

BUILDING YOUR AR-15

■ By Michael Ware

So you're going to build your own AR15? Sure. Why not? After all, they are commonly considered the "Legos" of modern sporting rifles, right? If you can swing a hammer you can build an AR15. ...Or so I've been told.

We built an entire business segment on repairing AR15s that were either poorly assembled at the factory or assembled poorly by an individual. Don't misunderstand me. People build them every day for the first time and do a great job. However, they are like everyone in that they don't know what they don't know. Sounds strange, but it is a pretty important concept to grasp. Let's take a few moments and break this down.

Often times the do-it-yourself crowd members' fall into three distinct categories. The first two are either particular to the point of being crazed about the parts and accessories used in their build, or they are cheap as a gypsy jeweler on payroll day. Thankfully, the third group occupies the majority and they opt to proceed with caution and seek help. The particular guys and cheap folks don't represent bad things of course, but both can lead to some decisions that greatly impact the build list and components. I have never been a fan of 'cheap' anything, as I have rotten luck. You can bet any sum of money the instant I cut corners on a project just to save a couple bucks I end up paying for that minute financial gain and then some. It never fails, and I get bitten in the rump. The casinos roll out the red carpet when I show up... I leave every dollar behind. Let's dissect where we go wrong and correct the mistake before it happens.

Some folks will shop for days for the lowest possible prices and often they are the lowest overall prices for any part, rather than a particular part. For example, when choosing an "LPK" also known as a Lower Parts Kit, they'll pop from Website to Website to find the difference in a dollar. That can work, but you always have to be cognizant of the shipping. Freight will kill you. This isn't an online retailer's first rodeo. They know they don't have to offer every stock item inexpensively, as

you'll buy some of the other stuff while you're there. If not, they'll still get something from you as most treat freight as a profit center. They ship thousands of dollars of merchandise a day and a small one-pound box may only cost them \$4 to ship, while the standard freight charge is \$12.95 to you. This means they made more money on the freight charges than the LPK you bought from them. I don't begrudge any of them this either, as they are in business to make money. Besides, nobody put a gun to your head to buy from them. Regardless, be thinking about how this adds up. You can shop all day for the lowest price and when you buy all the parts on your list from six different retailers or drive to a few different places you'll have plenty of shipping along with time and fuel costs.

Other buyers will be a bit more understanding of freight charges and be shopping for a specific part for a specific purpose. These folks typically have either done this type of build up before, whether it be a weapon, a kit motorbike, or a kid's play set. They simply find themselves more comfortable researching online for hours as opposed to many others. While they usually make some good purchases and sniff out some good parts and bargains, they tend to be very convinced that only certain parts will suffice. This is a good thing in many aspects of a quality build, but can lead to over confidence and a serious case of the red rump if things don't go "bang" upon weapon testing.

We now have all the parts we need to build our weapon. Some specialty tools are necessary of course. Provided you're patient and have a decent set of tools or access to them, a good portion of the smaller specialty tools can be skipped. Plenty of workspace is a good thing along with proper lighting. I also suggest a really great pair of safety glasses. Why? The several spring-loaded detents the AR15 contains

have a tendency to go shooting out across the room if you're not in total control. While watching your buddy on his hands and knees looking for a detent the size of small grain of rice is really kind of comical, the chuckles stop when the poor guy is digging a hunk of metal out of his eye. A new detent is two bucks. A new eye isn't readily available. One of the best investments you can make is a great pair of safety glasses. Pairs that are clear and fit well can be had under the ten dollar mark, so

there is no reason to suffer scratched up glasses or goggles you squint through when good stuff is available all over the place.

Now we can go over the tricky part and the genuine purpose of an article like this. Beginning to know what we don't know is a pretty big deal. Anybody can pick up a barrel, look at it and say "Yeah, it looks round on both ends and hollow through the middle..." Yet, they have no idea what they're looking at. In defense of folks like this, we're all in that situation until we realize otherwise. The trick is considering it and questioning a few things. The other part is setting aside a couple bucks to have somebody qualified double check our work.

A couple of examples might help. I once had a fully automatic 9mm AR15 that routinely fired out of battery. While it didn't ever do this in semi auto, it would constantly do it with the selector switch in automatic position. Experiencing a KABOOM is scary enough one round at a time. Try it repeatedly at 900 rounds per minute with shrapnel, brass, and knuckle flesh flying around and you'll opt to search long and hard for a fix. Again, you'll be glad you had a great pair of safety glasses.

I'll bet I had that weapon apart two dozen times. I had the bolt torn down into little tiny pieces at least three or four times for every single teardown of the weapon. I double, triple, and quadruple checked everything. I finally had to park my pride and call up somebody I knew was pretty handy with them for help. I mentioned the problem I was having and he said, "Yup... Take that crappy stock firing pin spring and throw it away. You'll blow your head off with one of those things if you're using it in an auto. Use a Colt spring from their catalog and it'll be fine."

I doubted very much this would solve it, but he was insistent and trustworthy. The minute I got the spring in I knew there was likely to be a difference. The spring was longer and much heavier to compress. I dropped the spring in, made the walk down from the shop to the range, closed my eyes, prayed, and ripped off a full 50 round drum without a hiccup. Four drum dumps later the results were the same... Fixed! A \$6 spring nearly killed me. I didn't know what I didn't know. I found somebody who did though.

One common example you should consider carefully is the parts in the fire control group. Disconnectors, hammers, shoes, selectors, detents, etc. all look fine when lying neatly on your rag atop the bench. You can compare them by sight to the high-resolution pictures

The pile on the left is the various 9mm ammo I ran through the 9mm AR15 automatic weapon with the longer, heavier spring. The pile on the right is with the stock spring included with the bolt we bought. The differences in the springs are slight, but the results weren't.



on the Internet and they look flawless. Yet, when installed your weapon either goes click instead of bang or manages to kick off doubles or triples. While kind of neat, the ATF gets their underpants in a wad over stuff like that, so it is best to make it work correctly. Many of these little parts are stamped or just plain rough little buggers. It isn't uncommon to find various parts in your lower parts kits that aren't up to specification. How can you know this by looking you ask? Unless it is painfully obvious you probably won't. Again, the need to budget a few dollars to have your build looked over by a qualified smith and armorer for the product is a must.

Don't get me started on the chambers. Can I shoot 556NATO in a .223 Remington chamber? Can I do the inverse? My short answer is yes. Many will cringe when reading this, but they are either lacking information to make the statement or not realistic about how things are currently built. With the rates that most barrels are being churned out, you're more likely to experience short, long, or weird chambers simply due to manufacturing that doesn't fully adhere to a quality model. Why worry about a thousandth or two between 556 and 223 when it is highly likely your chamber isn't even correct to the specification stamped on the barrel itself?

I'm not suggesting being unsafe. I am suggesting being realistic. I've checked, gaged, and reamed lots of barrels that were clearly marked "556 NATO" that weren't even close. They weren't even close to 223 Remington specs either. The slight pressure increase with a poorly reamed barrel typically manifests itself in the form of early bolt failure – this is nearly identical to what we see when running 556 in a 223 chamber. Most AR bolts make 30,000+ rounds prior to failure and recommended to be replaced at 15,000 regardless. So if a few thousand rounds shorten their life, should we get in a twist over it? Nope.

I'd much rather see the chamber checked by a qualified smith. This way you'll actually know, and more importantly be able to transform, that rough short chamber into something the eats what you feed it and doesn't pose a reliability or durability concern. In the case of chambers, 556 vs. 223, there is plenty more to it. However, my point is a simple one. I have less concern for the minute differences between the two chambers than I do for the fact that the overwhelming majority of AR15 barrels aren't reamed correctly to either specification anyway, many are rougher than a cobb, or too short/long to the point of making an issue with

556/223 irrelevant.

The AR15 isn't some mystical beast. Voodoo isn't encapsulated within a black aluminum and steel exterior. To be frank, there really isn't that much going on inside them. However, the parts are built in a specific fashion to do specific things. Once you monkey with that there is a result. Not all the results are favorable. While we assume all the parts we're picking up are correct and will fit, sometimes they don't. Worse, they fit, but don't operate in the fashion in which they were intended. Couple that with lacking knowledge on proper assembly, lacking tips and what hurdles to jump, and you can get in trouble.

The vast majority of rookie builders do very well and I don't discourage them from doing so. I do encourage them to have their work checked. After all, this is a weapon. We don't get second chances in cases like this, and safety should be our primary concern in all weapon handling and building scenarios. Our shop has offered "AR15 Build Clinics" for years with this goal in mind. I've seen this done all across the country and it is a really great way to delve deep into what you're doing with real time resources. We allow folks, whether they are customers or not, to attend a clinic and bring along their parts or buy them from us that day. The majority of people just come to watch so they can learn about what they're getting into. With the aid of our armorers they build up their weapons alongside a professional so they can avoid the pitfalls associated with the unknown.

Whether you have attended a build clinic, paid a smith to walk you through a build, or just paid the smith to look it over, there are a ton of resources for you. Iowa, and the Midwest in general, are chock full of qualified people for this. I highly recommend this thought process as you choose your parts, and specify your dream weapon. The versatility of the AR15 and support for them is unmatched within centerfire rifle circles, so you don't have a reason to say no. You'll see these two quotes in our shop and they hold true for anyone, anywhere:

"The instruments of battle are valuable only if one knows how to use them." -Colonel Ardant du Picq

"The instruments of battle are valuable only if they go 'BANG' rather than 'click' when one uses them." - Michael Ware

My dad always says "Measure twice, cut once Son." I think this holds true in AR building as well. Get outdoors, spend half a day in a tree stand, hit the range, and stay safe friends. . .



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