

Revisiting the .30 Streaker

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The .30 Carbine and the Ruger Blackhawk.....a unique chambering to say the least. For all of the noise that the round generates though, it seems underpowered for a single action as strong as the Blackhawk. I had spent some time shooting the .30's in the early 1990's and found them to be highly accurate and pleasant to shoot. However, their drawbacks are three-fold: 1) Non-rimmed cartridges in revolvers require that overall case length be closely monitored, 2) Heavy loaded .30 Carbines have yielded a lot of extraction problems in the guns that I've tried, and 3) 1400-1500 fps for a 110 grain bullet can hardly be characterized as speedy (top end .44's can perform at similar levels with a 240 grain slug). Now don't get me wrong, the .30 Carbine is an excellent round that deserves more attention than it's received on the Ruger platform. For those of us though that like to make more of the Blackhawk's potential, a stronger .30 caliber was needed.

Small bore pistols rounds are somewhat of a departure from what I had been accustomed to with the Ruger's. Much like Keith, Taylor, and Linebaugh, I've always considered caliber and bullet weight to contribute the most to terminal performance. Nonetheless, the idea of a high velocity, flat-shooting varmit round in a single action is intriguing. History has shown that such a combination can be effective. Steve Matthes in the 1940's used a converted Colt in .218 Bee to hunt mountain lions and Smith and Wesson proved the .22 Jet

to be fast in their K-frame double actions. Unfortunately, I'm not turned on by .22 calibers in full-sized Rugers; they just seem "too" small for a cylinder as large as the Blackhawk's. Improved .30 caliber performance would have to come from either a longer carbine case (such as 1.45") or a bottle-necked configuration. The former is easier said than done while the latter has the reputation of causing case setback (more on this later).

Initially, .357 Magnums necked to .30 caliber appeared as a viable option. It had been done before in Thompson Center Contenders and single-shot rifles such as the BSA Martini and worked well. .41 Mag's when squeezed down to accept the .308 bullet could also be a candidate. Then out of nowhere my dad stumbled across an article in Wildcat Cartridges, Volume II on a converted .30 Carbine. As it turns out, a gentleman by the name of Bob Rayzak developed a shortened .30 Herrett for the Blackhawk (I believe the round to date back to the late 1970's, early 1980's). The publication had a significant amount of load detail, a complete depiction of case dimensions, and the steps necessary to form the brass. If it worked for Mr. Rayzak, it seemed like the logical route to take (why reinvent the wheel?). Overall performance and availability of brass were key contributors to us pursuing the .30 Streaker. With velocities in excess of 2000 fps and the .30-30 Winchester as the parent case, this is a very logical wildcat.

Rayzak annealed his carbine cylinder and had it rechambered to .30 Streaker. Since my dad had been making Ruger cylinders for some time, we decided to start from scratch. He began by machining a set of chambering reamers (both a finisher and rougher), reloading dies, and a form die. The conversions also made use of 4140 steel and a non-fluted cylinder design was employed. At the time, my dad owned a couple of .30 Carbines so he simply had to fit the cylinder to an existing gun. I on the other hand had to find a donor for the project. Blackhawks in .30 Carbine have never been in plentiful supply in Northern Virginia, at least in the used market. That, coupled with my general impatience, moved me to grab the first used Ruger I came across (a like new .41 Mag, 6.5"). I also opted to make use of some surplus .30 barrel that we had lying around the shop. To my surprise, the bore on this stock was excellent and upon slugging the tube, found it to be extremely consistent. Because we were dealing with a high-velocity round my barrel was cut to 8.5" whereas my dad used the standard 7.5" configuration. In the course of the project we also decided to build .32-20 cylinders for these guns; by sizing the necks to accept a .308" bullet, the round could be easily used within the Streaker conversions (call it a .30-20 if you like, but it's really only a .32-20 with bullets undersized by .004"). Our first Streaker conversion was finished in March of 1993.

Forming the .30 Streaker is a little bit of a chore, but not excessive for the sort of case-life that is returned. Initially, the shoulder of a standard .30-30

case is pushed back to the desired position and the neck is cut to length (overall length is 1.47", shoulder angle is 30 degrees, and neck length is set to 0.290"). Inside case reaming is not necessary when beginning with .30 Herrett brass, but is required when the Streaker is based upon virgin .30-30 cases. The last step is to fire-form the round and in doing so I have exclusively used 15 grains of H4227 behind a 110 grain bullet. Now onto the issue of case setback and cylinder lock-up.

As many shooters found with the .22 Jets of the early 1960's, when bottleneck rounds are fired in revolvers the case has a propensity to back out of the cylinder and jam against the recoil plate. This not only impedes/prevents the action from being rotated to the next chamber, but also necessitates the removal of the cylinder to clear the gun. Our initial testing with the .30 Streaker yielded such a result with both reduced and maximum loadings. Bob Rayzak had discussed the issue though to some degree in his original article. Specifically, he denoted the importance of shoulder position with respect to overall headspacing. While our guns used the rim to headspace the round, shoulder position relative to the chamber is still important. In the end, Rayzak determined that a minimal amount of "excess" space between the shoulder and chamber is needed (~0.008"). When it was positioned as to actually touch the chamber step, cylinder lock-up occurred the majority of the time. Most likely this results because as the round is fired, the shoulder is blown forward. If already engaged to the chamber wall, the case has nowhere to go but backwards. Conversely, if too much space is permitted the result is over-worked brass and shoulder splitting. In our guns we found shoulder position to be less critical, but to be safe we did set it back by a few thousandths. Interestingly enough, cylinder lock-up still occurred on occasion. What did remedy the problem though is the removal of oil from both the cases as well as the cylinder chambers. This is something that Rayzak did not mention in his Wildcat article, but it has long since been a workaround for the .22 Jet. As ridiculous as it may sound, even the slightest bit of excess oil and/or lubrication can cause cylinder lock-up. Again, a few thousandths of space between the chamber and shoulder coupled with clean cartridges/cylinders provides for flawless operation. Now many of you are probably asking the question of, "why screw around with a cartridge that requires all of this case preparation?". Really though, once your reloading dies are set for the proper shoulder position, all that is left is to wipe down the cases and chambers. In the two guns that we built, these steps have allowed us to fire hundreds of full-house loads without incident.

Rayzak concluded that H4227 and 2400 work best with respect to powder selection. Trials with W296 were also conducted but provided no improvement in velocity over the aforementioned propellants. I quickly realized that with a 110 grain

bullet, velocities of 2000 fps could be reached thru an 8.5" barrel; the loads used to achieve this are either 22 grains of H4227 or 19 grains of 2400. Now Rayzak originally sought speeds of 2000 fps or higher out of a 7.5" tube and as such decided to go with a lighter bullet. His solution was to hollow out the tip of the 110's to obtain an overall weight of 85 grains. Outwardly, the thought of a high velocity hollow point seems asinine.....why lower the ballistic coefficient to gain some velocity? Strangely enough, the bullet shoots extremely well with top speeds in excess of 2100 fps using 23 grains of H4227 or 19.5 grains of 2400. Offhand accuracy tests were done at 100 yards and with the 85 grain bullet my gun grouped well on a rock that was less than 10" in diameter. Hardly world class, but good enough for ground hogs. As one would imagine, the bullet is extremely flat shooting and the gun produces an enormous amount of muzzle flash.

So for all of this effort, what does this .30 wildcat provide? In terms of velocity, you're able to gain about 500 fps over the .30 Carbine and extraction is also less problematic with the Streaker. As a matter of fact, I've never had trouble with case removal, even with the hottest of loads. Beyond the gains in performance/functionality, the project also taught me a lot about bottleneck rounds in wheel guns; so much so that it inspired my dad and I to try the .357 Bain & Davis in the Ruger Blackhawk (I definitely would like to get an article out on that conversion because I was able to exceed .357 Maximum velocities in a standard length Ruger frame).

It is unlikely that this round will ever be a commercial offering due to the potential for case setback. I should note though that a leading custom revolver shop does offer a wildcat that is essentially the .30 Streaker. With this, it is possible that the popularity and awareness of the cartridge will increase in due time. If you have any questions or comments, I can be reached at lee@singleactions.com.

Photos of some of our 30 Streaker conversions can be found in the gallery section

NOTE: All of the aforementioned loads work in my gun and do not show signs of excessive pressure. I am not responsible though for these reloadings in any other firearm and recommend that only large rifle primers be used in the .30 Streaker. Obviously, maximum loads should be approached with caution.