



3D Lab
EAG

Ne Sto
Studio



OSHKOSH – MATV

1st Generation

Body for RC crawler chassis Axial SCX10
Scale 1:10

Oshkosh MATV 1. generation



MATV stands for Mine Resistant Ambush Protected All Terrain Vehicle (MRAP-ATV) developed by Oshkosh Corporation and used by US Army and other armies in NATO. It is replacing heaviest versions of popular HMMWVs. MATV was already battle tested in Afghanistan and it saved lives of many soldiers even against very large explosives.

MATV platform can be modified to multiple uses by changing whole modules of body. It is fairly heavy though. Base version weights more than 14,5 tons.

That is actually similar weight as Russian BVP/BMP, so although it is considered All terrain, weight and COG positioned quite high up from the ground is a limiting factor. But it looks quite cool, if I may say so myself :-).

Please note, that this model is NOT aimed on beginners. Parts are fitting together well (if printed correctly), but it still require a lot of additional work and you may find some small details missing (for example side mirrors, window glass and light brackets), and you need to make them yourself. On the other hand, this shouldn't be any issue for crawler community, you guys are making super scale details for your cars on a daily bases.

This pack of documents contains all parts you need to assemble body scale 1:10 for crawler chassis Axial SCX 10 with 1,9" wheels. It also contains front and rear bumper (as chassis frame end links), designed to fit in to the SCX chassis frame. You are more then welcome to try to fit this body on chassis of other manufacturers, with use of parts without holes for mounting columns, however you will probably need to modify fitting of bumpers or even make your own.

Completed body with bonnet, trunk and under body plates is very rigid construction. I'm quite confident it is stronger than expansive crawler ABS bodies and comparably durable as poly-carbonate bodies. Also it is much easier to repair, than poly-carbonate, since you can easily glue cracks, top them up and re-paint them. This is not sheet, but solid printing, so you have dual wall with infill strengthening it from inside. Body however make whole model quite top heavy (as it should, it's bullet and explosive proof) and scale tires are not very good for crawling. You can manage all this issues by adjusting center of gravity of your chassis and for hardcore crawling you can use better tires and wheels then issued by Military :-).



You don't need any special setup, this is not thin wall printing as 3Dlabprint's planes, this are simple models made with solids. So you can use slicer of your own choice and set printing parameters as you want and are whiling to wait for.

You need printer with printable space 200x200x200 mm or more. But be prepared, printing takes a lot of time (my estimate is around 60 hours).

Recommended printer setup:

Layer height	0,2 mm
Nozzle diameter	0,4 mm (not larger!)
Wall thickness	One layer (0,4) is good enough, do not use under fill, walls should be always multiple of nozzle diameter.
Top and bottom thickness	0,6 mm (or more)
Infill	20% for body parts (more is better, but also heavier), 50-80% for strong parts (front bumper etc.)
Printing speed	cca 50mm/s (or according to your printer)
Material	PLA (I don't recommend ABS and other shrinking materials. Also you can glue PLA with CA very well)
Temperature of bed	60°C
Temperature of nozzle	210°C (or as your material have specified).

No supports needed!

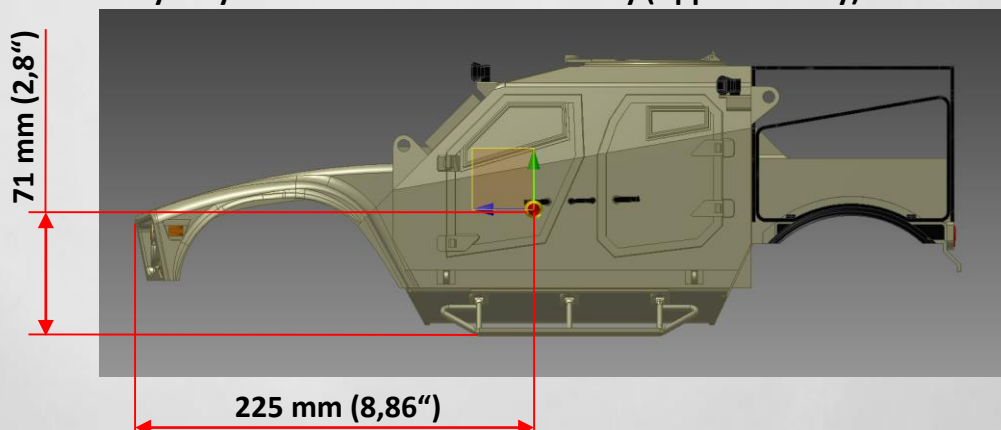
I don't recommend to scale model down too much, because I'm calculating with thinnest wall 0,4 as a nozzle diameter.

You also need:

- Glue - Cyanoacrylate (CA, super glue, second glue) with or without activator.
- Filling primer - (to hide printed layers) I recommend Tamiya gray primer.
- Flat paints - Olive drab, Tan, black or khaki, or whatever you fancy.
- Sheet of transparent plastic, or thicker foil for windows.
- Steel round bar or wire diameter 1mm (for hinges).
- Sand paper and lot of patience.



Body only - Theoretical Center of Gravity (Approximately)



If you decide you want to use standard columns as holder of your MATV body, you need to have your Axial SCX10 equipped by this type of columns.

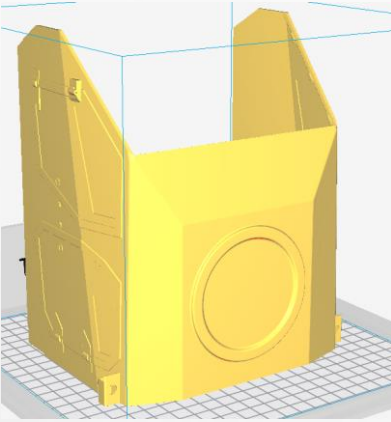
FRONT

REAR

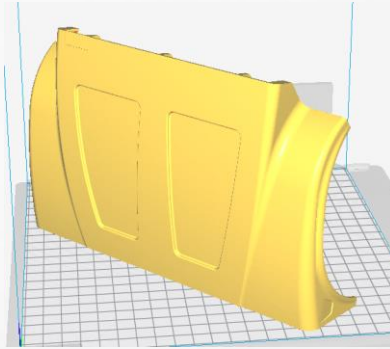
This is how front and rear bumper is mouthed to chassis. It replaces end links of Axial H-Frame.

FRONT

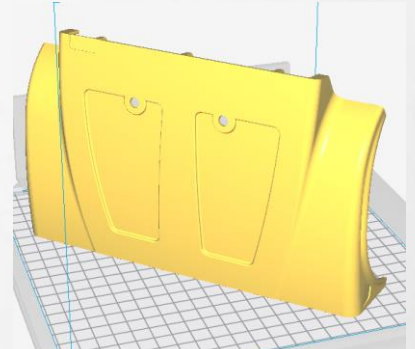
REAR



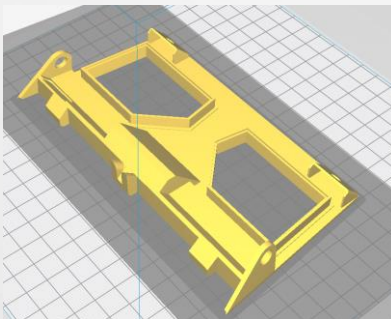
Cabin.stl



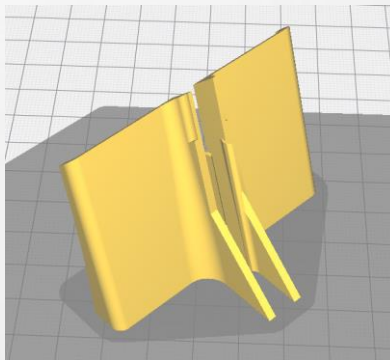
Bonnet without holes.stl
(Optional)



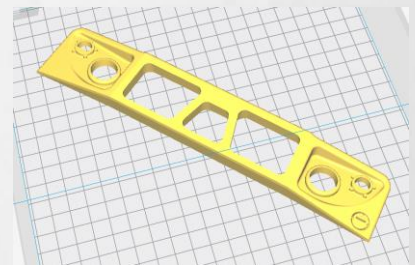
Bonnet.stl



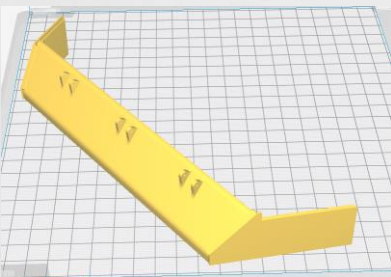
Windshield.stl



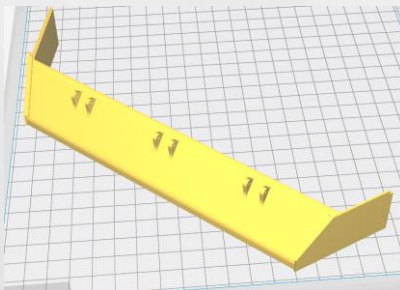
Front fender extenders.stl



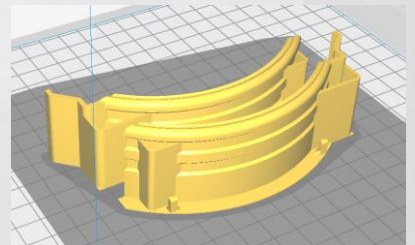
Front mask (grill).stl



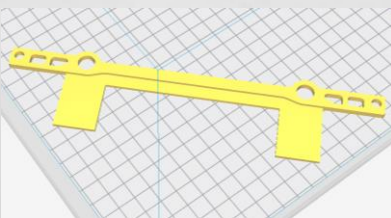
Underbody right.stl



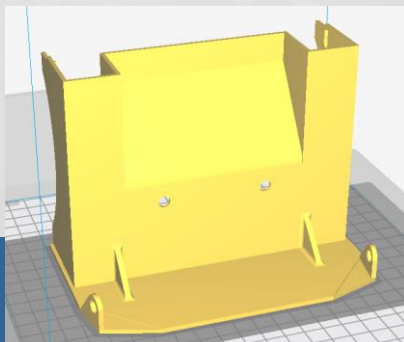
Underbody left.stl



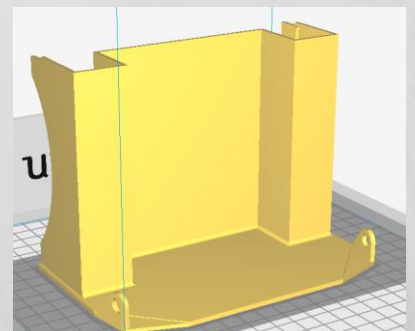
Rear fenders.stl



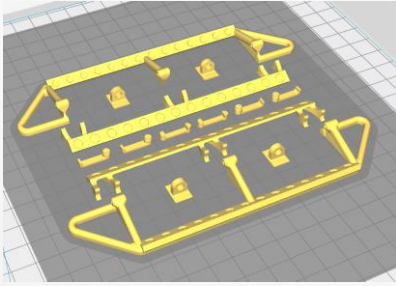
Taillights ramp.stl



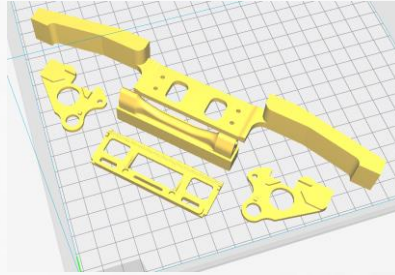
Trunk.stl



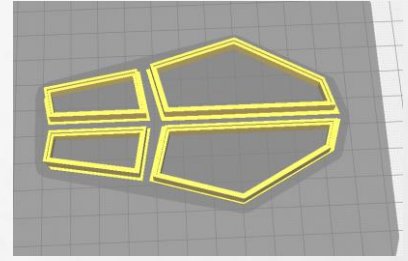
Trunk without holes.stl
(optional)



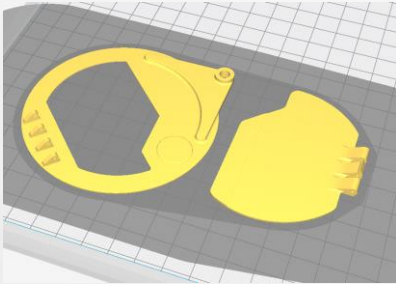
Side details.stl



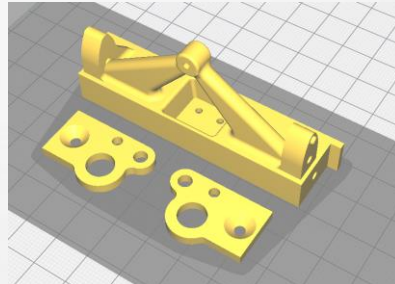
Front bumper (Axial).stl



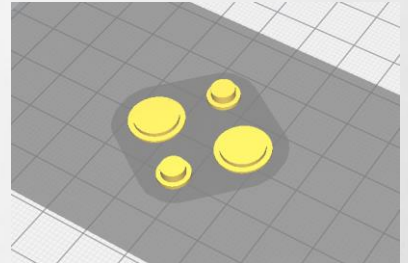
Window frames.stl



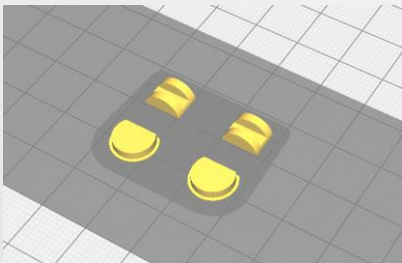
Roof hatch.stl



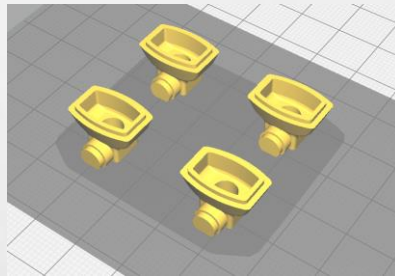
Rear bumper (Axial).stl



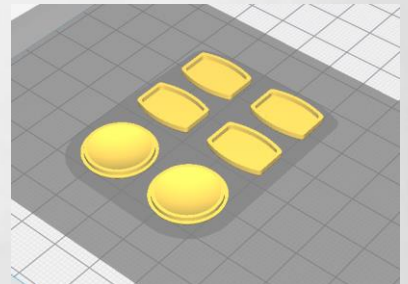
Taillights optics.stl



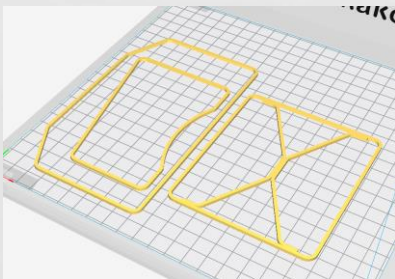
Indicators optics.stl



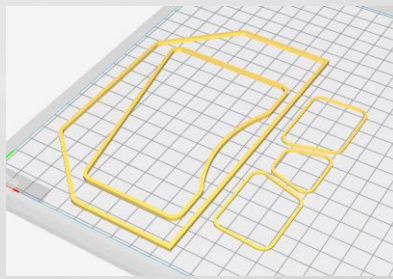
Roof reflectors.stl



Reflector optics.stl

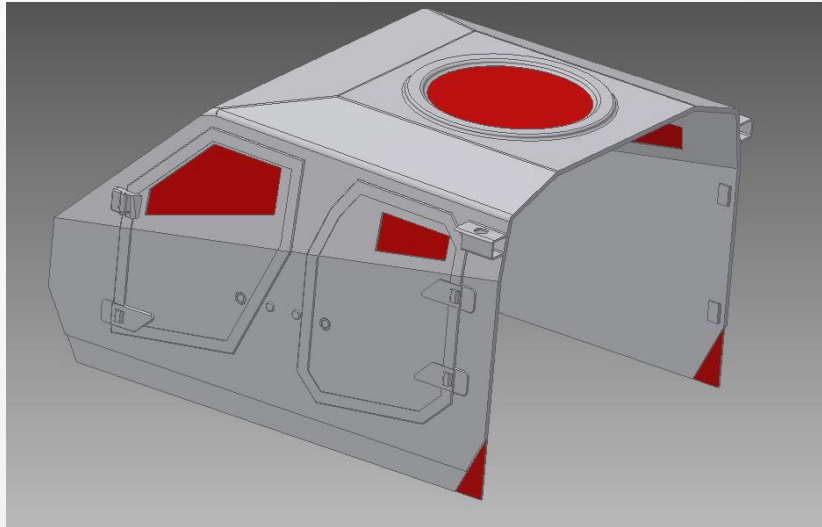


Cover frame 1.stl



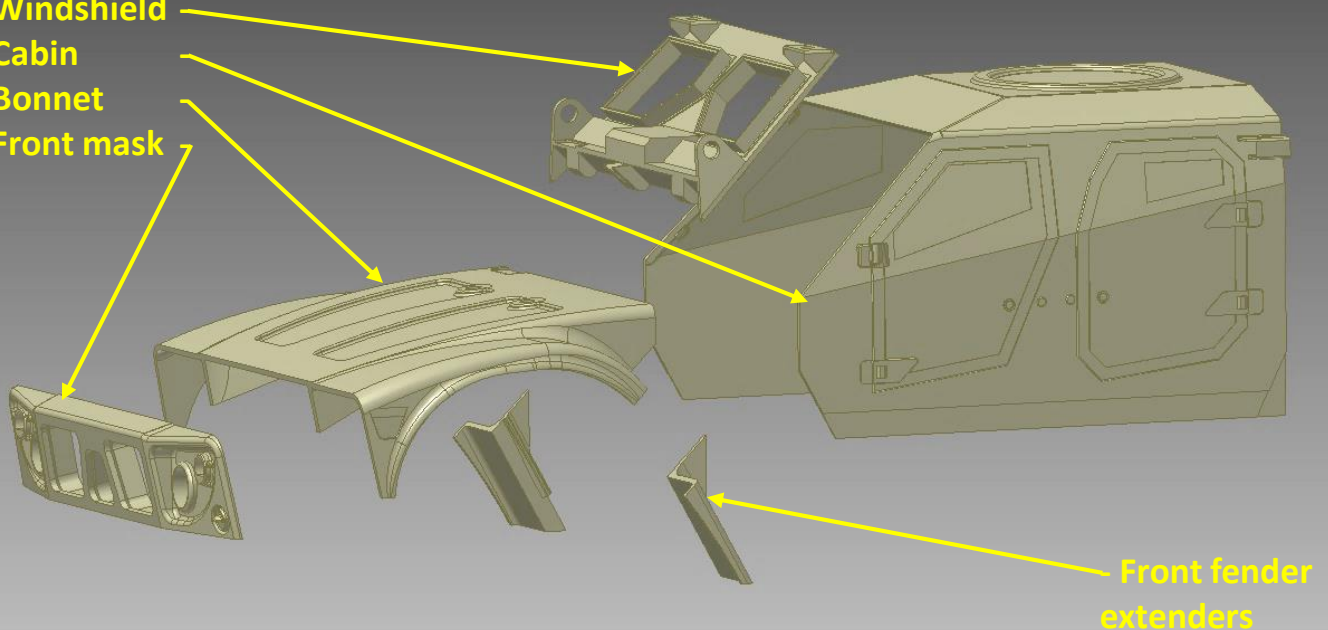
Cover frame 2.stl

Cut off red marked parts of Cabin.

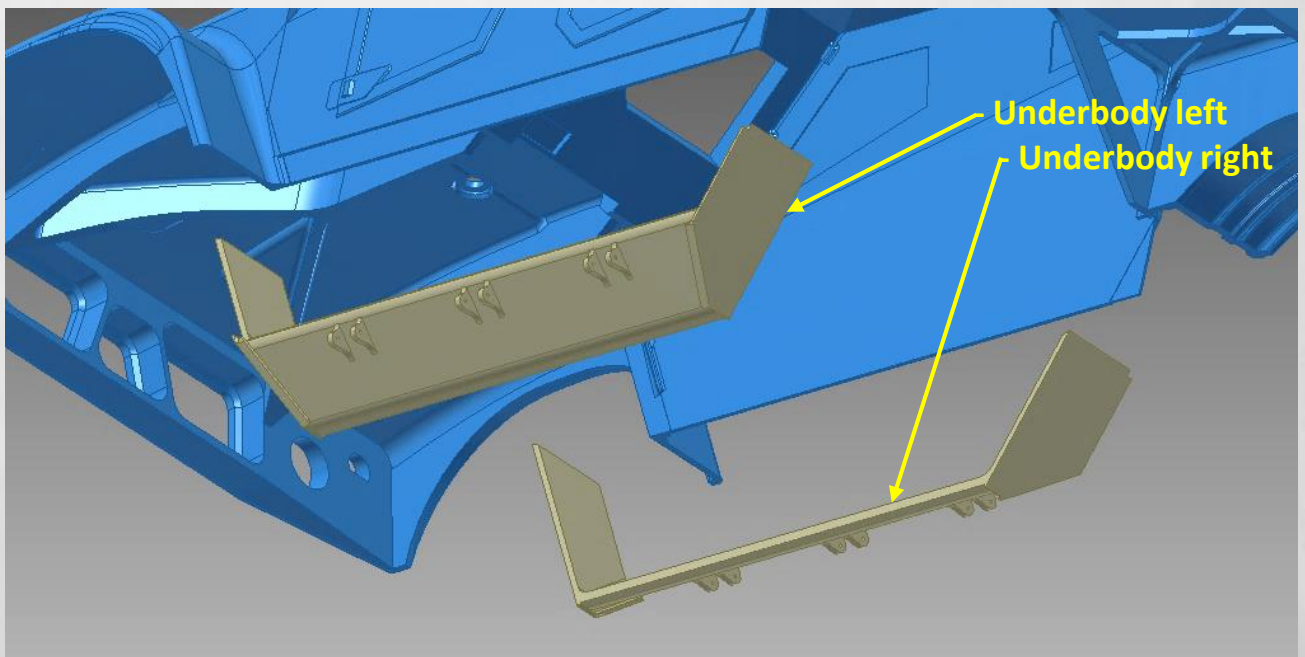
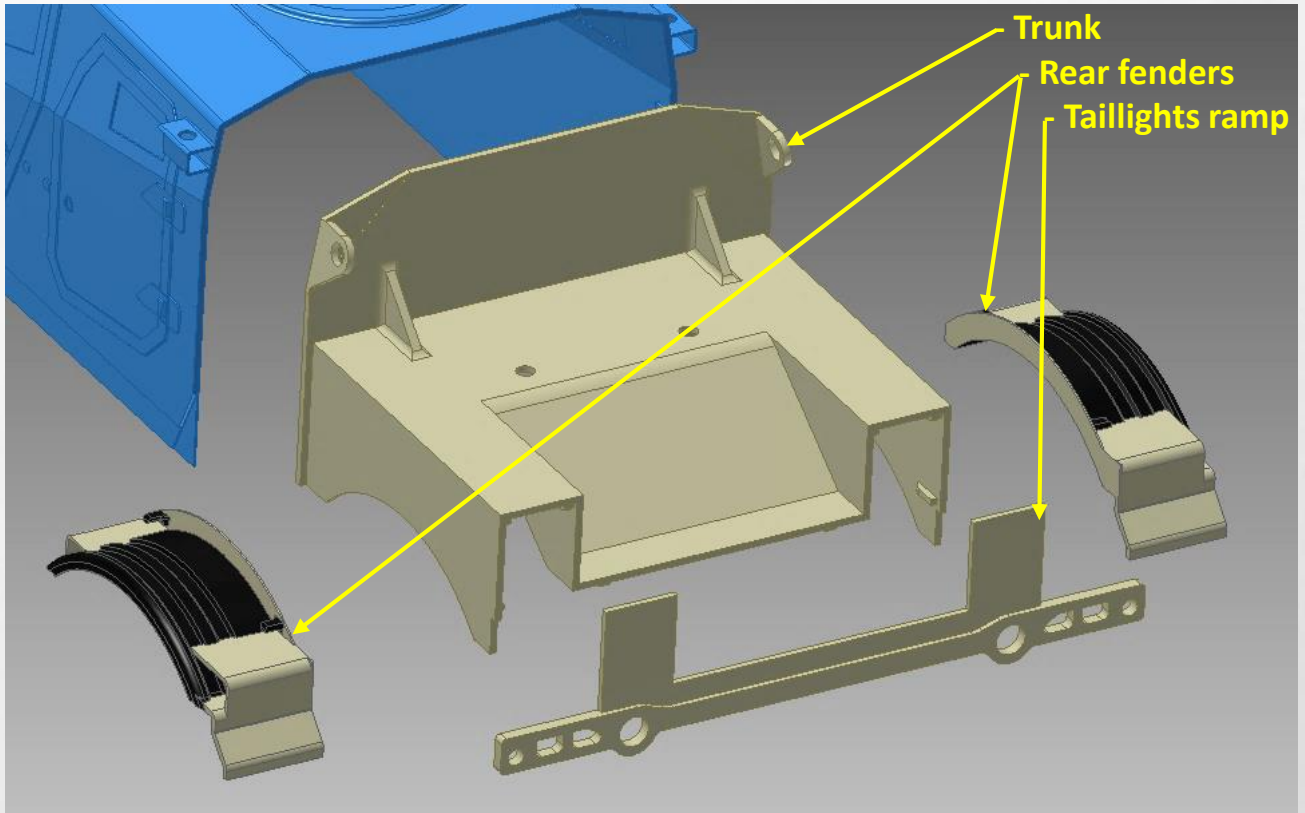


Most parts are fitted by small notches on their places, however there are also parts, for which I couldn't use this method. Namely front mask/grill. Be very careful to place mask to bonnet as precisely as possible. I recommend to use thicker CA glue with longer hardening time, or spot-glue it first and then add thicker layer of glue.

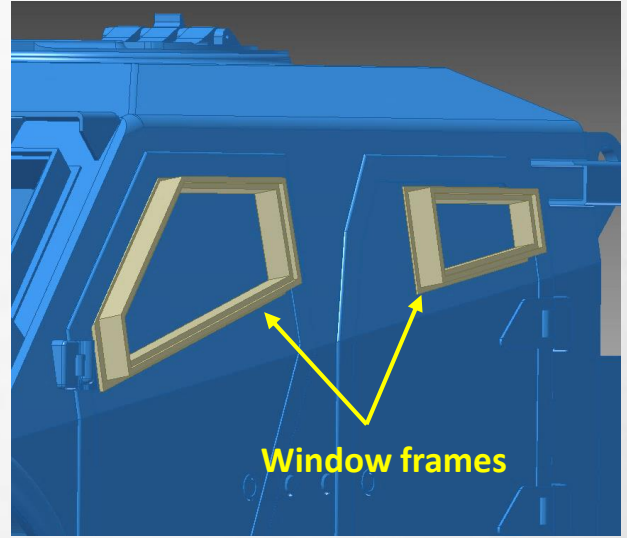
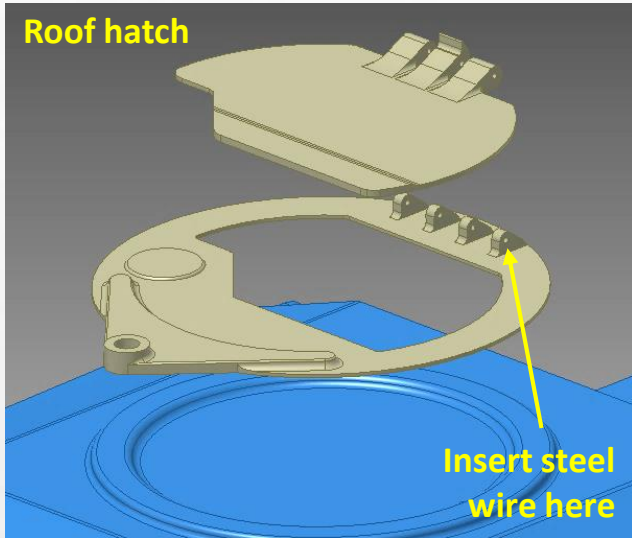
Windshield
Cabin
Bonnet
Front mask



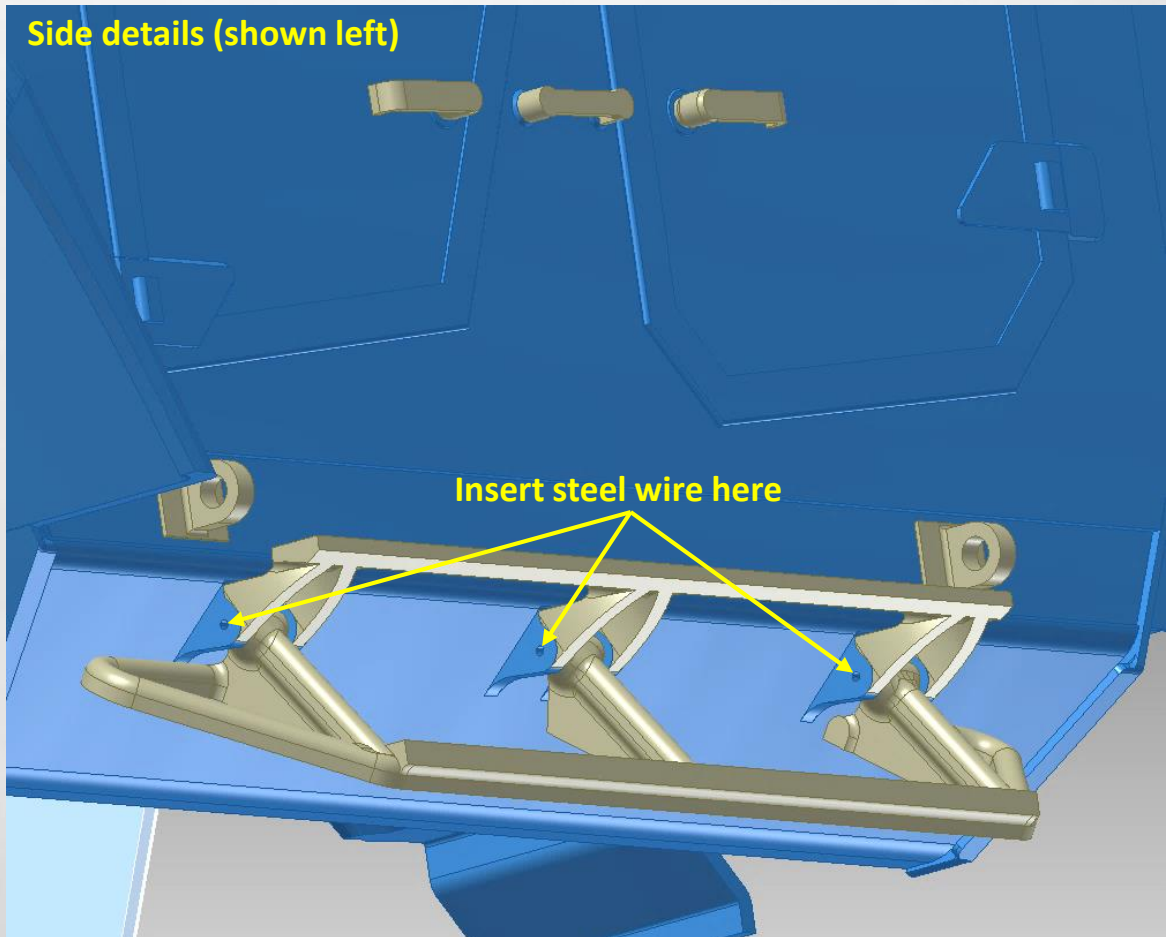
Front fender
extenders

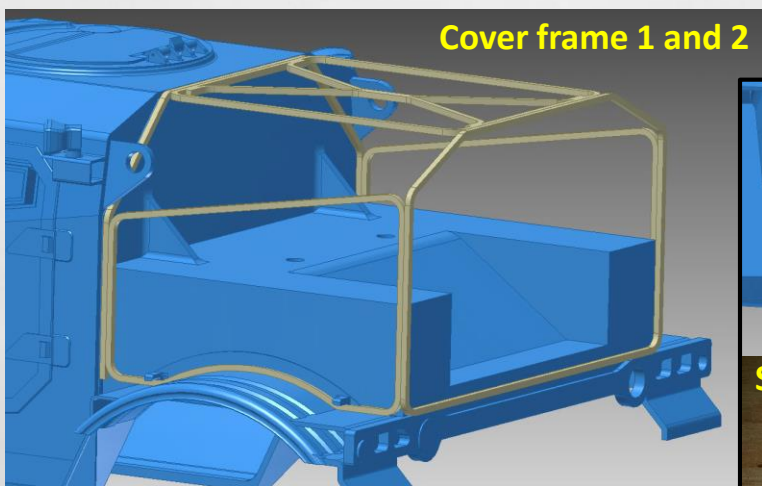
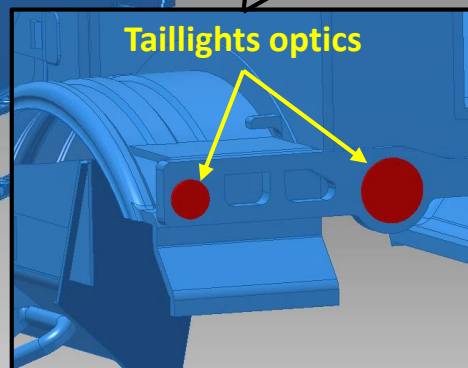
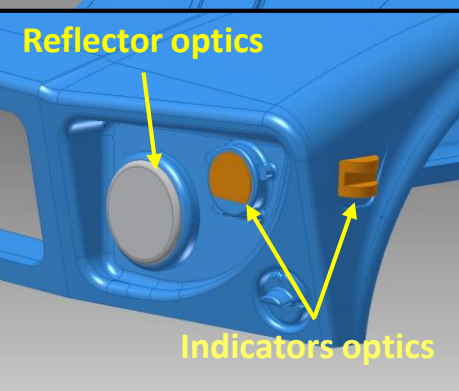
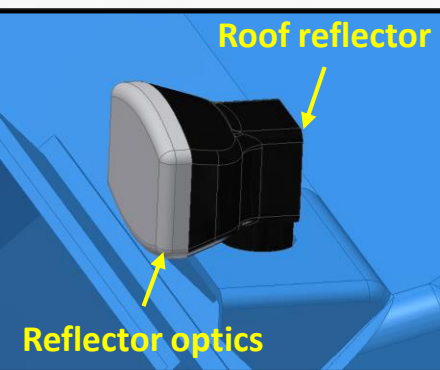


Roof hatch

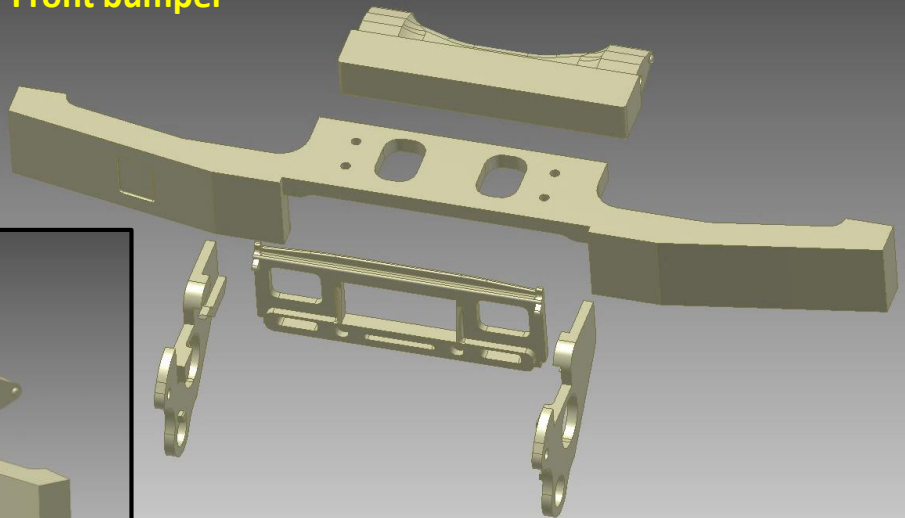


Side details (shown left)

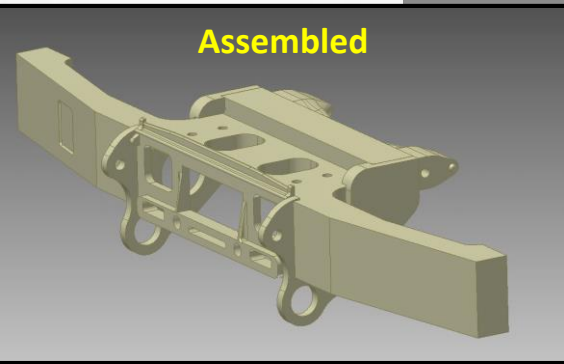




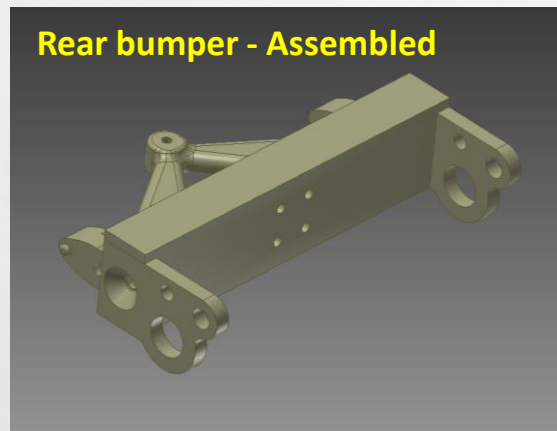
Front bumper



Assembled



Rear bumper - Assembled



As a bonus, here is 1,9" military style wheel.
You need 8x M2x10 screws with nuts, for each
wheel.

**WARNING! You need to use supports for
printing.**



Winch for which front bumper is designed for is this one:

https://hobbyking.com/en_us/electric-winch-for-1-10-scale-land-rover-defender.html?store=en_us

Feel free to modify it for winch you like.



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Thank you for purchasing, if you did!

**Good luck with your build and
I hope you'll have fun with it.**

**I'm planning to add additional parts and modifications,
such as roof gun, light brackets, truck bodies and such. Stay
tuned.**

**Please, use these files only for your own
purpose, do not send it further. Thank
you very much. Enjoy your ride.**