

CUSTOM 338 WIN MAG

& Vixen 6-24 x 58 Scope

By Bob Gough



Custom 338 Winchester Magnum rifle and Vixen 6-24 x 58 illuminated Mil Dot Reticle. An excellent choice for precision hunting and F Class competition.

I received the Custom 338 and Vixen 6-24 x 58 scope for review in December 2014. For many hunters, a custom rifle, built to exacting standards using a combination of handcrafted stock, reliable action, match grade barrel, and topped with a matched scope that is perfectly suited to the calibre and purpose of the rifle, is a very desirable item.

The review rifle is very much as described. It is all business and has excellent heft and feel. The laminated timber thumbhole stock is well matched to the 660 cm (26 inch) Tobler stainless competition grade barrel. The Winchester Model 70 action, long respected for reliability

and function will ensure trouble free operation; and the Vixen 6-24 x 58 scope with Illuminated Mil Dot reticle, has the magnification, clarity and precision to allow the hunter to employ the rifle well out to the maximum ethical range of the calibre.

I do have a bias for heavy rifles, as I believe they are an aid to precision shooting. The Custom 338 is a hefty and very well balanced rifle that is built for precision hunting. The rifle weighs 5kg (11lb) loaded and with scope, mounts and Safari Sling. The point of balance with the Vixen scope mounted in Warne bases and rings, is just forward of the front action screw, which I found very comfortable to carry in the field. I

fired over 200 rounds from this rifle in practice and load development. I shot it over a bench rest and using a sling, sandbags, a forend mounted bipod, crossed shooting sticks and Bog Pod Tripod to simulate field firing conditions.

I used this rifle with and without the Safari Sling for over 40 hours deer hunting in the hills, where I found it comfortable to carry on the stalk into my hide. I found the rifle very comfortable to operate in all field positions, with the weight keeping the rifle very steady and allowing me to keep the crosshairs on target and watch for bullet strike.

The Winchester Model 70 action

The Winchester Model 70 controlled feed action has long been favoured for use in custom rifles because of its strength, reliability and smooth cycling. This particular action is of full length stainless steel and the rifle is chambered for 338 Winchester Magnum, a very popular big game calibre for deer and general hunting in Africa, the US and Australia. The internal magazine is of generous length, and allowed me to extend the Cartridge Overall Length (COAL) and seat bullets closer to the rifling lands to increase accuracy. Magazine capacity is three rounds and the rifle is loaded from the top. The hinged floor plate releases easily to allow safe unloading.

The action is drilled and tapped for scope mounting, and is currently fitted with Warne two piece mounts. There are a number of mounting options, and a hunter who wanted to shoot this rifle in "F" Class competition or for precision shooting at ranges past 400m could also fit a 20MOA Piccaninny Rail to allow greater elevation adjustment with a standard scope of 25 or 30mm tube diameter.

The underside of the action is flat and the action is epoxy bedded at the rear and front screws, and for the first section of the barrel chamber. The remainder of the barrel is free floated to allow for consistent bedding pressure and prevent torsion or bending the action.



THE ACTION AREA OF THE STOCK SHOWING BEDDING.

Feeding

I fired over 200 rounds during load development, testing and practice and found the action to be reliable and very smooth. The controlled feed action eliminates the possibility of a double feed or a jam and is simply a joy to shoot.

Extraction & Ejection

The Winchester Model 70 action uses a post type manual ejection system; and the ejection and loading port gives good clearance. The extractor claw is sturdy and reliable and the firer can extract cases by hand if required. As this rifle will be used a lot in practice this is a very useful feature.

Safety Catch

The 3 position safety catch is located on the right side of the bolt head, directly above the trigger, and allows for the bolt to be locked down and for the rifle to be unloaded while in the "Safe" position.

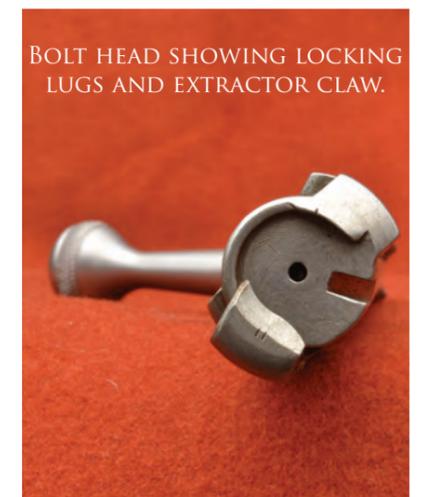
The safety catch surface is notched to provide a non slip surface and is easily and quietly operated with the trigger finger or thumb - forward to "fire" and rearward to "safe". The safety detents are very positive, so it would be difficult to bump from safe to fire.

Trigger, Magazine Floor Plate & Trigger Guard

The trigger is fully adjustable and breaks like glass at 1.36kg (3lb) with no creep or drag, having obviously been finely tuned by a Gunsmith. It is perfect for a precision hunting rifle. The floor plate and trigger guard are made of stainless steel and are bead blasted to reduce glare. As noted, the magazine holds three 338 Win. Mag. cartridges plus a fourth in the chamber if desired. The floor plate release catch is located outside front of the trigger guard. It functions well and the magazine follower relocates easily when the rifle is unloaded via the floor plate, making unloading easy in the dark.

The Bolt

The bolt has two locking lugs and bolt operation is smooth without binding. The rear of the firing pin housing protrudes from the rear of the bolt to act as a cocking indicator and the Mauser style claw extractor is located on the right side of the bolt. The ejector post slot is located at the seven o'clock position on the bolt face to eject cases "up and out", well clear of the action. No tools are required to disassemble the bolt for cleaning or to ease spring pressure if you store the rifle with the bolt removed.



BOLT HEAD SHOWING LOCKING LUGS AND EXTRACTOR CLAW.

The Barrel

My association with Tobler barrels (RDT Products) dates back to 1994, when several people I knew were using Tobler barrels on hunting and full bore target rifles, and they all had two things in common – the rifles shot very well and the makers, Robert and Kathy Tobler, were very easy to deal with.

In 1995, while I was working as the Australian Defence Forces National Fleet Manager for Small Arms, I was able to convince Defence to re-barrel our fleet of Parker Hale 7.62mm sniper rifles with Tobler match barrels. Feedback I had was that our snipers were very impressed with these barrels.

The button rifled stainless steel barrel is 660 mm (26 inches) long and of a number 5 profile. The barrel is a 1:10 inch twist, that the maker advises will stabilise traditional hunting and match projectiles up to 280gn. The long barrel allows the use of slow burning propellants, that in turn allow the hunter to maximise case capacity and velocity for optimal cartridge performance.

I found that the barrel length and profile balanced the rifle perfectly for precision shooting, and I didn't really notice the longer barrel while moving to my shooting location.

The Stock

The thumbhole stock is made of laminated timber and is perfectly fitted, giving the rifle an excellent heft and feel.

The rifle is designed for right handed firers, and the wrist angle of the stock is sharper than that of a standard stock, and more naturally aligns the wrist and hand for prone shooting, either from a bench rest, forend mounted bipod, shooting sticks or sand bags.



CLOSE-UP OF MODEL 70 ACTION AND VIXEN 6-24X58 MIL DOT SCOPE

The Vixen 6-24 x 58 with illuminated red dot reticle comes with low hunting style turrets (shown) and also with longer Vernier type range turrets that are easy to fit using an Allen Key. This gives you plenty of flexibility in how you use this scope. The diopter adjustment ring. I check it regularly as a matter of course, but as the diopter adjustment is quite firm it didn't move out of focus during the review. The illuminated reticle has 11 settings to suit available light.

The forend is flat, and 75mm (3 inches) wide. This gives a very stable platform when firing from a bench rest or sandbags. I found the laminated stock pleasing to look at, and it certainly catches the eye. The length of pull is 350mm (13.75 in) and would fit most hunters. The stock design, rubber recoil pad, weight and balance of the rifle minimised felt recoil in .338 Win Mag calibre; and even with the high mounts required of the 58mm Objective lens on the scope, the cheek piece allowed for good eye alignment.

The Vixen 6-24 x 58 with illuminated reticle

The Vixen 6-24 x 58 is waterproof (submersible) reliable, robust and in common with all of the Vixen scopes I have used, is excellent quality and great value for money.

The Eyepiece

The scope has a 40mm eyepiece. The diopter adjustment ranges from +1 to -1 diopter, which is ample, and focussing the scope to suit your eye is done by rotating the diopter ring on the eyepiece (the ring is simple to focus and retains position). The magnification numbers are gold in colour, with the 10X number in red (10X is the correct magnification for subtention with the Mil Dot reticle).

The large rib on the zoom ring gives good grip and is aligned at 6 magnification. This allows you to set the rib in low light by moving it all the way to the left at 6X for stalking, then to set the magnification at 10 by moving the rib to the 12 o'clock, or zoom it all the way to the right to 24X for the best view of a target.

Illuminated Mil Dot Reticle

The Vixen 6-24 x 58 uses Vixen's Mil Dot reticle, the cross wires and Mil Dots are clear and easy to see in a wide range of vegetation types. The Mil Dots subtend to 10cm at 100m at 10X magnification, and when the range and wind speed are known, allow the firer to aim off with precision.

With 11 brightness settings, the illuminated reticle is an excellent aid to low light shooting as it naturally draws the eye to the centre of the scope and is very usable in bush hunting sambar in low light at ranges out to 200m. I found the reticle easy to adjust to suit the available light conditions, such as pre dawn and late evening. The scope uses a commonly available CR32 battery, and while battery operating time is not stated, I have used this scope weekly for 6 months and have not had to replace a battery.

Eye relief, field of view and tech detail

The 6-24 x 58 has a 30mm tube, is 357mm long and weighs 800g. The 58mm objective provides high light transmission and the image is crisp and clear from edge to edge. The scope has 90mm (3 1/2 in) eye relief (all Vixen scopes have generous eye relief); and Field of View at 100m is 5.4m at 6X through to 1.4m at 24X.

Side focus, elevation and windage increments

Elevation and windage adjustment on the Vixen 6-24 x 58 are in 1/8 MOA clicks and are very precise. Total reticle adjustment for windage and elevation is plus or minus 15MOA.

This allows ample elevation and windage adjustment at ranges out to 500m plus. So in simple terms, the calibre will run out of killing energy for a deer sized target well before the scope runs out of adjustment. The side focus drum located on the left of the scope is firm to rotate, so will not be easily rubbed off setting.

Range and field turrets

The scope is supplied with two sets of turrets; a long adjustment Vernier type that I would use on the range, and a short turret that I would use when aiming off using mil dots. I zeroed the scope at 100m, then, loaded the known muzzle velocity data of my 210gn Scirocco and 250gn Sierra hand loads into two commonly available Ballistic Applications (apps) (Strelok and Sniper Calc) to obtain estimated elevation settings for 200, 300, 400 and 500m. I cross checked the ballistic app figures on the rifle and found them to be a good starting point to get me on paper.

Return to zero test, Point of Impact test at varying magnification and grouping. See Target 1 below.

During testing I was able to compare the Vixen 6-24 x 58 with other high end scopes. Everyone who looked through the Vixen noted how clear and sharp the image was.

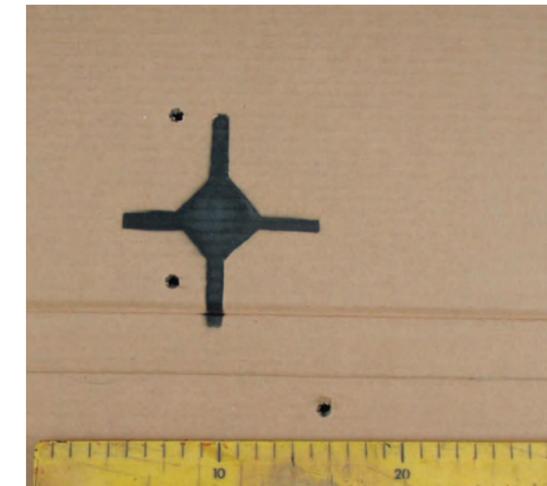
For the "return to zero" test I moved the scope 40 clicks for each shot. As the scope returned to zero. To test for POI shift at varying magnifications, I fired a shot at 6X, 10X and 24X, and again there was no significant change in POI between magnifications.

Target 2 shows a 300m 3 shot group with an extreme spread of 200mm (80 x 170mm). This group was fired in a gusty 20km/hr wind at full value left to right. After measuring the range and reading the wind I calculated the windage and elevation, set to 10X and aimed off using the mil dots.

The shot at bottom left shot was a sighter, and I would say that I misjudged the 3rd shot at bottom right and blew the group out to 170mm. These things happen at longer ranges, and the science of precision hunting includes consideration of such variables.

All three shots would have killed a deer standing broadside at 300m. For precision shooting at longer ranges, it always pays to test groups at 300m as this distance is closer to the mid-point of the trajectory, and some bullet designs are more stable at 300m. This group told me that the rifle and hand load are capable of 1/2 to 3/4 MOA - "Aim small, miss small".

Target 2



Target 1



Conclusion

I have owned and very much enjoyed using several precision rifles and am happy to say the Custom 338 Win Mag and Vixen 6-24 x 58 outfit is one of the best I have used. It looks good, handles very well and with the correct bullet and tailored hand load, is to me, everything a precision hunting rifle should be. This outfit will be very suitable for hunting sambar "Face to Face", for "F" Class competition and for precision shooting.



Above: Developing accurate load for any rifle required a lot of time reloading and on the range (time spent in practice is seldom wasted!) so "check and test" - always.

KEY FEATURES

- Winchester M70 Stainless Steel Controlled Feed Action.
- Barrel - 26 inch # 5 profile, Match grade stainless steel made by Tobler Barrels, NSW.
- Custom made laminated thumb hole stock.
- One inch Pachmayr Decelerator Recoil Pad.
- Uncle Mike style sling swivels inletted into the stock.
- Scope and Warne rings and bases are new.
- Tobler Match grade barrel, M70 action and laminated stock are in excellent condition.

LOAD DEVELOPMENT FOR THE 338 WIN MAG

Accuracy Beats Velocity

I load for accuracy rather than velocity, as to me, marksmanship is about repeatability and reducing variation. My usual method of load development is to load at 10% less than the recommended starting load and to test fire 3 shot groups, increasing the charge by half (0.5) a grain at a time, until pressure signs, such as flattened primers start to show, then, if I am satisfied with the accuracy I will use the load that gave the best group on the day, or if not satisfied, I may try loads a quarter of a grain either side of the load that produced the best group on the day to find the most accurate load for that particular rifle.

I have used this method for over 40 years, and always found that the most accurate load was well below the fastest load.

The 26 inch barrel on the Custom 338 allowed the use of slow burning propellants, that in turn allowed me to maximise case capacity for optimal uniformity. I tried a range of commonly available rifle propellants in this rifle, and was able to work up a 2750fps load using the excellent Swift Scirocco 210gn projectile, and a 2600fps load using Sierra 250gn Game King projectiles, both of which can deliver more than sufficient energy at 400 metres to kill sambar, red or fallow deer. I used Federal 210 Gold Medal Match Primers for both loads. I tried very hard to work up an accurate load over 2800fps to flatten out the trajectories downrange, but ended up using slower loads that were more accurate, and adjusting my elevation and windage as required.

Load development for 210gn Swift Scirocco.

The Scirocco range of projectiles from the Swift Bullet Company are known for accuracy and reliable expansion from the muzzle through to velocities as low as 1700fps. For the 210gn Scirocco projectile I tried AR2208, AR2209, AR2213SC and Reloader 22. AR2208 would only generate 2570fps, so I moved to AR2209 and got to 2750fps. AR2213SC yielded 2750fps, Reloader 22 gave 2890fps. The most accurate load was with AR 2209 and AR2213SC, both of which shot under MOA.

Load development for 250gn Sierra Game King.

I have used Sierra Game King projectiles in my rifles for many years. They are inexpensive, extremely accurate, and perform very well on deer at a range of velocities. In fact, one of the best groups I ever fired (3 shots cutting and measuring 11mm at 100m) was with a .308 using 150gn Sierra Game King projectiles, and a good mate has had a number of excellent one shot broadside kills on sambar with this same projectile out to 150m. With the 250gn Sierra Game King projectiles I tried AR2209 for 2680fps and AR2213SC and Reloader 22 for 2600 and 2776fps respectively. Both AR2209 and AR 2213SC delivered the most accurate loads of MOA.

FOR SALE

THIS RIFLE IS FOR SALE FOR \$3,490
WARNE RINGS AND BASES (RRP \$200) AND VIXEN LVF 6-24X58 ILLUMINATED SCOPE WITH MIL DOT
RETICLE (RRP \$1397) ARE INCLUDED.

- The buyer shall be responsible for all costs associated with the transfer of ownership and shipping of the rifle.
 - The transfer will be performed using a licensed gun dealer in Victoria who will forward the rifle to a licenced gun dealer nominated by the buyer.
- For further enquiries re purchasing rifle contact: Errol Mason 03 51568278; email errolmason@sambardeer.com