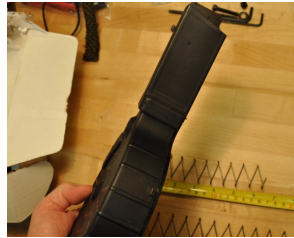




Start with this 1911 drum or Ruger drum in .45ACP.



End with this 40 + round drum mag finished product.



READ THE WHOLE DOCUMENT FIRST, THEN READ IT AGAIN AND MAKE SURE YOU UNDERSTAND ALL THE STEPS. I am not liable for any mistakes you may make during the course of this mod. :^)

First remove Allen screws and remove cover carefully. Take care when lifting edge clips so you don't break them off. Light pressure is all that is needed. Be careful of the follower spring releasing when you unclip and loosen the faceplate.



Drum with cover removed



Remove internal follower spring



Slide off 1911 magazine feed tower.



Remove this mainspring cover and be careful of mainspring, it is under tension and can pop out at you.



Spring and spindle position before modification, take note to inner spindle and spring attach locations.

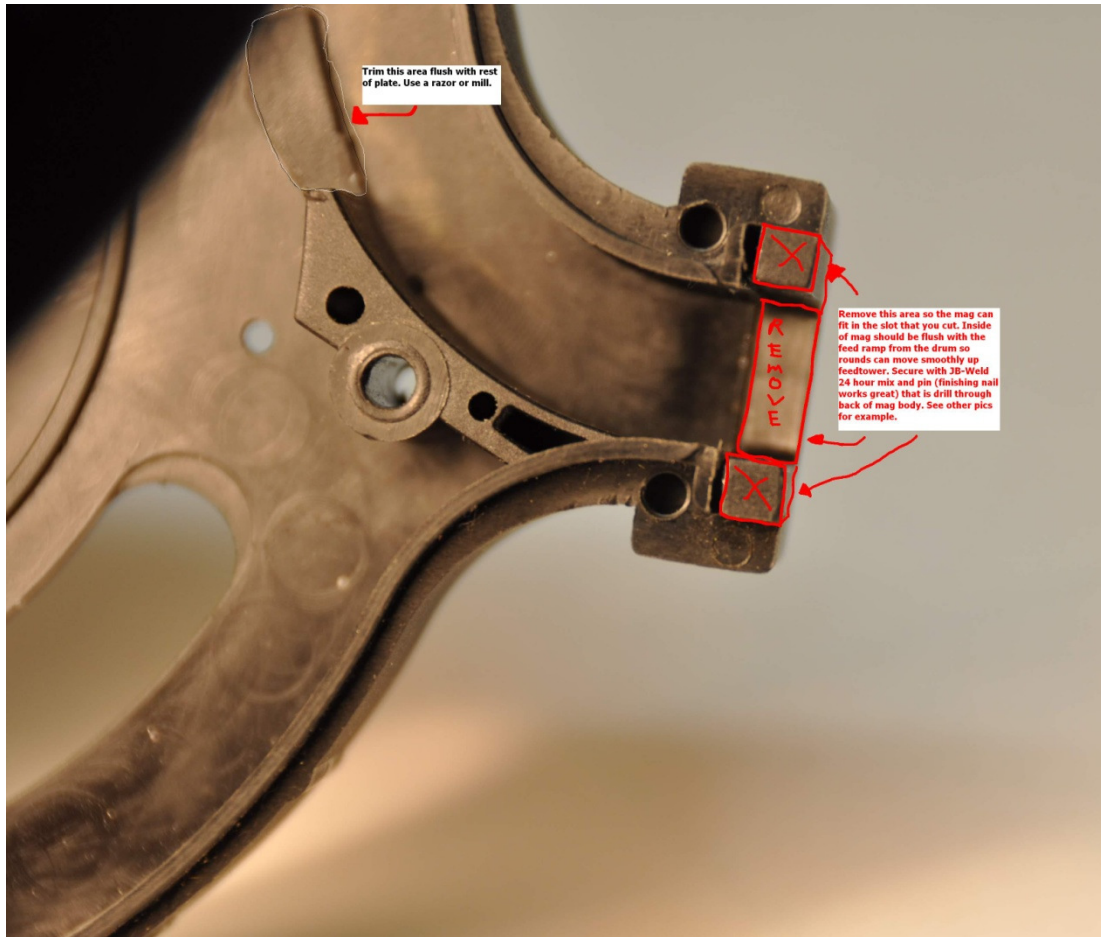
2 o'clock position of inner spindle spring catch. We will move that to 5 o'clock position later.



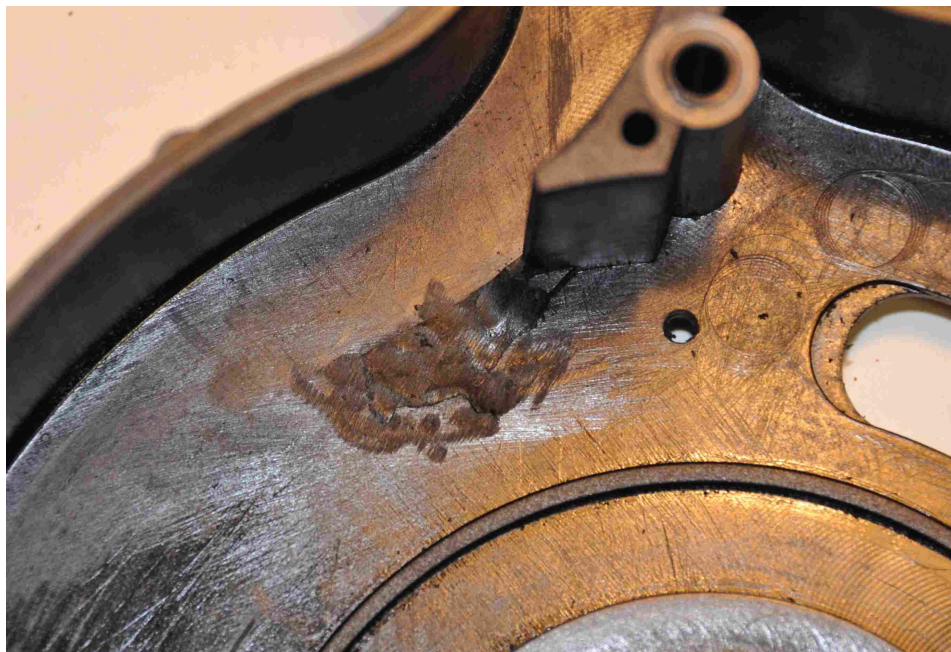
Unclip inner spindle spring from spindle with pliers. Spring is sharp so be careful. Remove inner spindle, inner drum, spring and set aside in box.



Top of ProMag outer drum before HK USC Mag Feed tower placement.



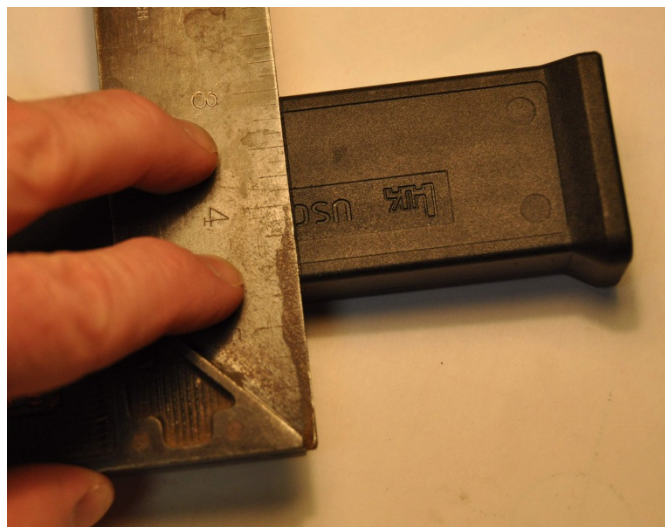
Material to be removed



Material removed inside drum well. Sand, trim, grind or whatever to remove the little bit of material that prohibits the drum from spinning smoothly all the way around. It does not have to be pretty, just clear off the lip of material and make it so the inner drum spins freely in the main housing.

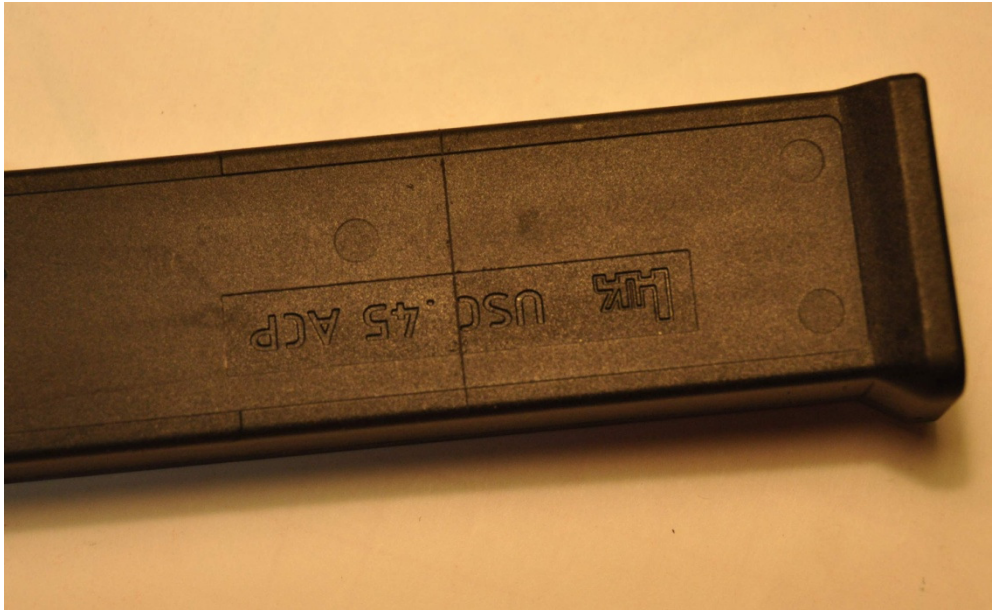


Material removed from feed tower attachment rim. You can do this with a mill, hacksaw or Dremel. Don't try to use a box cutter; the polymer is just a tad too tough. Only cut or trim down to the mold lines on the feed tower and no further down than the cuts that exist from the 1911 mag tower base. Make sure the areas are clean smooth and there are no burrs. This needs to be wide enough for the body of the mag to fit just right.

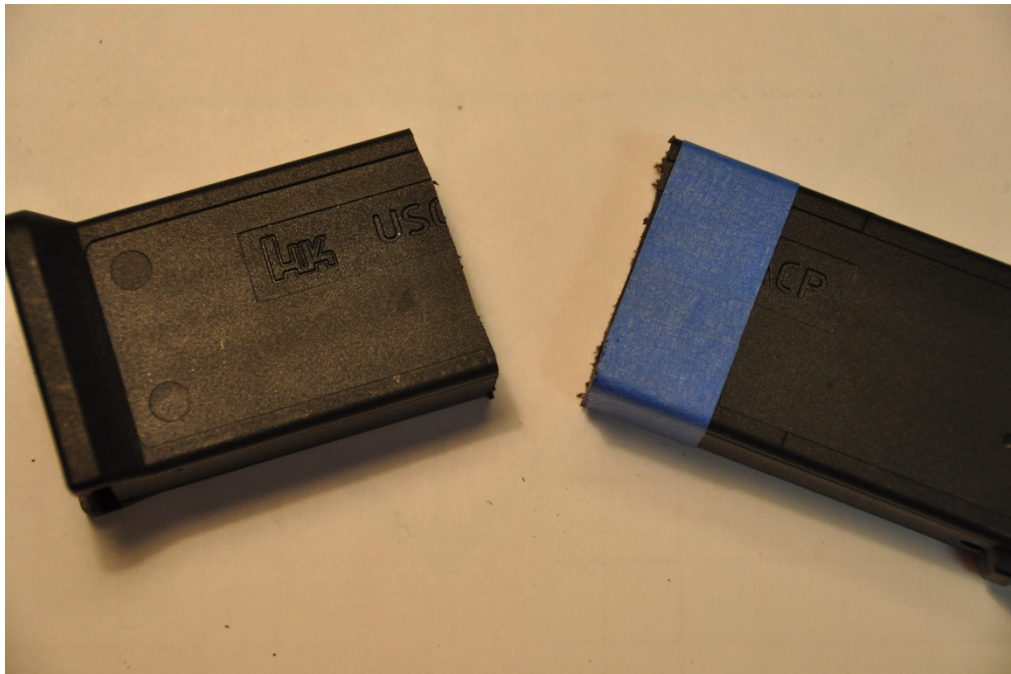


Cutting the mag!

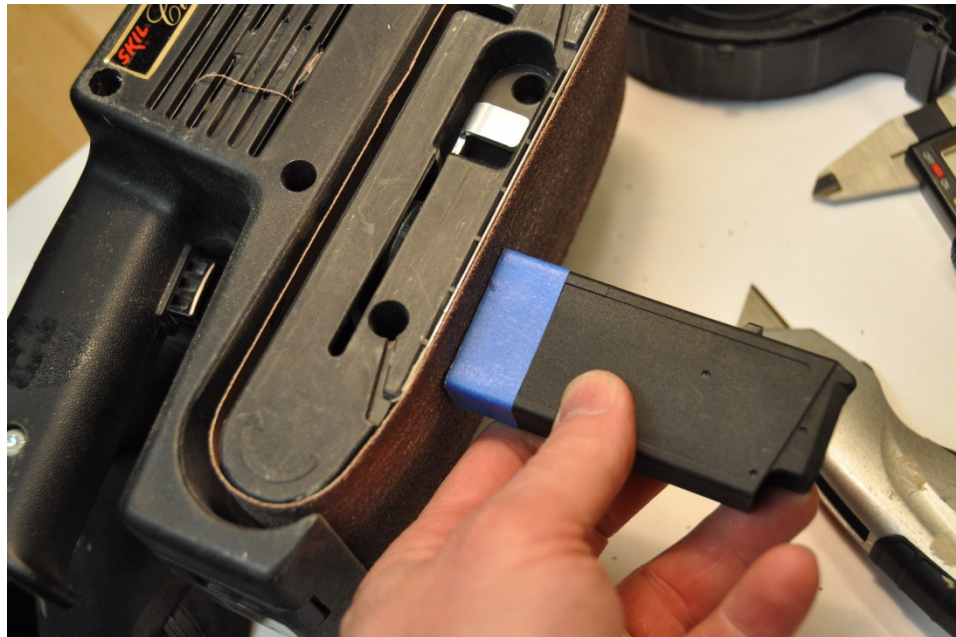
You can cut the mag at the "C" in USC and have a nice short tower that looks very professional and get 40 rounds out of it (Like Ed's from HDPS) or you can go "old school" and have a feed tower that is full length and get 45 to 47 rounds. Whatever length you choose you will have to play with spring length. Don't get too greedy because the spring length and forces don't really like that big of a mag. I can get 45 rounds in my full tower mod. I did not go any further because messing with springs is not so much fun... cutting, cutting, oops cut too much, need another spring etc. If you stick to the DIY and use the lengths of spring I specify you will have a perfect mag each time.



This is where you chop the mag... pity!



Now sand the bottom flat and flush, taking off any plastic burrs.



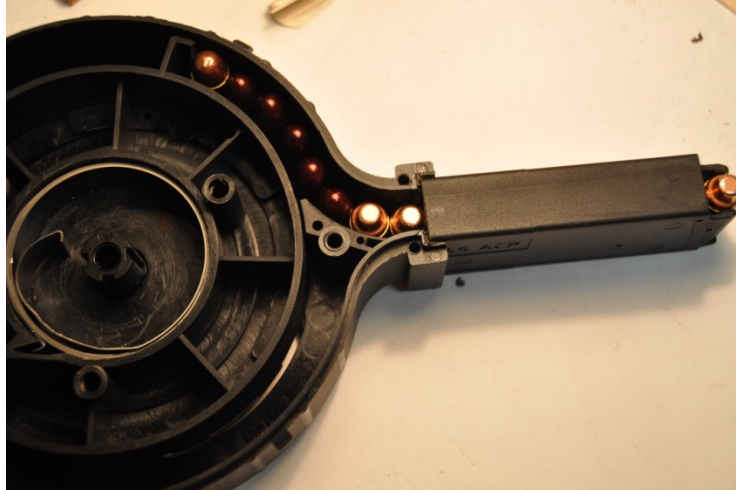
Inside of the mag, nice and smooth, touch up with fine grit sandpaper; make a very slight angle on the inside back ribs of the mag, smoothing them over so the rounds will slide right over.



Looking down at the tower attach point. Drill a small hole through the rounded end of the rim so it just goes through the back of the mag. This secures the mag in addition to the JB-Weld. Don't worry about this coming apart. I have fired about 1500 rounds through my first drum and no problems, no cracks no breaks, no issues. One pin will hold it along with the JB Weld. You can add another pin in the front if you wish but you will have to be very careful so the rounds won't touch the pin.

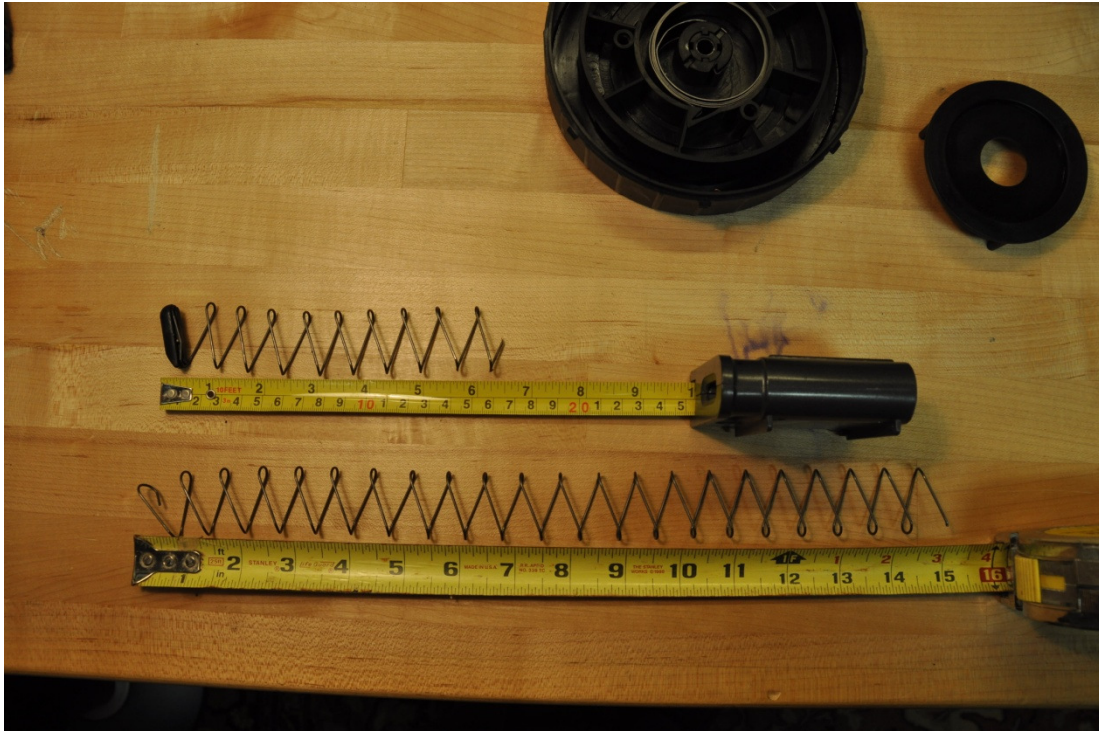


Use a small finishing nail as a pin; I just used whatever I had in the toolbox... trim the head off and size up the pin for the exact width. Use a file to shape the pin flush. Once you put the epoxy on the mag base and the pin it will not come out.



Stuff some dummy rounds in the feed tower to make sure that everything is lined up. Make sure the inside of the magazine is flush with the inside of the feed ramps and there is no misalignment. Once the epoxy dries it will be a pain to correct. Use a file or sandpaper to smooth out all the rough edges so the rounds just float up the ramp. Once you are certain that the inside walls, back and edges are all OK mix up some JB-Weld 5 minute epoxy. Apply a small amount to the inside of the tower retaining ring (that you cut and removed material from) and set the mag tower in and push nail (pin) through and secure.

After the 5 minute epoxy sets up, mix up a batch of 24 hour JB-Weld and lather on a fillet of epoxy around the edges of the mag where it attaches to the tower rim. Get in all the outside sections and make sure none gets inside the tube. Any drips or blobs on the outside can be sanded off and painted with flat black later. Prop magazine upright and let dry overnight. Don't be shy, use plenty of epoxy, you can always remove it with a razor or belt sander.



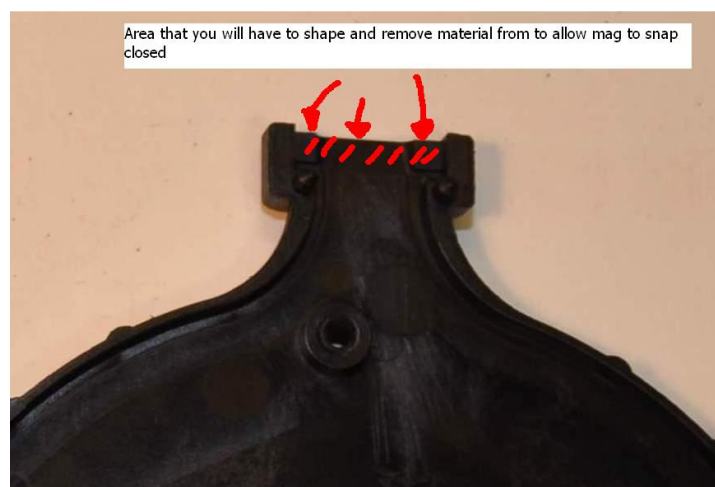
Measure the springs!

This is where you may have to adjust depending on how long the feed tower is. Use the original length of spring and make a cut at the following:

For the inside mag tube follower spring with original follower on end = 6 ½" -7" long from end to end.

Back internal follower spring which is cut from the remaining spring = 15 ½ " to 16"

Curl the cut ends of the springs slightly to reduce internal friction. This setup works because we reduce a lot of friction and rub points that the original drum had.



You will have to remove a little material from the cover plate to get the drum to close. This will take several attempts, so go slow and just nibble away a little material at a time so it is a snug fit when you attach the cover. Do so with a Dremel or file till it fits snug against the mag bottom.



After 24 hours, remove any bumps of epoxy, smooth out the rough edges and make sure everything looks smooth and flush. I use Krylon Flat Black Camo paint and give the area a little touch up (I tape off the rest of the mag so the paint area is minimal, just a slight band around the base of the mag)



Voila! Looks good... now to assemble. Take note to the “witness panel” it snaps off. Make sure the retention tab on the panel does not inhibit the smooth operation of the drum.



But first, one last check that the insides are flush and flat, smooth out any rough edges with fine sandpaper.



Before you assemble the drum, it is a good idea to spray the insides with a silicon spray lube. I find this works the best to keep the drum movement smooth. Spray all contact areas with a light coating.



Assemble the inner drum and spindle as shown. Then attach the mainspring as shown. Be careful! Use needle nose pliers as they work best.

If you need to you can remove the tension and rotate the spindle spring catch to the 2 o'clock position removing some tension if need be. Bring tools to the range as the spring constant varies from batch to batch and you may need to make adjustments.

Insert the springs, short one in the tube and end resting on the lip of the inner drum follower. **Make sure you have the correct orientation of the follower or it will pop out or worse you will tear the follower off when the bolt goes home after the last round is fired!** Insert the longer spring behind the follower and tuck in to the end. The key here is that you have increased tension on the mainspring and added a spring to the backside to help PUSH the 40 + rounds along with the inner mainspring. Replace the inner mainspring spindle cover (small cover). Replace the cover. Install Allen screws and make them just snug. Do not over tighten!



This is what the follower position should look like.



Final product! Now load, make sure all the rounds load smoothly. If not, go back and check the fit of the mag tower to the base. Also check the "witness cover" on the drum body (It pops off with a screwdriver) you may have to sand a little of the retention clip flat so it does not interfere with the smooth operation of the spinning inner drum.

I hope you enjoy your drum as much as I do mine. I am close to finishing a mod for the HK USP Compact .45 using the drum. I will post that mod once it is perfected.