MOD9 V2 Assembly instructions
11/29/2020

Category	Description	Qty	Where Used
Filament	1kg filament (PLA+ or ABS)	2	Printed parts
FCG	AR-15 Fire Control Group	1	FCG
barrel	glock 17 9mm barrel	1	barrel installation
Screw	#4 x .75" sheet metal screw	1	feed ramp
	#6 x .75" sheet metal screw	4	ejector, magwell, endcap
	#8 x .75" sheet metal screw	2	magwell
	#8 x1.75" sheet metal screw	4	barrel retainer
	#10 x .75" sheet metal screw	1	ejector
	# 1/4 x 1" sheet metal screw	1	Grip
Spring	7/32" OD x .015" WG compression spring cut to 17mm	1	Bolt Carrier
	AK recoil spring = Standard strength cut in half(recommended) = Dead center coil spring cut to 7in	1	Upper
	1.5mm x 38mm Stainless steel rod	1	Mag Catch
RC Shock	1:10 scale RC car front shock absorber. 92mm hole center to center	1	hydraulic buffer
	1/4" x 30mm pin	4	Upper and Lower
	1/8" x 25mm steel pin	1	Bolt carrier
Rod	Carbon fiber arrow 5/16" (8mm) in diameter.	1	Charging handle
Adhesive	2 part JB weld epoxy	1	Bolt carrier, charging handle

Drill chart

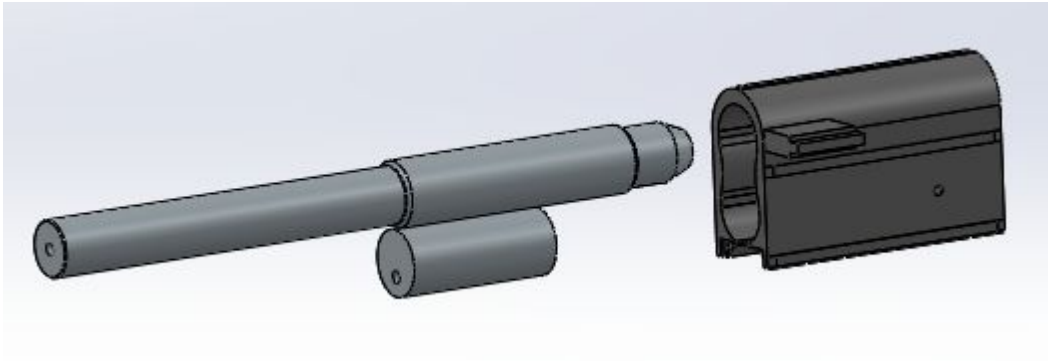
Refer to this chart when drilling and tapping the screws

screw size	drill and tap size
#6	7/64” drill bit
M3	2.5mm drill bit and M3 tap
#8	9/64” drill bit
M4	3.3mm drill and M4 tap
#10	5/32” drill bit
M5	4.2mm drill bit and M5 tap
1/4"	7/32” drill bit
M6	5mm drill and M6 tap

Bond Bolt Carrier Assembly

Procedure

1. Clean the outside of the bolt and the inside of the bolt carrier with Isopropyl alcohol (IPA) to remove oils. This will ensure you have a good bond.
2. Cover the firing pin hole with masking tape.
3. Apply the adhesive to the bolt
4. Insert the bolt into the bolt carrier.
5. Make sure surfaces are flush as shown.

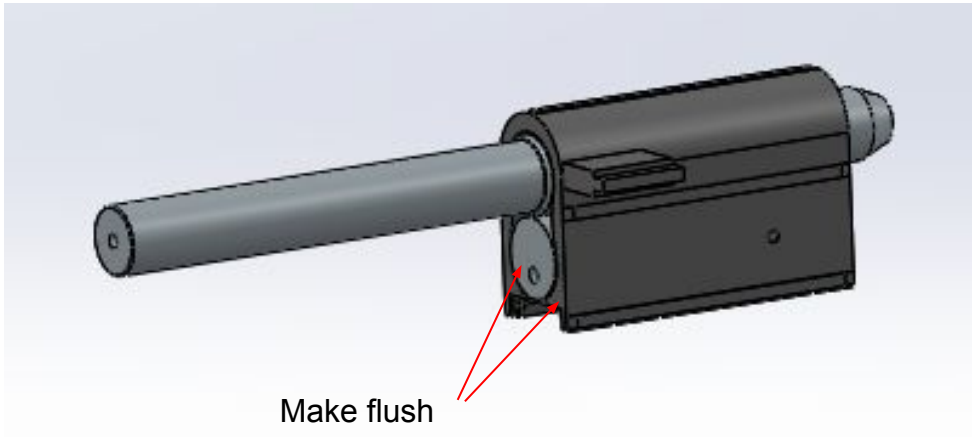


Parts:

1. Bolt
2. Bolt Carrier

Tools:

1. Masking tape
2. Isopropyl alcohol (IPA)
3. Epoxy



Firing Pin Assembly

Procedure

1. Drill the firing pin hole with a 1/4” drill bit.
2. Insert the spring and firing pin as shown.
3. Insert the retaining pin as shown.
4. Test the assembly
5. Bond the bolt and bolt carrier

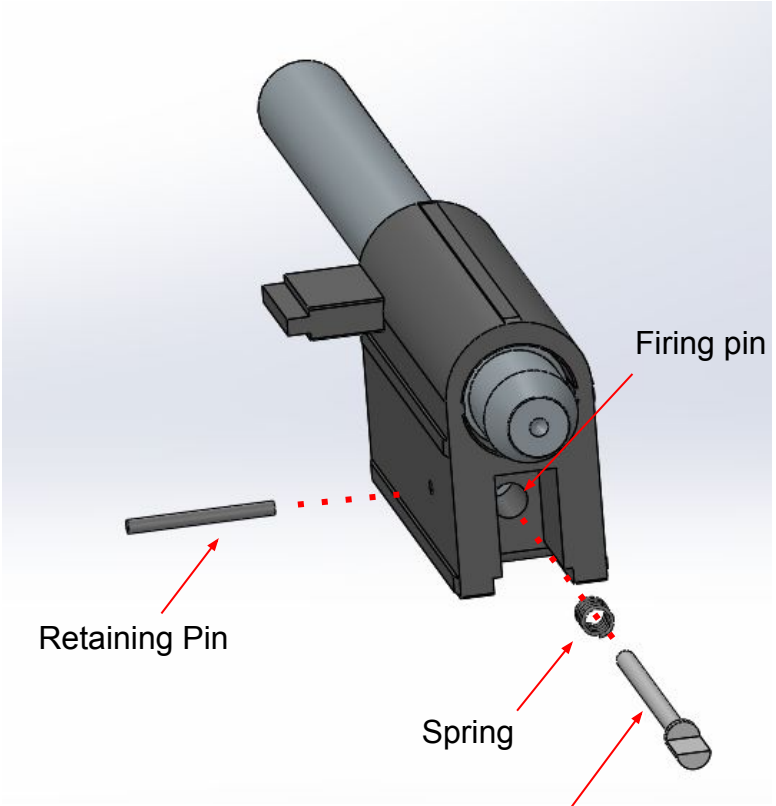
Note: Once assembled, the firing pin should move freely. If it doesn’t move freely drill out the firing pin hole with a 5/16” drill.

Parts:

1. Firing pin
2. Spring
3. Retaining pin

Tools:

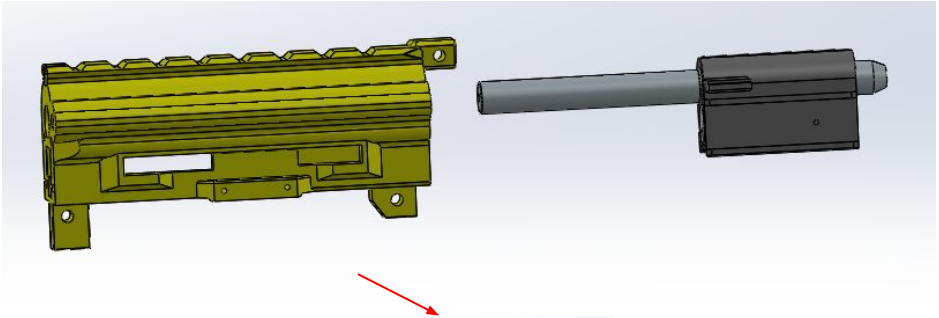
1. 1/4” drill bit
2. 5/16” drill bit
3. Drill

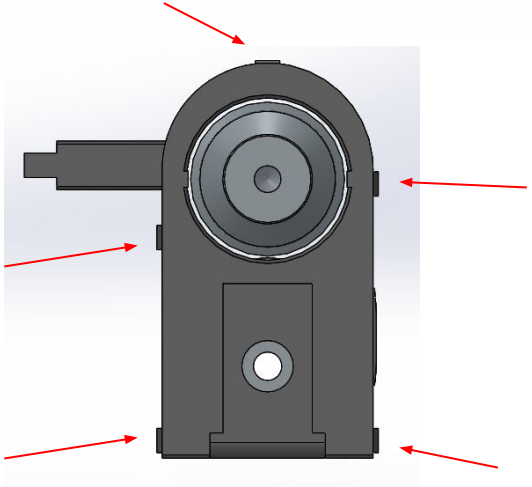


Upper receiver and bolt carrier fit

Procedure

1. Insert the Bolt assembly into the Upper receiver. It should slide smoothly without a lot of side to side play.
2. If it slides smoothly move on to the next page.
3. If it doesn't slide smoothly sand the raised strips (shown with arrows) on the bolt carrier until it does.





Parts:

1. Upper receiver
2. Bolt Carrier

Tools:

1. Sand paper, various grits

Barrel installation

Procedure

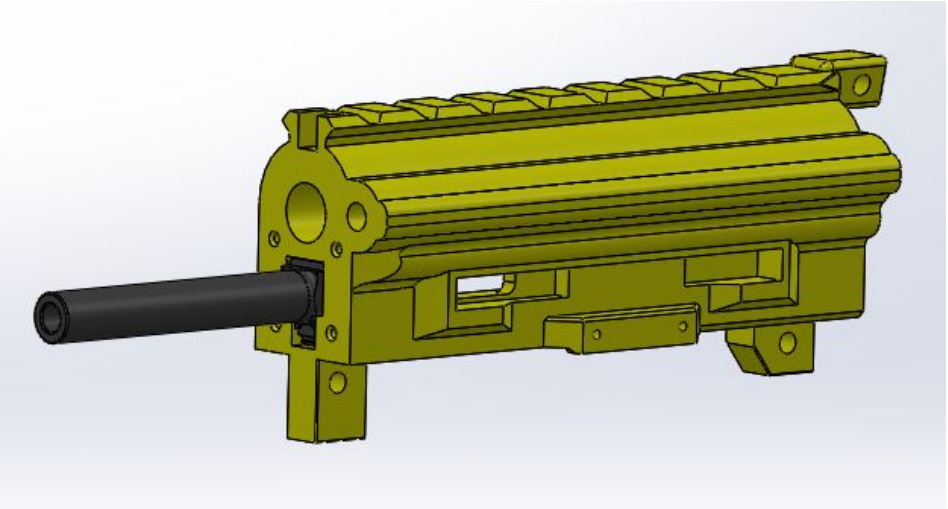
1. Insert the glock 17 barrel into the upper receiver by gently tapping the end of the barrel with a non marring hammer or mallet until the barrel extends just past the upper receiver about .001” (.25mm)
2. It’s very important to make sure the barrel goes in straight. Go slow and don’t force this step.
3. If necessary use sandpaper or a knife to remove any blobs or burrs.
4. Another method is to heat the barrel with a heat gun so it is just warm enough to soften the plastic as you insert the barrel. **Do not get the plastic too hot or you will need to reprint the upper**. Its recommended to have a test piece of printed plastic to check the temperature of the metal.

Parts:

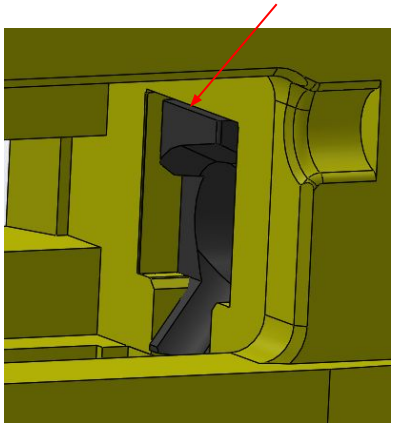
1. Upper receiver
2. Barrel

Tools:

1. Sand paper, various grits
2. Knife
3. Non marring hammer
4. Heat gun



.001” (.25mm)

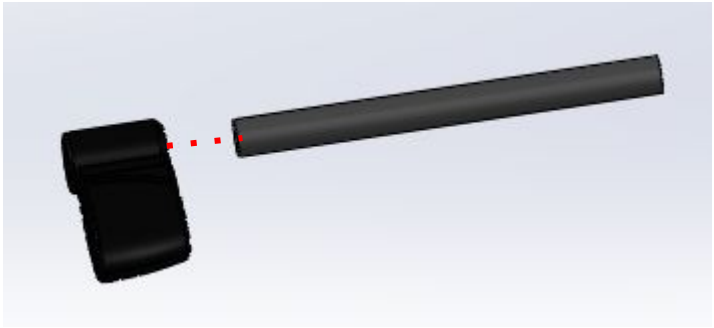


Charging Handle

Procedure

1. Wrap the material with making tape where you will be cutting.
2. Cut the charging rod to 3.54” (90mm)
3. Bond the charging handle to the rod
4. The total length is 4” (101mm)

Note: The charging rod needs to be 5/16” (8mm) in diameter.
Carbon arrow is recommended but metal, plastic or wood will also work.

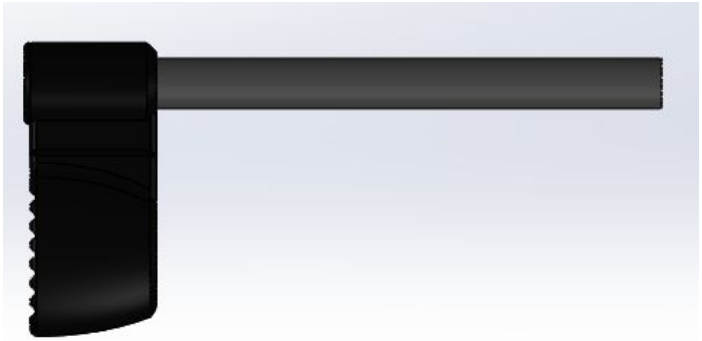


Parts:

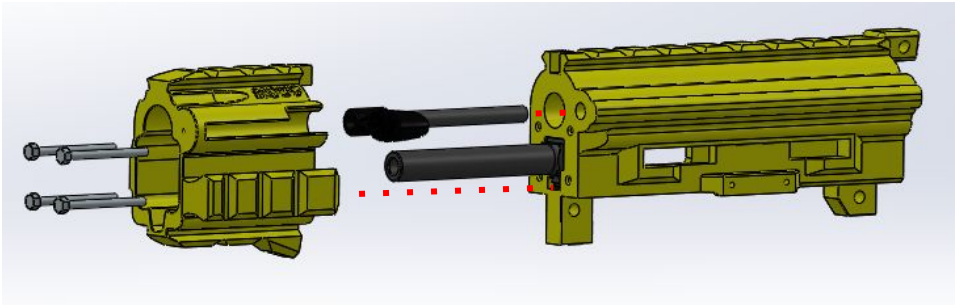
1. Charging handle
2. Charging rod

Tools:

1. Masking tape (to prevent the carbon arrow from splintering)
2. Saw or dremel tool
3. Epoxy



Barrel retainer



Procedure

1. Reaming or tapping may be necessary.
2. Grind off the tips of the sheet metal screws before installing them.
3. Insert the charging handle into the upper receiver.
4. Slide the barrel retainer onto the barrel.

Note: The charging rod needs to be 5/16” (8mm) in diameter. Carbon arrow is recommended but metal, plastic or wood will also work.

Parts:

1. Charging handle assembly
2. #8 x 1.75” sheet metal screws (Qty 4) **OR** *M5 x 45 screws (Qty 4)*

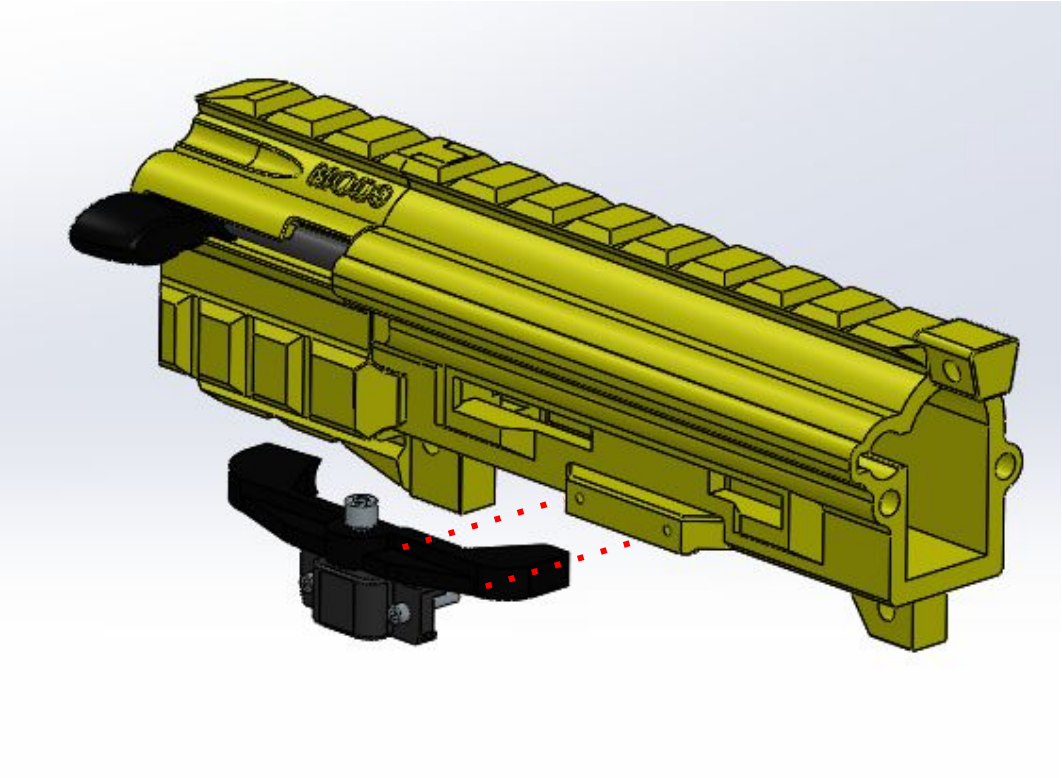
Tools:

1. 9/64” drill **OR**
   4.4mm drill bit and M5 tap

Ejector

Procedure

1. Reaming or tapping may be necessary.
2. Grind off the tips of the sheet metal screws before installing them.
3. Attach the ejector arm onto the ejector mount with a #10 sheet metal screw **OR** M5 screw
4. Install the ejector assembly with #6 sheet metal screws or M3 screws



Parts:

1. Ejector arm
2. Ejector mount
3. #10 x .75” sheet metal screw (Qty 1) **OR**
   M5 x 22mm screw (Qty 1)
4. #6 x .75” sheet metal screw (Qty 2) **OR**
   M3 x 18mm screw (Qty 2)

Tools:

1. 5/32” drill bit **OR**
   4.3mm drill bit and M5 tap
2. 7/64” drill bit **OR**
   2.5mm drill bit and M3 tap

FCG and grip

Procedure

1. Reaming or tapping may be necessary.
2. Install the FCG
3. Drill and tap the lower for the grip
4. Install the grip with a 1/4" **OR** *M6 screw*

Parts:

1. FCG
2. Grip
3. Lower
4. 1/4" x 1” sheet metal screw (Qty 1) **OR**
   M6 x 30mm screw (Qty 1)

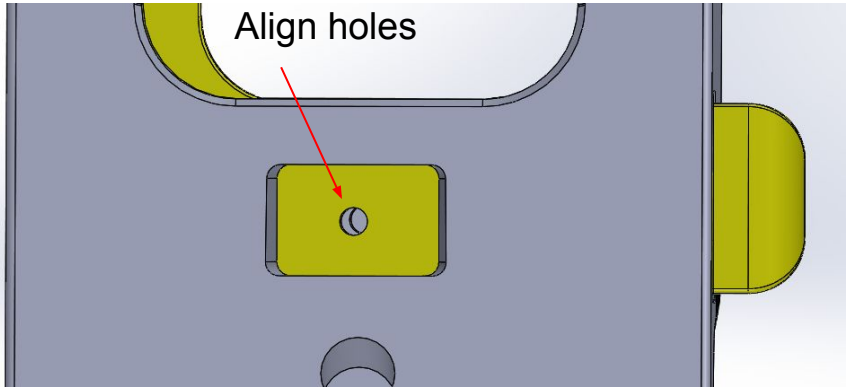
Tools:

1. 7/32” drill bit **OR**
   5mm drill and M6 tap

Mag catch spring

Procedure

1. Slide the mag catch into the mag well.
2. Align the holes in the mag catch and the magwell
3. Heat up the spring with the lighter hot enough to melt plastic and insert the spring through the mag catch and into the magwell.

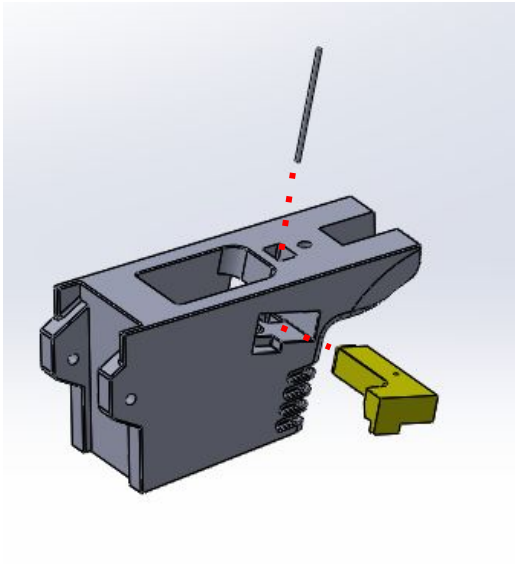


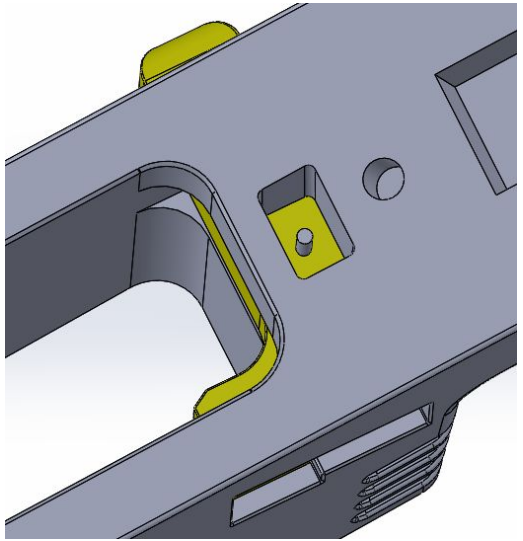
Parts:

1. Magwell
2. Mag catch
3. Mag catch spring (1.5mm x 38mm long steel rod)

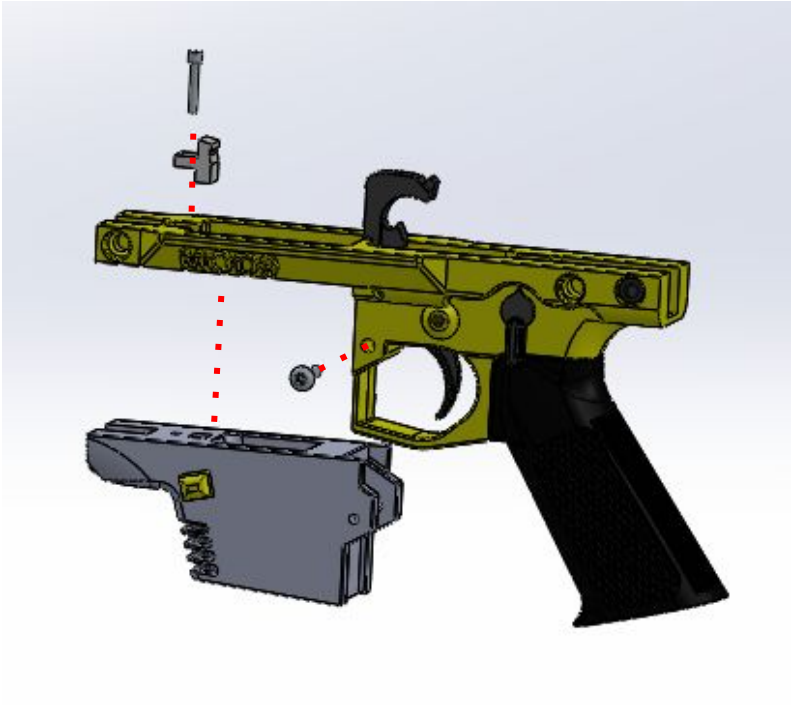
Tools:

1. Pliers
2. Lighter





Magwell and feed ramp



Procedure

1. Reaming and tapping may be necessary.
2. Grind off the tips of the sheet metal screws before installing them.
3. Install the magwell with #8 sheet metal screws (grind off the tip) **OR** M4 screws.
4. Install the feed ramp with a #4 sheet metal screw (grind off the tip)**OR** a M3 screw

Parts:

1. Feed ramp
2. Lower
3. Magwell
4. #8 x .75” sheet metal screw Qty 2 **OR** *M4 x 18mm screw (Qty 2)*
5. #4 x .75” sheet metal screw (Qty 1) **OR** *M3 x 18mm screw (Qty 1)*

Tools:

1. 9/64” drill bit **OR**
   M4 3.3mm drill and M4 tap
2. 3/32” drill bit **OR**
   2.5mm drill bit and M3 tap

Upper and lower

Procedure

1. Reaming and tapping may be necessary.
2. Grind off the tips of the sheet metal screws before installing them.
3. Install the magwell with #6 sheet metal screw **OR** M3 screw.
4. Insert the push pins

Parts:

1. Upper assembly
2. Lower assembly
3. #6 x .75” sheet metal screw Qty 1 **OR** *M3 x 18mm screw (Qty 1)*
4. HK pins 6mm x 30mm (Qty 2)

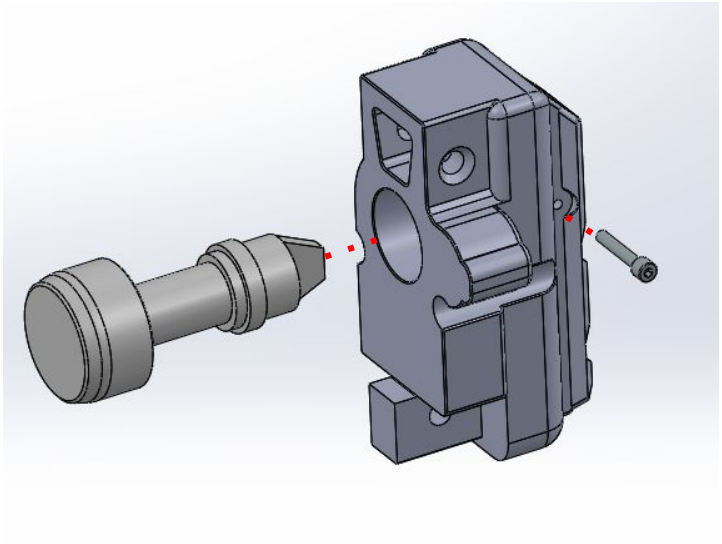
Tools:

1. 7/64” drill bit **OR**
   M3 2.5mm drill bit and M3 tap
2. Letter B drill (15/64” drill can work if you enlarge the hole a little bit) **OR**
   6mm drill bit

Hydraulic buffer and endcap

Procedure

1. Reaming and tapping may be necessary.
2. Place the cap onto the RC shock.
3. Install the RC shock into the endcap with a #6 sheet metal screw **OR** M3 screw.



Parts:

1. Hydraulic buffer endcap
2. RC shock
3. Endcap
4. #6 x .75” sheet metal screw (Qty 1) **OR** *M3 x 18mm screw (Qty 1)*

Tools:

1. 7/64” drill bit **OR**
   M3 2.5mm drill bit and M3 tap

Upper and lower

Procedure

1. Install the bolt assembly
2. Insert the spring
3. Install the endcap assembly
4. Install the push pins

Parts:

1. Upper assembly
2. Lower assembly
3. Endcap assembly
4. HK pins 6mm x 30mm (Qty 2)

Tools:

1. Letter B drill (15/64” drill can work if you enlarge the hole a little bit) **OR** *6mm drill bit*