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PHOTOGRAPHY: TERESA DAIKER

YOUR DEFENSIVE HANDGUN:

TO PORT OR NOT TO PORT?

That is the question! Porting on defensive handguns has become very popular in recent years. Porting seems to be most prevalent in revolvers because of the tendency to pack powerful calibers into relatively small and light carry packages. Taurus and Smith & Wesson both offer a wide variety of ported revolvers designed especially for concealed carry, and there are many gunsmiths who will port your favorite carry gun. Porting, however, is not confined to wheel guns, and many semi-autos can be had in ported configurations, including several Glock models, and many others can be ported by after-market conversions.

So...should you port your defensive handgun? Raise this question in your favorite gun shop or on an Internet forum and you will likely have an avalanche of strong and varied opinions. In order to make some headway on this question, I decided to run some tests and see for myself.

The Guns and the Testing

In order to fully evaluate the value of porting, I needed two nearly identical guns—one ported, and one not. Marc Morganti of Gemini Customs graciously provided me with two nearly identically

configured Ruger SP-101s in .357 Magnum. One gun had Gemini Customs' exclusive Hybra Port porting—a series of five ports down the length of the three inch barrel. The other had similar bits of Marc's magic applied (see the sidebar to this article), but no porting. These two short-barreled revolvers provided an excellent test bed to see just what porting could do for a carry gun.

I tested both guns extensively, over several range sessions, with a wide variety of defensive grade ammunition in both .357 Magnum and .38 Special (both standard and +P loads). These handsome guns (and the



The only significant difference between these guns is the Hybra Port modification shown on the top SP-101.

promise of free ammo) attracted a variety of on-lookers who also compared the guns and helped me with the subjective analysis.

The Results

The first question was, “Do ported guns perform better than non-ported guns?” If not, the analysis could probably end there. If so, a second question would be, “Are there drawbacks to porting that outweigh the benefits?”

Advantages of Porting

The claimed advantage of a ported firearm is to reduce or eliminate muzzle rise upon firing, resulting in faster follow-up shots. Many people mistakenly believe that porting reduces felt recoil, which is not technically true. Until Newton’s Third Law of Motion is repealed, firing a bullet from a gun is always going to impart an equal force of “recoil” to the gun. However, porting functions to re-direct a portion of the hot, expanding gasses escaping from the firearm to a different direction, altering the direction of the recoil force to some degree. By porting the top of a barrel, some of the escaping gasses are directed out of the top of the barrel, causing a downward force on the barrel, which counteracts the natural inclination of the barrel to rise sharply on recoil. (Physics majors, please direct all complaint letters to the e-mail address below—I am doing the best I can).

So what does all that mean? Porting a handgun should result in less muzzle rise. Less muzzle rise keeps the sights on target—or closer to the target—permitting quicker follow-up shots.

My experience with the ported SP-101 confirmed the effectiveness of porting to reduce muzzle lift. Although this type of testing is very subjective, I believe the porting significantly reduced, and in fact almost eliminated, muzzle rise—even with hot .357 Magnum loads. Interestingly, the porting works better as the loads get hotter. With .357 Magnum loads, the SP shot nearly flat. The non-ported SP-101, by comparison, would experience significant muzzle rise and deliver a sharp snap to the wrist. The ported gun was unquestionably easier to shoot fast and much easier on the wrist.

However, the reduced or eliminated muzzle rise does not tell the entire story. While the ported gun was easier to shoot with hot loads, it was not necessarily more pleasant overall. The side effect of porting is that much more of the guns blast—i.e., the noise and concussion—is directed toward the shooter, as opposed to downrange.

The perceived blast was considerably more with the ported gun, and was a bit disconcerting at first. I am not sure that recoil-shy shooters will necessarily prefer a ported gun, although those with weak or arthritic wrists certainly will.

Disadvantages of Porting

With the advantages of porting comes a series of potential disadvantages that must be considered.

Shooting from retention or unusual positions. Modern pistol training techniques teach the student to draw to, and potentially shoot from, a retention position—where the gun is held tight up against the body near the armpit. Close range struggles may require shooting from unusual positions while grappling, ground fighting, or struggling for control of the gun. These positions can cause potential problems with a ported handgun because firing with the ports oriented toward the shooter can result in the hot expanding gasses, particles and unburned power causing discomfort, distraction or even injury. This is a danger that has to be taken into account when using a ported handgun. Of course, this potential problem can be largely overcome by proper training and attention to the orientation of the gun when firing. For example, rotating the gun slightly to the outside of the body while holding in a retention position can be effective to redirect the ported blast – but it has to be practiced and ingrained into the shooter’s training.

Reduction of night vision. Many critics will say that the porting of flaming gasses into the shooter’s line of vision (over the sighting plane of the gun) will have a negative effect on night vision. This is, of course, another very subjective issue. I found in my testing that the flash caused by the ports had no more detrimental effect on my vision than the huge fireball and flash emanating from the end of the unported barrel. Excessive muzzle flash is very common on large caliber, short-barreled guns because all of the powder is not burned in the barrel, and the porting makes little

difference to me. Regardless of porting, the amount of flash can be controlled to some extent by proper ammo selection.

Reduction of bullet velocity. By drilling holes in the barrel of the gun, some of the hot, expanding gasses that are pushing the bullet down the barrel are allowed to escape before the bullet exits the barrel. This effect necessarily results in some loss of velocity to the bullet being fired. Some of the results of my testing are reproduced in the accompanying chart. The chart shows results for Winchester’s “white box,” personal protection ammo in .357 Magnum, and shows a loss of approximately 100 feet per second caused by the porting. Results were similar with other brands, although the slower .38 Special loads lost slightly less velocity on a percentage basis. Based on this sample, a difference of 100 or so feet per second on a .357 Magnum load would not seem to be a real disadvantage in and of itself. Other guns and other loads, of course, may have different results, but the relatively small decrease in velocity is probably not a major factor in deciding if porting is right for you.

Fouling of sights. As a minor concern, some ported handguns will deposit soot on the front sight, which can change the sight picture and potentially obscure a gold bead, a red ramp, or even a tritium night sight. This type of fouling is usually not at significant levels after firing the number of shots reasonably anticipated in a defensive engagement. For most applications, this would seem to be a minor concern.

Conclusions

The selection of a defensive handgun is a highly personal choice, as is the decision to port your gun. Ultimately, only you can decide what fits your needs. Porting is very effective to reduce or eliminate muzzle rise and the accompanying wrist snap and discomfort. For those with weak or damaged wrists, porting could be a wonderful solution. Also, those who highly value and desire the ability to deliver multiple shots

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Non-Ported SP-101			Ported SP-101		
Winchester .357 Magnum 110 grain JHP					
Velocity (fps)	Run 1 5 rounds	Run 2 5 rounds	Velocity (fps)	Run 1 5 rounds	Run 2 5 rounds
High	1285	1249	High	1158	1163
Low	1222	1239	Low	1114	1114
Average	1249	1242	Average	1133	1140



Two nicely modified Ruger SP-101s from Gemini Customs were used for testing.

as quickly as possible should seriously consider a ported gun. However, those committing to carrying a ported gun must be aware of the characteristics of their gun and train appropriately with that firearm. Many well known instructors discourage ported carry guns because of the extra level of complexity or training required to mind the ports and the possible effect of the gasses expelled from the ports. Ultimately, however, balancing the advantages and the disadvantages are a personal decision for each of us to make.

About Gemini Customs

Marc Morganti of Gemini Customs has been in business since 1997 and does a wide variety of custom gunsmithing to Ruger and Smith & Wesson revolvers, as well as 1911 pistols. The SP-101s shown in this article were completely re-worked as part of Gemini's SP-101 package deals. Gemini Customs is the exclusive outlet for the Hybra Port brand of porting originally developed by Jack Weigand. I have seen several examples of Marc's work and it is exceptional. Whether you decide to port or not to port, I highly recommend Gemini Customs.

www.gemini-customs.com



Duane A. Daiker writes on firearms and concealed carry issues as a Contributing Editor of Concealed Carry Magazine. Duane shoots regularly in club IPSC matches and is the moderator of the Rohrbaugh Forum: www.RohrbaughForum.com Contact Duane at: Duane@Daiker.net

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