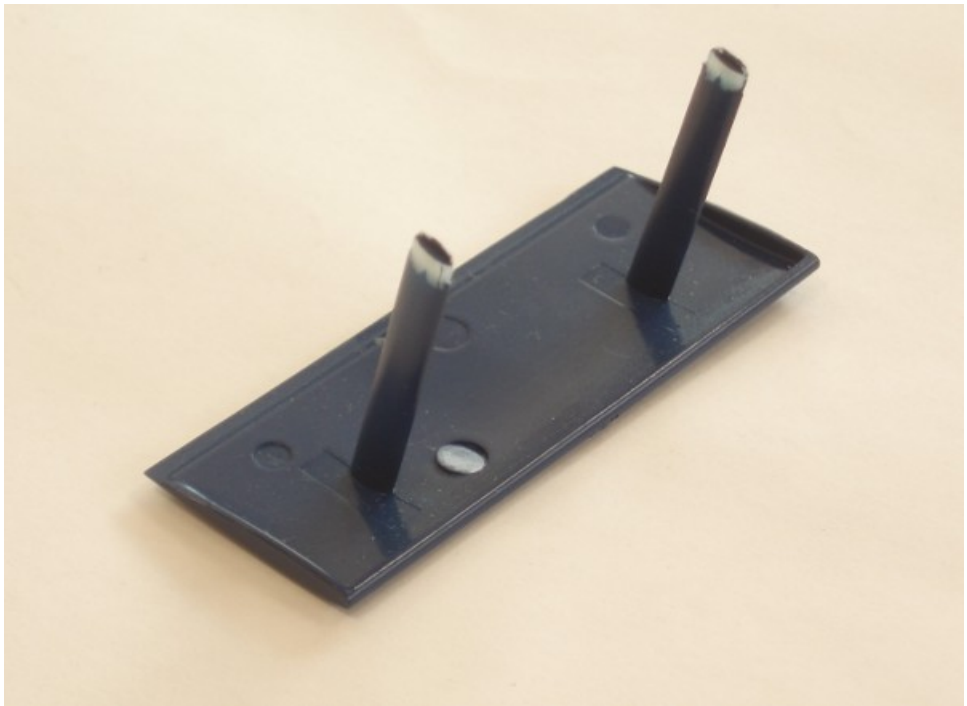
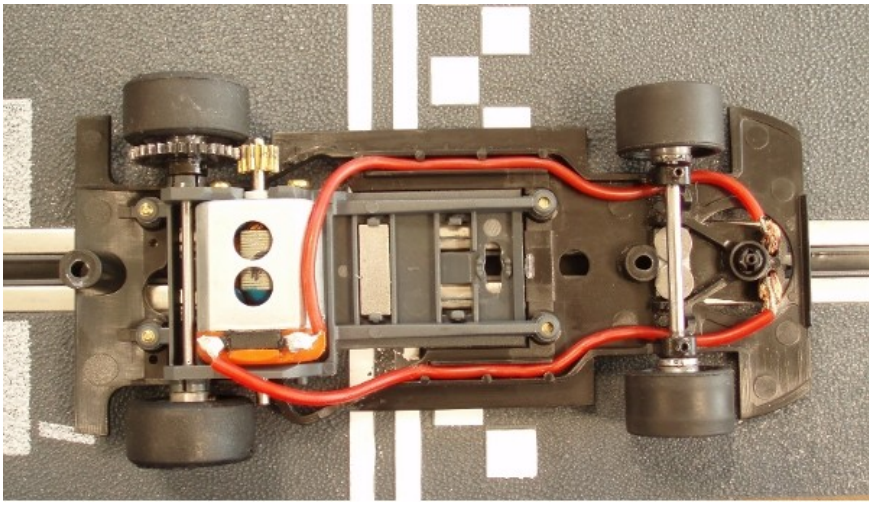
The DINO files: Chaparral 2E set-up

For racing purposes, this car should be run with the lightened version of its wing. It can be recognized from the bottom surface, that is hollow:



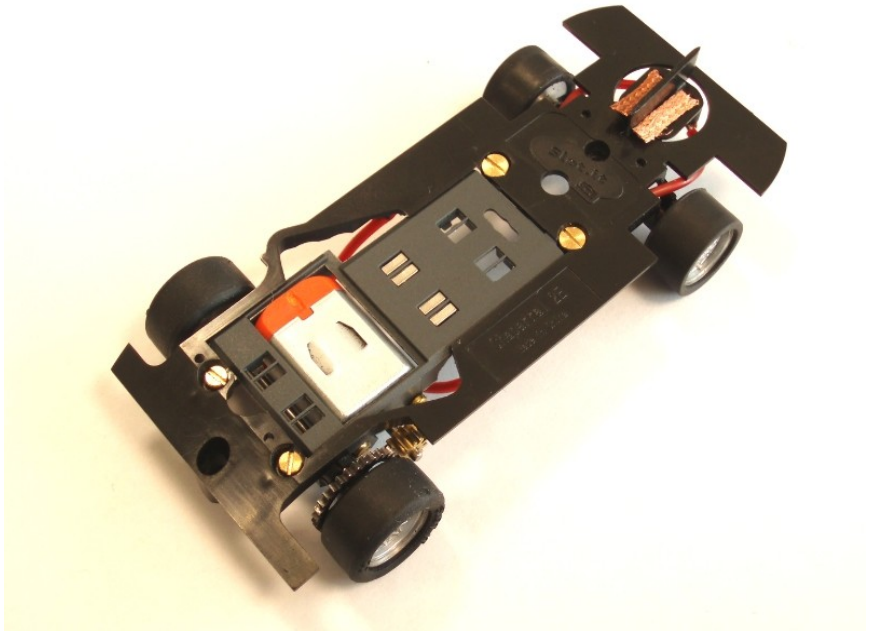
By using the new axle, which has a reduced section in the middle, there will be a greater gap between axle and motor can, thus eliminating the possibility of dirt accumulating in this area.
The transmission may be easier to assembly with the axle version PA01-51R code, since it offers a greater surface than the 48 mm version to locate the wheels.

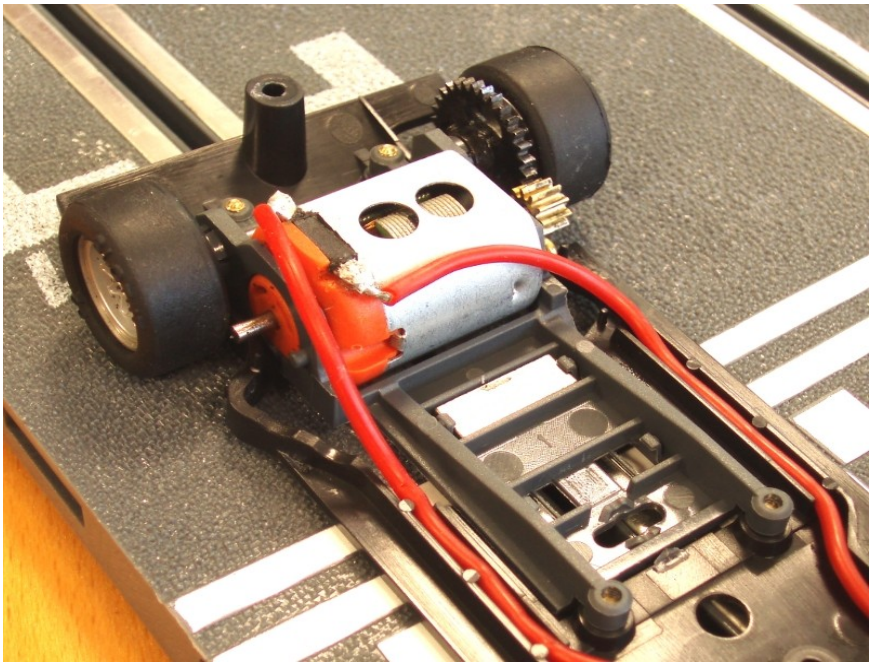


Assembly of motor mount to chassis:
All the washers included in the original model can be removed, in sake of simplicity. For competitions organized by Slot.it, they may be glued to the chassis. In any case, the important thing is to avoid them to remain free, risking to get jammed into screws thread.
It is important to use the screws of motor chassis to lock its movements back and forth, and in side direction; this is for improving the traction of the car when accelerating. The new screws with conic head, code CH54b, were conceived for this purpose. They should be used in particular for the front locations of motor mount.

The front screws may also be cut by about 1 mm to avoid the contact with cockpit.

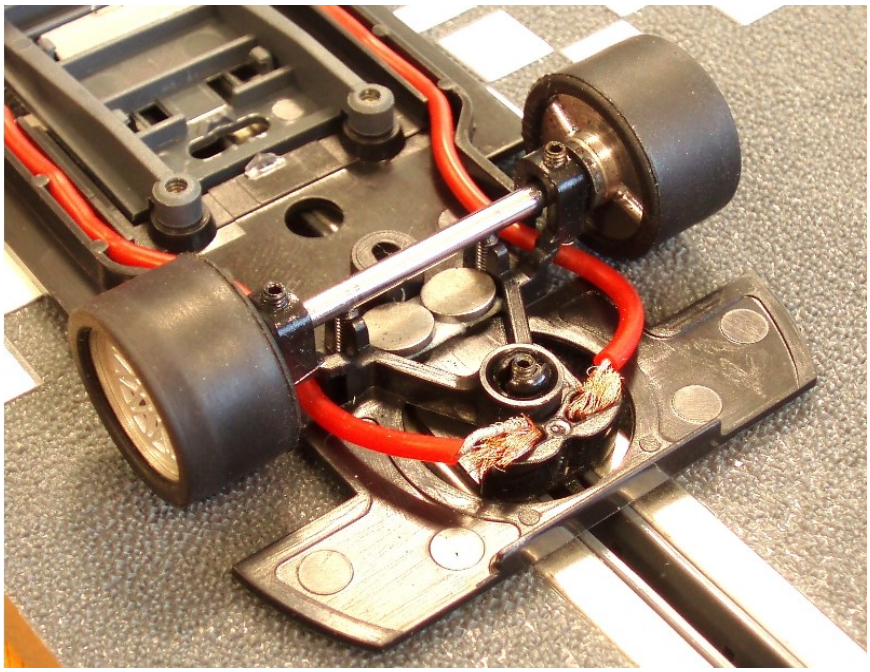
The screws at the front of motor mount should be almost completely tightened. However, the conic head screws may block the tilting movement of support, thus losing its suspension effect. So, they should be tightened fully, then untightened by one turn, in their locations.
At the rear of motor mount, I preferred to use the more classic big head screws, code CH54. Again, this is to avoid that the rotations of support are completely locked and to lose the suspension effect. Here, there is not the necessity to almost completely tighten screws. Their set up usually depends on the specific track the car is going to run on. I'm used to loosen them when the car tends to jump often on the bumps of the track, or if pick-up exits the slot when running through the corners: both these cases mean that the set-up of the car is too stiff.
On the other hand, screws should not even be too loose. This would reduce the grip of the car and increase its tendency to spin.





The weight distribution can be set up by using the tungsten Slot.it ballasts; the SP24 code has a cylindrical shape, while the SP23 code was designed to fit into the magnets locations. I put one SP23 onto the motor mount: this was done to balance the weight of wing, and, more in general, to move down the center of gravity. When I tested the car, actually I discovered that handling was much better comparing with the same car without ballasts, and the stability when entering the corners too fast had greatly improved.
Another mass of about 1 gram may be added under the front axle. This can be obtained taping two SP24s on the chassis with bi-adhesive tape. Else, by the use of some tungsten putty, code SP25: it can be anchored to chassis just applying some pressure. This additional mass may help when running through corners that have sudden slope changes, in order to avoid that pick-up exits the slot.
The more you add mass to the car, the more it will get fluent and easy to drive; but it will also lose acceleration and turn out slower lap times, in general. So, the best performance will be the result of the best compromise, as usual for a race car.

Assembly of body to chassis:
The screws of the box stock car may be good, as well. But they will tend to loosen up after some time, so the body screw locations should be shrank by using some cyanoacrylate. This problem can be avoided with the “long” versions of Slot.it metricals, code CH51 or CH52.
These screws should be adjusted following the same procedure used for motor mount. In other words, as well as for a real car suspensions, a stiff set-up will make the car more reactive and faster, but with a greater tendency to jump and come off the track suddenly. On the contrary, if the screws are not tightened enough, the body would be left too free to move, thus making the car slower and reducing its agility.



Front axle set-up:
The sidewinders are the car on which I found more favorable to exploit the front axle as an aid to the stability of the car. More than for inline and anglewinder, maybe because of the different balance of magnetic effect.
I eliminated both the bottom rests and the plastic bushings, in order to adjust the axle position. Then, I

put 6 mm long grub screws inside the bottom locations. The Ninco tracks have a very bumpy and rough surface, that's why many tuners want front wheels to touch ground as little as possible. The axle position must be adjusted so that front wheels never come into contact with the track surface, or that they do only where ground is more irregular. This regulation should be done with unused tires on the rear wheels.
I put 3 mm long grub screws inside the upper locations. Their position must be adjusted so that front axle is free to have a little vertical run.
The front track may be extended by the use of spacers. In this way, the front axle may be set in a upper position, thus improving the car fluency in straights. But in bends, front wheels will still continue to touch the ground slightly, thus giving the car greater grip and stability.
I chose the front tires Slot.it “PT15” code, that produce very low friction thanks to their “zero grip” compound. Moreover, their tread is very wide and smooth; an additional turning is not necessary. For all these reasons, these tires are able to give excellent stability to the car. They should be used with the “Slot.it” logo facing the inside of the car, so that the little flash on this side of the tire will not touch the ground and cause no kind of troubles.