

## Short Line Ammo or Confessions of a Reloading Junkie

When I first started competing in high power rifle, I was shooting a re-import M1. This rifle had so much head space that the brass was getting pushed back and forth by .015" with each firing and the was no rifling visible at the muzzle. But, I hunted down and bought every little gadget I could find in order to make better ammo for it. Primer pockets were uniformed, flash holes were de-burred. I was that guy holding up the line, while looking for that last piece of brass.

Being a tool and die maker (and German too!) I was anal about my ammunition. I trickled every charge and even picked powder out of the pan if the scale read over. I even set aside for practice, the remainder of a batch of ammo, because I didn't want to mix primer lot numbers in a match! All this with an un-accurized Garand with a worn out barrel.

Once I was sure my lack of success wasn't the ammo, I build a .308 Garand with a heavy match barrel and had it accurized. I shot this rifle for the 1995 season and made Sharpshooter.

By now though, the black rifle was really starting to take over. I had one and sent it to Compass Lake for trigger, sights and float tube and began shooting it in 1996. Got my expert card after just four matches. Now my weapon and shooting skills were starting to catch up with the level of the ammunition I was producing.

My ammo plan would make most shooters dizzy. I had 55 grain IMI bullets for offhand. 62 grainers for rapid sitting and 69 Match Kings for 300 & 600 yards. To make matters worse, the 300 and 600 yard ammo was seated differently and had different powder charges. But, I wasn't confused because I color coded everything.

So, there I was at Ft. Benning, GA, shooting with John Holliger. By the time we were back to 600, John noticed all my different markings and asked if I had a load for each position. Well, I really didn't know who John was back then so I began to brag about my ammo and how I weighed each load for precision.

I am sure John (along with others) questioned having four different loads, but what I remember from that day was John telling me that weighing short line loads was not necessary. I told him I had to trickle each charge because my powder drop would vary the weight by as much as four tenths of a grain. He just smiled and suggested this simple test; Weigh a number of drops to find out the extreme spread. Then carefully load 10 rounds with the low charge and 10 rounds with the high charge. Shoot this ammo from the bench with a scope and see if you have two different groups.

Well, I tried it and at 200 yards there was only one group. Vertical stringing didn't seem evident, so I started to drop my loads. It took a while before I trusted them completely and you can still run into trouble. I use the RCBS powder drop with the small precision micrometer adjustment. (RCBS makes two size drop drums and the powder measure comes with the large drum. You can get the small drum free by request from RCBS.)

The technique I use is as follows. Each drop seems to have a 'sweet spot' where it likes the powder level to be. For my hopper it seems to be about 1-1/2" down from the top, where I have marked a line. I also like the little baffle that regulates the powder column just above the measuring drum.

I fill the hopper to the line and then drop five charges into the scale pan. I weigh these five charges and they must be within one grain of what five charges should weigh. That allows for  $\pm 0.2$ gr variance. Example: If the charge is 23.5 than I look for 117.5 on my digital scale. The five charges get dumped back into the hopper. If the weight is high or low I will drop another five and re-check. If, after several tries, I can't get my weight, I will adjust the micrometer. However, any big deviation indicates a problem that is probably not the adjustment. All this dropping and checking also conditions your hand for a consistent motion on the handle.

Happy with the setting, I will then drop some single charges and weigh them. I like to see  $\pm 0.2$  on single charges. Then I will charge 20 cases. When the cases are charged, I will again weigh several single drops. Again, I am only looking for a big change.

Always give the charged cases a visual inspection before seating bullets. Look not only for the presence of powder, but also for a consistent powder level. Once satisfied with the batch, bullets are seated and the finished rounds are placed bullet down in a block. At this time I will mark the bases with a stripe. This also provides an opportunity to detect any upside down primers.

Some of you may be wondering what load I am using for short line so here it is:

Bullet - Sierra 69gr Match King

Seated to 1.750 $\pm$ .005 LOA

Powder - VV-135 23.5gr

Primer - CCI 450

Brass - Lake City

Sized - no expander ball

Trimmed to 1.250 $\pm$ .005

M-Die (Lyman)

This load has taken me to high master (at Perry), Distinguished and President's 100, two out of three times. And, no I don't uniform pockets or debur flash holes for short line. Ray Brandes (January 2003)