

## Notes on HO Scranton Electromobile from Shapeways.

### Bob Dietrich - EPTC

Volkmar Meier developed the car and posted it on Shapeways. I purchased the car on [www.Shapeways.com](http://www.Shapeways.com) (part # 87-1401) and Volkmar provided me with a Halling drive (<http://www.halling.at/>) for which the car is designed. From Shapeways I received a car body, underframe, floor/seat unit, side frames, and driveshafts. The body is made with Frosted Ultra Detail (FUD) material, the other components are made with their White Strong and Flexible material.

The first task to be completed is cleaning the FUD body, necessary because the 3D printing process leaves a waxy material in it that must be removed or paint will not hold. I learned this one the hard way on another model. On the web you can find many methods to get the wax out. I just bathed and lightly scrubbed mine several times in very warm dish detergent water. The wax has an odor so when I could no longer smell it, the washing was done. Before cleaning the car was translucent, after it became solid opaque white AND very delicate. I have several breaks in mine.

I discovered that the two materials used in this model shrink at different rates; the frame was longer than the body interior. Volkmar confirmed this and said he allowed for some shrinkage in the design, still it took quite a bit of filing from the ends of the frame to get it to fit. There are bolsters in the body over the trucks that also had to be filed to allow the fit.

The Halling drive is wired for two rail operation and the model is designed that way. I run from the overhead employing the East Penn relay-controlled block system, complicating the wiring of the car. I wired all wheels together connecting them to the negative post on the motor. I actually soldered a miniature plug to the motor and plugged the wires from the trucks into it. The positive lead from the motor goes to a PC board mounted on top of the frame that is contacted by a spring wire from the pole base in the ceiling. I try to avoid plugging a lead into the motor every time the body is removed from the frame. I removed the center of those body bolsters, otherwise wires would have to be threaded over these pieces.

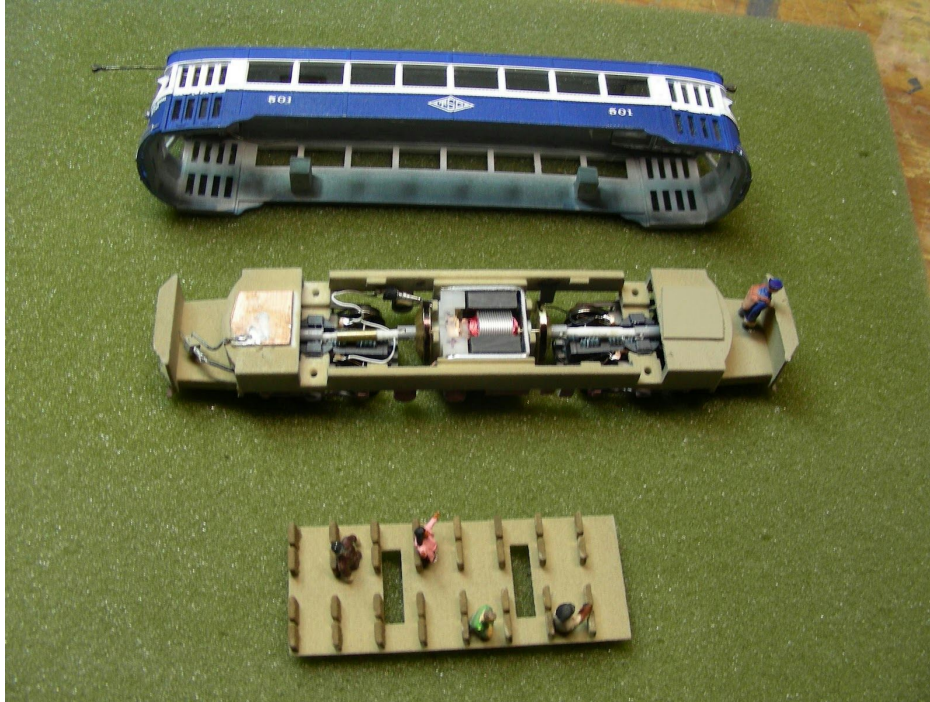
Most everything else was straight forward model finishing. Below are listed a few minor discrepancies that I dealt with.

- One driveshaft kept falling out of my car. I fixed it by nudging the universal joint toward the motor on the problem truck.
- Some wheels were slightly out of gauge causing derails on rough track, they were too narrow. I simply used the twist and pull method of getting them in gauge.
- The fender hit the track at the bottom of my grades. I removed the bottom bar from the fender.
- The side frames came with a wrap-around bar that had to be removed to fit the trucks. I also had to drill a #52 hole in the side frame to fit the Halling trucks.

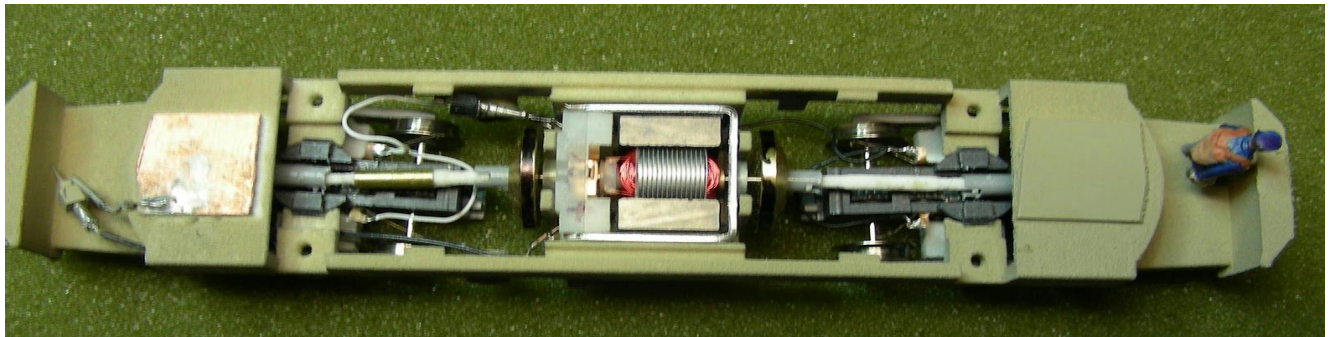
Overall this is a very nice addition to my roster. It is proportioned and detailed very well, it was only necessary to add pole hooks. On the down side the FUD material is very fragile. The whole row of window posts on one side broke away. They pop back into place so I'm not going to try a repair, least I spread glue all over the windows and paint job. The other negative is with the 3D Printing process – the roof has “build-steps”, although not as noticeable as earlier models, and the sides that represent

smooth steel have a pattern. So it is not a contest quality model but it sure looks great running around my layout.

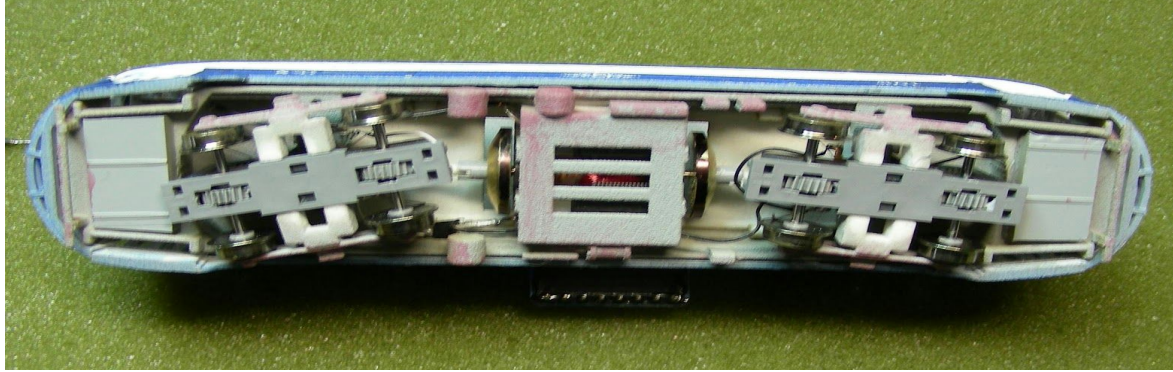
### Photos:



The above photo shows the three components, body, frame, and seat/floor. Besides providing seats, the floor anchors the drive in place.



The frame with the Halling drive installed. The plugs on the ground wires from the trucks can be seen at the upper left of the motor. The plus wire goes from the motor to the plate at the left where a spring wire from the pole base makes contact with it. Note the miniature plug on this wire next to the plate. All these plugs allow the motor and trucks to be removed without un-soldering.



The underside has weights below the platforms. There are also weights above the platforms in the ceiling.



The finished car has not plied the streets of Scranton for very long as the culm on the roof and underbody is not very heavy. The triangular pole hooks fit under the trolley boards – they were hard to glue in place but they will stay there.