From: Pantle, Robert
Sent: Monday, November 12, 2007 3:18 PM
To: Trull, John
Subject: FW: Cutshaw's article[Scanned]
Attachments: REM700XCR#2.doc

John,

This would be yours.

Regards,

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-----Original Message-----
From: Tracy Liu [mailto:tracy_liu@harris-pub.com]
Sent: Monday, November 12, 2007 2:52 PM
To: Stevenson, Eddie; Pantle, Robert
Subject: Cutshaw's article[Scanned]

Good morning,

Please verify the technical details of the enclosed article, "Remington 700 .300Mag XCR Tactical" by Charlie Cutshaw.

Thank you.
--
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Special Weapons Feb08

Title: Gun Test:
REMINGTON 700 .300MAG
XCR TACTICAL
Blurb: Xtreme Conditions Rifle, it's a sub-MOA tack driver right out of the box!
Bline: By Charlie Cutshaw
Photos by Chris Rohling

Remington's classic Model 700 has been a mainstay of civilian, military and law enforcement users since its introduction and continues to "soldier on" after nearly 50 years in production. The Model 700 action is so strong and

flexible that is has served as the basis for both the US Army's and US Marine Corps' sniper rifles, the Army's M24 and the Marines' M40 series. Because of its basic excellence, the Remington 700 action is usually the action of choice for custom rifle builders. Despite the fact that the M700 has served as the basis for countless custom precision tactical rifles, only recently has Remington begun building what in essence are custom precision tactical rifles of its own. The latest in Remington's precision tactical rifle lineup is the Xtreme Conditions Rifle or XCR Series Precision Tactical Rifles. The XCR precision tactical rifles are available in .223, .308 and .300 Win Mag.

Gun Details

The Remington 700 XCR that's the basis of our test begins with the bolt action design. Like all Model 700s, the bolt face, barrel and receiver surround and support the cartridge with three concentric circles of ordnance steel. The receiver is machined from a block of solid steel, and drilled and tapped for scope mounts. The .223 and .308 rifles use the Remington 700 short action, while the .300 Win Mag is based on the long action. Barrels are 26 inches long with a match crown at the muzzle.

The 700 XCR stocks are by Bell and Carlson, and are green with a black thread pattern and a solid aircraft aluminum bedding block that runs the entire length of the receiver. The aircraft aluminum floorplate is hinged to facilitate quick unloading should the need arise. The forend is the classic "beavertail" pattern that facilitates control and the butt has a "hook" that enhances control by providing a solid surface for the shooter to pull the butt into their shoulder. The stock has three sling swivel studs, two of which are typically used for the sling and the other for mounting a bipod. Our magnum also had a soft recoil pad in consideration of the rifle's caliber. The recoil pad had a "tacky" feel that again enhanced control by keeping the butt in place against the shooter's shoulder. The barrel is 416 stainless steel and fluted to enhance heat dissipation and stiffness. The metal parts are finished in Remington's proprietary TriNyte coating, which provides an extremely hard and durable surface that's resistant to nicks, abrasion and corrosion. This finish is unique in that it accomplished by an electrostatic discharge process wherein the metal parts are electrically charged and placed into a gaseous medium that carries an opposite charge, causing the medium to be attracted to the metal, resulting in a finish that is superior to most conventional coatings and looks good as well. Since the finish process is proprietary, Remington is understandably reluctant to reveal the exact process other than its fundamentals. The finish on our test rifle had a matte satin sheen, which was extremely attractive while at the same time preventing unwanted glint that could attract unwanted attention in a tactical situation.

The trigger is Remington's recently announced X-Mark Pro that has zero creep or overtravel and breaks like the proverbial "glass rod" at just over 3 pounds on our test rifle, ideal for a precision tactical rifle. Remington's claims that the X-Mark Pro trigger has out of the box performance on a par with many custom triggers initially aroused our skepticism, but after testing this 700 XCR's trigger and having tested several others, our skepticism has evaporated. Remington technical personnel tell us that triggers are set to a nominal pull weight of 3.5 to 5 pounds. As mentioned, our test trigger broke just over 3 pounds, actually below factory spec, but virtually ideal for a precision tactical rifle. Remington was able to develop the X-Mark Pro for a number of reasons. Most significant is improved manufacturing processes. Components can now be manufactured to much closer tolerances using computer numerical controlled (CNC) machinery. Because of this, the internal components of the X-Mark Pro trigger have surface finishes that approach mirror smoothness and tolerances on a par with many custom triggers. All components are electroless nickel plated, a process that further enhances surface finish and helps produce an exceptionally crisp feel without any perceptible creep or backlash. Because

of the foregoing improvements in manufacturing, the X-Mark Pro trigger can be set at the factory to as much as 40 percent lighter than earlier factory triggers.

The overall fit and finish of our test rifle was superb and on a par with many custom rifles we have seen that cost much more than the XCR, whose manufacturer's suggested retail price of $1332, although we have seen XCRs advertised on the Internet discounted by several hundred dollars. The OD green stock is perfectly mated to the receiver and the matte satin TriNyte metal finish was a uniform dark gray that seemed a perfect adjunct to the black "thread" in the stock. The barrel fluting was evenly spaced and beautifully executed. The entire rifle is one of the most esthetically attractive precision tactical rifles we have ever encountered. It is rare that an out of the box factory rifle gets our attention like this new Remington, but when we opened the box, our first reaction was, "Wow!"

As we have noted on numerous occasions, a rifle, no matter how good it is, is the basic component of a total shooting system that incorporates much more than the rifle itself. Because of this we set up every rifle we evaluate as a shooting system that is as close to what precision tactical marksmen might choose for their personal duty weapon. The operative word here is "personal." Most precision tactical marksmen of our acquaintance "tailor" their duty rifle to their tastes and operational requirements and our shooting system consists of the items that we'll expand.

Optics

First was a mounting rail from LaRue Tactical. Our 700 XCR was drilled and tapped, but came without a mount. We prefer a MIL-STD-1913 mount that mates to our LaRue Tactical scope mount and so ordered a MIL-STD 1913 mount from the same source. Our scope was a Leupold Mark IV 6.5-20x50mm with Horus Vision H-25 precision tactical reticle. We also used a Leupold Mark IV 12-40x60mm tactical spotting scope with the H25 reticle. The matching reticles make second shot corrections a breeze. The Leupold scope mated with the Horus Vision reticle should please virtually any precision tactical marksman, as the scope's optics are excellent and the reticle is arguably the most versatile and fastest available.

We also added Optical System Technology's AN/PVS-22 Universal Night Sight (UNS) that is probably the best all around piece of image intensifying (I^2) night vision equipment available because it can be used as a hand held night vision optic or as a small arms sight. The UNS is about half the size and weight of a SIMRAD, but has similar performance. Although the AN/PVS-22 is only slightly larger than an AN/PVS-14, it overshadows the AN/PVS-14's performance in every way. The AN/PVS-22 has absolutely zero "sparkles," "blooms" or lines and when used as a night sight, mounts ahead of the day optic. The advantage to forward mounting is that the day optic can be used in darkness without illumination and unlike night vision optics such as the AN/PVS-14 that must be mounted behind the scope with an adapter clamped to the ocular, eye relief with the AN/PVS-22 is the same regardless of whether or not the night vision device is in use. If the rifle in question does not come with an extended MIL-STD-1913 rail to mount an AN/PVS-22, LaRue's Sniper Total Optical Mounting Package (STOMP) solves the problem by adding a removable rail mount that allows mounting an AN/PVS-22.

The scope and night vision capabilities are essential components of the overall system, but there are several other elements that are necessary. Although most precision tactical marksmen are trained to use MIL-Dots, several active duty Army individuals have told us that in operational conditions, they use laser rangefinders because they are just more accurate and faster on target. Today's laser rangefinders are much more accurate and dependable than earlier versions. Moreover, laser rangefinders like Leupold's 750 yard/meter RX II and 1200 yard/meter RX III rangefinders do much more than just indicate range. These state of the art pocket size rangefinders also calculate true ballistic range when shooting

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on a slope, either up or down. Previously, this required a mathematical calculation, while simple, took time and in a combat situation time is everything. Leupold's RX rangefinders display this critical information instantly, which is especially valuable in operations where slope shooting is required, Northern Afghanistan comes to mind. Special Forces operators of our acquaintance tell us that they use laser rangefinders almost exclusively in this operational area because MIL-Dots just take too much time. In fact, every precision tactical marksman we know uses a laser rangefinder to determine target distance.

Extras

Having gathered the essential tools for evaluating our Remington XCR Tactical, we proceeded to set it up for operations. Once we got the scope mounted, we found the comb of the rifle's stock to be to low for us to obtain proper eye relief, so we went to Brownells for a D&E Scope EZE that raises the comb for a better cheek weld with optics and cushions the recoil from cartridges like the .300 Win Mag. We also ordered one of the company's "Tactical Plus" urethane coated nylon M1907 type slings that feels like quality leather, but is made of Biothane, which is impervious to sweat, water and just about everything else and will not stretch, crack, peel or stiffen in arctic conditions. Finally, we added a Keng's Firearms Versa-Pod. We generally prefer the Versa-Pod to others because it is high quality and can be rotated side to side and then fixed in place by leaning into it. One of the Versa-Pod's best features though, is the ability to instantly change bipod height by simply exchanging one set of legs for another by simply pressing the locking button that retains the legs on the bipod mount.

Range Time

With our XCR set up just as we like it, we headed for the range. On the range, the XCR's performance was a match for its superb appearance. The bolt moves effortlessly back and forth as if it was on ball bearings. Feed was butter smooth. For single shots, the shooter can simply drop a cartridge into the receiver and close the bolt with no more effort than feeding from the magazine. As mentioned, the trigger broke at just over 3 pounds with zero creep or overtravel. Although recoil was "stout" as expected with a rifle chambered in .300 Win Mag, it was manageable and the rifle controllable for quick follow up shots, thanks to the overall design, the efficient recoil pad and the Scope Eze cheek pad. Out of the box, the XCR Tactical rifle was an absolute "tack driver," delivering sub-MOA accuracy at 100 yards. Once the barrel gets broken in with a few hundred rounds through it, accuracy can only improve.

Remington's latest efforts towards providing "out of the box" precision tactical rifles at reasonable prices are truly impressive. This rifle and the previous Remington 700P precision tactical rifle we tested both proved to be as accurate and reliable as custom rifles that cost at least twice the price. The overall fit, finish and feel of our test XCR Tactical was on a par with the best rifles from custom makers. Our sole issue about our test rifle was the comb that forced us to add a cheek pad for proper eye relief. That said, individuals whose physiognomy is different from ours might not have this kind of issue. People are different and there is no "one size fits all" solution.

Final Notes

The bottom line is that based our experience with them, any of Remington's XCR precision tactical rifles are ready for the SWAT sniper team right from the box and we recommend them without reservation.

Specifications: REMINGTON 700 XCR TACTICAL
Caliber: .223, .308, .300 Win Mag

Barrel: 26 inches
OA Length: 45.75 inches
Weight: 8.5 pounds
Stock: Tactical Bell & Carlson in OD Green with black webbing
Sights: None, drilled and tapped
Action: Bolt
Finish: Black TriNyte
Capacity: 5 (.223), 4 (.308), 3 (.300 Win Mag)
Price: $1332

Performance: REMINGTON 700 XCR TACTICAL .300 WIN MAG

Load	Velocity High	Low	Average	ES	SD	Accuracy
Black Hills 190 HPBT	3008	2936	2972	72	27	0.85
Hornady 178 TAP	2844	2822	2832	22	7	0.75
Remington 190 HPBT	2822	2710	2781	112	32	1.00

Bullet weight measured in grains, velocity ES (extreme spread) and SD (standard deviation) in feet per second (fps) by an Oehler 35 Chronograph, and accuracy in inches for two 5-shot groups at 100 yards in 79 degrees Fahrenheit.

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Photo Captions:
1-1A Remington 700 XCR Tactical mounts Leupold MK1V 6.5-2-x50mm with Horus Vision H-25 tactical reticle

2-2A Remington 700 XCR also mounted the AN/PVS-22 night vision optics.

3 Detail of receiver area shows LaRue STOMP tactical mount that can accommodate 30 or 34mm diameter scopes. Mount protects scope while providing capability to mount latest night vision optics for rifles that do not have an extended MIL-STD-1913 receiver rail.

4 Comb of standard stock was too low for author to achieve proper eye relief. Scope EZE polymer cheek piece from Brownells resolved the issue. Once in place, cheek piece is almost impossible to remove, so initial positioning is critical. Standard Remington recoil pad eased .300 Win Mag's stout recoil.

5-5D SWAT sharpshooter Howard send brass flying and lead downrange as he puts Remington 700 XCR through its paces. Rifle was well under MOA accurate right from the box using ammo from three major manufacturers and without break in.

6 Business end of Remington 700 XCR Tactical shows match muzzle crown and well executed barrel fluting that enhances stiffness and heat dissipation. (draw 2 arrows)

7 Best group came with Hornady TAP 178gr ammunition, although XCR delivered excellent accuracy with other brands of ammo.