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Once upon a time, not so very long ago, I made the blanket statement that bottleneck cartridges would not work in a revolver. I was wrong. So this does not sound totally arbitrary, I will qualify it a bit. One of my first revolvers was a Smith & Wesson .22 Jet. It was a nightmare. The cases stuck in the cylinder – when you could get them to go round enough to go off. Usually after a shot or two the cases set back against the breech and stopped cylinder rotation.

Later I tried .256 Winchester and a variety of wildcats. None really worked. Yes, if you kept the cylinder and cases squeaky clean and did not allow even really oily fingerprints to contaminate the cases, the gun would work, sometimes. Of course, if you even thought about leaning on a handload, all bets were off. I even wrote an

The “Raging” series from Taurus all have heavy barrels with ventilated ribs.

open invitation for anyone to show me a bottleneck-cased revolver that would work. No, I said, do not tell me, show me. No takers! (I do not include the .32-20, .38-40 and .44-40 in the argument. Their low pressure and essentially non-necked shape make them different.)

When I was confronted with a .22 Hornet revolver, I admit I was fascinated but secretly only fascinated with finding out how badly the concept would fail. This smelled suspiciously like my .22 Jet. Enter the Taurus Raging Hornet, a big, racy-looking eight-shot .22 Hornet revolver.

The test was going to be short and sweet. All I had to do was devote a gunful of factory ammunition to the cause. In that amount of shooting some ugly gremlin would show up, proving once again that bottleneck and revolver, in the same place at the same time, were a bad idea. The strangest thing happened. I fired all eight shots and each time the cylinder rotated smoothly, as if the gun were unloaded. When all had been fired, a light touch on the ejector rod dumped all eight empties in my hand. Could it be? Well, not really; if I handload surely I can defeat the gun. Lo and behold, eight shots later, this time using full-maximum, rifle handloads, all was well. The gun went round and round, and the cases popped out. Okay, now I knew the cure. The cases had been clean so far.



**A varmint
handgun that
goes round
and round.**

ng Hornet



The Raging Hornet is designed to be scoped, but it is still a revolver with pleasing lines that looks and feels like a working handgun.

"Let's leave a little sizing lube on the cases, that'll fix you," said the clever gun tester. And the Raging Hornet said, "I do not mind." Yes, I know you are not supposed to leave lube on the cases, but in the name of science, this was a good way to see if there was some margin for error in the system – and indeed there was!

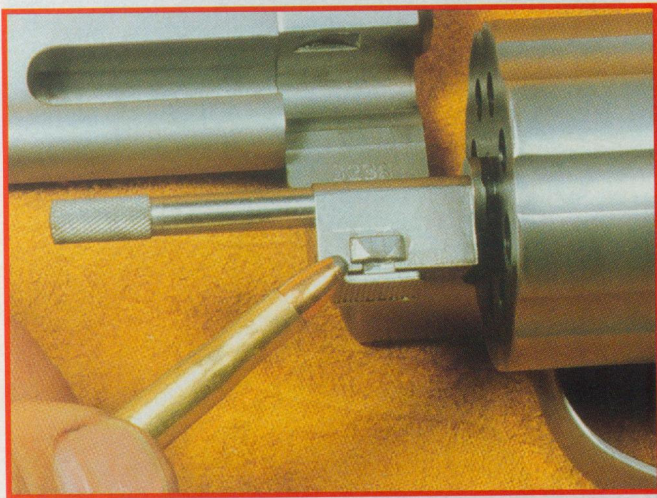
Having conclusively proved that the concept worked, that a revolver chambered for the .22 Hornet cartridge was indeed a fully functional firearm, the time came to investigate the gun's shooting qualities and potential. I began by shooting a selection of factory ammunition, testing both accuracy and velocity. Along the way I discovered a problem that further enhanced the revolver's proof of performance. During the early tests I saw relatively poor accuracy and evidence of quite high pressure. Upon measuring the cylinder, I found the throats were almost .002 inch undersize. An investigation revealed that someone at Taurus had, by great mistake, sent me a three-year-old prototype revolver. The gun that had been going round and round, and ejecting its empties, had

done so at very high chamber pressure. Imagine what a gun with correct dimensions would do.

The current-production replacement arrived a few days later. This time the throats measured .2254 inch, just right. Now we were in business. The speed went up, group size went down, and we had a real gun on our hands, one that would give us a correct impression of the ability of the Raging Hornet.

The "Raging" series from Taurus all have heavy barrels with ventilated ribs. The cuts in the ribs accept three steel plates that become anchors for the scope base. Thus, the lines and surfaces are not disturbed in any way to accommodate a scope mounting system. The Taurus base is a rail that accepts Weaver type rings. I fitted this one with a 4x scope with handgun eye relief and did almost all shooting at 100 yards. Other features common to Raging guns are: a front cylinder lock (in addition to the normal rear); precision forged barrel liners; contoured rubber grips; and a well-designed, unobtrusive locking (child-safety) device. The Hornet has a 10-inch non-

The cylinder is massive in proportion to the small diameter Hornet cartridges. Even with eight charge holes, the webs between chambers are thick and extremely strong.



The Raging Hornet features a double cylinder lock. A conventional rear lock and a front latch help secure cylinder alignment.

ported barrel that makes it muzzle heavy and, for all intents and purposes, recoilless.

Over the course of shooting a good-sized basketful of cartridges through the revolver, I found lots of things I liked and a couple I would like to change. To begin, a Hornet is Hornet. They are finicky on their very best day. When you add a cylinder gap, short barrel and eight different chambers, you are giving a Hornet every imaginable opportunity to misbehave. We will see the results of this when we shoot it.

One thing I found truly astounding about this revolver (its flawless function aside) was the extraordinary precision of the cylinder chambers. This internal finish is flawless, smooth, absolutely slick and right at minimum dimensions. Further, every chamber is the same; my micrometer cannot find the difference between them and more important neither can neck-sized cases. You can fire the handgun, dump the empties, shuffle them and press them gently back into random charge holes. The trigger was also agreeable at a crisp 4 pounds. When compared to factory triggers on most modern firearms, this is exceptional and would surely come down to a silky 2½ pounds in the hands of a skilled gunsmith. The all-important cylinder gap was .005 inch in the test revolver.

There were two major questions I wanted the gun to answer when I shot it: How accurate could it be, and how much speed could it produce? The answer to the first is not surprisingly variable. Rifles show decided ammunition preferences, and this revolver was not different. In fact it actually seemed to have similar preferences to most rifles I have tried.

First it did not enjoy most hollowpoint (HP) bullet loads. Where Remington and Winchester offer very similar HP and softpoint (SP) loads, the latter usually cut the groups in half. Winchester's 45-grain SP was the most accurate factory load and almost as accurate as any hand-

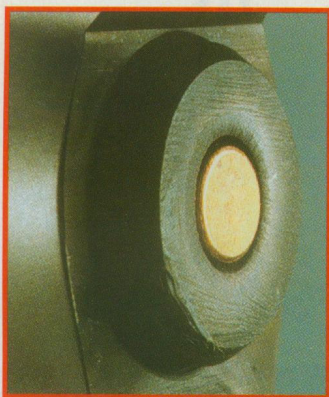


A feeler gauge revealed a tight barrel cylinder gap. With a high-intensity, smallbore round the smallest possible gap is desirable.

load I could cook up. The smallest groups, at 100 yards, were about 2½ inches, while average performance was in the 4- to 6-inch range. The chronograph showed very high shot-to-shot velocity variations, and these variations translated onto the target. That is, the fast and slow shots in any given group would often be well out of the "core." The same thing can be said for Hornet rifles, and they too can demonstrate undesirable spreads.

While on the subject of accuracy, during my trials I shot several "one-chamber" groups. That is, I shot five-shot groups using only one of the revolver's chambers. This was a means of double checking the chamber consistency and alignment. In most revolvers the variation from chamber to chamber can be a major contributor to overall group size, and I was sure this would be the case with the Hornet. Not true. The accuracy and velocity spreads were very consistent, whether I used one chamber or eight.

Most factory loads would show an extreme spread of 200 to 250 fps over two gunsful, 16 shots. That number is over 10 percent of the velocity and is very large by any standard. The most efficient (powerful) factory load I fired was current production Remington 45-grain SP. The average velocity was 1,940 fps with some shots actually going over 2,000 fps. Hornady's 35-grain V-Max load was



Perhaps the weak link is the generous forcing cone, shown here with a 45-grain bullet that is swallowed by the cone.

the fastest in this revolver, as it is in rifles. It averaged 2,131 fps, demonstrated a relatively low spread (82 fps) and was one of the most accurate loads fired.

As we look at these results, the first thing that comes to mind is handloading. Surely there is something we can do to tailor a load to the short barrel. Keep in mind it is not really fair to be mad at the factory loads because of their inconsistency. They are engineered around rifle barrels and arms without the leaky barrel cylinder gap.

While I was thinking about handloads, a concept lurked in the back of my mind. This is, to get efficiency from a revolver, you need a heavy bullet. To this end I found one really fun load and proved that Hornets continue to be exceptions rather than rules. By this I mean, heavy bullets and relatively quick powders did not greatly outperform lighter bullets and slower powders. In contrast to the best recipes for rifles that use Small Pistol primers, Small Rifle Magnum primers seemed to be most effective in the revolver.

The first load I made was an attempt to duplicate the performance of the Remington 45-grain offering. While no handload quite made the velocity, one came close. Here I thought quick powders like W-296 or H-110 would be best, but they ran in the mid-1,600-fps range. Switching to maximum charges of Lil'Gun and 45-grain Sierra Hornet bullets, the Hornet came within 60 fps at 1,880 and made some good groups. An attempt to duplicate the Hornady load also came up just a bit short. Here I got to 2,028 fps but had a larger spread and lost some accuracy.

One thing Taurus did to tailor its revolver to the Hornet was to wind up the barrel twist.

Okay, it was time to try my master plan, to put some weight in front of the powder in order to increase its efficiency. (Efficiency defined here as increasing the velocity/bullet ratio and most important to reduce the extreme velocity spread.) This began with 55-grain Hornady bullets. Hodgdon shows 13 grains as a maximum load with Lil'Gun, but this seemed a bit spicy in this revolver. It did produce a very powerful 1,860 fps, while 12.5 grains appeared to have a more acceptable pressure and went 1,790 fps. Extreme spreads went way down on this one,

in fact it was the only reload that would stay under 100 fps variation.

Just to disprove my theory, the Hornady 35-grain factory load was the only other one that kept variation under 100 fps, and it proved to be the second best of all, with 82 fps extreme spread. Heavy bullets do help a Hornet revolver, but they are not an absolute answer to the question. Of course, there is another facet we must consider, bullet expansion. The high-velocity rifle bullets, traveling well below 2,000 fps are going to have minimal expansion at best. So the varmint hunter will certainly be best served by the most frangible bullets he can obtain. These are those designated "Hornet" bullets, SX (Hornady Super Explosive), V-Max or others designed for the little .22 centerfires.

Encouraged by the success of the 55-grain bullets, it was time to try something almost silly – well, let's call it extreme. The big 70-grain Speer was going to be almost as long as the case, but it just might work. One thing Taurus did to tailor its revolver to the Hornet was to wind up the barrel twist. While normal Hornets have one-in-16-inch twist barrels, the Raging Hornet comes with a 10-inch twist. This was fast enough to stabilize the long bullets. The one problem was I would be operating in no man's land when it came to charges. Hodgdon Lil'Gun continues to demonstrate a very friendly pressure/velocity relationship and easy ignition, so it was a prime candidate. I extrapolated charges and began shooting.

It was easy to get too much powder with the big bullet, but I settled on 7.5 grains as a maximum load. Accuracy looked very good, often shooting a very small "core" group (sometimes approaching an inch) with a few fliers that always spread things out. Velocity spread was also higher than hoped. While most shots would be very close to 1,200 fps, others would manage to scatter things to 162 fps total variation. However, in this case it was not always the fast or slow shots that left the group. The long

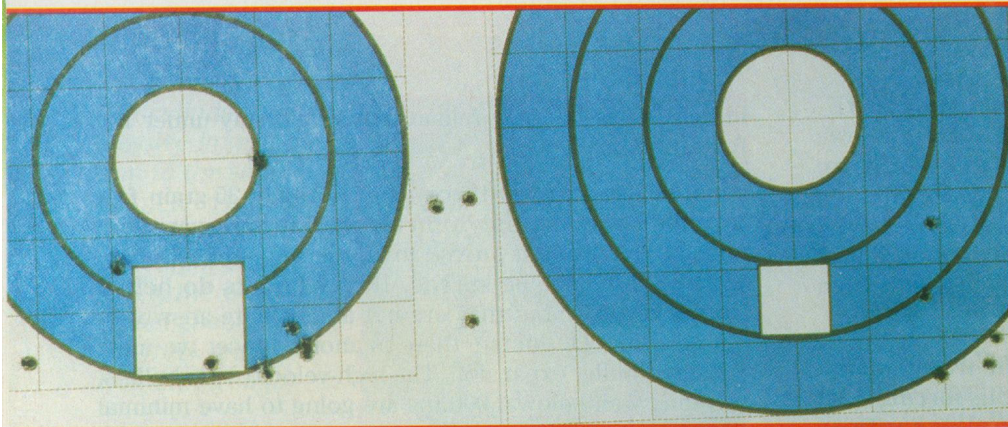
Raging Hornet Factory Loads

bullet (grains)	velocity (fps)	extreme spread (fps)
45 Remington hollowpoint (1985 vintage)	1,574	244
45 Remington softpoint (1999 vintage)	1,940	205
46 Winchester hollowpoint	1,701	214
45 Winchester softpoint	1,694	231
34 Winchester hollowpoint Supreme	2,105	287
35 Hornady V-Max	2,131	82

Raging Hornet Handloads

bullet (grains)	powder	charge (grains)	velocity (fps)	extreme spread (fps)
45 Sierra Hornet	Lil'Gun	13.0	1,880	176
45 Hornady	H-110	10.1	1,610	154
35 Hornady V-Max	Lil'Gun	13.1	2,028	149
55 Hornady	Lil'Gun	12.5	1,790	66
70 Speer	Lil'Gun	7.5	1,197	162

Be Alert – Publisher cannot accept responsibility for errors in published load data.



Above, the group on the left was typical with many loads that were plagued by fliers. On the right is one of the best groups. Ross feels that with some refinement the revolver might produce excellent results on a regular basis. Right, while it looks bizarre, the big 70-grain bullet (right) was one of the better performers. The quick 10-inch twist allows the Taurus to stabilize this extraordinary bullet.



bullets were doing something different. Once again an investigation of the physical revolver offered an explanation.

While I had measured the revolver inside and out, I had failed to study the forcing cone in the barrel. What I found was a sort of Grand Canyon, on the .22-caliber scale. The cone in

the barrel would swallow an entire 45-grain Hornet bullet with space for the bullet base to rock back and forth considerably. There it was, the weak link. While the chambers and throats sealed and aligned the bullets perfectly, the big cone asked them to fly totally unsupported for more than a normal bullet's length –

not only unsupported, but with enough windage to allow a good bit of gas to blow by them on every shot.

A smaller throat should significantly improve the revolver. To this end I have suggested to Taurus it greatly reduce this cone and perhaps even consider cutting a bullet diameter (.224 inch) Taylor throat in front of a very small cone in the barrel. While it is still only my theory, I bet it will increase accuracy and maybe even nip the spread a little – and it will probably add some velocity.

As it is the Raging Hornet is a fine revolver and a very different revolver. It is perhaps the first and only successful revolver that is chambered for a true rifle cartridge. The mechanism works flawlessly. We also have to keep things in perspective. If I shot any ordinary revolver and reported it would average well under 6 inches at 100 yards, we would all be thrilled. Now because this is a “varmint” gun, we look at it with a varmint microscope. Be that as it may, the Raging Hornet concept acts as if it might want to be a “rifle.” With a tweak here and there we might begin to see this revolver consistently hold little rat-sized groups at 100 yards or more.

No, a .22 Hornet revolver is not for everyone. It certainly should not be a “first” revolver, nor should it be your only revolver. But if you like fine revolvers, like the idea of a varmint handgun that looks and feels like a handgun, this is a good way to go. ●

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