And Then There Was One

FEDS SELECT NEW FIGHTING RIFLE

ROCK RIVER'S DEA CARBINE

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Any time a Federal law enforcement agency picks a new firearm it’s big news, and the effects will often be felt throughout the entire community. And when the change reflects a major shift in doctrine, it’s even more notable.

For many years the DEA has issued their agents a Colt 9mm submachinegun that was basically a scaled-down version of the M-16; but these are now being replaced with a semiauto carbine chambered for the .223 Remington. In September, 2002, the DEA issued a request for samples to meet a very broad set of requirements and a total of 11 “offerors” submitted the three required samples for testing. It would be fair to say torture testing, although the DEA calls it “abuse.” (See the box for test details.)

The best part of the test is everything is clearly spelled out, with little room for error. Malfunctions due to faulty ammunition or shooter error would not count provided the shooter could explain what caused the stoppage. The pass/fail of this part of the test is largely objective.

Remember, all of the above are just like tryouts for a ball team. Lots of guys show up, but many are cut. It isn’t too hard to guess who many of the “offerors” were, but it isn’t possible to get authoritative information on who lost and why. We do know 11 companies provided samples for the first test but only four progressed to the “Endurance/Functional Reliability” test.

Making It Go

Here three samples must fire 5,000 rounds. They were allowed to cool and be cleaned every 250 rounds. The bottom line was more than one malfunction per 1,000 rounds was enough to show you to the door. Even if two guns functioned perfectly, if one failed they all did. Of course everything is inspected all along the way and accuracy tests repeated at 2,500 and 5,000 rounds.
"To resolve questions relating to the structural integrity of the weapon, the DEA/FBI reserves the right to require the offeror(s) to fire an additional 5,000 rounds in the endurance test to further evaluate performance of the weapon." There was also an opportunity for a gun to get a do-over. Two guns were given this opportunity and subsequently passed, but the winner was Rock River Arms and in December 2003, they were awarded a contract for a minimum of 5,000 rifles over a five-year period. One of the good things about this type of contract is the opportunity for other agencies to piggyback on it and one source reports the FBI either has, or is considering, purchasing some.

Of course selecting a gun is only part of the process. It was a foregone conclusion "stuff" was going to be hung on the gun. Optical sights are mandatory, as are provisions for white lights or other illuminating devices, plus lasers and high speed stuff.

**The Rifle Itself**

Let's begin with a description of the basic Rock River rifle that won the contract and cover the accessories separately. It's an AR-15-type carbine with a 14.5" chrome lined barrel. This seems to have become a de-facto standard for CQB shoulder weapons. It also has a permanently attached flash hider. The forend is manufactured by SureFire and solidly attaches to the rifle and the basic shape is a four-sided Picatinny rail. The receiver also has the rail cuts, so optical devices can be attached other than the standard EOTech holo-graphic sight we'll deal with later. There's also a GG&G rear sight that can be used separately, but will normally "co-witness" with the optical sight. In other words, you can use the iron or the optics. A conventional carrying handle with normal sights is also included and may be used in place of the optical and iron sights.

The upper receiver is otherwise standard and equipped with a forward assist. The lower receiver is also standard, although it does wear a Hogue pistol grip specially done for Rock River. The serial numbers are within a special, but confidential, series for DEA.

The stock is Rock River's six-position collapsible design that has been around awhile and is thoroughly proven. One nice touch is it's clearly marked "DEA." It's suit-
able for use with currently popular slings and both stock and forend have ambidextrous attachment points. A Viking Model VTAC sling is part of the package as is an Eagle Industries case.

The white light is a SureFire Model AO15908, which mounts on the forend and is held in place by a pair of large knurled knobs with coin slots. One useful accessory is the pressure switch which conveniently fits between the Picatinny rails and does not require any form of adhesive to stay there. The switch is very light-weight so even strenuous activity doesn’t seem to bother it. There is also a common pushbutton switch on the back of the light providing intermittent, or stay-on operation.

**Optics**

Perhaps the most visible accessory is the EOTech HDS (holographic diffraction sight) that will look familiar to anyone who saw the early Bushnell Holosight, which is also made by EOTech. The most notable difference is this one is much larger. I’ve heard these referred to as "heads-up" displays, comparable to aircraft where flight information is projected onto the aircraft windscreen. While there is certainly parallel technology you still have to get your cheek down on the stock. But one of the really useful features is the overlay of one sight picture with the other. This is that "co-witnessing" thing we mentioned. When everything is
THE TESTS

The initial phase consisted of:

1. Inspection and measurement to ensure the submission conforms to specifications.
2. Function testing, which consisted of five rounds from each of six magazines.
3. Accuracy/Dispersion/Velocity Test:
   - Three randomly selected carbines would fire three 5-shot groups at 100 yards from machine rest.
   - The same three carbines would be hand-fired from benchrest for three 5-shot groups at 100 yards. The largest hand-fired group would be eliminated. The remaining five groups were averaged and must not exceed 4".
   - 10-shot strings were chronographed and had to average no less than 2,350 fps.
4. Abuse Test
   - Parts interchange test: three carbines were field stripped and major component parts randomly interchanged, reassembled and each must fire ten rounds each of both duty and training ammunition without malfunction.
   - Extreme Temperature Test:
     (A): Two properly cleaned and lubricated carbines were loaded to capacity with DEA/FBI service ammunition and exposed to a temperature of -20 degrees F for one hour. Then it was taken from the cold and immediately had to fire the complete magazine at room temperature.
     (B): The same two carbines were allowed to dry and stabilize to room temperature, reloaded and subjected to a temperature of +120 degrees F for one hour. Following the high temperature they had to be fired immediately.
   - Interestingly enough stoppages during the extreme temperature testing would not eliminate the sample if the shooter could clear them with customary immediate action drills.
   - Drop Test: Two carbines were loaded with a primed cartridge case plus a full magazine and, with the safety on, dropped from a height of four feet with: sights down, muzzle down, muzzle up, right side, left side and squarely on the bottom. After each drop the primed case was inspected. If it fired the test was repeated and a second firing constituted failure of the test. Following the drop testing the carbine had to fire 20 rounds of service ammunition without malfunction.
   - Throw Test: Two carbines were loaded with a primed cartridge case plus a full magazine and thrown from a height of four feet over a distance of 15 feet to land once on the right side and again on the left. The carbine must not fire the primed case or permit the magazine to fall out. Following the throwing the carbine must fire 20 rounds of service ammunition without malfunction.
   - Salt Water Immersion and Corrosion Test: A carbine lubricated according to the manufacturers specification was immersed in a saline solution resembling sea water for five minutes, removed and shaken 15 seconds to remove water and allowed to sit for two hours at temperatures between 68-78 degrees at a relative humidity of 30 to 50 percent. Following the test it was field stripped, rinsed with tap water, drained and held for 24 hours. At the end of that period it had to fire 20 rounds of service ammunition without malfunction.
   - Sand Exposure Test: One carbine is cleaned and lubricated, loaded to capacity and placed on its left side in a box filled with a mixture of 50 percent each of coarse “road” sand and fine “play” sand. Sand was scooped to completely cover the carbine. It was then removed from the box, shaken for 15 seconds and had to fire all rounds. Malfunctions would be “noted” and must be clearable by immediate action drills.

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When the various electronic sights began to be used on combat weapons there was a widespread distrust of anything with batteries. I think that has largely been overcome, but the HDS does have an automatic shutoff feature. In fact, the controls are deceptively simple. At the rear of the sight are three buttons. Those on either side have up or down arrows serving two functions. Pushing either one turns on the sight and they can then be used to control the brightness of the image, but if you turn the sight on with the up arrow it initiates and automatic eight-hour shutoff cycle. If the down arrow is used the sight stays on for four. To turn the sight off you must push both buttons simultaneously. The button in the center is marked “NV” and pushing it dims the display to the point it will not interfere with night vision gear.

Just Some Guy

With all that background you might wonder how a plain guy like me is going to add anything to the testing. I sure as heck am not going to fire another 5,000 rounds, don’t have a rifle machine rest and am not overly-inclined toward wheel re-invention. I came up with a three-part evaluation that included an initial function test with ammo having bullets weighing from 40 to 77 grains. The rifle has a 1:8 twist that might be a tad slow for the heaviest weights, but everything functioned perfectly.

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After about 200 rounds I gave the rifle a thorough cleaning. You really can learn a lot by this process. You can tell if the bore is smooth or has tight spots by the pressure on the rod, and you can judge the quality of the bore by how hard it is to clean. Rock River uses chrome-lined barrels from Wilson Arms and no unusual cleaning effort was needed. Bore scope inspection revealed no anomalies and only minor machine marks from the button rifling process. Inspection also confirmed basic cleaning with Shooters Choice was perfectly fine. There were no streaks of jacket material in the bore.

Because of NFA requirements, the gun we got to test has a 16' barrel, but everything else you see is exactly the same as the government issue rifle. The differences attributable to 1.5' of barrel are not worthy of concern. Since this is a CQB rifle, I decided to formally measure accuracy at 50 yards using the EOSight, and then play a bit at 100 and 300 yards.

Three 5-shot groups were fired from a benchrest with seven different loads, representing bullet weights from 50 to 69 grains. The average for all of those was .99". Best accuracy came from Federal 55 grain Tactical at 2,910 fps with an average of .63". Close behind was Black Hills 50 grain V-max at 3,045 fps and .66" accuracy. Within those averages were several groups in the half-inch range. Maybe the surprise here is not that the rifle shot so well, but that it was possible to get that kind of accuracy with the sight.

A second informal accuracy test involved the standard B-27 police target. Making head shots at 100 yards was just no trouble at all. Really that is stretching the envelope a bit, because most situations would leave shots like that to sniper teams and tactical rifles. But when you're having fun it's tempting to play, so the final test involved a 14" diameter steel plate at 300 yards. We about wore it out.

**SWAT and Stuff**

I was also able to go to a training session with a SWAT team and let some of their officers run a few drills and shoot the rifle. The first officer to shoot it fired one round and turned to me with a funny look on his face. I had neglected to tell him the trigger was a match grade two stage design from Rock River with a pull-weight of 4.5 lbs. When you're used to pulls that are double or higher, it's easy to jerk the first one. The carbine was universally popular and there were a couple of tense moments when one very big cop wanted to keep it.

I didn't keep a round count during this whole thing but I'm sure it was over 500. And there was not a single stoppage of any kind. I know the great trigger helped, but the simplest way to put it is the gun is easy to shoot. At a bit over 8-pounds it's not a lightweight, but there is very little recoil and the reticle hardly left the target. And even though you and I can't own one of the real DEA guns, Rock River has something real close they're going to call the "Government Model" which will have a 16' barrel and fixed stock.