

The Simplicity of the .223 Ackley Improved

By Fermin C. “2 Dogs” Garza

My absolute favorite pest/varmint rifle is chambered for .223 AI. I know a lot of active shooters might cringe at the thought of a non standard cartridge. These riflemen want to be able to buy rifle ammunition over the counter. Many of the non reloaders I know for the most part WANT to be able to reload their own ammunition someday. If this is you, consider reading on and see if I can convince you why the .223 AI is a great place to start. Perhaps you will discover that this wildcat is really not that complicated and might be something you want to do.

First, you can buy ammunition “over the counter” for your .223 AI rifle. Standard .223 ammunition fits, fires, and can be astoundingly accurate. The .223 Remington and the .223 AI share the same headspace dimension however the reverse is not true. That is, a formed .223 AI will not chamber in a standard .223 Remington rifle. The .223 Remington chamber is smaller but the datum line is in the same place. To reload, you need brass, so just save your newly formed brass.

Second, forming .223 AI brass is as simple as chambering a .223 Remington cartridge into your .223 AI rifle. Just fire your rifle like you always do at whatever you always shoot at and when you cycle the bolt a formed .223 AI brass case will appear. It has been my experience with my rifles that fireform ammunition is just as accurate as formed ammunition. You might be thinking about additional wear and tear and shortening barrel life but let me put that thought to rest right now. I have often formed cases at the same time I was hunting predators or prairie dogs. We all already know the standard .223 Remington is an effective performer on the range or in the field but we are essentially killing 2 birds with one stone. By recovering and saving our newly formed .223 AI brass we can actually *increase that level of performance with the .223 AI*.

About now, you might be wondering exactly what level of performance improvement you might see with the .223 AI. The answer depends of course on the bullet weight you wish to run. Clearly the lighter bullets see more of a velocity gain than the heavies. For example, a 40 grain .223 AI will be up to 150 fps faster than standard. That is, if your standard .223 Remington with a 40 grain bullet is moving at 3850 fps your velocity with the .223 AI will be 4000 or so. Some of my rifles that are custom barreled and twisted 1/14” actually exceed that 4000 fps benchmark by quite a bit. The heavier .223 bullets do not see the same performance jump however you will see an increase in the neighborhood of 100 fps. That is still an amazing boost down range when the wind is really blowing or the intended target is farther than normal. While the improvement is not in the .22-250 or .220 Swift class every little bit helps. On the other hand, the little .223 AI gets much closer to the performance of the big case .22’s with much less powder.

And finally there is versatility. The .224 diameter bullets are commonly available from 40 grains to 90 grains from many sources. Any powder that works for the .223 Remington will also work for the .223 AI. When you combine the two the possibilities for a successful marriage are vast. A good deal depends on your barrel twist. Most factory barrels for a long time were 1:12” but with the introduction of the ever heavier .224 diameter bullets you now can see some factories producing 1:7”, 1:8” or even 1:9”. This might seem complicated but it really is not. The simple rule is the heavier bullet you want to shoot the tighter your twist needs to be. Factory .223 Remington barrels can certainly be rechambered to .223 AI. However I would be reluctant to spend the gunsmith fee on a factory barrel unless it shot at least ¾” at 100 yards. So, if you are a target shooter looking to extend your range by increasing your efficiency with the use of long heavy for caliber bullets look to a 1/7 or 1:8 twist barrel. A 1:9 twist barrel will handle bullets up to 69 grains, and on down to the slowest twist I would consider which in the 1:14 which shines with the 40 grain bullets. The very best option is to have a custom barrel installed. So doing will allow you maximum accuracy and velocity with your given projectile. A barrel twisted 1:8” will still shoot the 40 grain bullets accurately but not nearly as fast as a 1:14” twist. But a 1:14” twist barrel will mostly only stabilize the lighter bullets and even a 55 grainer can become “lffy”.

I own and use four bolt action .223 Ackley Improved rifles. Two of my rifles are twisted 1:14” and are set up specifically for the prairie dog fields and the occasional Texas Jackrabbit. These rifles exit 40 grain Nosler ballistic tips at 4000 plus fps. These rifles both wear muzzle brakes which keep the recoil so mild I can see the 40 grainers impact the target. Another is twisted 1:8” and wears a 27” custom barrel. This is my long range rifle and I run the Sierra 80 grain Matchking to way out there. My last and newest is a 1:9” twist heavy short barrel rifle set up for its versatility and for when I want to run a suppressor. I am currently also considering a fifth which will likely be a 1:8” twist 18” barrel “truck gun” with a slim profile barrel.

Since the .223 Ackley Improved is one of if not the most popular wildcat cartridge in existence reloading dies are standard. There are no super secret tricks to reloading as it reloads just like any other normal cartridge. Simply tumble your fired brass until it is clean. Lubricate and full length size like any other cartridge. Seat your favorite small rifle primer. Weigh and drop your powder charge and finally seat your bullet of choice. Use standard .223 Remington maximum charges listed in any reloading manual and work up until you either achieve the velocity you want or you start to see pressure signs. I would work up in increments of 1/10th grain until I saw the accuracy and velocity I wanted to see. .

Start your reloading hobby with an exciting cartridge. I recommend the .223 AI. See if it doesn't become your favorite as well.

