

.218 BEE CONVERSIONS



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My first centerfire rifle was a .218 Bee that dad made for me when I was eight. With its Martini Cadet action, Douglas barrel, and 3x9 scope, it was, and still is, a great little shooter. As I got older though, we started working with guns that were “bigger” and “faster” and never did a lot more with the cartridge. Then in the late 1980s we built a 6” Contender barrel in Bee and were once again hooked on its merits.

Now jump ahead fifteen years and dozens of home-built Ruger cylinders later. Though we had toyed with the idea of converting a Blackhawk to .218, other projects always pushed it to the back-burner. Granted, there was never any doubt as to whether it would work in a revolver. Gary Reeder had been producing the outstanding Coyote Classic for some time, Magnum Research sells auxiliary cylinders in .218 for their .22 Hornet BFRs, and Taurus recently unveiled the “Raging Bee”. I guess a lot of the hesitation stemmed from the fact that our .30 Streaker conversions would outperform the Bee in a wheelgun. Not only is the Streaker larger in caliber, but it can shoot 110 grain bullets at the same speed as the 218’s 45 grain spire point. There was also the issue of weight. Since the Blackhawk cylinder is large, six 0.224” bores would seem undersized and make for a heavy single-action.

For most of 2004, I was shooting a lot of .22 Winchester Magnum in a stainless Single-Six. At \$5 per box however, it got to be expensive, especially at 200 – 300 rounds per session. Then I noticed that Midway sold 46 grain bulk .22 caliber for \$31.00 per 500 (Winchester JHP). That got me thinking about the .218, and after some quick calculation, I realized that I could reload Bees for less than the cost.22 Mag. Before long, I was ordering a new stainless Blackhawk and .22 barrel blank.

The history of the .218 Bee in single-action revolver dates back to the 1940s when Steve Mathes carried a converted Peacekeeper to hunt mountain lion. Originally he used a Model 1911 for predator hunting, but found it to be less than ideal, especially when the animals were in trees. All too often, the .45 would simply punch a hole through the cat and not cause it to fall from the branch. The .218 on the other hand had enough “zap” to make the target drop. Even more important was the fact that the .218 did less damage to the pelt. As Mr. Mathes proved, the round is well suited for small North American game to include ground hogs, rabbit, lynx, and bobcat.

Producing a Bee cylinder wasn't too hard. Our standard 6-shot configuration was blanked out of 416 stainless and fit to the Blackhawk frame. Initially, the bores had to be drilled small due to our rifle reamer's undersized pilot. After the chambers were machined, the throats were opened to 0.2245" on a Sunnen Hone and a 1:14", six groove Pac Nor barrel was installed; cylinder gap was set to 0.002" and the barrel was cut to eight inches in length. The only difficult part of the conversion was getting the ejector to function. Since the Bee's bores are small and the Blackhawk doesn't index in perfect alignment with the extractor hole, the standard ejector wouldn't work. The fix involved grinding a flat on one side of the rod so it could fit through the front of the cylinder. Though it had to be thinned considerably, the cases extract with relative ease.

Bottleneck revolver rounds usually work best with improved designs, such as that of the .22 K-Hornet or .218 Mashburn Bee. In truth, blown-out cases do exhibit less setback than those that have significant taper. In spite of the Bee's shape, cylinder lock-up has never occurred, even with the hottest of loads. I've even conducted tests to where case lube and oil were purposely left on the shells and the gun still cycles without incident. Functionality aside, the round really shines in a revolver. Recoil is extremely mild, accuracy is outstanding, and velocity tops out around 2,000 fps with a the 46 grain JHP. Selected loads include:

BULLET	POWDER	CHARGE WT	VELOCITY	GROUP SIZE*
Winchester - 46 gr JHP	H4227	11.5	1,975	1 1/4"
Winchester - 46 gr JHP	H4227	10.0	1,890	<1.0"
Winchester - 46 gr JHP	AA1680	13.0	1,970	1 1/4"
Winchester - 46 gr JHP	AA1680	11.0	1,850	1.0"
Winchester - 46 gr JHP	Lil'Gun	9.8	1,885	1 1/2"
Winchester - 46 gr JHP	2400	10.5	1,900	1 5/8"
Winchester - 46 gr JHP	W296	9.0	1,975	1 7/8"
Winchester - 46 gr JHP	W296	8.5	1,940	2 1/4"
Winchester - 46 gr JHP	H110	9.0	1,970	2 3/8"

Primer - Winchester Small Rifle **Brass** - Winchester

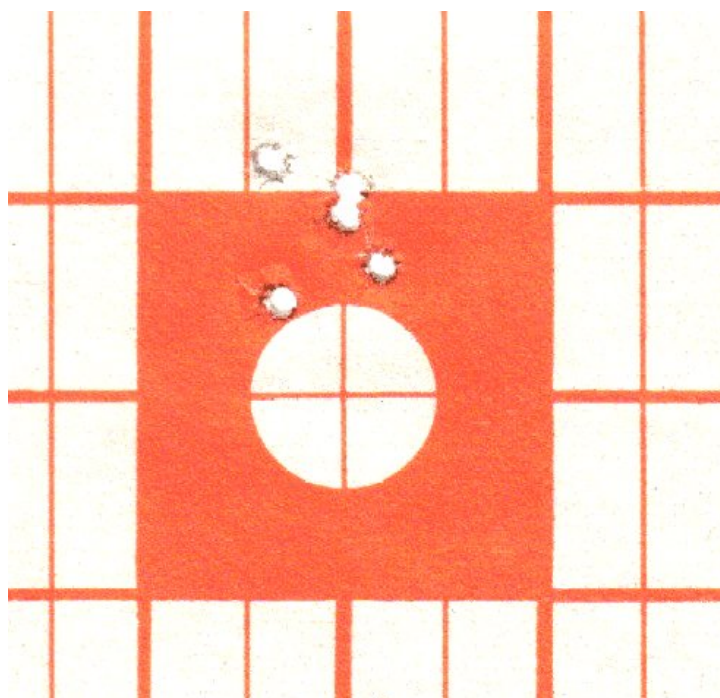
*5-shot groups fired @ 25 yards, open sights

As with my Martini Cadet, 10.0 grains of H4227 works well with a 46 grain bullet. It's not max, but at 25 yards it'll print 5 shots in about an inch. Another excellent powder for the .218 Bee is Accurate Arms 1680. It's a little slower than H4227 and tends to produce higher velocities. Lil'Gun, W296, H110, and 2400 are also suitable propellants, though I've achieved better accuracy with AA1680 and H4227. H110 and W296 are interesting in the Bee for a couple of reasons. For one, my old Hornady manual shows 10.0 - 14.0 grains of W296 for the 45 - 46 grain bullet. Newer manuals however (Speer, Nosler, etc), indicate that 9.0 grains of H110 or W296 are maximum. Eventually, I tried 9.0 of W296 with Winchester's 46 gr JHP and found it to be pretty hot. In fact, it gets you close to 2,000 fps, so I couldn't imagine using 10.0 - 14.0 as some sources suggest. Secondly, I've been unable to get much consistency out of 296 or 110 in that group sizes are 2.0" - 2.5" on average. That's twice the size of those returned by H4227, AA1680, and 2400.

After testing a dozen or so loads in the Bee, I noticed the best groups were achieved at below maximum. That is, by backing off max by a grain or so, the groups got tighter. For instance, 11.5 of H4227 yields 1,975 fps and 1-1/4" accuracy at 25 yards. I should note that 1-1/4" was the average of twenty five-shot groups. After reducing the load 10.0 of H4227, group size dropped to an 1.0" or less. The latter is outstanding for open sights at 25 yards and really illustrates how accurate this round can be in a revolver.

The other benefit to shooting the Bee is component cost. Like many, my guns see a lot of use. In fact, I rarely take a revolver to the range unless I'm set to put 200 rounds through it. Fortunately, the .218 Bee burns little powder and Winchester offers great bulk .22 bullets and brass. I was especially surprised with the latter in that my first batch of Winchester brass lasted through ten reloads (at that point, I started experiencing split necks and loose primer pockets).

If you have any questions regarding our .218 Bee conversions, please write me at sc429@yahoo.com



Typical 5-shot group @ 25 yards using 11.5 of H4227
(~1.0" with open sights)