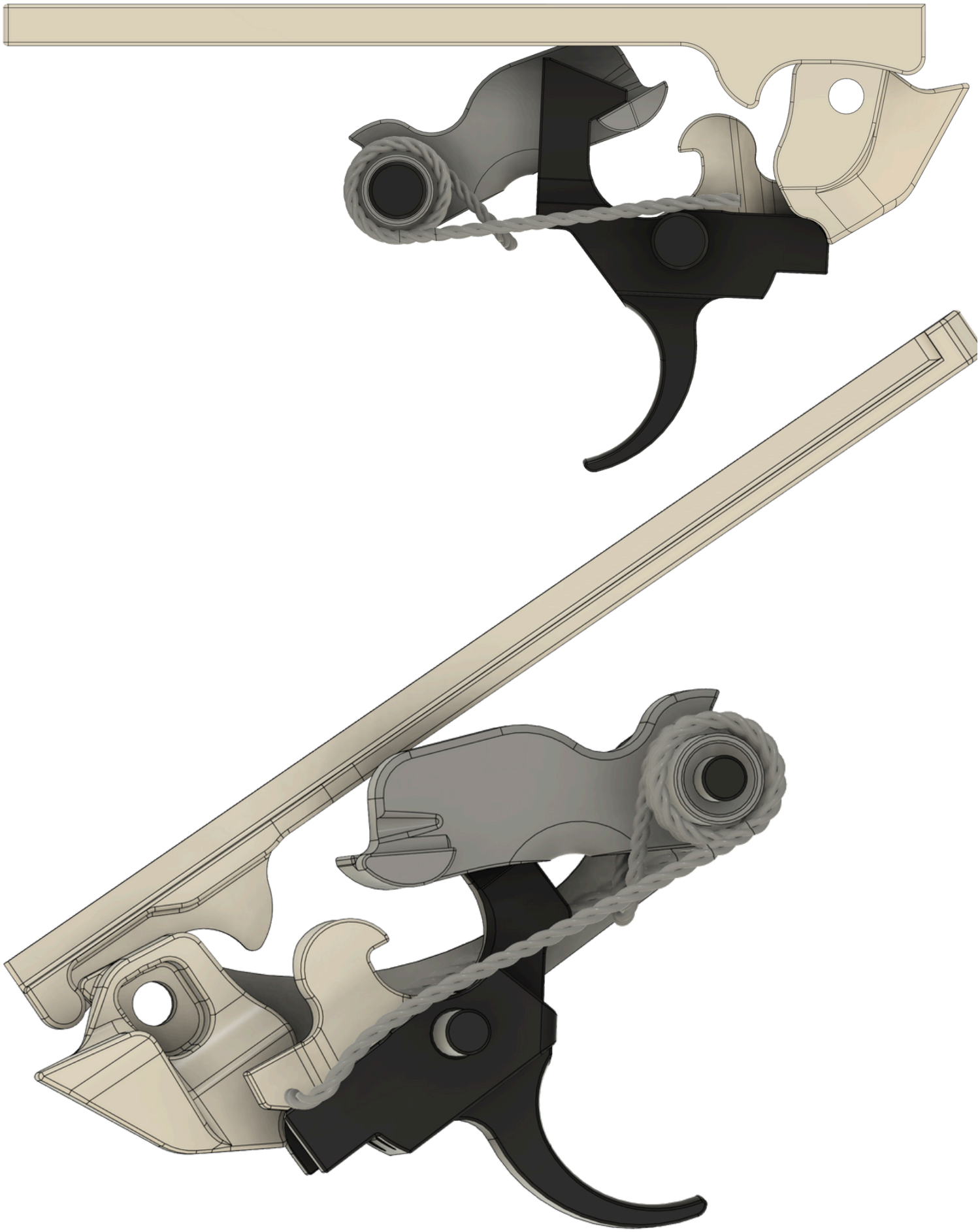
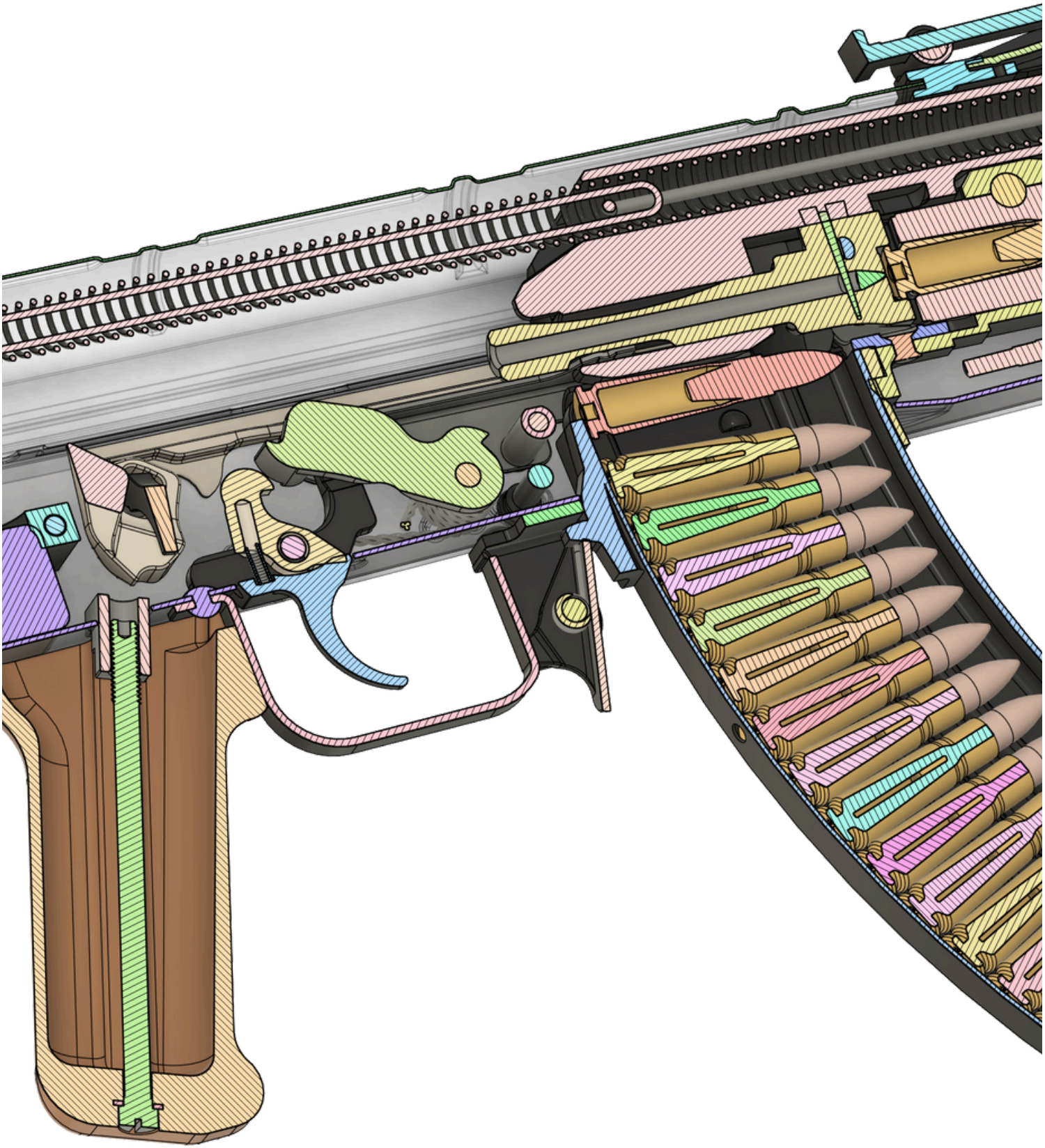
Super Safe AK (SSAK V1)



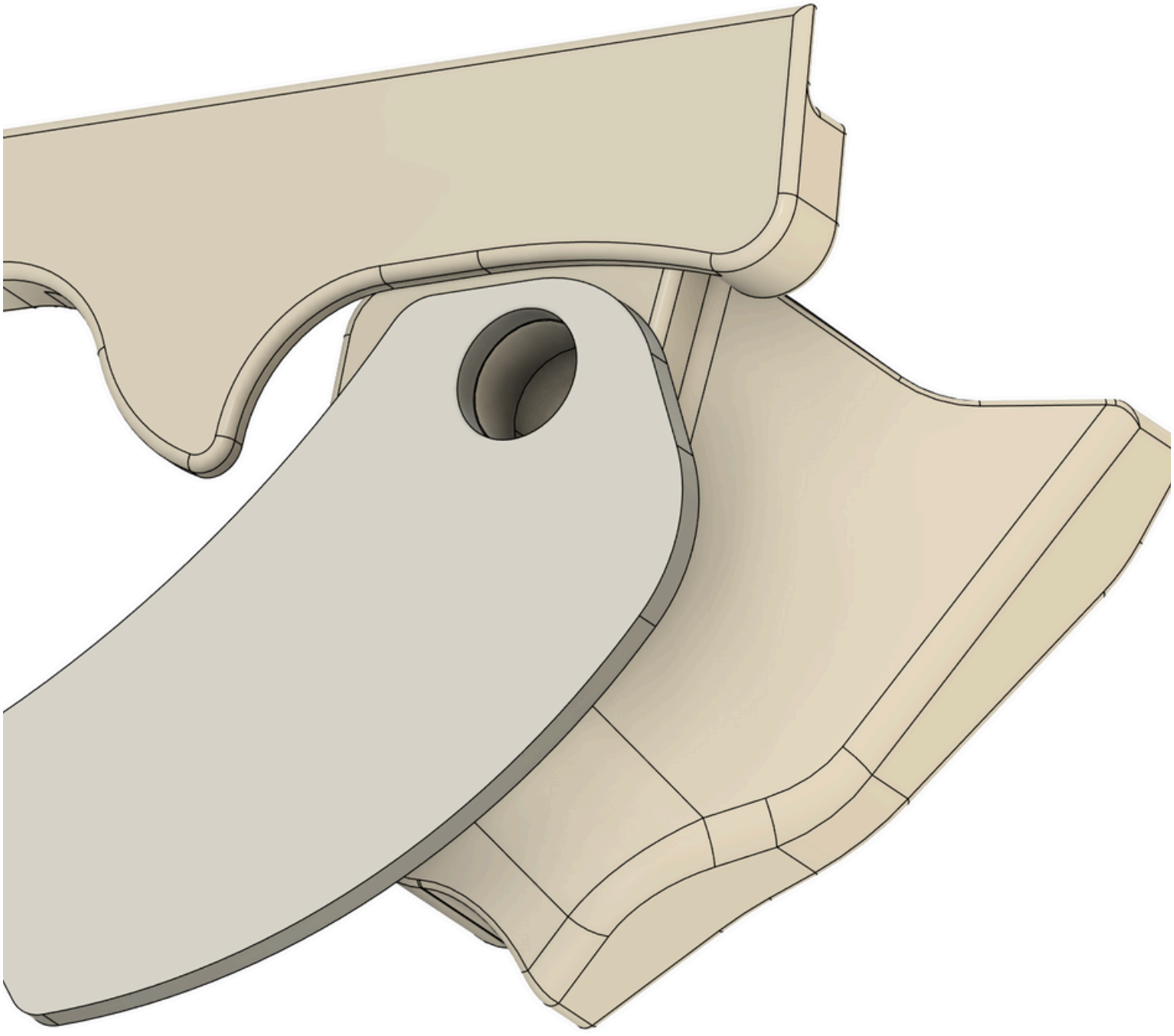
Legal Disclaimer

The ATF currently considers triggers like this to be machine guns, just be aware of that before making this as it comes with some legal risk. I would avoid taking videos or telling anyone if you do make this trigger.



Disclaimer

This trigger wont work for every AK, the specs are just to lose and to much weird random stuff in some aks that make it impossible to account for. Also not using the correct trigger or the correct retainer plate provided will only increase the chances this wont work correctly. You need to make sure your printer is printing in spec, if you aren't that will only make this much harder to get working.



Non Printed Parts List

- A FIME FCG is highly recommend as this is what this entire project is designed to be used with SKU FM-922US

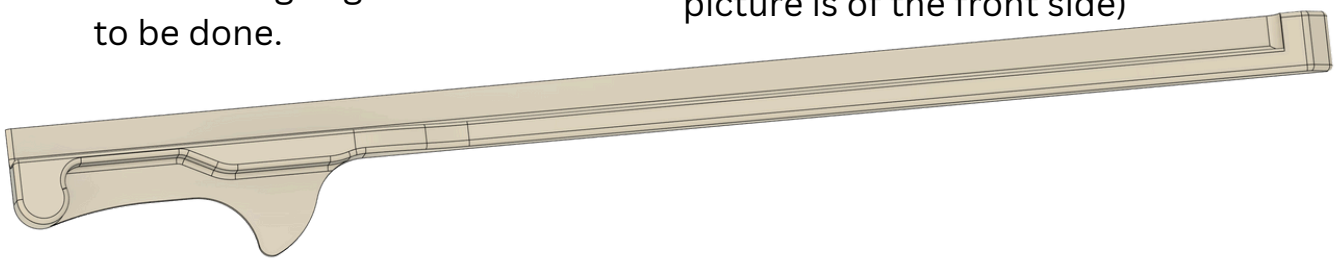
- Alternatively you can use a ALG FCG with the ALG CAM, This should work with ALG EL and UL FCGs

- Optional but recommended - x1 Stainless Washers 5mm Shim 100 pack (5x8x0.5mm) Amazon Link in readme these are really good for removing CAM wobble and last a very long time

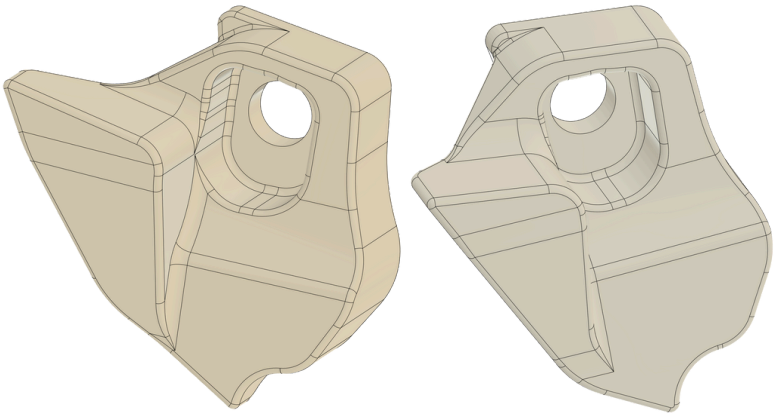
3D Printed parts required

- Firstly you need the trip bar, this trip bar should work with most AKs tho some fitting might need to be done.

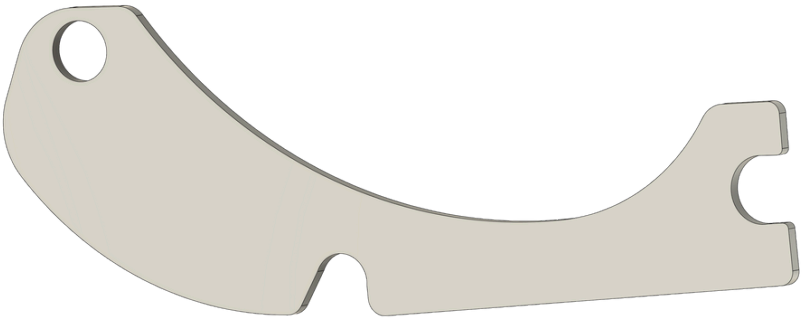
You might need to file the back side of the trip bar so that it fits with your bolt carrier group (This picture is of the front side)



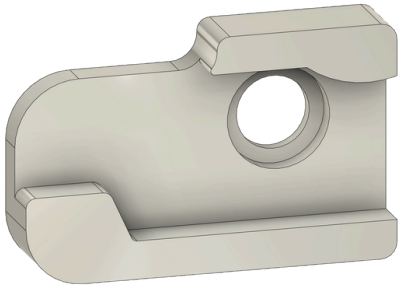
- For the CAM you will need the FIME cam for FIME triggers or the ALG cam for ALG Triggers. If you are using a unsupported trigger then i recommend you try the FIME cam first.



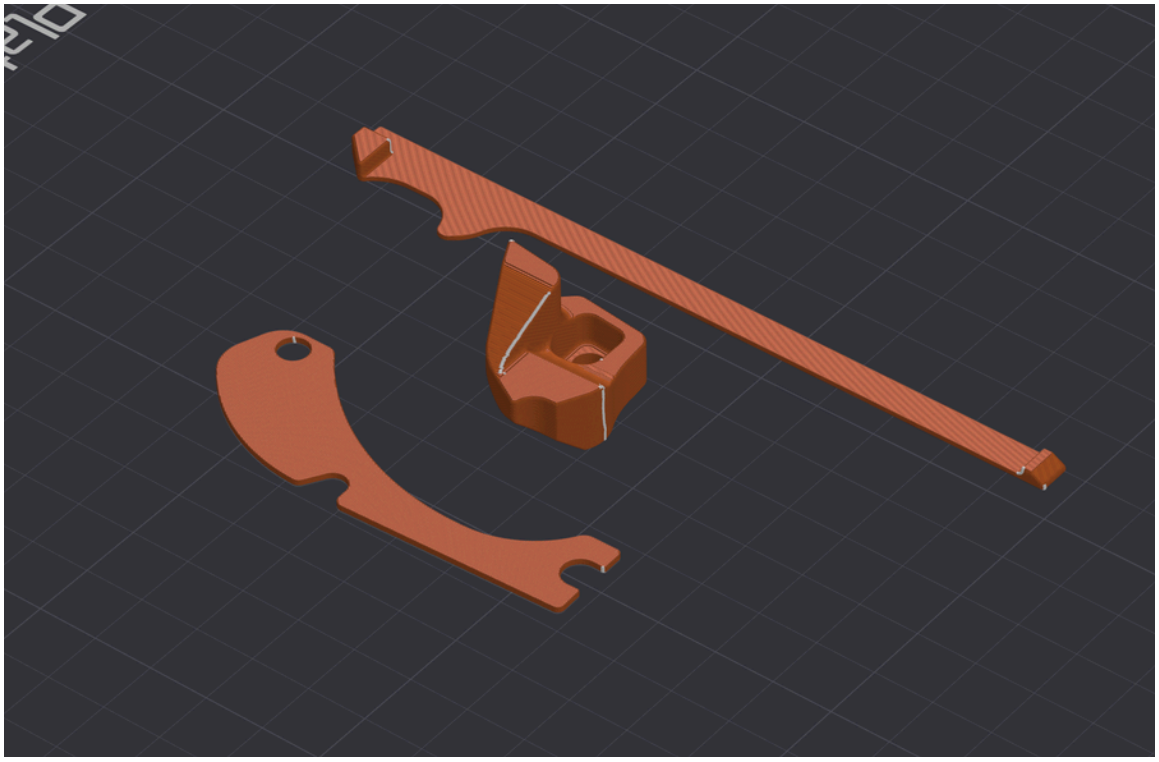
- You also need the retainer plate. This is NOT optional at this point as using other retainer plates will only add potential to cause issues



- To make sure the FIME trigger is cut correctly i recommend you print and use this jig as it will insure the correct cut is made.



Print Settings And Part Prep



Everything is designed to work in PLA Pro, other options - Polymaker PA6-CF if you want a more high temp option see my odysee guide @s3igu2 for exact settings if you plan to print in polymakers pa6-CF.

STL files are orientated correctly and have brims / supports where needed (Step files are NOT orientated correctly)

- Temp: 220/60C (PLA PRO)
- Nozzle: 0.4mm

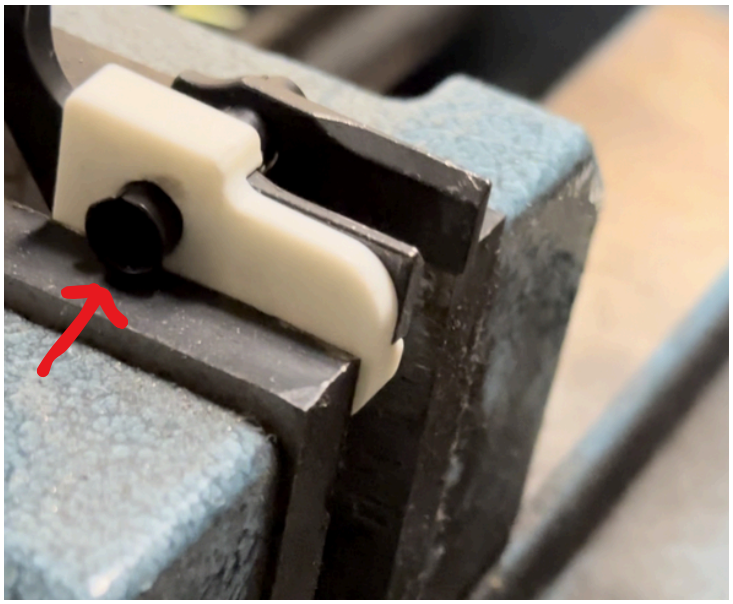
- First Layer Height - 0.20 (Or 0.15)
- Layer Height - 0.15

- Wall Loops - 4 Walls Max
- Infill - 100% Rectilinear

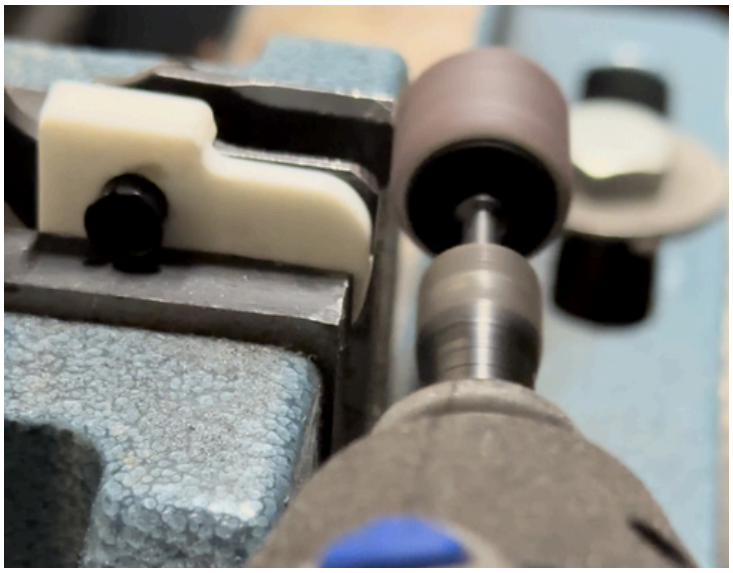
No supports are needed on any of the parts

Cutting the FIME trigger

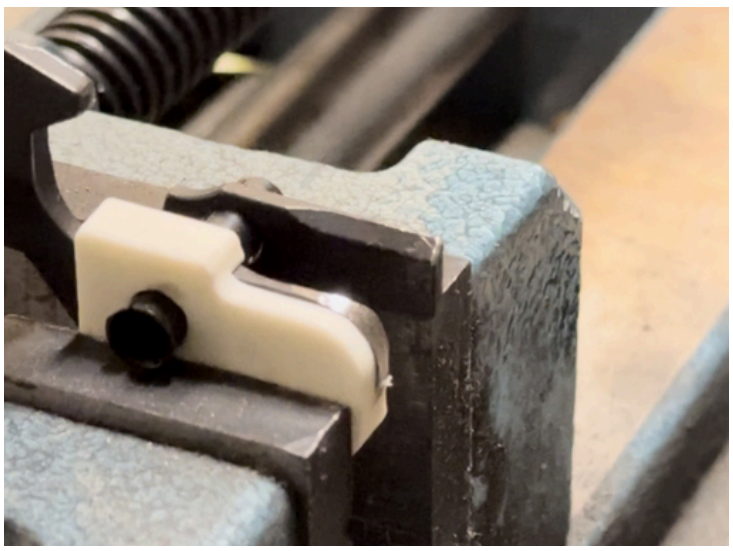
- Place the trigger cutting jig on the FIME trigger like in the picture, it will fit tight. Push the FIME trigger pin tube into the trigger like in the picture. This will keep the plastic jig on and lined up. The tube might be hard to push through the plastic this is normal use something to hammer it in



- You can place the trigger in a vise like so and dremel away or file by hand until it has the same profile as the jig.



- Once the trigger is rounded off like so you need to sand it with p800 till its smooth then again with p1500 till its super slick and shiny this will significantly extend how long the cam last



Reassemble and Install the trigger like any normal AK trigger.

SSAK Assembly

- Install the retainer plate along the left side wall like in the picture. You can look up a video for more details on installing AK retainer plates

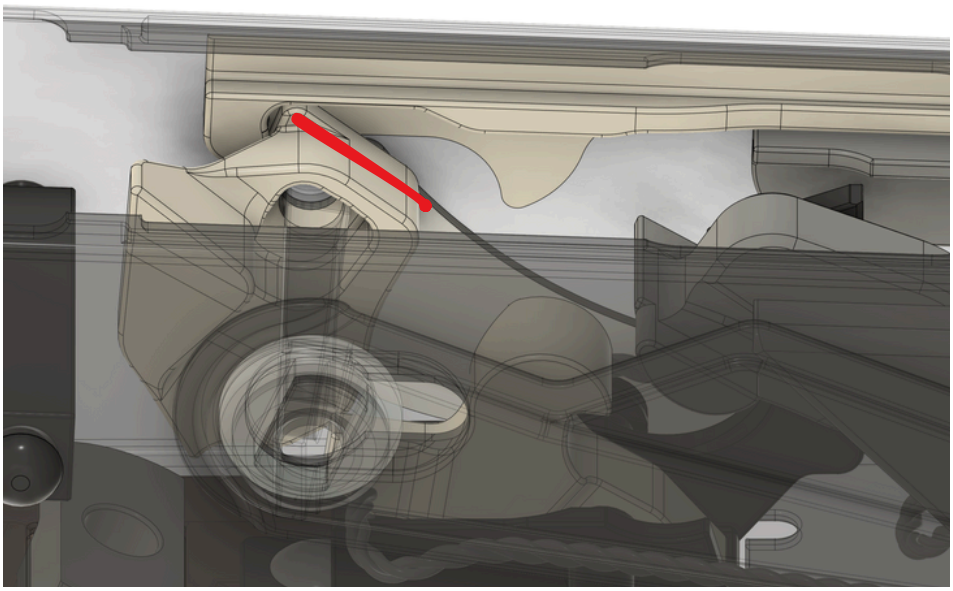
- Place the trip bar on the side of the receiver. CLP can be put on the entire trip bar to insure it runs smooth between the BCG

- Install the AK selector half way and then place the CAM on the selector like so. Then push the selector the rest of the way in and rotate the selector down to the semi.

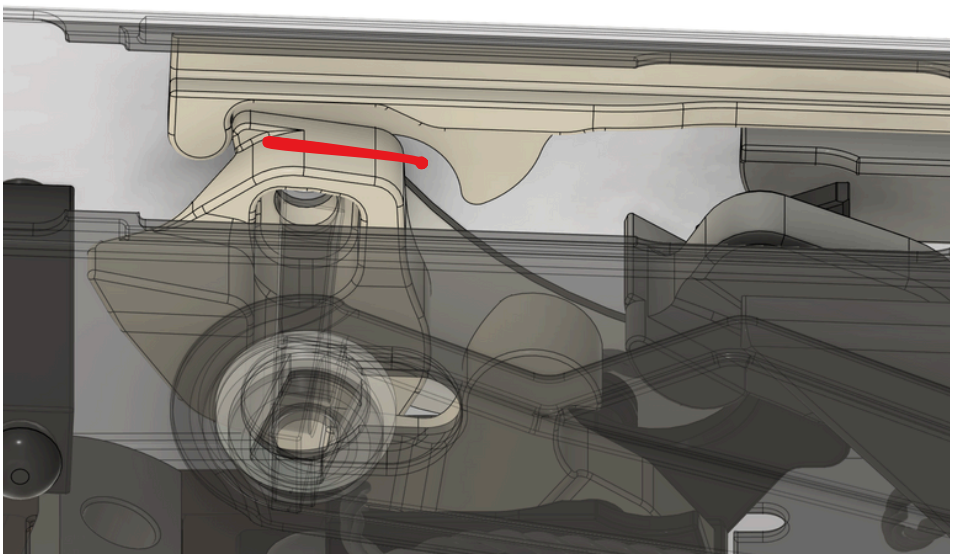
If the cam wont go onto the selector you might need to drill the cam hole out to 5mm (Drilling the hole to large will cause CAM wobble)

- Install the bcg and recoil spring (make sure the cam is down when installing or the bcg might bind up)

- For reference this is the **unlocked** position (also known as the UP position)



- For reference this is the **locked** position (also known as the DOWN position)

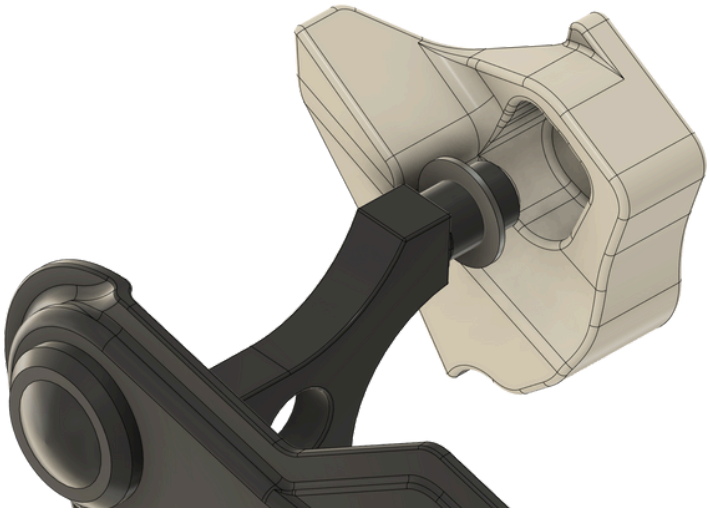


The very bottom position on the selector is the super safe mode, the middle position is NOT the super safe mode.

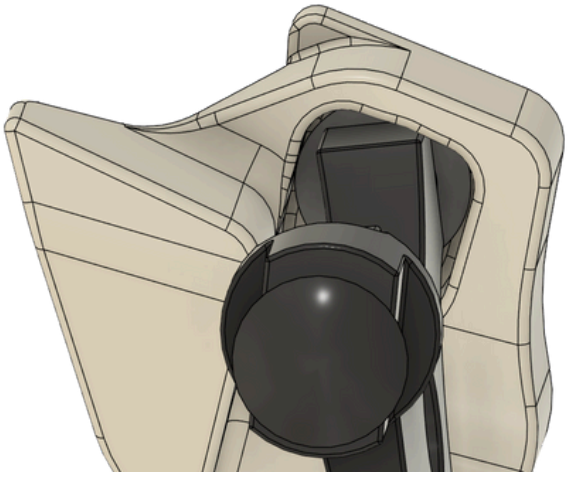
Removing Cam Wobble

Cam wobble is when the cam is lose on the selector causing it to rotate off axis, while some cam wobble isnt going to be a issue alot will cause the cam to not function correctly.

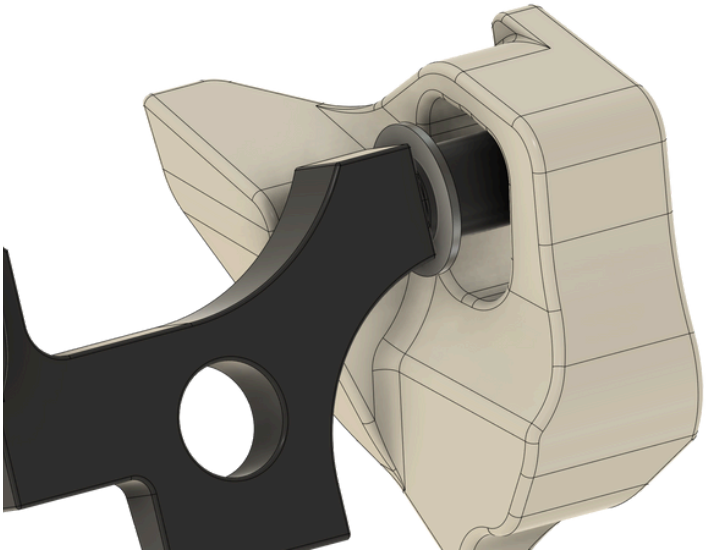
- You can remove the cam wobble by adding a 3d printed washer found in the others folder. For example my sam7SF takes zero washers but the WASR 10 takes 3 x 0.5mm washers or a 1.5mm washer



- The washers go in between the selector and the cam like so. (Washers **should not** be used on the other side where the cam touches the retainer plate / trip bar.)



- Install the cam washers by first putting the selector into the receiver then putting the washers on the selector and then putting the cam on the selector after that finish the install process above



Also metal washers like the ones linked in the read me can be used, washer size 0.5MM ID 8MM MAX OD 0.5MM thickness

Function check

REMOVE THE MAG AND CLEAR THE GUN

1. Flip the selector down and to the **semi** position and charge the gun

2. Pull the trigger, the hammer should hit the firing pin. Now while still holding the trigger pull the BCG back as its pulled back your finger will be moved forward, release the BCG while still holding pressure on the trigger, as the bcg goes into battery the trigger will be able to be pulled again and the hammer should strike the firing pin. Repeat this a few times to verify function.

3. Flip the selector lever back to safe and verify the trigger cant be pulled.

Debugging Section

- **Trip bar makes bolt carrier way to tight -** Due to the wide variety of ak specs some fitting of parts might be needed. The main part that will need fitting is trip bar, file the back side of the trip bar to allow more room for the BCG. Also the top might need to be filed also on some builds.
- **Semi when function testing -** Make sure you are using the correct trigger (FIME) then verify your hammer spring isn't pushing the cam off of the trigger. If the hammer spring is pushing the cam off the trigger you can bend it so its not so far back on the trigger and this should resolve this issue.
- **Cam wears out very fast -** Make sure you cut the trigger correctly it should fit into the bottom groove on the cam perfectly. Also make sure its polished very shiny and smooth as this makes a huge difference
- **Cam wont push hammer off disconnector even in fully down locked position -** This is a good sign you aren't using the incorrect trigger or you have very bad print settings. Make sure you are printing to spec and also verify you have the correct trigger or try a different trigger.
- **Bolt carrier is sticking to the back -** CLP the cam faces and rack the gun 20 to 30 times with pressure on the trigger until it breaks in. If this continues verify your print settings are in spec.