

FIVE-SHOT 45 COLTS

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Five-shot revolver conversions have become more common in recent years. While many small wheel-guns work on “five” capacity, large calibers are traditionally six. That all changed in the 1950s when a Utah gunsmith named Dick Casull started tinkering with the 45 Colt. Taking root from his early 45 Magnum experiments, the 5-shot design offers two advantages. First they permit higher chamber pressure, hence greater velocity. This added strength comes from more steel between each cartridge and bolt stops that aren’t directly over the sidewall. Secondly, some rounds are too large in diameter for six holes. Examples include the 475 and 500 Linebaughs. Five-shooters were later legitimized when Freedoms Arms released the Model 83 in 454 Casull. We now had a platform that would handle 60,000 PSI and stay tight in the process. 44 Magnum standards had been shattered and Dirty Harry’s famous line no longer held.

If you query leading pistolsmiths, 475 and 500 Linebaughs probably top their five-shot business. Hamilton Bowen, John Gallagher, Jim Stroh, David Clements, and Alan Harton are just a few that chamber these hammers. But before unveiling the pair, John Linebaugh made a name for himself converting Sevilles and Abilenes to heavy 45 Colt. After milling the top and bottom of the frame window, John installed oversized, minimum spec 6-shot cylinders for added strength. Early tests gave incredible performance, easy extraction, excellent case life, and operating pressure nearing 50,000 PSI. Pretty neat considering the cartridge began as a black powder round back in 1873.

Eventually John switched to five-shot cylinders and used Ruger Blackhawks and Bisleys as the base. I also prefer five-shots because they don't require frame modification and they'll handle higher pressure. But what's the added strength give us in terms of performance? To answer this we first need to define the three power levels of the 45 Colt:

- 16,000 PSI - Colt Peacekeepers and clones
- 30,000 PSI - Ruger Blackhawks, 1st model Vaqueros, and FA 97s
- 50,000 PSI - Freedom Arms 83s and five-shot Ruger customs

Focusing on the second and third, I'll highlight the advantages of converting a stock 45 Colt Blackhawk. Though these five-shot customs have a lot of mystique, the advantages may not be as big as you think.

Ruger finally offered a 45 Blackhawk in 1971. Built on the New Model frame it was safe to 30,000 PSI and launched 250 – 260 grain bullets at 1,400+ fps. Sure, the 44 Magnum could do 1,500 fps with 240s but it took 33% more pressure to get there. But comparing and contrasting the two is a waste of time. Each is outstanding in its own right and they offer similar performance. If forced to choose however, I'd opt for the old Colt. Added caliber and the ability to shoot heavier bullets would be the reasons.

Solid head brass, slower burning powders, and the New Model Blackhawk turned the 45 Colt into a handgun heavyweight. Capable of everything from mild plinking to big game hunting, you're hard pressed to find a more versatile cartridge. This versatility is apparent when it comes to bullet selection. With cast and jacketed designs spanning 185 to 400 grains, there's a 45 bullet for every job. That being said, my Rugers are more accurate with heavier weights at short and long range. A few favorites include:

BULLET	POWDER	CHARGE	VELOCITY
300 LFN	H110	24.0	1,320
325 LFN	H110	23.0	1,280
325 LFN	Lil Gun	20.5	1,265
335 WFN	H110	22.0	1,220
340 SSK	Lil Gun	20.0	1,165
350 Keith	H110	20.5	1,150
360 WFN	W296	18.5	1,125

(Note – these are considered “Ruger Only” loads for New Model Blackhawks, Bisleys, and the first model Vaquero. They're unsafe in New Vaqueros, Colts, or Peacekeeper clones)

If I have one complaint with 45 Blackhawks, it's the throat dimensions. I won't discuss it here since I cover it in another article on Single-Actions.com. Needless

to say, shooting 0.452” bullets through 0.447” – 0.450” holes does two things: 1) it increases chamber pressure, and 2) it hurts accuracy. No matter how hard you plan to push your 45 Blackhawk, correcting the throats is money well spent.

Now I’d like to issue a word of warning. The five-shot loads I’ll discuss work in my custom Rugers. In the past, authors have been reluctant to publish such data for fear it’ll find its way into a stock Ruger. Make no mistake; these loads could grenade a Blackhawk. While intended for custom five-shot revolvers and Freedom Arms 83s, all should be approached with caution. If you decide on a five-shot conversion, shoot the builder’s recommended loads and mark them accordingly. Many segregate their 45 Colts with different makes of brass. For example, author Ross Seyfried used Winchester shells for low pressure models, Starline for six-shot Rugers, and Federal hulls for his five-shots. Another trick is to chamber the 450 Extreme, which is just a 454 Casull trimmed to 1.340”. The resulting case is too long to fit a Colt cylinder. Again, I’m not responsible for these loads in any firearm outside of my own.

To get the most out of a five-shot 45 Colt, we need to safely increase pressure to 50,000 PSI...or 80% higher than top-end six-shot loads. The only powders that’ll do this are H110, W296, and Lil’Gun. Other handgun propellants are just too fast and will cause dangerous pressure spikes. Of those listed, I prefer H110 and W296 for volume shooting. Lil’Gun is accurate and gives good velocity, but burns hotter and can be tough on forcing cones. The flip side is Lil’ Gun ignites better than 110 or 296, especially in cold conditions. Obviously, all three require magnum pistol primers. As for brass, I use Starline in five-shot 45s. Federal is just as good, but unfortunately it can’t be bought in bulk. I never load Winchester or Remington at these levels. While plenty strong, extraction is more problematic and their primer pockets loosen quicker. Stick with Starline and Federal and you’ll be fine. Some select five-shot loads:

BULLET	POWDER	CHARGE	VELOCITY
300 LFN	H110	28.5	1,550
325 LFN	Lil Gun	24.5	1,500
335 WFN	H110	26.5	1,460
340 SSK	H110	24.5	1,430
350 Keith	W296	24.0	1,385
360 WFN	W296	24.5	1,410
395 WFN	H110	21.0	1,295

Notice how these are on the heels of the 454 Casull? And while lacking the caliber, 395s at 1,300 fps aren’t too far behind a 475 Linebaugh. Unlike the 475 however, Colt brass is cheap and there are plenty of bulk bullets for plinking.

So for a given bullet, the extra 20,000 PSI adds roughly 200 fps over six-shot maximums. Not bad, but we're definitely falling prey to the law of diminishing returns (80% more pressure for 15% more velocity). Across each weight, the charge differential between my 6-shot and 5-shot loads was 3.0 to 4.5 grains. Up until around 340 grains the extra powder returned 200 – 220 fps more. With the 360 and 395 grain WFNs, it jumps to 260 fps. This confirms what Ross Seyfried reported years ago; turbo charged 45 Colts yield higher velocity gains with heavier bullets.

With correct placement a 325 grain WFN at 1,300 fps from a stock Blackhawk will drop anything in North America. Then why build a five-shot? Dangerous game hunting is one reason to. Ross Seyfried has killed many large African species with a 45 Colt, including cape buffalo. If faced with a 2,000 pound beast at close range, I'd gladly take the extra 200 fps. Beyond that, customizing a Blackhawk can involve a new cylinder with features I'll discuss later. Why not opt for a five-shot and have a little more throttle?

The gun also has to be up to the task. If these five-shots were built to the same specs as a factory Ruger they'd shoot loose in no time. I have nothing against standard Blackhawks. They're strong, affordable, and withstand 30,000 PSI all day long. That being said, Ruger tolerances aren't designed for this type of pressure. In my opinion there're three "must haves" in a five-shot 45 Colt. All of which are upgrades to a factory model:

- Tight chambers, preferably 0.001" over a sized case. The more the brass expands, the harder it is on the gun (plus case life is shortened). I've seen factory Blackhawks with chambers 0.009" oversized; not good, especially when it comes to extraction.
- Rigid cylinder fit. No end-shake, no side-play as can be found on many factory single-actions.
- Slow twist barrel. Not only does slower twist increase velocity, but it also reduces chamber pressure. Remember, increased bullet rotation equals increased resistance. I like 1:22" twist and use Pac-Nor blank. Freedom Arms are 1:24", while others go with 1:20". Contrary to what many believe, these slow twist tubes will stabilize and accurately shoot heavy 45s. For reference, Ruger uses 1:16".

Throats sized to match the bullet are a given, regardless of the level of 45 Colt you're shooting. All of mine get set to 0.4525". A couple of other features I like include 11 degree forcing cones, line-bored cylinders gapped to 0.002", barrel bands to support the ejector housing, and set-screw base-pins by Belt Mountain.

Sound familiar? If so, they're the same features Hamilton Bowen and John Linebaugh have used for years.

Five-shot 45's are sort of the Corvettes of single-actions. Most don't need all the horsepower, but it's nice to have. Mine rarely see anything past "Ruger only" loads, but occasionally I like to dial-up. If nothing else, building a five-shot 45 Colt mandates tight chambers, correct throats, and rigid cylinder fit. No matter what load you shoot, all promote improved accuracy and gun longevity.

NOTE – I'm not responsible for these loads in any firearm outside of my own. The 5-shot data provided has proved safe in my conversions, but should not be attempted until the manufacturer or gunsmith is consulted.

If you have any questions or comments, drop me a line at lee@singleactions.com