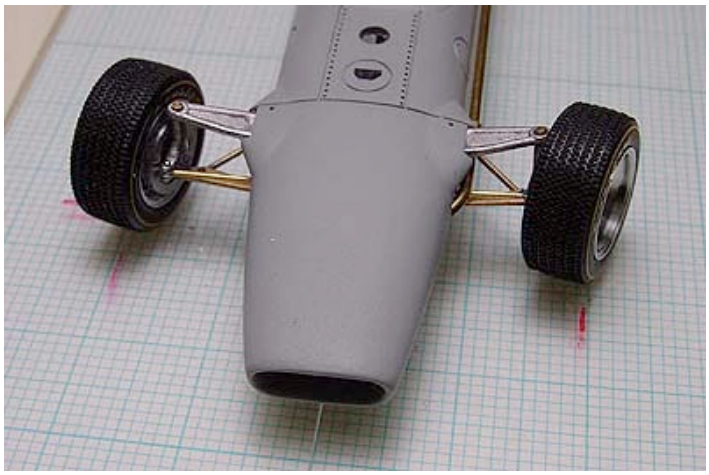
The outer wheels were turned off from aluminum by a friend. I used inners from an original kit but they needed some adjustments to fit into the outer one. And you know, the tire set came from Quartzo's Lotus 49 : a die-cast model car.



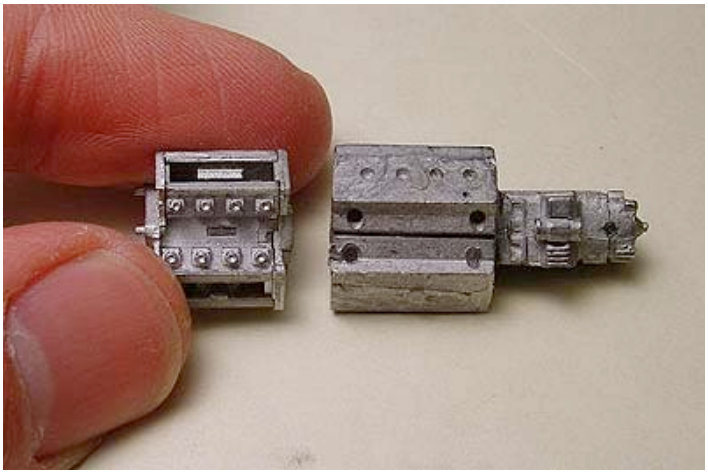
I set wheels and tires but it seems a bit wider as the image of the real car. I'm going to chop and adjust the center part of the upper arm, little by little.



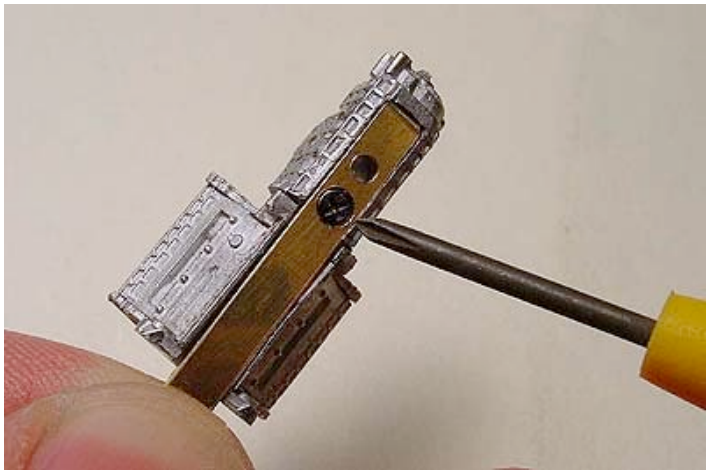
After the position of the uprights had been fixed, I began to make lower arms along them. They almost consists of brass material : the double upped brass sheet and 0.6-mm brass rods. Especially for the joints of arms, what a perfect fit that I found them at a shop of the rail-road modeling (I don't know how they should be used originally).



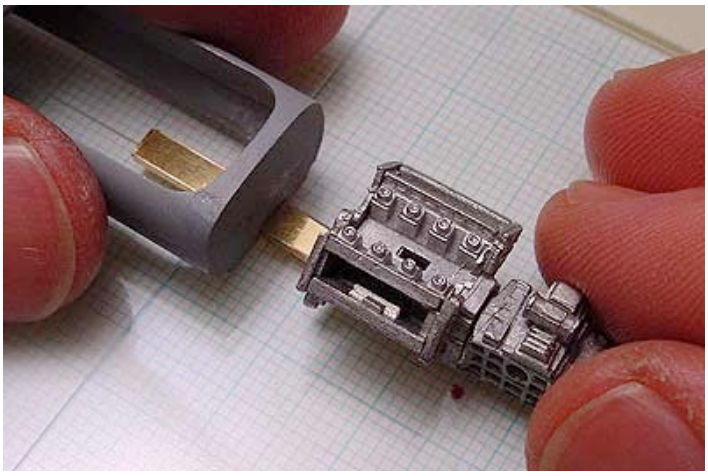
I guess... I've done the perfect job on the front suspention. Don't you think so?



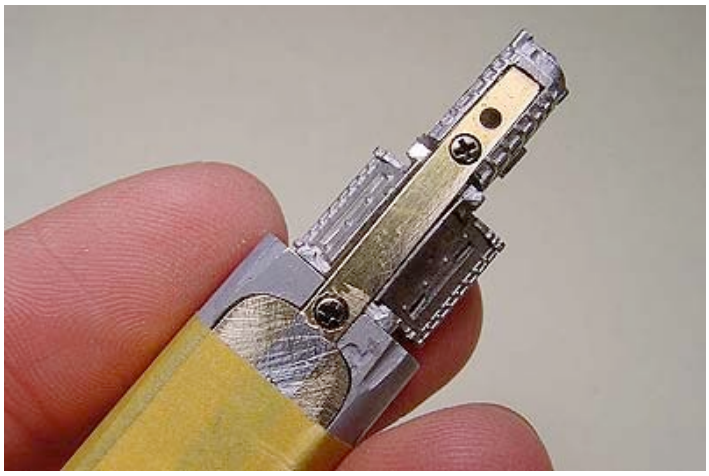
I stated to build the rear end. There was a strangeness for this big one and I had the luck to use Tameo's DFV from the junk box. The ZF gear box, almost seems okay but I'll add some pick details later.



I made a base-plate from the thick brass plate and attached the gearbox that removed from the original engine block, on it with small screw. Tameo's DFV were also set in front of the gearbox.

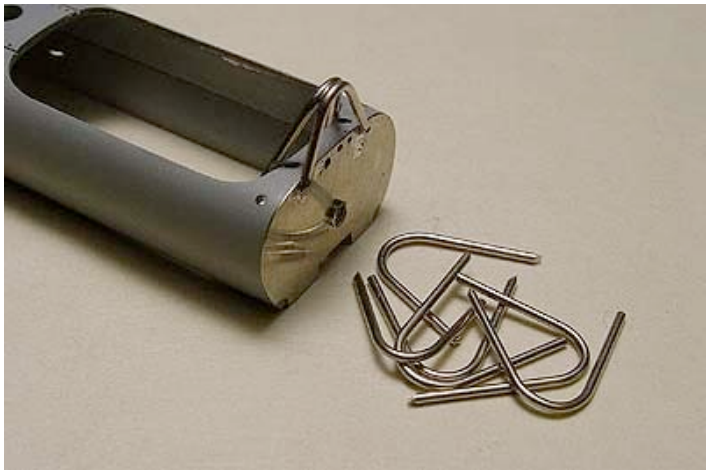


And then I inserted the base-plate in the rear bulkhead.

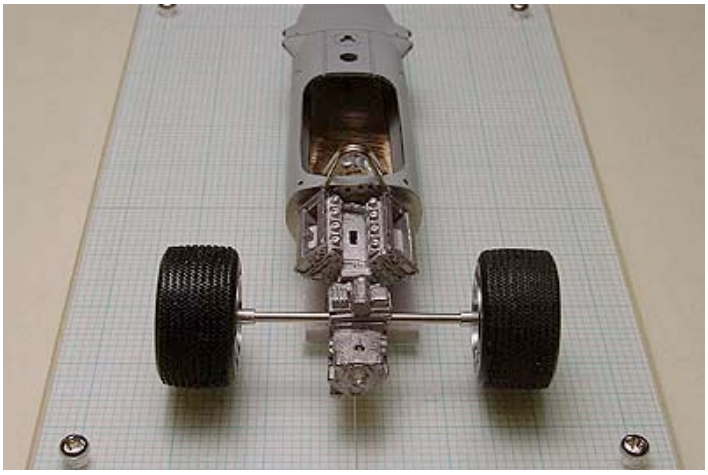


The base floor of the body was removed in the early stage. I also remade new floor with a thick brass plate and cut to fit the base-plate of the rear end. Finally they were joined with a solder like this.

According to the references, the rear bulkhead seems no painted, was bright like a metal. I decided to cover that area with a metal sheet and I cut it out from a 0.1-mm nickel silver, using a jigsaw.

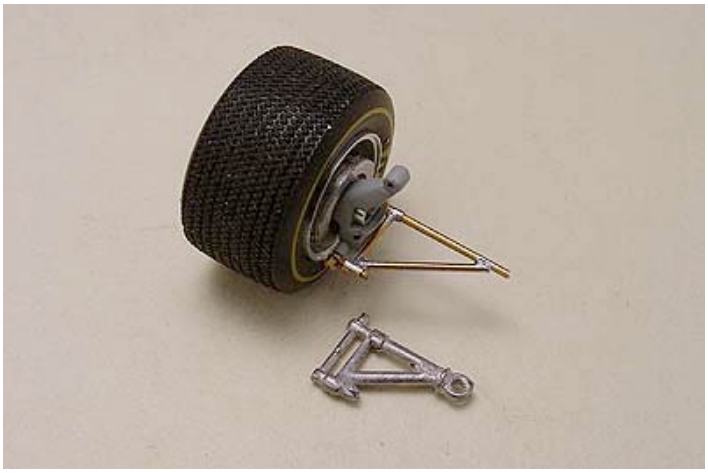


The bulkhead cover was attached to the body with a small screw.Making the roll-bar, I'm no match for it and there were many errors, at this time!



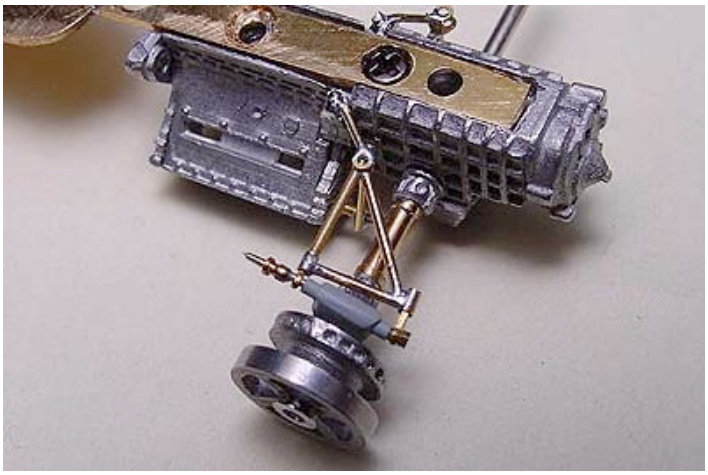
I set the alignment of the rear tread. The body was fixed on the transparent-acrylic base that is binding a cross-section paper. So I could easy to decide its alignment.

Original rear uplights were unified with the drive shafts. I cut them all to pieces with razor-saw and went through the nickel silver rod each other.

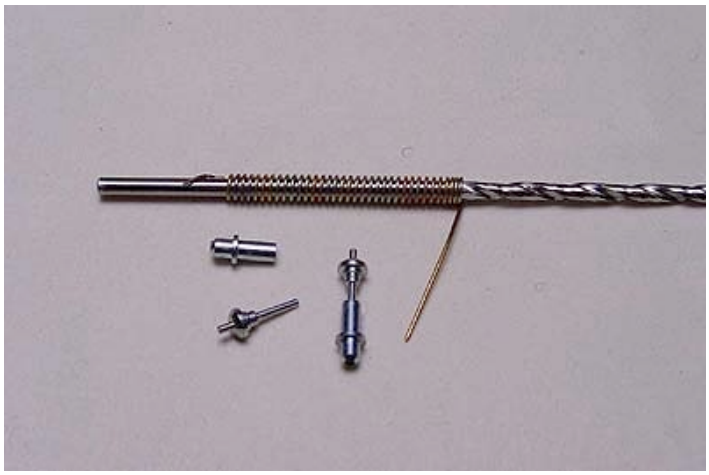


The lower suspension arms consist of brass tubes and rods, as usual. I also made use of some small hex head bolts that are provided by Sakatu. I guess...every Japanese modeler should be obliged to our easy circumstances.

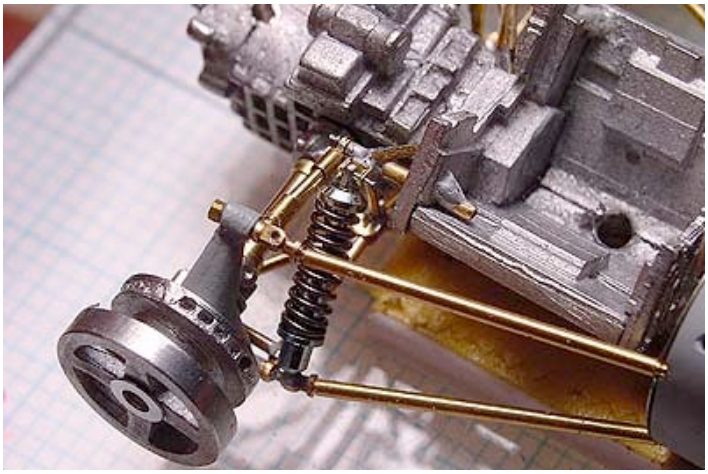
I made the pivot brackets of the lower suspension arms. They were floating at the both sides of gearbox and surported by the sub-frames from the engine. It seemed a difficut work, however I supposed it was never impossible.



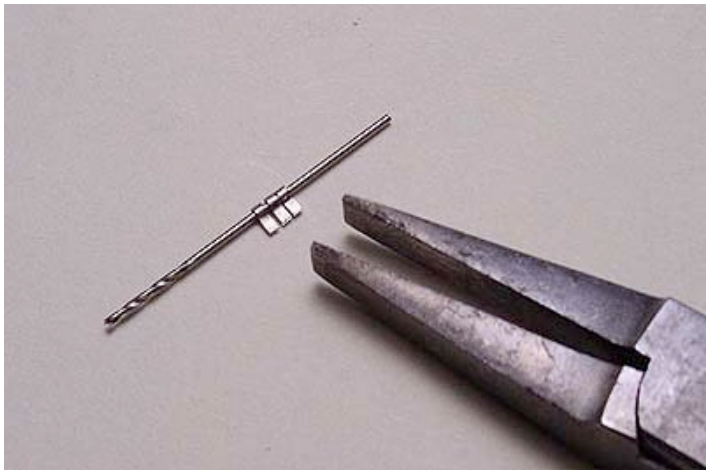
It took about three and a half hours to compleate the all parts...



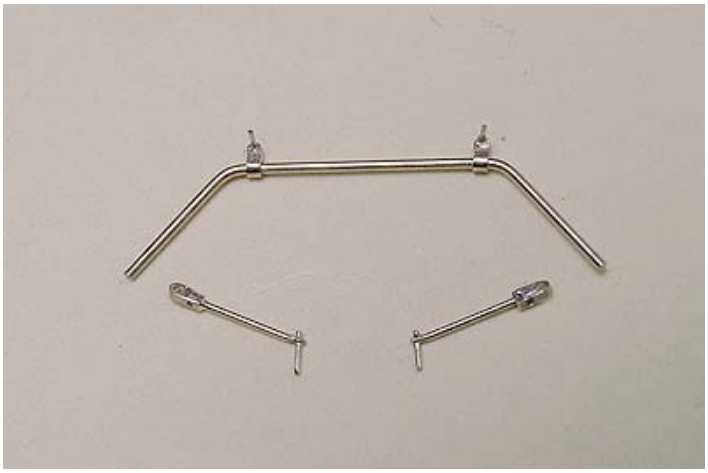
The shock absorbers could be replaced from Tameo parts. So all I need to do was to make the narrow-pitched spring ; they were made with a thin brass rod that heated with a lamp..



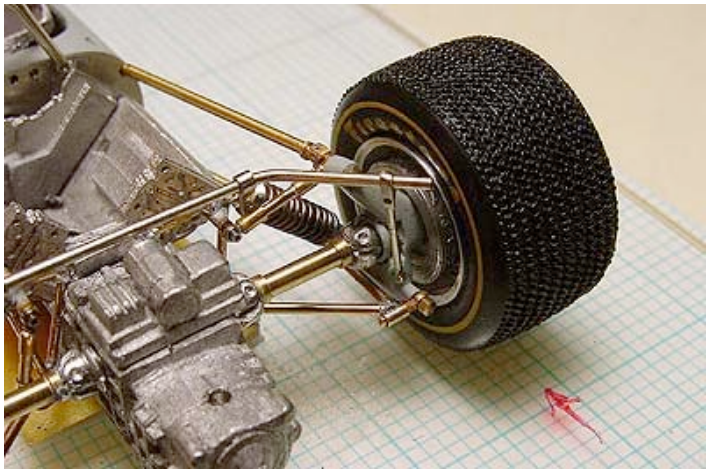
I soldered the small brakets on the sub-frames and attached the absorbers to them. Any other arms of the rear suspension were made with brass tubes, as I did before in Lotus 72E or Ferrari 312B.



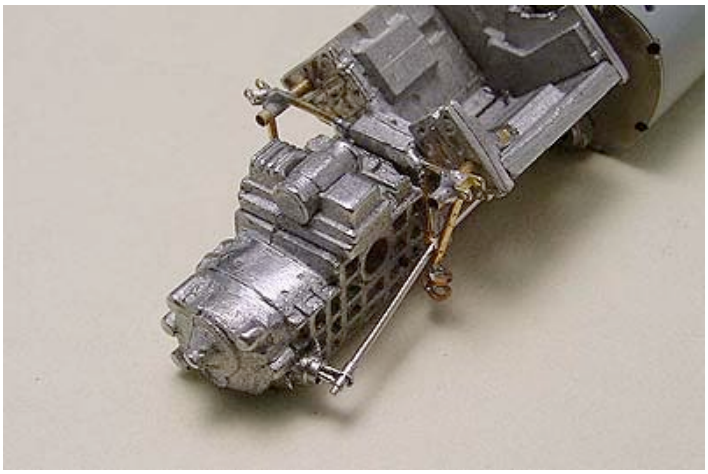
When I want a small bracket in my model, I often divert a photo-etched parts from AFV modeling in1/35 scale. However, there's a few case to make it on my own...



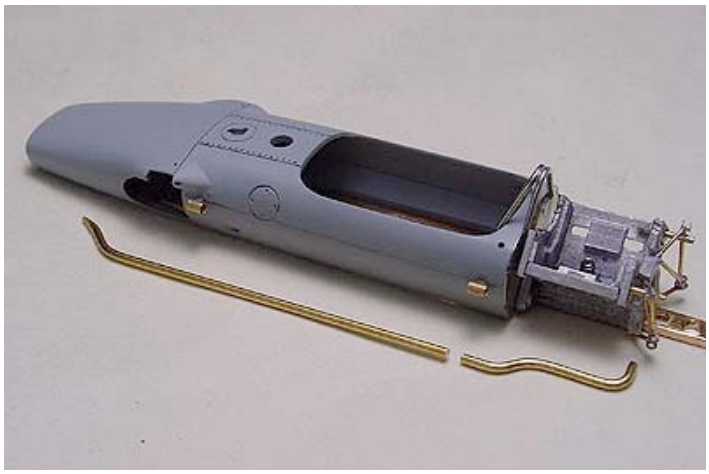
I made the support brackets of the stabilizer along to its diameter size. I also made two guide arms with nickel silver strips and thin rods.



All the rear suspension parts has been settled now. Even if I do say it myself... but it's a fine job!

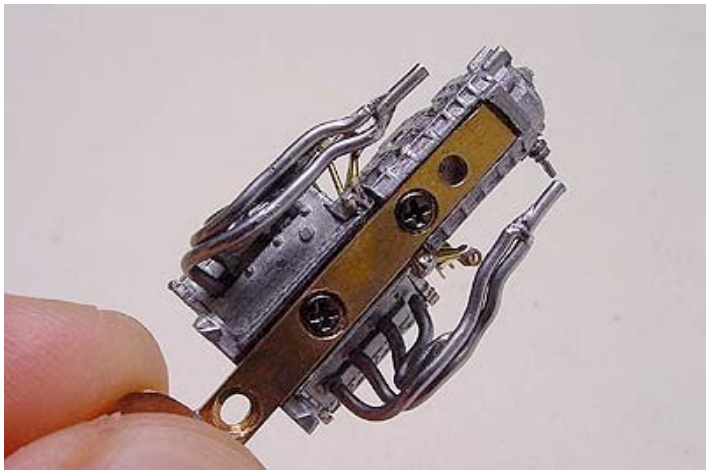


From here, I started building peripherals of the engine. The shift rod was added on the right side of the gearbox and it reached at the end of rear bulkhead, throughing under the exhaust pipes.

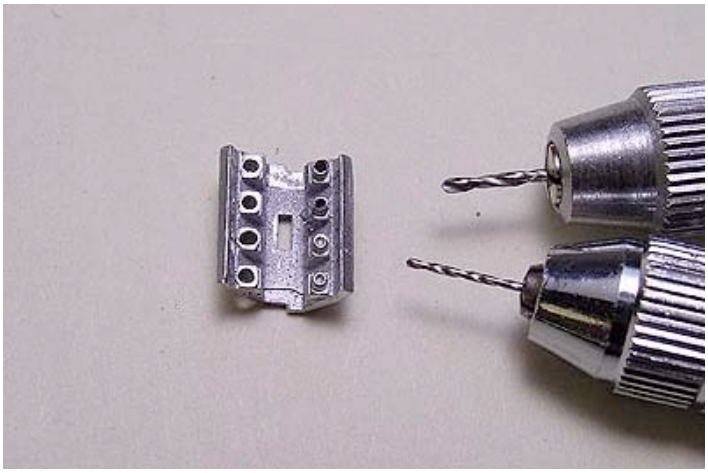


I made the radiator lines with a 0.8-mm brass rod. As it has any curves, so I divided it into two pieces and attached them with the brackets that were made with brass tubes.

The exhaust pipes were remade with a1.0-mm solder line that's easy to form by hand.

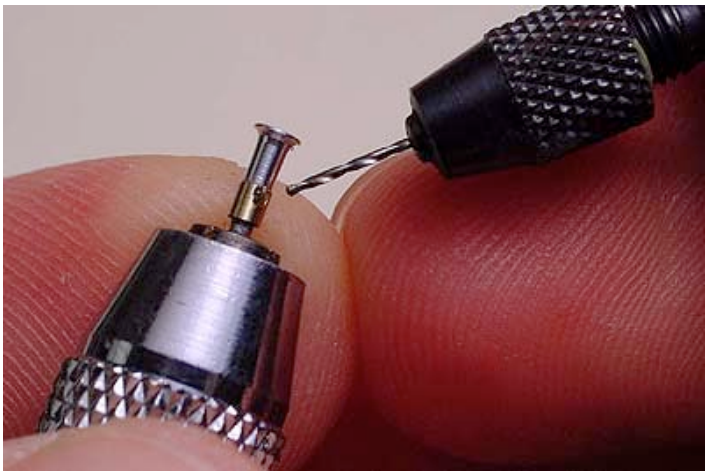


It has became a bit warped... may need some adjustments with a filler.



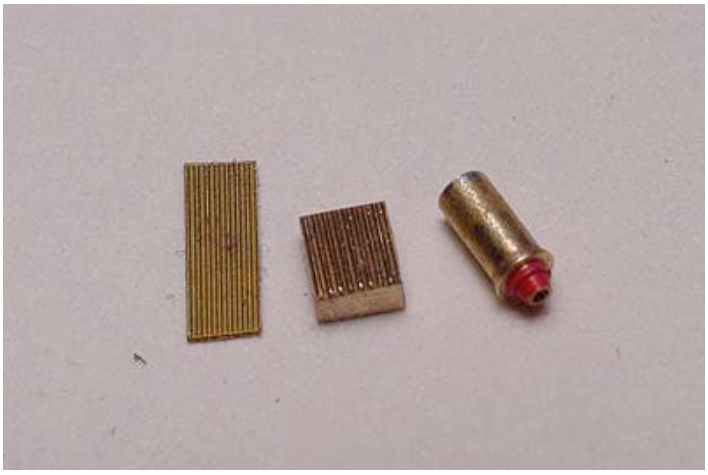
I've built some Ford DFVs in 1/43rd scale before now, and for this time I'm going to add a bit new detail based on my experience. This is the center part of air funnels and throttle plates. I drilled the holes that would be inserted air funnels, step by step.

I had got these air funnels at Retromobil show and their lower part were already extended with the combinations of brass tubes. The throttle plates that were made by photo-etched were modefied to through the brass tubes. You can see a little clearance under the plate, in above picture.

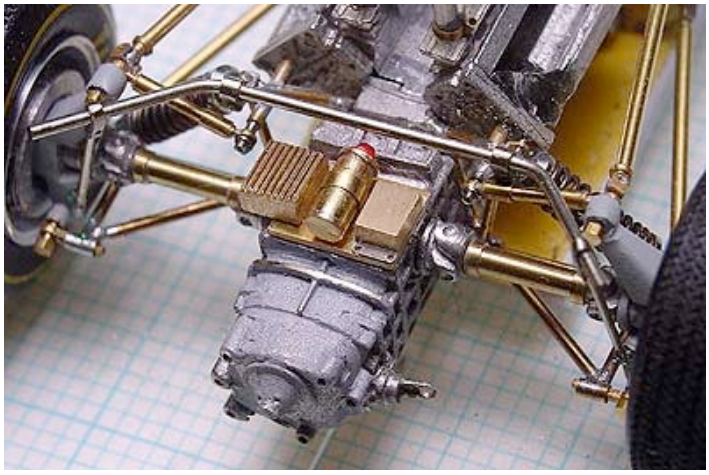


I drilled 0.5-mm hole on the side face of the brass tube, to insert another brass tube as the root of fuel injector. This kind of work has much difficulty so I needed another method in addition to using this drill, a verry thin needle file and a rotary tool.

Then I got sucess to solder the injector roots. I had found verry small hex head unions in a rail-road model shop in Tokyo few months ago and I put them between roots and nozzles of the injector.

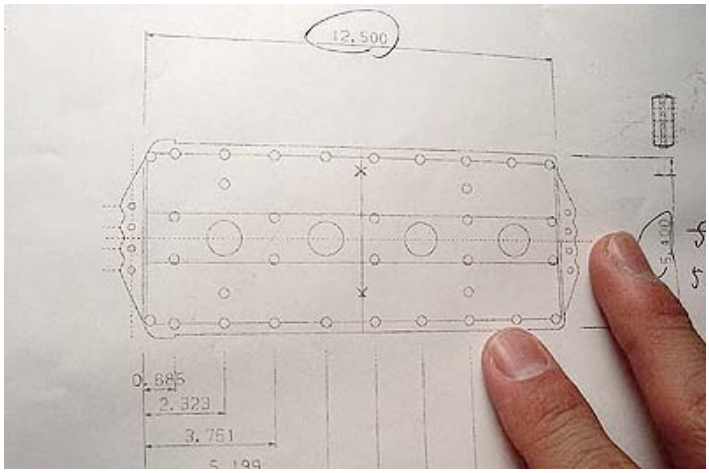


I scratched the ignition devices that were mounted on the top of the gearbox, availed of an existing p-e part and a brass tube.

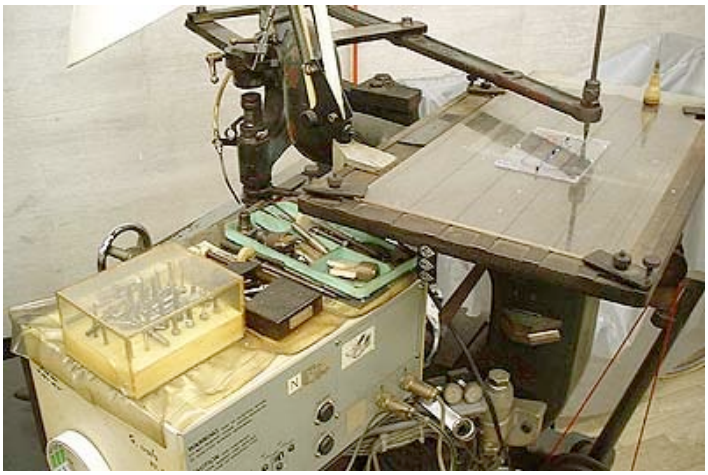


OK, it's almost lovely result on the gearbox.

All major parts have been pre-assembled now ; still there are some concerning points that I have to correct... however, I believe in my bones that it will be a good model!

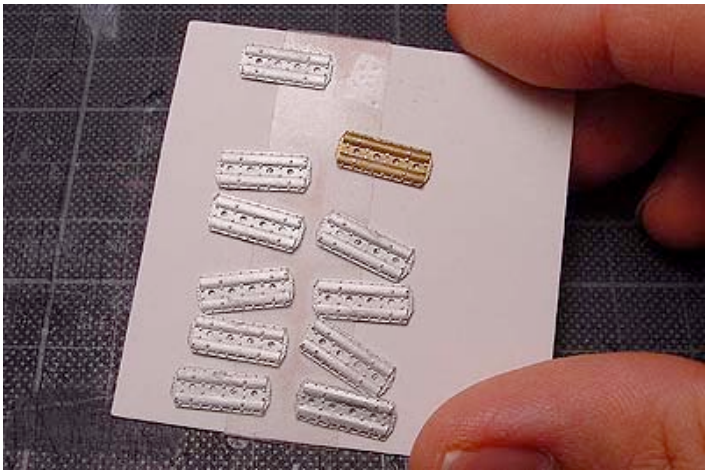


Considering the long view of my modeling, I ordered to make a "real" DFV engine to my friend who is experimental modeling engieer. We had some discussions and then a detailed drawing come out.

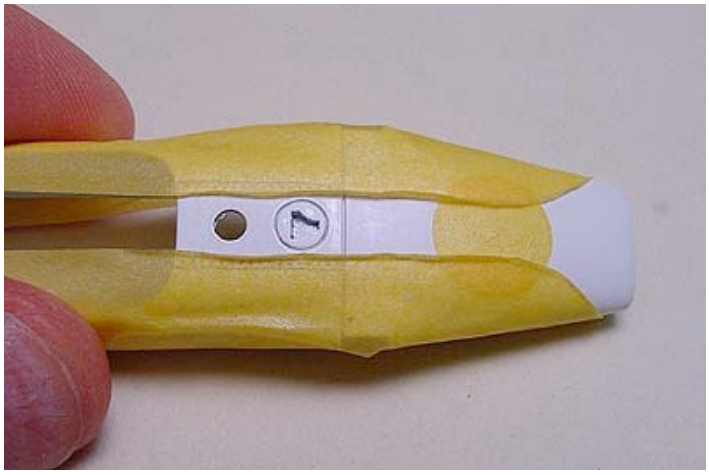


There's a reduction machine in his work shop. He also used freely a milling machine and a drilling machine to make this small master piece. I never think it could be finished without his considerable experience and talent.

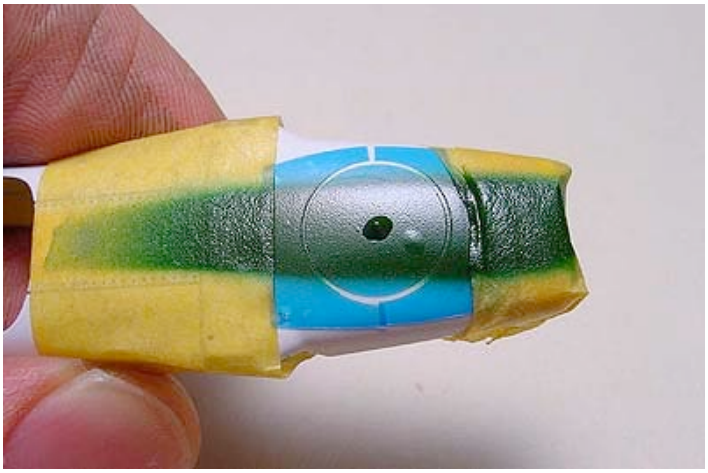
He sent me the master and I added some details of bolts and nuts on it. I asked another modeling guy to copy by a white metal.



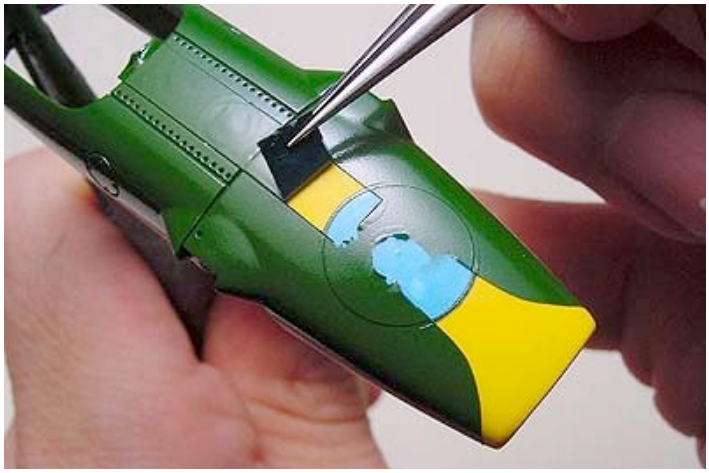
I guess it must be very difficult way to coppy such a minimal one but he has achieved it. Anyway I've got the superior pieces and it's my destiny to build a good model enough to match them...



I began to paint the body. After the white painting, I covered the number circle broadly.I painted the center stripe with yellow.



To depict a thin green line around the white circle, I masked the yellow areas and air-brushed with green.

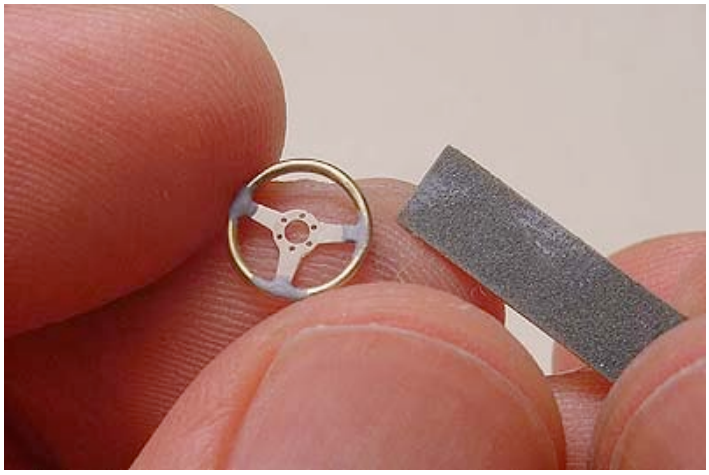


After the green line were dried, I retained the mask on the circle and then peeled another. And then masked on the yellow area accurately. I finally painted full body with green. It's always a wonderfull time for me to see the crisp divided line of paints.

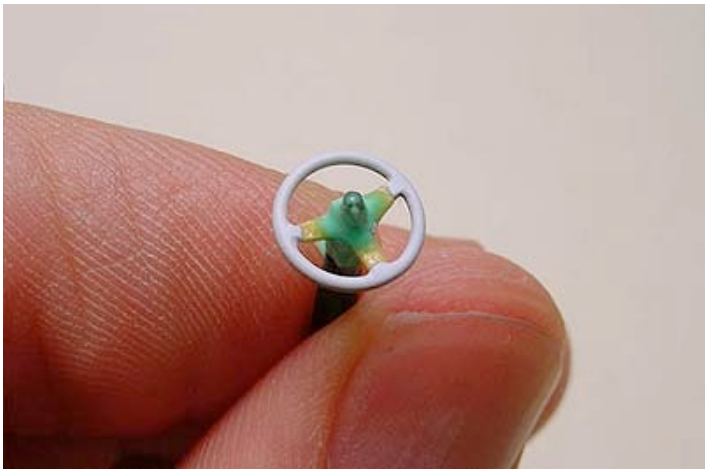
I found some mistake about the decal when I started to apply it ; different font and different size. A friend of mine print me a new decal with his PC and another guy gave me a piece of decal including Tenariv kit. It brings home to me that I'm favored with good friends...thank you very much!

I painted a clear coat on the body several times. When the clear coat has been dried, I polished its surface and then painted the clear again.

Oh! I've almost forgot to build a cockpit. The stering wheel was made with a brass rod which was rolled up and was bonded to a center spoke with solder.



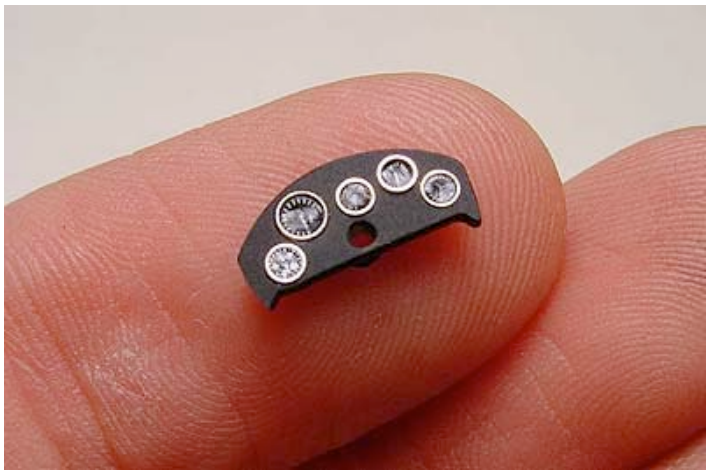
If necessary, some grey filler was added on the joints of spoke and rim. After it has hardened I sanded the joints carefully.



And then I painted it white, primary. The masking gel is very usefull item and I frequently use it in such a case.

Semi-gross red has been coated over the white and the emblem of Lotus has been applied on the center, too.

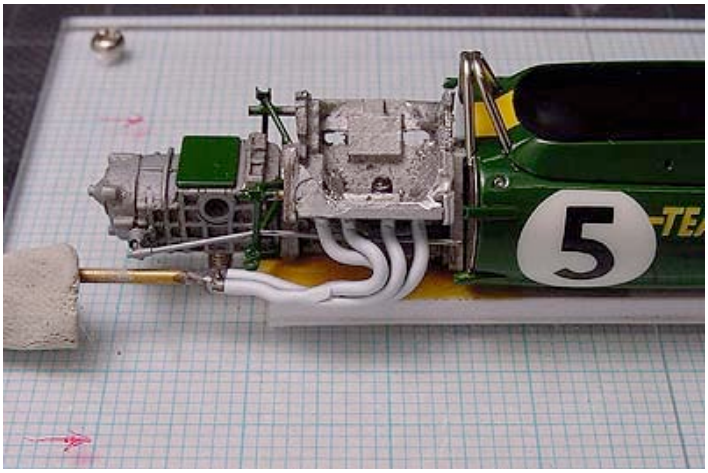
The instrument panel was came from a kit. I shaved the molds on surface and drilled five holes for each meter. The meters were made with brass rods and tubes.



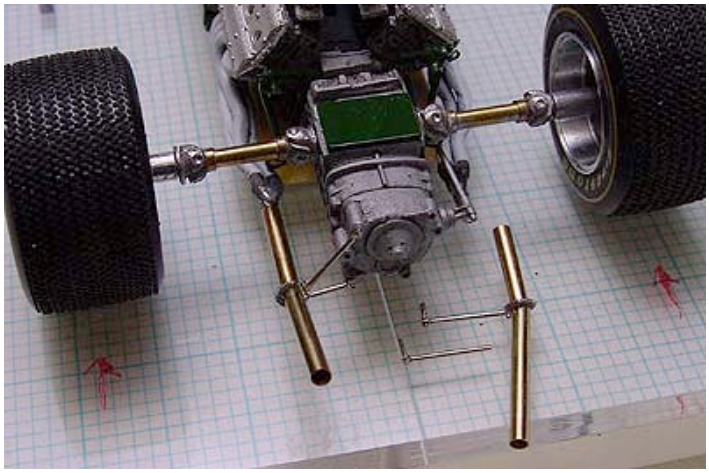
I applied the decals of meter on each. Now I find the stering axis should be drilled more to the left because the real car has very hard offset, but it is too late...

Anyway, there was no importance around the drivers sheet so I let well alone without black painting. I glued the instrument panel on it and checked if it could be settled into the body.

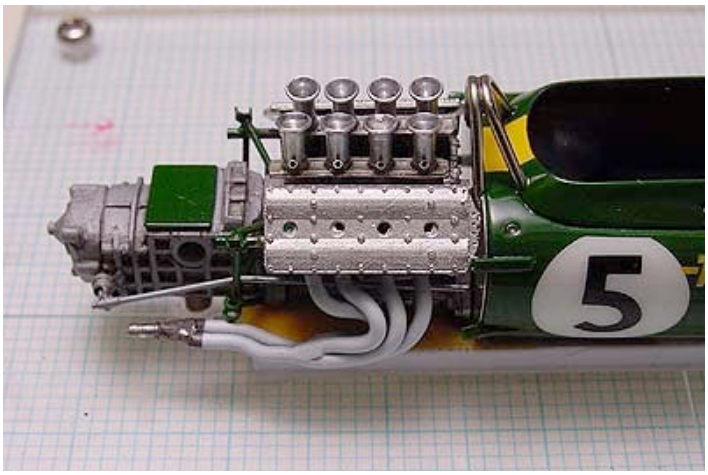
I joined the body and the underbody with screws. I also use the epoxy glue secondarily but there's some possibility of yellowing. So you must be carefull when you put the epoxy on the leucocratic color...



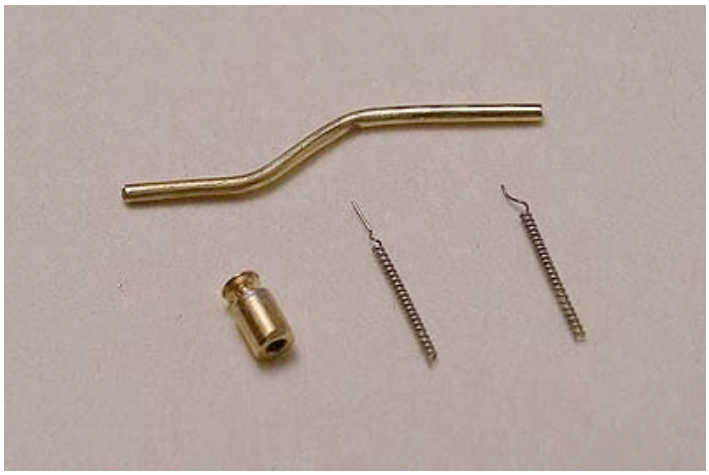
I fixed the engine brock and the gearbox on the underbody. The exhaust pipes were painted with matt white and just be settled in its position.



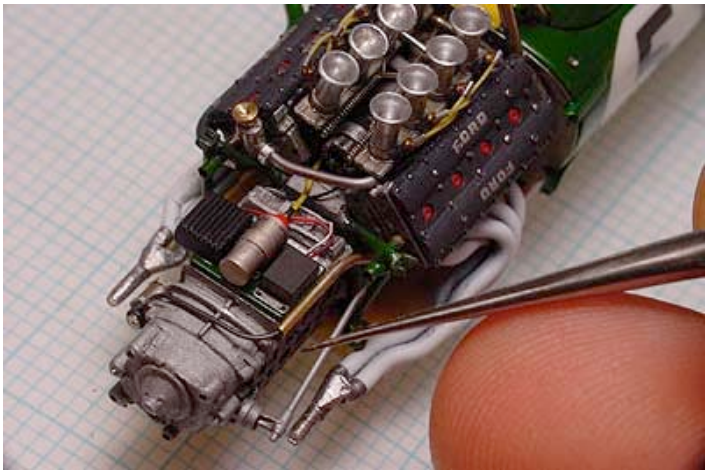
I made the end pipes with a brass tube (1.2mm in outside, and 1.0mm inside). And I added the details of exhaust pipe stays. These were consist of 0.3mm nickel silver rods and micro springs.



I set the engine heads temporarily. You may find any gaps between the plug holes and the air funnels... but there's no longer time to bother myself such a bit thing.



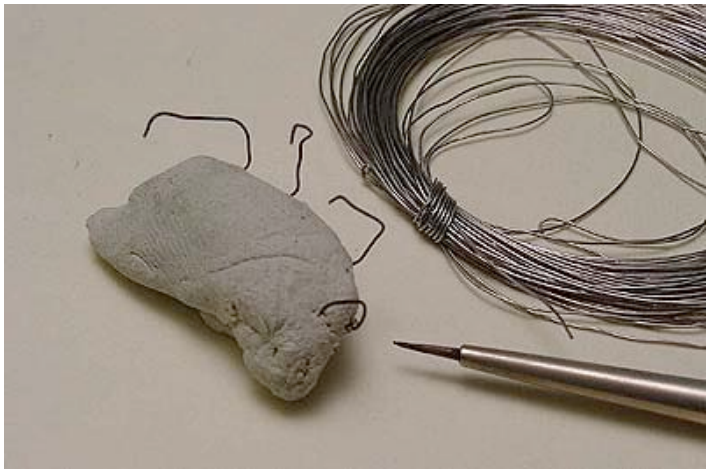
I remade the water pipe and the reserve tank with brass materials. Below the pipe you can see two micro springs that were twisted from very thin and soft wire. I'm going to use them as the throttle wires...



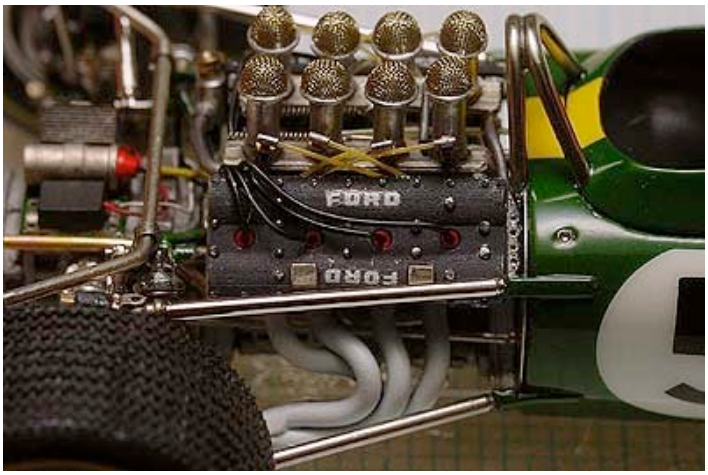
I painted the engine heads and others. The water pipe, reserve tank and all wiring should be set before the assembling of the rear suspension.

As concerns the rear suspension, I couldn't afford enough time to take photos of assembling because that was so complicate work. The front suspension was not so hard, however I have some difficulty with setting the inside structures to the front nose.

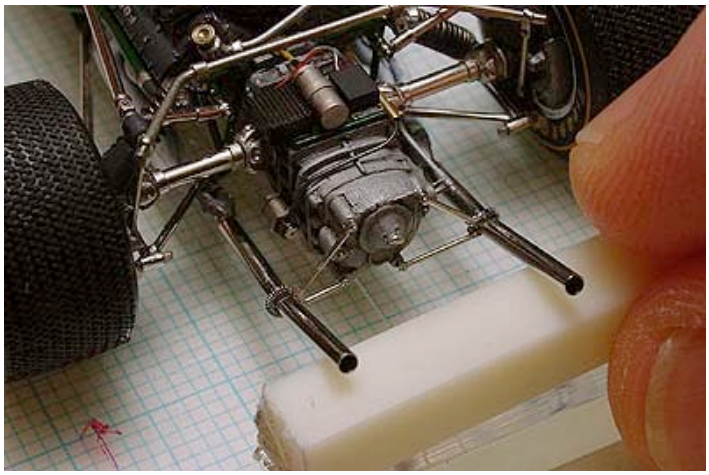
Yeahhh! She has got four small wheels and looks like a car. It's a long way to come here but I still have certain number of processes.



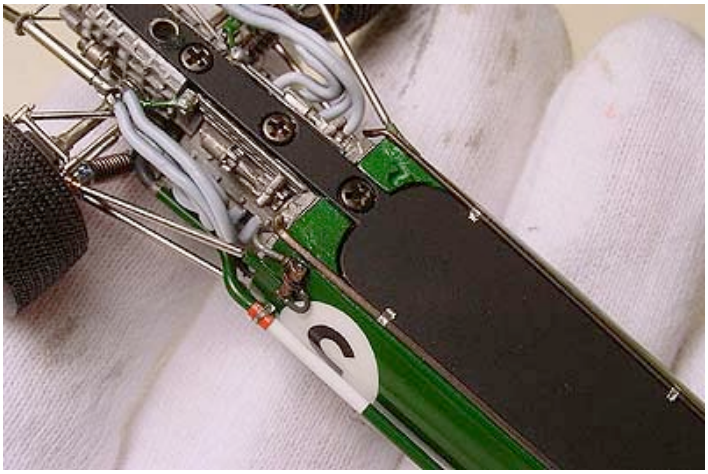
The plug cord is 0.25mm soft wire that is sold as solder in the railroad model shop. It is so flexible that I can make them having a nice expression as a real one.



I painted the plug cord and attached them in such position. The fuel injector pipes were also painted yellow and settled in.

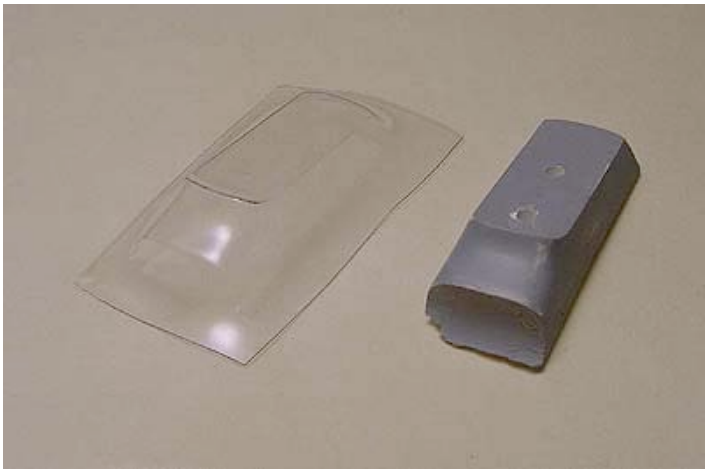


The end pipes of exhaust have changed gold to silver by a nickel plating. I fixed them with the help of some plastic brock.



When I browsed the reference book of Lotus 49 yesterday, I found something pipes on the both side of the underbody. So today I made up my mind to add these pipes hurriedly.

I reshaped the outlines of the rear-view mirror. The mirror planes were made from thin nickel silver plate. I'm going to polish them and put into the body of the mirror, as usual.



I had to remade the windshield by vacuum forming because we can find the different shape in the early type of Lotus 49 compared to the late one.

I added the finishing touch, the braking pipes along the front suspensions. Many thanks for your help, M.Goto, M.Saito, HiSuzuki, Y.Kabasawa and I.Nomura.