HK 416 5.56mm

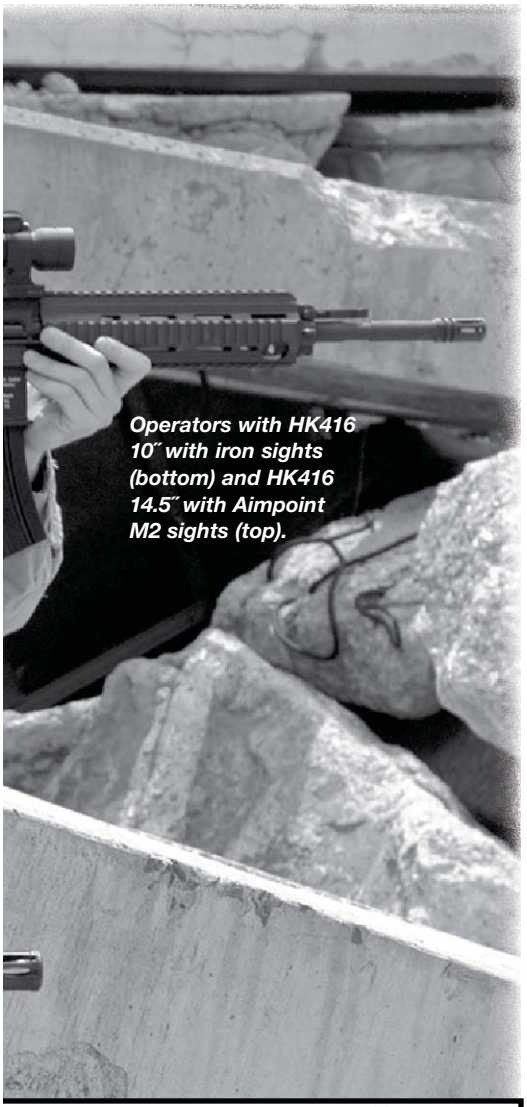
Carbine upper was combat proven by US Army and US Navy Spec Ops!

By Ken Hackathorn

Some five years ago while visiting Heckler & Koch in Germany, I was invited to a presentation where HK's CEO, Ernst Mauch, offered to troubleshoot the US M4 carbine. The AR-15/M-16 family of weapons has been serving the USA for over 40 years. In the latest version as the M4, it had become the darling of the Special Operations Units in the US Military.

It should be noted that from the first days of issue, the AR-15/M16 weapon system has proven to be a superb fighting arm as long as the weapon is kept clean and well lubricated. US service personnel have learned the lesson that you must keep the M16 clean and free of carbon fouling, plus properly lubricated for reliable functioning.

In the military operations of Afghanistan and later Iraq, desert environments took their toll on the M4. If you use any form of wet lube like CLP to keep the M4 running,



Operators with HK416 10˝ with iron sights (bottom) and HK416 14.5˝ with Aimpoint M2 sights (top).

The 10˝ barrel HK416 with iron sights.

The 14.5˝ barrel HK416 with iron sights.

sand will collect on wet surfaces of the weapon and reliable functioning will be an issue. Unlike the missions performed by conventional forces, Special Operations units often operate deep in enemy-held territory and cannot disassemble and clean their weapons daily. Add to this the fact that with shorter 14.5-inch barrels, the M4 has minimal gas pressure "dwell time" and extraction can be more violent than with the full size M16 rifle.

The M4 was never intended to be issued to front line troops, who use the weapon heavily. It was designed for support troops who don't need a full size M16A2 rifle. Because of the M4's short handy size, sliding stock, and ease of use in confined spaces, it became very popular with Spec Ops forces. When subjected to more intense and prolonged use than experienced by standard military forces, plus harsh environments with less preventive maintenance, the M4s have demonstrated a less than stellar reputation for reliability.

Heckler & Koch's engineering and design team have recently corrected most of the problems with the British SA80 service rifle that had a reputation for less than reliable performance. HK is rebuilding each and every SA80 rifle in UK service. When Ersnt Mauch offered to take the problematic US M4 and design a fix for the reliability issues, US Army Special Operations Master Sergeant Larry Vickers said, "You are on."

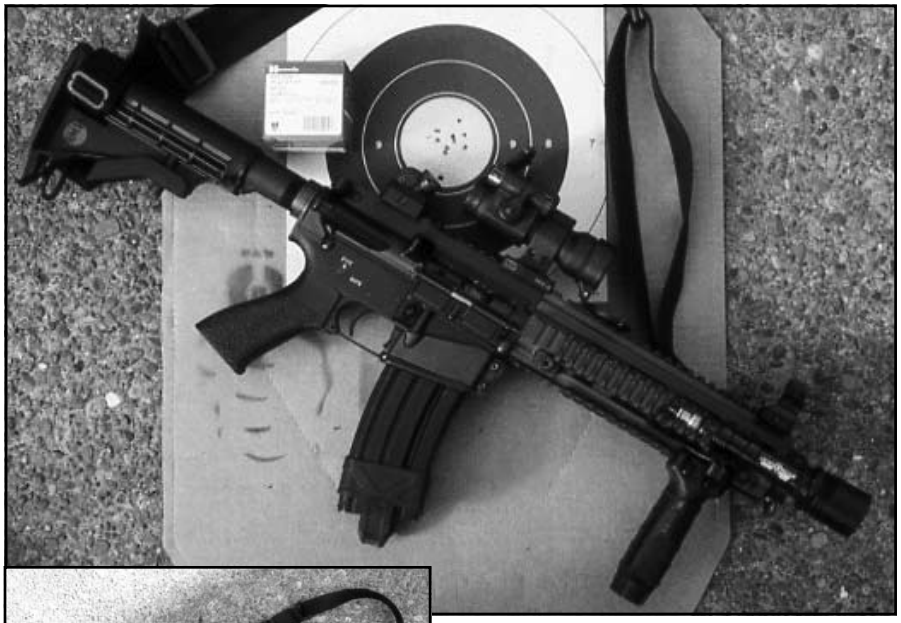
Within a few months HK had produced a M4 that used a new gas system that fixed nearly all the issues of the M4 reliability. With the M16 pattern magazine that HK developed for the SA80, the new M4 design from HK was ready for testing. As we have come to expect from HK, they came up with an excellent quality, made of the best materials, small arm that incorporates all the pluses of the M16 design, while eliminating its weakness—the gas system that blows carbon into the action of the gun. This HK weapon system is known as the HK 416.

Gun Details

A complete carbine is available as the HK 416 or you can select the HK 416 upper along with a replacement buffer and buffer spring to convert an existing M4 or AR15 lower to use this vastly improved HK system.

For the past eight months I have been testing the HK 416 upper on a Rock River Arms lower receiver. I selected the 10-inch variant and now have over 5,000 rounds through it with not one malfunction.

Larry Vickers, retired US Army Special Operations M/Sgt. who helped make the HK 416 happen on left, author, right, both with HK 416 10" barrel upper receiver carbines.



The 100-yard 10-shot group with 75gr TAP. HK 416 is more than accurate enough for a CQB 5.56 carbine.

The 14.5˝ HK 416 upper receiver carbine with Troy Industries BUIS, Aimpoint, plus LaRue mount and Battle Light.

When I first received the 10-inch HK 416 upper, I removed it from the packaging, installed it on my Rock River Arms lower and fired it for over 1,900 rounds without cleaning or lubrication. Not one failure. Compared to an AKM, that may not be very impressive, but with a traditional Armalite design, it's pretty good news. More importantly, the history of short barrel variants of the M16 family has been less than impressive.

Going back to the XM177, getting a M16 to run with such a short gas dwell time has always been difficult. While I've heard of 10- to 11-inch M16s that are completely reliable, like the unicorn of legend, I haven't seen any of late. Note, these gas tube shorties don't exist in any numbers in the hands of the guys whose lives depend upon them in the "rock pile or sand box."

In the Special Operations arena, a short barrel 5.56mm caliber weapon has great utility for CQB use. The 9x19mm SMGs have been largely replaced with 5.56mm caliber weapons. A short 10-inch barrel M4 that is 100% reliable, functions with all types of 5.56mm ammo, plus can be fitted and used reliably with a suppressor, is exactly what most Spec Ops units are looking for. HK has answered the mail in the 416 design.

What's so different about the HK 416 over the traditional AR-15/M16/M4 system? To put it simply, a better gas operating system. Gas piston/push rod design weapons have been around since before WWII. The Soviet SVT 38/40 followed by the German G43 are classics. The FN FAL is another to use a gas port to direct gas to a piston that, in turn, pushed an operating rod to cycle the bolt. While this concept has been, and is still used on a large number of small arms designs, HK used a variation of this gas system that's proprietary to them. The gas piston has a very short stroke that only moves a limited distance. It strikes a spring-loaded push rod that in turn hits the bolt carrier and moves it to the rear. In many ways it's similar in function to the US M1 carbine gas piston function. The difference is you can remove and clean the HK 416 piston.

HK 416 upper receivers on RRA lowers. Top, 14.5˝, bottom 10˝ version used in test.

Shooting Impressions

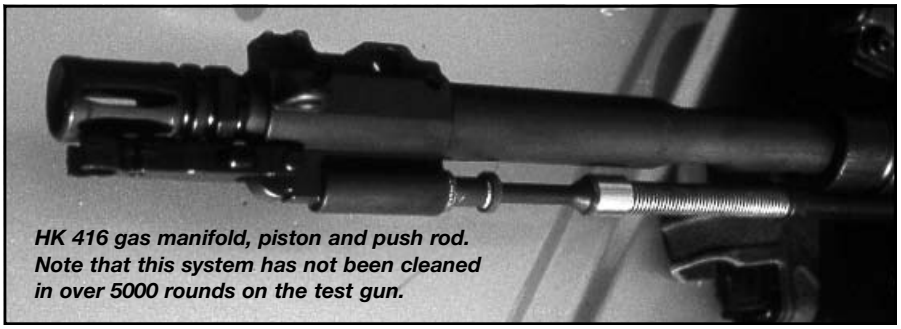
With my HK 416, I have yet to clean my gas piston or any part of the system in over 5,000 rounds. I find the gas piston to be pretty much self-cleaning, and unless I was in a high humidity or saltwater environment, I don't think cleaning the HK gas piston would be an issue.

The HK 416 utilizes a hammer forged, rifled barrel that is extremely strong and well made. Each is hard chrome lined and my samples shot extremely well; in fact, they are among the most accurate 5.56mm NATO carbines I have ever fired. With Hornady Tap 75-grain HP I got repeated 5-shot groups of less than 2 inches, fired in a rapid manner. Other test procedures by US government organizations have confirmed that the HK 416s are extremely accurate.

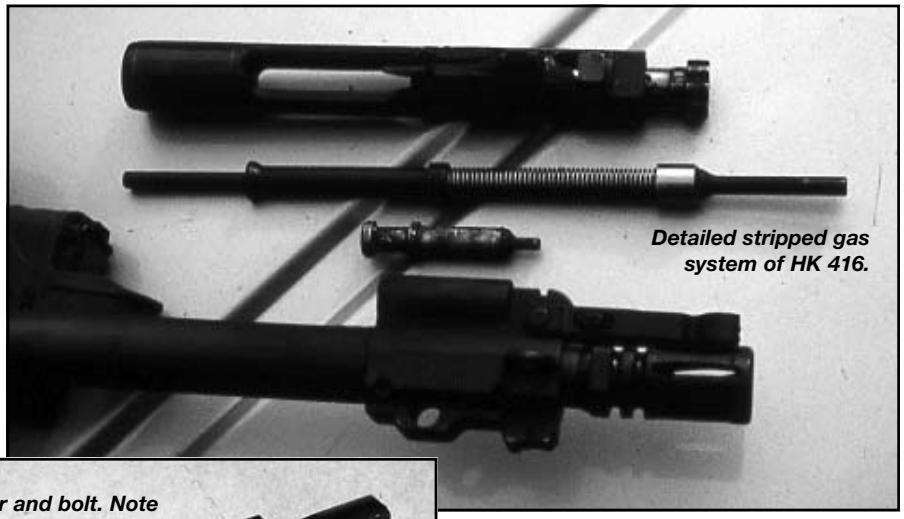
Some observers have claimed that a direct gas impingement system gun is inherently more accurate than a piston gun. HK's 416 system has proven that this is not true. Bolts and carriers are different from the typical M16 design in that the bolt does not need gas rings (they are on the gas piston) and the bolt head has no drag in the carrier like the direct gas impingement system. The bolt carrier has a lug on top for contact with the push rod, which is part of the bolt carrier forging and not attached via two Allen head screws like the AR15/M16. Also, the rear of the bolt carrier is machined to be a bearing surface allowing for a smooth bolt cycle when the gun functions.

All HK 416 rifles being delivered to the USA will have a firing pin safety that prevents firing pin bounce. When you unload your AR15/M16/M4 you will observe a small firing pin dent on the primer of the chambered round. This is caused by the free-float firing pin. When using 223 or 5.56mm ammo with mil-spec primers, slamfires are never an issue. HK 416s utilize a 20-percent stronger buffer spring, which produces more bolt velocity. HK designed a firing pin safety that locks the firing pin in place until the hammer deactivates it in the firing cycle. This firing pin safety has proven to be positive and has no effect on reliable operation. All internal parts of the lower receiver on the HK 416 are interchangeable with standard AR15/M16/M4.

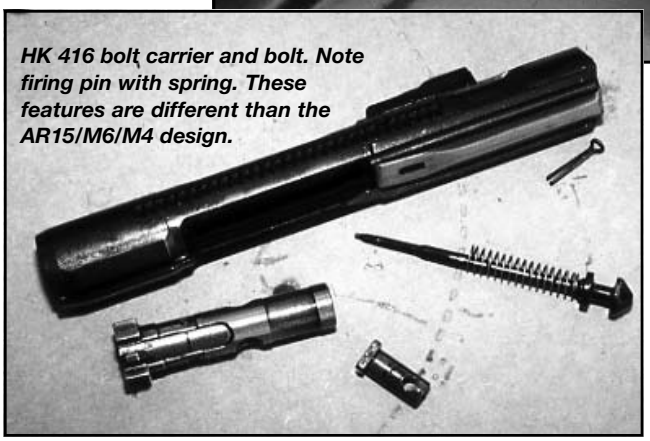
Unique to the HK 416 is the free-floating forearm that has Picatinny rails. This rail forearm is easily removed and replaced without any effect on zero with either sights or optics. This design is longer than most carbine length handguards, so added length is available for attaching white lights, lasers, IR designators, and vertical grips. Overall, this HK 416 free-floating forearm unit is outstanding.



HK 416 gas manifold, piston and push rod. Note that this system has not been cleaned in over 5000 rounds on the test gun.



Detailed stripped gas system of HK 416.



HK 416 bolt carrier and bolt. Note firing pin with spring. These features are different than the AR15/M6/M4 design.

Available from HK is a set of sights that are the typical HK diopter design that gives the 416 the same sight picture as the MP5. The rear sight has four settings: 100, 200, 300 and 400 meters. These sights mount to the top rail. They do not fold, which is excellent, as backup sights should be up, not folded down. If you need backup sights, you certainly will not have much time to flip them up; folded down backup sights in a combat environment is a sign of a "clueless" operator. HK also offers a flip-up front sight for the 416, but it is mated to the HK diopter rear. Because the receiver is made to a different height than a gas tube AR15/M16, Aimpoint and L-3 EOTech mounting rings or bases must be made for the HK416 or they will be too high for the HK diopter iron sight backup viewing. Mark LaRue offers a HK 416 Aimpoint mount that is like all his products—superb.

I set up my 10-inch barrel HK 416 with HK Diopter sights, added the LaRue Aimpoint mount with M2 Aimpoint. A Tango Down vertical foregrip and pistol grip, and SureFire M600 Scout light were mated to the 416. Topped off with a Boonie Packer two-point sling and Redi-Mag. My HK had digested thousands of rounds of M193 ball, M885 Green Tip, 75-grain TAP, 77-grain Black Hills, and plenty of International Cartridge Frangible .223 for indoor shoot-house work. Most gas tube short barrel AR15/M16/M4 carbines are less than reliable with frangible ammo. The 416 seems to be the best I have yet tested to give good functioning with the light bullet frangible rounds.

Combat Proven

The HK 416 with 10-inch barrel has been adopted by the top US military operation groups, the best of the best. In their hands the HK 416 has been combat tested in the worst of conditions and has earned their respect. In fact, the guys that have them will tell you that the HK 416 is the best 5.56mm weapon they have ever used. Strong words of praise from top professionals. If they have any comments concerning the HK 416, it is that they would like to have a lighter barrel. It seems that, in full auto fire with suppressors, the bolt often fails to lock to the rear when empty. Full auto fire with a suppressor is not much of an issue. A lighter weight barrel is valid, especially if you load up your primary with 3 pounds of accessories.

The major advantage of the HK 416 is the enhanced reliability in a hostile environment where lack of lubrication is an issue. The real plus is not having the moving parts of the weapon coated with carbon. Add to that the fact that the short barrel 10-inch version of the HK 416 has demonstrated a level of trouble-free functioning that was previously unheard of in the AR15/M16/M4 family of weapons. When you can get enhanced accuracy along with a barrel life well beyond double that of current US issue M4, the HK 416 looks great.

Final Notes

If you have an existing AR15/M16/M4 carbine and it works well for you

HK 416 unique design free-floating Picatinny rail forearm: easy on and off with no change in zero.

now, replacing it with a HK416 may not be justified. Most police and civilian 5.56mm carbine applications do not require the level of reliable service offered by the HK 416. Plainly put, most folks can get along nicely with the old gas tube AR15 design weapon. But, it should be noted that a rumor from Colt Defense is that a new 5.56 NATO carbine is about to hit the market, the M5, which is a gas piston version of the M4. So, where there is smoke, there may be fire—or a gas piston.

If you want the most advanced evolution of the AR15 system, combined with superb quality, check out the HK 416. Trust me, it's a great piece of kit. ■

For more information contact:

Heckler & Koch Defense Inc.
21480 Pacific Blvd., Dept GW/LE
Sterling, VA 20166
703-450-1900; www.hkdefense.us

Rock River Arms
1042 Cleveland Rd., Dept GW/LE
Colona, IL 61241
309-792-5780; www.rockriverarms.com

Aimpoint Inc.
14103 Mariah Ct., Dept GW/LE
Chantilly, VA 20151
877-246-7646; www.aimpoint.com

Austin Precision Products (LaRue Tactical)
850 CR 177, Dept GW/LE
Leander, TX 78641; 512-259-1585
www.laruetactical.com

Boonie Packer Products/Redi-Mag
DIV. of JFS, Inc.
P.O. Box 12517, Dept GW/LE
Salem, OR 97309
800-477-3244; www.booniepackerproducts.com

SureFire
18300 Mt. Baldy Circle, Dept GW/LE
Fountain Valley, CA 92708
800-828-8809; www.surefire.com

Tango Down, LLC
1588 Arrow Hwy., Unit F, Dept GW/LE
La Verne, CA 917504
909-392-4757; www.tangodownllc.com