

Purpose-designed glass-breaching tools from ShieldSpike enhance operator safety.

SHATTERED GLASS

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Photos by Alfredo Rico



Sure, a baseball bat, baton or halogen tool might work, but not nearly as efficiently as the purpose-designed HammerSpike.

A few months ago, I helped organize a joint training session with a nearby agency's SWAT team. A good portion of the day was devoted to vehicle assaults, which, like most things in the SWAT realm, are relatively simple in theory but can be quite complex in application.

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When used properly, the Shield-Spike enables the operator's head and neck to remain protected by his ballistic shield.

Once the window has been breached by either the ShieldSpike or HammerSpike, an operator can use a gloved hand to alleviate remaining glass, providing a view inside the vehicle.

After a successful breach, this operator assesses the situation with handgun at the ready.

Medford Knife and Tool designed the glass-breaking tips for the ShieldSpike and HammerSpike.



After several "dry runs" involving unloaded weapons, inert flash-bangs and imaginary occupants of the suspect vehicle, things started to flow pretty well. Next, we positioned police explorers inside the vehicle, as role players. This required team members to communicate with each other, as well as with the occupants of the vehicle; determine who may be armed; and safely remove each occupant from the vehicle for handcuffing.

By the end of the day, it was time to have a little fun courtesy of A&A Auto Wreckers in Brentwood, California, who

donated several vehicles to science (so to speak). These vehicles were destined for destruction, and our assembled SWAT operators were determined to expedite the process. We upped the ante a bit by deploying real flash-bangs during the assault on an unoccupied vehicle. We intentionally deployed live bangs directly onto the windows and windshields of these vehicles to see if the glass would break when the devices deflagrated (they didn't). Then, several curious SWAT officers tried their hands at breaching vehicle windows.



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IDENTIFYING THE PROBLEM

It didn't take long to realize the "glass breaking" devices contained on our expensive, department-issued knives were ineffective. Next came several failed attempts at breaching using expandable batons thanks to windows flexing upon impact. Finally, an aluminum baseball bat, spray painted black (for effect) was used to break the windows. While the bat worked, it was not efficient—certainly not the right tool for the job. This training session caused my SWAT team to consider alternative methods for breaching glass.

FINDING A SOLUTION

A week or two after our vehicle assault training session, I was contacted by an old friend, Phoenix PD SWAT team member Chris Trapp. Trapp and I worked together nearly 15 years ago as rookie Phoenix police officers, but over the years we lost touch, as is too often the case when an officer goes to work for another agency, as I did. Trapp told me that he has been a full-time SWAT operator since 2007 and that he recently formed a company called ShieldSpike to provide SWAT teams with a more efficient means of breaching glass. I was all ears, hoping Trapp had developed a solution to what I perceived to be our team's glass-breaching dilemma.

Trapp didn't develop glass-breaching tools on a whim but rather out of necessity. As a Phoenix police officer, he dealt with heavily tinted windows on a regular basis. Window tint is legal in Arizona to help mitigate the effects of the blazing sun on the interior of the vehicle as well as to minimize glare. Obviously, when SWAT converges on a vehicle, there's a good chance the vehicle contains bad guys. In such a case, SWAT operators need to obtain a clear view inside the vehicle ASAP. This often calls for a breach of one or more of the vehicle's windows.

When Trapp asked fellow SWAT operators what they felt was the best way to breach a vehicle windshield, he got a lot of shrugs and hypothetical scenario responses. Some advocated the use of a T-ball aluminum baseball bat, while

others suggested using a halogen, a pry bar or an expandable baton. While any of these items could work, none seemed to be the right tool for the job. "Using a halogen to breach a window is like using a sledgehammer to turn off a light switch. It might work, but it's certainly not efficient," said Trapp.

Trapp set out to design a glass breaking tool that was reliable, efficient and afforded the user as much protection as possible. He designed his tools around the shortcomings of tools commonly used to breach glass. The baseball bat was unwieldy and awkward, not to mention unprofessional-looking to a bystander or viewer watching the event unfold on the evening news. A halogen or pry bar was even more cumbersome than a small baseball bat. Such a device slowed down the operator, compromised his balance during the breach and in some cases required the use of both hands, without providing adequate protection to the operator from the occupants of the vehicle.

Trapp turned to local knife maker Greg Medford of Medford Knife and Tool for help designing production models for the ShieldSpike and the HammerSpike breaching line.



Every SWAT entry is dependent on a successful breach. How would your team breach a tinted vehicle window or an arcadia door of a residence?

The collaboration has proven successful, as evidenced by the ever-increasing number of law enforcement and military units who are employing these tools with favorable results not only in training, but, more important, during live operations.

SHIELDSPIKE

The ShieldSpike is essentially a metal clamp with a heat-treated, glass-breaking tip. The clamp is placed over the bottom edge of a sturdy ballistic shield, with the thumb screws facing the interior portion of the shield. The ShieldSpike can be installed in mere seconds, without the need for any tools, by simply tightening the thumb screws. The ShieldSpike does not in any way interfere with the shield operator's duties and is not sharp enough to cut by incidental contact.

The ShieldSpike enables the operator to reap the benefits of head and neck protection from the ballistic shield during a vehicle window breach. When breaching, the off hand remains on the designated shield handle, while the dominant hand

is positioned over the top of the shield, as far away as possible from the broken glass resulting from a successful breach. The ShieldSpike works best when affixed to a sturdy ballistic shield with minimal flex. For best results, strike the window at a downward

angle (approximately 45 to 60 degrees). The MSRP for the ShieldSpike is \$185, making it affordable for agencies with even the tightest of budgets.

HAMMERSPIKE

The HammerSpike is made of steel with a rubber grip and features a 90-degree bend, which facilitates "raking" to clear away any glass that remains intact after the breach. This enables the operator to create a larger port from which to view, shoot or enter, as the situation dictates.

Weighing a mere 1½ pounds, the HammerSpike is well balanced, requiring minimal effort to breach vehicle and structural glass. The heat-treated breaking tip cuts through glass like butter, regardless of what portion of the glass

A SUCCESSFUL GLASS BREACH

According to Trapp, a window struck with the ShieldSpike or the HammerSpike might virtually explode upon impact or sustain severe cracking, referred to as "spider webbing," depending on the type of glass the window is made of and whether it has been laminated. As long as the glass is compromised to such a degree that an operator with a gloved hand can easily break it out, the breach is considered a success.

Most rear and side vehicle windows are made of tempered glass for added strength. In addition to making glass stronger, tempering causes glass to break into very small pieces when impacted. The obvious advantage to using tempered glass on vehicle windows is that it prevents shards of glass from injuring the vehicle's occupants during a collision. Rear and side windows proved to be no match for both the ShieldSpike and the HammerSpike during my testing.

Unlike vehicle windows, which are generally tempered, a vehicle's windshield is nearly always made of laminated safety glass, which is designed to keep occupants from being ejected from the windshield during a collision. Laminated safety glass consists of two layers of glass, with a thin layer of vinyl between them. It's quite possible for the exterior layer of glass to break, while the interior layer remains intact. If the interior layer is broken, glass tends to adhere to the vinyl film rather than fly into the vehicle, where it could injure the occupants. The construction of vehicle windshields makes them much harder to breach than any other vehicle glass.

The lightweight, ergonomically designed HammerSpike is ideal for vehicle assaults.

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is struck. As with the ShieldSpike, the HammerSpike keeps the operators' hand well clear of broken glass that is the very essence of a successful breach. The one-handed operation of the HammerSpike frees up the operator's opposite hand to carry a ballistic shield for protection from vehicle occupants during breaching.

A video clip on the ShieldSpike website shows a tactical team member attempting to breach the driver's window of a vehicle with a pry bar, which bounces off the windshield four times before finally breaking on the fifth swing. A caption reads, "When rescuing a trapped motorist from a burning car or conducting a vehicle hostage rescue, do you have this much time?"

To illustrate how easy it is to use the HammerSpike, the same video clip shows Trapp's 10-year-old daughter effortlessly breaching vehicle windows with the tool. The fitting caption reads, "This 10-year-old is calling your agency out!" The HammerSpike has an MSRP of \$120. At

this price, even if the department won't pay for it, officers could easily chip in and purchase this potentially life-saving tool.

TESTING

Once again, the good folks at A&A Auto Wreckers were kind enough to allow me to completely annihilate one of their vehicles, or at least the vehicle's glass. I was thoroughly impressed with the way both the ShieldSpike and the HammerSpike performed. Aside from "operator error" when I failed to strike a window with the ShieldSpike at the correct angle, it performed flawlessly. The HammerSpike was even easier to use, requiring minimal effort in a compact, gross-motor-based swing. I could see how these tools would enable operators to maximize safety while conducting a vehicle assault, which is an inherently dangerous task.

Designed by a SWAT operator for SWAT operators, the ShieldSpike and the HammerSpike have been successfully used to breach glass in vehicles

and residences with great success, which may explain why these tools are fast becoming required equipment for police tactical teams, military units and first responders across the country. According to Trapp, Brownells, a leading supplier of firearms accessories, has recently acquired exclusive distribution rights of the HammerSpike.

Out of necessity, Trapp developed a simple solution to a perplexing, widespread tactical problem. It's good to see that his business is booming, because his products help keep the good guys safe. I only wish I had thought of them first.

For more information, please visit shieldspike.com, medfordknife.com or policestore.com. **TACOP**

SOURCE

ShieldSpike, LLC
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The HammerSpike is well balanced, requiring only a compact swing to breach a window. The operator's hand is a safe distance from the window, and his body is behind the ballistic shield.