

Chapter 1-1

Triggers, Triggers, Triggers

Let's admit something right off the bat. When compared to most of the other trigger systems on competition guns, the Glock system takes a lot of getting used to.

Instead of going for minimum trigger travel, Glock prides itself on the fact that a stock trigger must move through at least 1/10th of an inch from shot to shot for the gun to fire. All the trigger parts except the striker are metal stampings, so the smoothness of that 1/10th of an inch sometimes leaves a lot to be desired. Once the gun breaks in, however, the triggers normally smooth out, feeling more like the last bit of travel on a double-action revolver. With practice, people can shoot this system very well. (See Bobby Carver's comments in the GSSF section.)

Home remedies abound for transforming the Glock trigger into something smoother, crisper, and with less overtravel — but be careful. I have handled several guns that had excellent triggers, only to discover that their owners had removed some of the safety devices to make them so smooth.

PROTECT YOUR TRIGGER SAFETY

Removing the trigger safety is a common tactic, but **DO NOT** let someone do that to your gun. The trigger safety doesn't act as a safety in the conventional sense. Sure, it helps prevent accidental depression of the trigger from the side, but its real function is to serve as a kind of backwards drop safety.

The drop safety you see inside the slide works to prevent the striker from falling forward and setting a round off when the gun is dropped on its nose. The trigger safety works to keep the gun from discharging when dropped on its backside, muzzle-up.

According to Armando Valdes, world-renowned Glock jockey

and armorer for Miami P.D., the trigger safety first came about after Glock did tests involving dropping the gun out of an airplane. When dropped from a height, the weight of the trigger mechanism was enough to pull the trigger to the rear and discharge the gun should the gun land muzzle up — even if the gun has a standard connector installed. In any shooting situation there is a risk that someone will drop a loaded gun. If all the Glock's safeties are working, that's not really anything to worry about, but if that gun has had the safeties deactivated, and that person is using a sexy low-travel, low-poundage trigger system they cooked up in their garage, look out.

Most Glocks come with the standard five- to seven-pound connector installed. Actual pull weight varies widely, and can be changed by altering the striker spring or trigger return spring.

The Glock 17L, 24, 34, 35, and the "competition package" C models all come with the 3.5 pound connector (designated by a "-" stamp somewhere on the connector) which reduces the pull weight down to somewhere between 3 and 5 pounds. Again, actual pull weights vary.

Some law enforcement guns have been issued with a "+" connector that increases the pull weight by several pounds. If you got one of those, I'd switch back to stock (or less) right away.

Adding what is known as a "New York" or "New York Plus" trigger return spring increases the trigger pull weight even further, putting it all the way up to 8, or even 12 pounds.

The various connectors differ only in the angle at which the trigger draw bar impacts the connector. A stock connector creates a ramp for the trigger bar that slopes down at 45 degrees. The 3.5 pound connector creates a more gradual angle, closer to 30 degrees, and the "+" connector makes the angle steeper, pushing it toward 60 degrees.

Most every Glock-shooting competitor will replace his stock connector with a 3.5 pound connector as a matter of course. This really isn't required, but American shooters have been conditioned to believe that lighter is always better.

In the Glock, going to a 3.5 pound connector makes master-

ing the trigger a little easier, but it's not a "must-do" item by any means.

If you do opt to change your trigger, do some shopping around. Glock will not sell you a 3.5 pound connector directly, but there are aftermarket sources for them, and some specialty shops are starting to sell custom built trigger parts. My favorite at the moment is one called a "Ghost Rocket" trigger. This nifty variant must be installed by a Glock-competent person, but it includes both a competition-angle connector, AND an internal overtravel stop (which must be custom-fit to your pistol). Since the stop is internal, this little jewel is legal for USPSA Production, and does miraculous things for the trigger behavior. Most of the serious shooters I encounter use stock parts, but the "Rocket" has its fans.

You can magnify the effect of your 3.5 pound connector by going with a competition spring set from W.C. Wolff. The set is designed to chop two pounds off a gun running a 5.5 pound connector. Duane Thomas reports installing this system in his personal G34 and lowering his *actual* trigger pull weight from 5.75 to 3.75 pounds.

"Within several thousand rounds, and with a lot of dry fire, that wore-in to 3.25 pounds," he says. "Since the lighter striker spring does translate into a lighter firing pin strike, guns so equipped can fail to pop hard-primered ammo like PMC or the Russian Wolf."

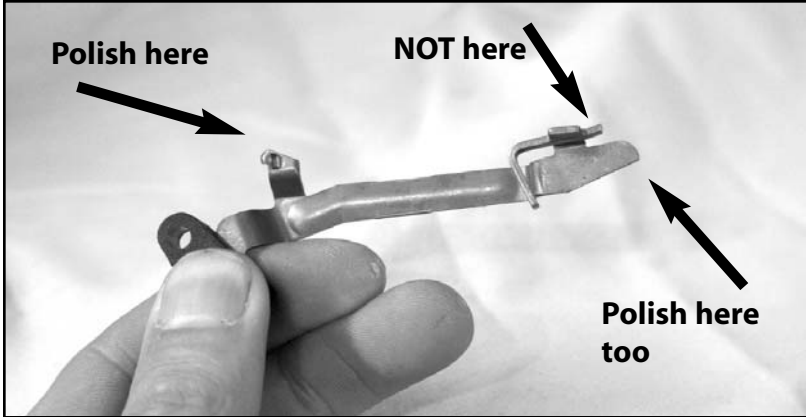
Glockmeister sells a drop-in kit with a built-in overtravel stop. If you want your trigger done by a pro, however, JP Enterprises and Dale Rhea are tops.

DOING IT YOURSELF

Personally, I'm too cheap to shop my triggers out to professionals — the difference just isn't worth it for me, and a really slick, low-drag trigger changes the gun into something quite unlike the 5-pound trigger guns I have around for personal defense.

In an hour's careful effort, most anyone can take the worst of the roughness out of their trigger. Add a competition spring set, and you've got a trigger that's both smooth and light.

REMOVING AS LITTLE METAL AS POSSIBLE, polish the contact surfaces at the top of the trigger bar extension, and the curve where the trigger bar touches the connector. DO NOT polish the sear plate itself, as you risk rounding the contact surfaces, which can make the pistol “double” (fire more than once per pull of the trigger). Been there, done that. Thankfully no one got hurt.



“It’s an easy thing to improve that makes a big difference,” says Matt Kartoizian. “New shooters particularly have a hard time with the factory trigger...”

Glock stamps out the trigger bar and connector by the thousands, and while they work, frequently the working surfaces are rough.

Take your trigger bar out and look closely at the curve of the trigger bar where it touches the connector. Frequently I’ve seen course scratches here that wear directly on an equally not-too-smooth connector.

I happen to have a scotch-brite wheel on my bench grinder that I do a lot of work with, so I’m comfortable whisking a trigger bar curve across that to smooth it out. A standard polishing wheel with a soft metal rouge works for getting a quick mirror polish on this part.

Polishing the inside of the connector is generally not required, but check it out, sometimes they’re ugly enough to merit a little time spent with an Arkansas stone.

Tom Graham does an excellent job of explaining how to do a quick polish job on the trigger bar using Arkansas stones in the American Gunsmithing Institute DVD titled “Making Glocks Rock.” The DVD includes unusually good explanations of disassembly, and a top-notch explanation of the history of the Glock design as well. If you’re new to Glocks, it’s worth a look.

OVERTRAVEL STOPS

While the trigger weight and length on my Glocks doesn’t bother me, the overtravel gives me fits. One of my product evaluators (Brian Doty) did some experimenting with overtravel stops and found out the hard way that shooters need to leave some overtravel to ensure proper engagement between the striker and trigger cruciform (he says about .040 inches). If you don’t, the gun will start “doubling” — firing more than one shot each time you pull the trigger.

This is especially true if the overtravel stop you use is soft, or can flex (like a pencil eraser). The gun will reset, but the bouncing action of recoil will trip the trigger and set the gun off again. EEEK!

Most Glock triggers come with copious amounts of overtravel. The parts are all metal stampings and bits of injection-molded plastic, so without a fair bit of TLC, loose fit and wide tolerances are the rule — particularly when it comes to overtravel.

JP Enterprises first started offering overtravel stops for the Glock in about 1995, and they remain one of the sweetest variations of this type of overtravel stop available. Unfortunately, it’s a permanent modification that can be seen from the outside of the gun — disqualifying it from GSSF, USPSA Production, etc.

Overtravel stops have since evolved along three separate lines. To stop overtravel, they catch the trigger bar somewhere along its travel: at the trigger shoe (JP), at the bend in the trigger bar (Jentra, several custom smiths), or at the trigger cruciform plate (CustomGlock.com, others).

Catching the trigger at the trigger shoe lets the trigger bar itself flex a bit, giving you more internal overtravel (for reliability).

Catching the trigger bar at the bend by installing a set screw in the frame, or by attaching a block to the back side of the bar (Jentra), splits the difference, and makes the gun legal for USPSA and IDPA events. The bar doesn't flex much ahead of, or behind the stop point, lessening the effect of flex in both places.



Two aftermarket connectors. 3.5 pound (top) and "Ghost Rocket" with overtravel stop.

Catching the trigger at the cruciform plate eliminates all internal overtravel. This allows for maximum sensitivity in setting the overtravel distance. To catch the trigger bar here, gunsmiths install a tiny set screw at the back of the ejector housing. The screw acts on the left side of the cruciform, inside the ejector housing's drop safety notch. Since everything about this setup is internal, it's legal for USPSA and IDPA events. Better yet, it requires no alterations to the frame of any kind, and can be swapped out with stock parts (to make your gun GSSF legal) in less than 15 minutes. For the money, it's probably the best approach developed so far.

THE 22-CENT OVERTRAVEL STOP

JP drills a good-sized hole up through the bottom of the trigger guard and screws in a nylon set screw with a tapered point. Moving the screw in or out adjusts the amount of overtravel taken up, and does so without marring the trigger. Getting one installed costs around \$50 plus shipping, but if you're handy with your tools, you can get a close impersonation of the JP feel for around 22 cents.

Instead of nylon you will use a small steel screw (with a smooth head), and set your overtravel by adjusting the length of the screw. This will permanently alter the frame and damage the underside of the trigger shoe, so give serious thought to this before you begin.

You need:

- *A drill press or electric hand drill*
- *A small-diameter drill bit and matching tap (an 8-inch long bit works best)*
- *A tapdriver*
- *A selection of matching screws (varying in 1/8" lengths)*
- *A countersink for the drill*

While I'd seen overtravel stops like this on other competitor's guns, Washington PPC champion Daryl Cross was the first one to take me aside and show me how it's done. In a matter of 20 minutes in Daryl's basement workshop, my personal Glock 24 went from having a relatively gross 250 thousandths-plus worth of overtravel, to perhaps 40 thousandths, depending on where you measure from.

While this does require a permanent, external modification to the gun, it's a modification that I feel is well worth it — particularly for anyone accustomed to the low-overtravel triggers common on most other target guns. This modification will disqualify you from USPSA Production division, and from many GSSF categories, so read the rules for the games you play carefully before you decide to proceed.

Take great care in setting the gun up correctly, because once you drill that hole, you can't take it back.

1. Strip the gun

Tear the gun down to the frame, taking care to carefully set aside the trigger parts (leave the locking block in).

2. Select your screws, drill size, and tap

When picking a screw, go with one that has a smooth head on it, and has relatively fine threads. The smooth head will help keep the screw from biting your second finger in recoil, and the fine threads have less of a tendency to wander back out of the gun. (I believe we used a 6/48 screw on my gun, though 6/32 would certainly work as well.)

3. *Drill the hole*

Carefully clamp the frame and/or slide (pad the jaws!! don't crush it!!) in such a way that you can drill through the rearmost portion of the trigger guard. The trigger guard sweeps back up to allow more room for the second finger, creating a swept-up section about an inch long. Drill in through this part of the guard (see photos).



Carefully drill this hole, taking care to keep the drill bit parallel with the pistol's grip. If you have access to some really long drill bits, use them.



When Daryl Cross and I did this to my personal G24, we didn't bother using the vise, and that let the drill motor wander too far forward. This allowed the screw to come up at the wrong angle (tipped too far back), impinging on the trigger safety notch instead of the tip of the trigger. Our creation still worked all right, but it did some cosmetic damage to the back of the trigger over

time. Ideally you want to stop the trigger by impinging on the end of the trigger, not the middle. It stops more cleanly, and the screw doesn't need to be as big.

4. *Tap the hole:*

Carefully tap the hole using your tap and tapdriver, clearing away all shavings.

5. *Countersink the hole:*

Create a space where the screw head can nestle up



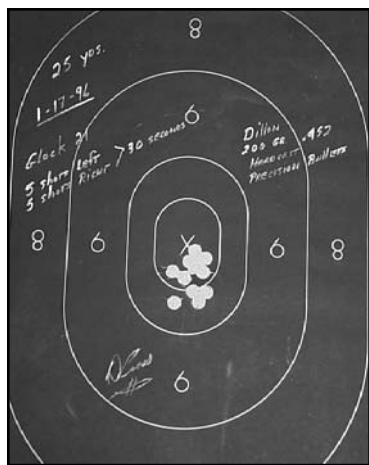
inside the trigger guard, away from your fingers. Be gentle with the tools — an electric drill will really eat up the polymer frame, and you can't replace the material you remove.

6. Start trying screws:

Take the gun out of the vise and completely reassemble it. Take your longest screw, run it on into the hole, and see if you can dry-fire. If you can't, back the screw out and exchange it for a shorter one until the gun dry-fires.

If you're lucky, you will get a screw that just barely allows the gun to go off, yet still provides positive sear engagement. More likely you will need to carve on one of the slightly-too-long screws to find exactly the right length.

Don't get anal about getting near-zero overtravel. You can



Daryl Cross knows his guns. He set the Washinton State Duty Gun record in PPC using a customized Glock 21.

set yourself up for big problems on the range when the gun ceases to fire on demand, or fires erratically because it can't cleanly disengage the sear. Once you have an overtravel stop in place that feels right to you, rack the slide vigorously and dry fire the gun several times to make sure your striker will behave itself. As you use the gun, the metal threads on the screw will cut into the back of the trigger guard, providing a little extra overtravel, and a little more positive function.

However, you still must fire several hundred rounds through the gun to make sure everything is working properly.

BLENDING THE TRIGGER SAFETY

When you draw back the trigger of a stock Glock, you may notice that the squarish trigger safety protrudes out of the curved trigger — digging into your finger. It's not really that irritating, but when you smooth it out of the way, you will be



Blending the trigger safety works better with the trigger already pulled, but this angle made for a better photo.

surprised how much better the trigger feels.

All you need to do this is a narrow-bladed pocketknife.

Using the side of the blade as a scraper (DO NOT cut the plastic) gently scrape the trigger safety. After a few dozen strokes, the plastic trigger safety will start to wear away, blending in with the surface of the trigger.

Only remove enough plastic so that the trigger safety comes down flush with the trigger. Otherwise you might interfere with the proper disengagement of the trigger safety.

Done right, this modification is difficult to see, much less notice, so it doesn't affect the resale value of the gun. Even if you slip and cut a big scratch across the trigger, the entire trigger assembly can be replaced for about \$5.