

This topic can be found at:
<https://forums accuratereloading.com/eve/forums/a/tpc/f/4711043/m/2861098911>

michael458

05 November 2011, 16:05

Terminal Bullet Performance

I HATE SMALL BORE RIFLES & CARTRIDGES
I DESPISE SMALL BORE RIFLES & CARTRIDGES

FINICKY BASTARDS

I HATE THEM!

I LOATH THEM!

I detest, abhor, Them!

Get the drift?

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

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I Bin Therbefor

05 November 2011, 16:19

quote:

Originally posted by michael458:
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I DESPISE SMALL BORE RIFLES & CARTRIDGES

FINICKY BASTARDS

I HATE THEM!

I LOATH THEM!

I detest, abhor, Them!

Get the drift?

Michael

I share you opinion. Even before this site came into being, I never liked anything smaller than a 350.

However, IMO, the work on bullet design and construction done on this site has enabled the "cure" of many of the ills of the small bore rifles and small bore cartridges. Witness, the CEB line of Raptors in small calibers shot with proper twist.

Still don't like 'um.

Maybe if we ignore them, they'll go away. But I doubt it. 🙄

416Tanzan

05 November 2011, 23:24

quote:

Originally posted by capoward:

quote:
And my thinking is that the best calibre for buffalo is the biggest/most-powerful calibre that one can put their hands on at any one time; with which one can shoot multiple accurate shots under extremely dangerous conditions.

I agree with the caveat added.

We're on the same page. I'm good with the caveat, if fact, I assume it. A calibre is no good if the rifle/shooter doesn't deliver the projectile on target.

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

capoward

05 November 2011, 23:35

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Originally posted by 416Tanzan:

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I agree with the caveat added.

We're on the same page. I'm good with the caveat, if fact, I assume it. A calibre is no good if the rifle/shooter doesn't deliver the projectile on target.

 As well do I.

Jim 

"Life's hard; it's harder if you're stupid"
John Wayne

416Tanzan

05 November 2011, 23:40

While on the topic of reliable shooting of heavy calibres, my biggest concern is not recoil per se, but eye-relief. I like scopes and I don't want to join the 'magnum eyebrow club'. A friend of my son's in DAR just went out bowhunting but was handed a 375 for some camp meat. He returned with a nasty gash over the eye. Ouch. And only a little 375, which brings me to my post.

I just received a firsttime, Nikon 1.6-5 Slughunter scope. The eyerelief was truly 5.0+" at all magnifications. Simply wonderful. It takes away concern about slightly inclined head position when shooting under pressure. The clarity of the scope is very good, rated at 92% light transmission (against Nikon's Prostaff at 90% and Monarch at 95%). As a 'Slughunter' design, it was designed for 500+ grain loads, though quite a bit slower in velocity than what I plan to put it through. If my 500 AccRel arrives in time I may be able to shake this scope around a bit in December before travelling from US.

In any case, for those who use scopes on 40-50 calibre certerfire rifles, 5.0" eyerelief can be quite welcome. I've never hunted with such luxury in safety and I'm looking forward to it.

PS: The mounting length is relatively short, around 4.76", but this has already been solved with a rear-extended front ring.

+ + + + +

"A well-rounded hunting battery might include:
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Conserving creation, hunting the harvest.

capoward

06 November 2011, 03:41

I've picked up two Minox Z5 1.5-8x32 scopes - they're approximately same size and weight as Leupold VXII 2-7x32 scopes - as well as a Nikon Monarch African 1-4x20 scope as a backup for use with my .423 and .500 caliber rifles. The Minox ZA5s and Nikon African have a 4.0+ eye relief so I figure with proper LOP that I'll not have to worry about a scope ring eye gash; just waiting for my rifles to be completed to give them a go.

That's very interesting regarding your use of a Nikon slug gun scope for your rifle. I believe that Michael is using some of the Leupold slug gun scopes on his .50 B&M as it seems to be over harsh on regular scopes. I'm looking forward to how well the Nikon holds up to your 500 AccRel - perhaps the trend for lighter weight BBs will be the use of long eye relief slug gun scopes.

Jim 

"Life's hard; it's harder if you're stupid"

John Wayne

michael458

06 November 2011, 14:44

I have been trying all sorts of scopes. Yes, I picked up 3 of the shotgun Leupolds. They are doing ok, but just not quite where I want them to be. On any of the 50s, 50 B&M especially, followed by the little Super Short, not so much the 500 MDM???, the VX3 1.5X5 just is not holding up, the old Vari X3 does better, but it takes a beating too. So far the VX2 1X4s are doing ok except for something coming loose inside, like black flakes? Then they disappear??? Have one with a slight black spot in the center! Hmmmmm.....

The 50 B&M is very rough on scopes, far rougher than anything I have ever seen in my days. Makes a 458 Lott look kind to scopes!

Never busted one on 458 B&M or others, but that 50 is bad on them. Recoil Impulse? I suppose.

I have one of the African Nikons. It's been on a 458 B&M for some time, and I know have it on one of the 500 MDMs and so far it is doing very good. I don't like the large eye piece in the rear, larger knobs for adjustments, but I like very much the way it works, and so far it's doing a good job. I wish it came with something besides that German #4 reticle. Something normal!

After seeing Tanz post yesterday went over to Optics Planet, they have that Nikon slug scope over there on sale for \$209.00. It looks pretty spiffy. I almost ordered one to see! Probably will today! Gotta find something?

Michael

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michael458

06 November 2011, 14:47

Jim

While I had your Minox here it got a lot of really good comments from the guys that came through. It was clear, nice no downsides. I thought it a little long for the 50 B&Ms, but never even got time to work with it. Sorry about that too!

M

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michael458

06 November 2011, 15:24

Most of you know it's been a busy few days around here! Yep, I get very frustrated with small bores, I think they are finicky bitches, and I don't like finicky. I don't have time for finicky! But here I am regardless, dealing with Finicky!

Friday morning started off in anticipation of having the same sort of day as Thursday with the .224 40 gr ESP Raptor. Only Friday I was really looking forward to the 55 ESP Raptor, and what it could do! I was sure to see a big increase in everything! Without even thinking, I loaded up carefully, both the 223 Remington, and the 223 WSSM. It was getting late before I got to the range with everything, around 10 am or so. Everything ready, loaded some extra to get POI at 50.

Took the big S&W 223 Rem out, and this thing shoots far better than I can. I don't shoot small bores too good, I don't have the patience with them I once had, big bores have spoiled me. But this thing is a one hole deal at 50 yds with near anything. The 55 ESP Raptor, I could not get less than 2 inches at 50 yards???? Tipped, No Tip, Solid, nothing? What the crap? It's a 1:9 twist, I know this. I also know it shot the 62 BBW#13 and the 55 BBW#13 NonCon great? Hmmm? OK, measured, and the 55 ESP Raptor is longer than the 55 or 62 BBW#13s--Without a tip! Add a tip, way long. Surely this is not much difference?

223 WSSM faired not one bit better, 2-3 inches, 50 yds. Crap, I know the 55 BBBW#13 NonCon shoots like crazy in this gun, along with my buddies rifle which is out slaying deer near every weekend!


Finally most of the day is gone to hell, I get worried about my 62 and 55 BBW#13s I have. So I load them up and shoot them in 223 to make sure?

OK great, things came together with the BBW#13s. Now I don't shoot too well these things, so if something is out of whack, and there is, that is MM, not the bullet, not the rifle, but MM doing something wrong.

Here is how the S&W shoots the BBW#13s, NonCon, Tipped or solids.

S&W AR Target Rifle

62 BBW#13 Solid
55 BBW#13 NonCon
X3 Tipped and No Tip

62 Solid
 MM



X7

50 Yards

X8

photobucket

So I was not completely nuts here! The rifle will shoot, if I do my part.

Now being a curious sort, I thought I had played with the .224 BBW#13s in a Rem 700 I have, yes shame on me, I have had this rifle 20-25 yrs or so. So it is from long ago. So long, I don't even remember. As I understand, they had 1:12 twist barrels, and the 62 and 55 BBW#13s are stable at 50 yds, UNTIL YOU ADD THE TIP!



Just adding the tip, sideways at 50. Amazing such a tiny thing makes that much difference! Things like this do not worry a Big Bore rifle!

Jest of the matter is this--- .224 55 gr ESP Raptor is not stable, it's too long. Mark this one off the list. I think maybe 50 grs??? I don't know? I leave that to the experts in twist rates, lengths, small bores or just some sort of small bore, rat bullet F***ing Magic. But we will try again with something. If not a Raptor, then maybe a 50 gr BBW#13 NonCon! YES! Along with a 40 Raptor, good combo maybe, if a 50 Raptor don't work? We see.

Michael

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michael458

06 November 2011, 15:48

Being somewhat of a tenacious sort of chap, I was not willing to give up on Friday, and felt the need to get something accomplished! My entire day had been a total waste of time thus far, I had nothing to show for it!

Determined to not give up, I cracked out the little Winchester M70 25 WSSM Ultimate. Dusted it off. It had not been messed with since 2007. I like this little gun, weighs in at a mere 6.5-7 lbs with a VX2 3X9 on it. I toted this rifle up and down one mountain after another in Mongolia of that year, it was a pleasure to tote and work with. Accurate as well. So it was my choice to test the 80 gr ESP Raptor in .257.

I had no 80 gr data, so I just used the same load I had used for the 100 Barnes TSX back then that worked so well. 46/IMR 4350.

Being a bit wiser since my mess with the 223s, I loaded up just a few, tipped, no tip, and solids and gave them a try. No sweat, accurate, all in the same POI at 50, good working velocity, so I proceeded to load up and do the tests! I was already set up to do the tests with the .224 55 Raptor, so no extra work there, just load and get started. This one went pretty easy!



First Test, 80 ESP Raptor, No Talon Tip added; Excellent results. Like the .224 40 Raptor, this one also sheared in the same manner, blades performed closer to center, lot's of trauma for a rat bullet.





Next With Talon Tip added;

This performed exactly like the other Raptors, blades shearing sooner, blades moving quickly away from center. Lot's of damage to test medium.

25 WSSM

11/342011

Twist Rate ??

80 Gr ESP Raptor

NonCon Talon Tip

Muzzle Velocity 3100 fps

48 yd Impact Velocity 2941 fps

Shear at 1.5 inches, Blades typical

Star Pattern 3"-7 Inches

Retained Weight 52 grs

X4--15 Inches



3" 80 Raptor
25 WSSM
With Tip



photobucket

And now the 80 ESP Raptor, Solid!



About time things went as expected. Stability good, no issues with this, performance excellent and consistent as it should be. I see no issues with this one at all. It will become standard as my 25 WSSM bullet in the future. Not that I need many of those! HEH HEH..... Rat calibers! Gees!

For some comparison, back in 2007 I did a test of some available .257 bullets I had and was using at the time, here is how they stacked up.

25 WSSM Terminal Performance---WET PRINT/MAG MIX-Dense
5/25/07 100 Remington 2971 fps 50 9" 76
5/25/07 100 Sierra 3073 fps 50 8" 54
5/25/07 100 Swift A 2973 fps 50 14" 98
5/25/07 100 Barnes X 2976 fps 50 15" 100
5/25/07 115 NoslerPar 2871 fps 50 14" 85
5/25/07 117 Hornady 2837 fps 50 12" 61

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michael458

06 November 2011, 16:29

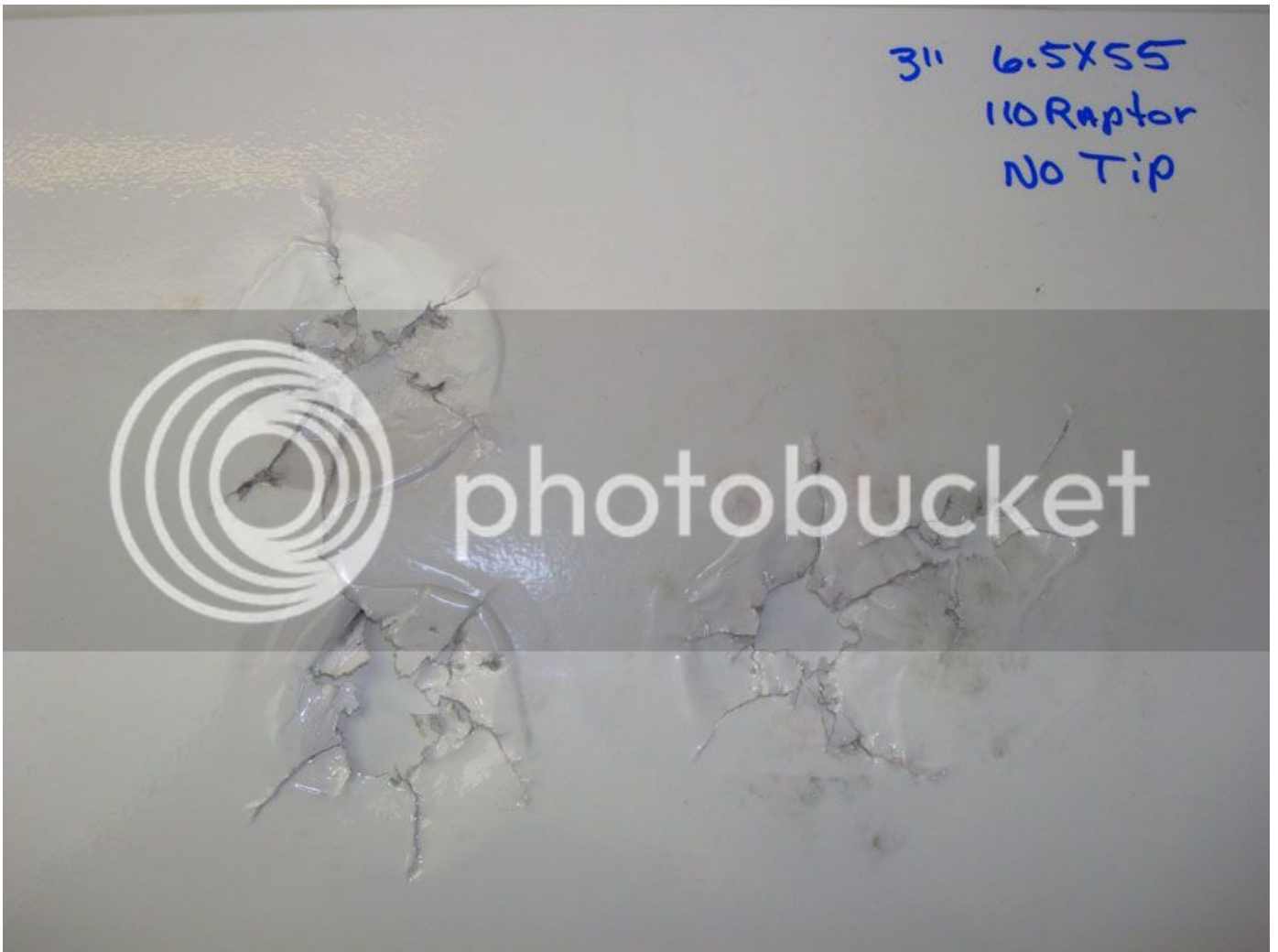
Saturday! Well, after the .224 55 ESP Raptor, you would think I would learn? Nope, not quite yet! It's sinking in now, but I started Saturday morning with high hopes of finishing the .264 110 ESP Raptor by 10 am! Stared at 7 am shooting one of the 6.5 WSMs for POI and accuracy, trying to get a load! Figured it would be easy, like the 25 WSM. Not! In fact, I tried 5 different loads, X2 each and got zip, around 2-3 inches at 50? OK, hell with that, go to the 6.5 X 55, my wife's little Win M70 FW. Still not good, but I was determined to test, so willing to take 1.5-2 inches with it and go. Hopefully NOT shooting the down range chronograph in the process!



First loaded the NonCon end, NO TIP.

Good results, same as the other Raptors, blades shear at 2", stay closer to center, nice wound channel, Blah Blah Blah.....





Next, With Talon Tip added!

Now, I started seeing some stability issues. Only fired the first two and quit with it. Could not count on POI with reliability, and the holes were slightly oblong! I did not even bother recording data, just got the bullets to see if they did shear, they did.



Now the 110 ESP Raptor Solid---

Speaks for itself I suppose! This was dead straight penetration. Mark it down to the incredibly perfect 67% meplat BBW#13 Nose profile!



I was not ready to give up on some higher velocity with the 6.5 WSM. So I dragged out the Win M70 FW rifle to see if it would do anything better than the heavy gun. It did, some better, so I gave it a go as well.



110 ESP Raptor--No Tip!

Same story as the others.

6.5 WSM
11/5/2011
Twist Rate ??
110 Gr ESP Raptor
NonCon No Tip
Muzzle Velocity 3181 fps
48 yd Impact Velocity 2866 fps
Shear at 2 inches Blades Closer to
Center 4-8 Inches
Retained Weight 81 grs
X2--17 Inches
X2--18 Inches



Now, with the tip added more instability is noted. It is slight, but it is there. Take notice in particular to the REDUCED penetration! Then, at the Witness card showing shear is irregular. The slight instability of this bullet really shows up on this test!

6.5 WSM
11/5/2011
Twist Rate ??
110 Gr ESP Raptor
Talon Tip
Muzzle Velocity 3258 fps
48 yd Impact Velocity 3004 fps
Inconsistent shear
Not Quite Stable
Retained Weight 81 grs
X1--12 Inches
X3--13 Inches



#3 6.5WSM
110Raptor
with Tip



photobucket

Raptor Solid--Typical 67% BBW#13 Nose Profile, success, even with a bullet that is not 100% stable.



Conclusions .264 110 ESP Raptor?

It's just not quite stable, getting very close, but not there. I think we will look at something like a 100 gr .264 Raptor, or whatever the experts think on this matter, which is CEB and Sam Rose! Not me. I am the terminal guy, other things like stability is out of my area! I am just stating an uneducated opinion that is mine alone. I leave final determinations on rat caliber stability up to those who know far more than I.

As for the terminals, I have no doubt at all, ALL of the Raptors are going to perform to the extreme for terminals. Get them stable, it's done and over. Seems the light weight Raptors, light for caliber, perform with the heaviest of caliber conventional expanding bullets, and in my opinion cause far greater trauma to target than any of the conventionals.

I have a particular interest in .264 rat caliber, the 6.5 X55 is my wife's favorite, and her caliber/cartridge/rifle combination of choice. She is not scared by the noise or recoil. This led me to play with 6.5 WSM some, and my boys took it to Africa in 2008 with a 120 Barnes TSX where it showed off in big ways! Knock'em in the dirt like a big bore does! I was amazed at it's performance. Now, if we can add a Raptor to the mix, crap, this rat bore will be even more enhanced than it is now!

I have also done some work in 6.5 in other bullets, here is how they stack up.

6.5 WSM Terminal Performance----Wet Print Magazine Mix

11/10/08 120 Barnes X 3299 fps 3202 fps 50yds 16 Inches 120 grs

- 120 Rem 2500 fps 50 14" 81
- 120 Swift A 2504 fps 50 16" 119
- 125 NosPart 2505 fps 50 15" 81-101
- 129 Hornady 2540 fps 50 ---- ----
- 130 BarX 2520 fps 50 18" 130
- 140 Swift A 2537 fps 50 18" 140
- 140 Berger 2519 fps 7 Inches 0

Michael

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michael458

06 November 2011, 17:01

Holy Crap! I am for the time being, out of the rat calibers! Moving to mediums! At least one medium right now.

Next test will be the .338 225 ESP Raptor. I am HAPPY to get there too. I am quite sure it won't be as finicky as the rat calibers are. But I approach with caution, regardless. I will be testing in 338 WSM and in the mighty 338 RUM. Both of course, Winchester M70s.

Sam is out of town shooting pigs and deer this week. I think he is in Texas right now. He won't be back until Thursday, and I am sure he has lot's to catch up on. In the meantime I will be sending Sam ALL of the .277s, .284s, and .375s, as I have nothing to test those in anyway. Soon as he gets a chance he will be working with those Raptors, and will bring them here for terminals, if they are stable. If not stable, no need to worry with terminals.

Same time, Dan, and all of CEB are busy testing for stability, loads, BC, accuracy and things like that with all the known Raptors at this time. In fact, they may find some things while they are doing there thing too! Ya see, this is why you test things first before jumping head long into sending bullets out. Gotta know they are going to work. I expected terminals to be excellent, and they are. Stability, never even entered my mind! As that is not my area. I am learning too!

Trends are showing up already, as we thought, even light for caliber Raptors are out performing heavy for caliber conventionals. We saw all of this with the big bores and BBW#13 NonCons and Solids. Well, I would expect nothing different from a Raptor, as both ends are BBW#13s! So.....

I have more interest in mediuam--338, 358, 9.3 (YIPPIE) and not much interest, 375. I will be using the 9.3 Raptor exclusively in the 9.3 B&M, if it performs like I think it's going to, I suspect I am right on that count. Then moving to 416, 458, 474, 500, and 510 Raptors! Big interest in all of those of course!

Testing the 338 Raptor early this coming week, probably Tuesday. Taking a break from it today. Actual catching up with real work tomorrow, maybe loading 338s tomorrow and testing stability a time or two, testing Tuesday! That's the plan.

Then I go to work on 475 B&M PT's, once done, moving to terminals with the various new .474 caliber bullets from CEB and North Fork!

Michael

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boom stick

06 November 2011, 20:44

Ok so the smaller mice and rat bores will be shortened to be stable with the tip. We want them to be accurate, reliable and the deadliest bullets on the market. Still holding up is the light for caliber Raptor bullets perform amazingly well compared to the conventional and heavy weight bullets. Maybe a 90 grain 6.5, 100 grain 270 and 110 grain 7mm in the smaller Raptors. Basically a 10 grain jump for every 10 thou diameter. That should make it perform like the 130 grain 308. It's good to get the wiggles out in testing. We know the potential once the bullet weights are figured out. As always a huge thank you to Michael for testing and persevering.

577 BME 3"500 KILL ALL 358 GREMLIN 404-375

we band of 45-70ers (Founder)
Single Shot Shooters Society S.S.S.S. (Founder)

Hog Killer

06 November 2011, 20:46

Michael, great report!

The 55 gr. .224" Raptors, did teach you something, that they are unstable and too much of a good thing.

With the great performance of the 40gr Raptors, is there reallt a need for a heavier bullet in that caliber? If so, then 48-50gr, tops.

On the .264 cal. 119gr buyllets, they do look awfully long, and have proven to be getting unstable. So maybe a drop to 95gr would be a good weight. Going light for caliber in the "rat" bullets, should keep them all seable.

After all, the light weight #13s are out performing "standard bullets"(wt/c-n-c) bullets.

Keith

IGNORE YOUR RIGHTS AND THEY'LL GO AWAY!!!

We Band of Bubbas & STC Hunting Club, The Whomper Club

Phatman

06 November 2011, 23:02

I'm glad my CZ550's (6.5x55 and 9.3x62) have all got fast twist rifling. These new bullets should work just fine.

Cheers, John

Give me COFFEE and nobody gets hurt

416Tanzan

07 November 2011, 01:05

quote:

Originally posted by Phatman:
I'm glad my CZ550's (6.5x55 and 9.3x62) have all got fast twist rifling. These new bullets should work just fine.

Cheers, John

I ordered a 1 in 12" 500AccRel instead of the 'recommended' 15" used in long 50BMG rifles just to take advantage of the raptor. When hunting africa, stability is more important than retained incline (attack angle) into the wind at 1000 yards. I don't need my noses to tip down on the downward side of the arc if I'm only hunting out to 300 yards, yea 400 absolute tops.

+ + + + +

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M

That's no problem Michael - right now both 1.5-8x32 are with my gunsmith waiting to be fitted to my two commercial FN M98s. Hopefully early 2012 I'll find out how they work.


Jim 
"Life's hard; it's harder if you're stupid"
John Wayne

capoward

07 November 2011, 01:46

Michael,
For the 55gr .224 and 110gr .264 ESP Raptors you need to think very fast twist rate... <7.5" with .224 caliber and <8.0" in .264 caliber. You need to borrow your buds old 6.5 military rifle to retest the 110gr ESP with and I believe you'll be surprised at the difference in result.

Tan,
You should have gone with the 10" twist rate; wouldn't hurt accuracy but definately helps with within-mass terminal stability.

Jim 
"Life's hard; it's harder if you're stupid"
John Wayne

416Tanzan

07 November 2011, 02:55

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Tan,
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Jim 

Yes, Jim, I considered 10", but my calculations already put 15" as stable in 2.4" bullets, not to mention 12" twist, which could handle 2.8" bullets. Big bores tend to be quite stable for bullet length. 2" long bullets in 12" twist have a 2.9 stability factor, far and above anything considered necessary. I think that anything under 15" twist will be great with the Raptors. The main limitation in these big bores will be what will fit in the magazines and then we can single load on top.

Congratulations, by the way, on the Minox scopes. If I had to do it over and had the money I would put them on our 416s in Tanzania. 1.5" beats 2.0" at the lower magnification and the eyerelief of 4.0" beats 3.8" at the high magnification of 8. There is also a rebate going on at the moment for Minox. It's quite tempting, but I'm committed to getting this 500AccRel ready and huntable, and at as low a cost as possible for plain functionality. I am sure that you will enjoy the Minox. The reviews are all superb.

+ + + + +

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capoward

07 November 2011, 05:26

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Jim 

Yes, Jim, I considered 10", but my calculations already put 15" as stable in 2.4" bullets, not to mention 12" twist, which could handle 2.8" bullets. Big bores tend to be quite stable for bullet length. 2" long bullets in 12" twist have a 2.9 stability factor, far and above anything considered necessary. I think that anything under 15" twist will be great with the Raptors. The main limitation in these big bores will be what will fit in the magazines and then we can single load on top.

Congratulations, by the way, on the Minox scopes. If I had to do it over and had the money I would put them on our 416s in Tanzania. 1.5" beats 2.0" at the lower magnification and the eyerelief of 4.0" beats 3.8" at the high magnification of 8. There is also a rebate going on at the moment for Minox. It's quite tempting, but I'm committed to getting this 500AccRel ready and huntable, and at as low a cost as possible for plain functionality. I am sure that you will enjoy the Minox. The reviews are all superb.

Tan you're likely correct. We'll have fun hopefully early 2012 when my .423 and .500 are finished as both have 9" twist rate barrels. I'll send them to Michael for bullet box testing after I do some load workup and we'll have good comparisons in the .500 caliber as he has 12" and higher but nothing lower - will be good testing to see if the faster twist rate does anything for lower velocity within-mass terminal stability. 😊

I like the Minox ZA5 scopes...but I'm cheap, I bought nothing but open box specials so was able to purchase four scopes for the price of three. Both of my M77 SA SS Rugers in 300 RSAUM are wearing ZA5 2-10x40 scopes with the ballistic recticle. Very clear scopes but still can't really see those dinky holes in the target beyond 100yds (without walking down to get the targets).

Jim 

"Life's hard; it's harder if you're stupid"
John Wayne

michael458

07 November 2011, 14:53

quote:

Originally posted by boom stick:

Ok so the smaller mice and rat bores will be shortened to be stable with the tip. We want them to be accurate, reliable and the deadliest bullets on the market. Still holding up is the light for caliber Raptor bullets perform amazingly well compared to the conventional and heavy weight bullets. Maybe a 90 grain 6.5, 100 grain 270 and 110 grain 7mm in the smaller Raptors. Basically a 10 grain jump for every 10 thou diameter. That should make it perform like the 130 grain 308. It's good to get the wiggles out in testing. We know the potential once the bullet weights are figured out. As always a huge thank you to Michael for testing and persevering.

Yes Boomy, I think they must be stable with the tip for most general purpose work. Can't be a ESP unless it does all these things. Seems with the rat calibers, just a slight change makes all the difference in the world.

We test until it is correct!

Keith
Thanks! Yes, I am learning, the 55 Raptors taught me something.

quote:

With the great performance of the 40gr Raptors, is there really a need for a heavier bullet in that caliber? If so, then 48-50gr, tops.

That is a very good question! One I am not sure I have the answer for! The Raptor is going to take some getting used to, and some understanding as well. Think about it, from all our perspectives. If we look down the list of available bullets, any given caliber, the Raptors are going to be light. Without understanding what they are, many will be dismissed as "Too Light" for heavy work. When in reality, most cases, they will equal or out perform even the best and heaviest of bullet, per given caliber.

We know this here on the big bore terminals, per BBW#13s and other bullets as well. But moving to small and medium with the same concept, lots of folks will have to have an understanding of what they are. And it will be hard in some cases.

There is a fellow in TX, down on Small Bores, JTP, he is doing some .224 tests, similar to ours, right now. Doing a fine job of it as well. I am getting a few BBW#13s out to him today, and I think I am going to send him a few 40 ESP Raptors as well. Might help some of those guys down there understand too. I have gone down and gave him support on his efforts, and if you guys have not seen, go down and do the same.

Tanz and Jim, all my .500s, 500 MDM, 50 B&M, 50 B&M SA, 50 B&M Alaskan, and 50 Super Short are 1:12 barrels, PacNor. 1:12 gets the job done well, and I am sure it will with .510 as well. You will be fine Tanz. That 510 Wells of mine is 1:15. Back in the day before I knew better. But, none the less, the BBW#13 570 with its 67% meplat takes care of any short comings on twist rates. Witness all the success with the BBW#13 Solids this year with all the double rifles in various calibers, we know the twist rates are very slow in all of those. Meplat still trumps twist! Remember our "Factors" of terminal penetration!

Raptors have to be designed for the "majority" of rifles. I am sure there will be this one or that one along the way, with wrong twist, wrong magazine, or this, that the other. Since I have little experience with much more than Win M70s and bigger bores, CEB is looking at the "Majority" part of things, and will do a fine job of it. A bump in the road is all on the twist rates and bullet lengths. Easy to sort that out.

Ya'll know the "Carnivore" is kinda one of my pet projects. And a good one I think. But here is the rub on that. The Raptors in the bigger bores are going to be so good, and very very appropriate for the job of "Thin Skinned" dangerous game, there really is not room or a need for the "Carnivore". The Raptor is a more capable bullet in the overall scheme of things, and will actually be far more versatile than the Carnivore can be. Being light for caliber means more velocity, velocity means more trauma inflicted with the BBW#13 NonCon Profile. With the addition of the tips, a far more versatile bullet for use on plains game, elk, moose and other things, while you are hunting Thin Skinned Dangerous game. Also, in the instance of some bear hunting, a tipped Raptor gives you more range, and heavy hitting at longer ranges as well. With all the advantages of the Raptor, I am going to drop my pursuit of the Carnivore, and place my efforts towards the Raptors in the big bores. I think this is a good move, and excited about the Raptors in 416, 458, 474, 500, and 510, to begin with.

Michael

<http://www.b-riflesandcartridges.com/default.html>

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Hog Killer

07 November 2011, 18:19

quote:

Without understanding what they are, many will be dismissed as "Too Light" for heavy work. When in reality, most cases, they will equal or out perform even the best and heaviest of bullet, per given caliber.

It is a matter of educating the shooting public, that is where CEB needs to put forth your testing info. To prove that they will get the job done with a lighter bullet than normal.

Keith

IGNORE YOUR RIGHTS AND THEY'LL GO AWAY!!!

We Band of Bubbas & STC Hunting Club, The Whomper Club

michael458

07 November 2011, 20:46

Keith

100% spot on. It will catch up with most folks, they will understand once they see, and in particular once they actually use one in the field, it's over then.

The .224 BBW#13 NonCon is a very big success. My buddy John has now shot 3 big deer, big for SC I suppose anyway, from 155-185 lbs. All 1 shot, the only one that ran, ran 25 yards. Ranges out to 150 + or minus a few. All exited, with one traveling over 24 inches before exiting.

Once the Raptors weight and stability issues are dealt with, the terminals are there, there is little to no concern about the terminals and what they will do.

Dan and I had one of our long talks this morning. About these same things. Getting the right weight, length and stability is the only real issue. I am going to curtail most terminals until that is completed, or I waste my time on terminals. But, I am still going to see about the 338s and maybe even load a few this afternoon and see if they are stable as well.

Michael

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michael458

07 November 2011, 20:49

Hey Don't forget our boy CCMDoc is on the African plains right now! Him and his Dad are hunting and it appears they are shooting as well! Look at what I got today via email!



I am told this is with a 375 caliber something or other, and the 270 BBW#13 NonCon I believe. No details yet of course. I leave that to Doc when he returns!

And of course, this one explains itself!



I don't know about you guys, I can't wait to hear this report!

Michael

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416Tanzan

07 November 2011, 20:54

quote:

Tanz and Jim, all my .500s, 500 MDM, 50 B&M, 50 B&M SA, 50 B&M Alaskan, and 50 Super Short are 1:12 barrels, PacNor. 1:12 gets the job done well, and I am sure it will with .510 as well. You will be fine Tanz. That 510 Wells of mine is 1:15. Back in the day before I knew better. But, none the less, the BBW#13 570 with its 67% meplat takes care of any short comings on twist rates. Witness all the success with the BBW#13 Solids this year with all the double rifles in various calibers, we know the twist rates are very slow in all of those. Meplat still trumps twist! Remember our "Factors" of terminal penetration!

10", 12", and 15" should all be fine. I went with McGowen Barrels so that I could have an integral second recoil lug in the forearm, 'CZ style'.

while on recoil, et al., it would be nice if you could put one of those little Nikon Slughunters 1.65-5 on your 50B&M for testing during the next couple of weeks. It's compact size should match your short rifles. I may only get two to four range sessions with mine before eventually wisking it away to 'live testing'. I'm expecting rugged reliability after using the Nikon Monarch 2-8 for three years on four rifles. But then again, who would have predicted the Leupold VxIII failures? Leupold made good on them, but that is hard to do quickly when on the otherside of the world. In any case, I'm thinking that 5" eyerelief is going to spoil me and make it hard to go back to 3.8" or 4.0". It is a different kind of luxury. Maybe a new trend will start with the renaissance of big bores in the past decade or two. Capo's Minox was also listed as a 'shotgun' scope, where the scopemaker planned to accomodate recoil on 500+ grain projectiles with added creature comfort. If people mention this at the shotshows over winter, the more enterprising makers will be listening. 3"-3.5" eyerelief on serious scopes will go the way of roundnose solids.

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

416Tanzan

07 November 2011, 21:21

Doc and Dad--

Beautiful animals, and a family affair, too.

All the best

Tanzan

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

capoward

07 November 2011, 22:25

Michael,

Just remember the military had to go with substantially faster twist rate barrels in the 5.56 when they determined they needed longer (heavier weight) bullets for more combat effectiveness.

Perhaps determining the maximum length ESP Raptor bullet with Tip Insert attached that would stabilize by common twist rate by caliber would shorten the testing process. Basically throw out the abnormal twist rates and then design the ESP Raptors for full stability with the norm...bullet weights will then take care of themselves.

Now regarding the Carnivore vis-a-vis the ESP Raptor...the Raptors properly designed should eliminate the need for most any other bullet per caliber other than the highly specialized bullets...such as the DG BBW#13s.

Anyway, just my thoughts.

Jim 

"Life's hard; it's harder if you're stupid"
John Wayne

capoward

07 November 2011, 22:26

oh yes before I forget. Congrats Doc and Dad...those are very fine animals!

Jim 

"Life's hard; it's harder if you're stupid"
John Wayne

boom stick

07 November 2011, 23:16

Thanks to the bullet terminal team here we have figured out many things. One is that with the non cons and BBW13 nose profile you can have a bullet with 1/3 less weight than nominal and still perform like the best or out perform all other bullets on the market. A bullet is a tool and use the right tool for the job but the Raptor is such a flexible system that it meets probably 95% of hunting needs. The 40 grain 22 Raptor is just incredible in performance. Maybe some slight modifications here and there but damn what a killer of a bullet. Maybe a do all 45 grain version but unless you are shooting game past 400 yards or long range targets what more could you want from a 22?

[577 BME 3"500 KILL ALL 358 GREMLIN 404-375](#)



we band of 45-70ers (Founder)
Single Shot Shooters Society S.S.S.S. (Founder)

michael458

08 November 2011, 00:52

What the hell happened to page 202???? 3 days? Gees! I talk too much!

Jim

Length, twist rates, tips, weights---  I am letting Dan and company worry with that!  Makes me sick! Not my area!
Above my pay grade! HEH HEH.....

In 223 I have from 1:7--I think--1:9 for sure, 1:12 and 1:14. I have not tried 1:7, or 1:14.

The rest, I don't know.

Let them worry with that, when they get them shooting, send them to me! I will take it from there.

I do have some good news, .338 225 ESP Raptor is stable at 50 yds in my 338 WSM and 338 Ultra. I suspect I will be testing those tomorrow morning!

Michael

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LionHunter

08 November 2011, 01:21

Michael,

As you know, I am awaiting delivery of my new .458B&M to Carl for load development. Carl has rcvd my scope & mounts. Hopefully Brian will have the rifle out the door soon.

That aside, I am very interested in the BBW bullets for the .223Rem with a 1:9 twist rate. Sounds like my initial belief that a heavy bullet would be needed was incorrect. I have in mind medium African antelope and am very curious as to performance on NA deer as a predictor of the loads behavior on such game.

I hope to return to Zim next year for Elephant and PG using the CEB exclusively in these two calibers and have the highest expectations for bullet performance.

Keep up the good work.

Mike

DSC
DRSS (again)
SCI Life
NRA Life
Sables Life
Mzuri
IPHA

"To be a Marine is enough."

boom stick

08 November 2011, 02:15

338's are one caliber I would like to see in two weights. A .206 SD 165 grain as well as the 225. The 165 for out to 400 yard hunting and the 225 for serious long range hunting. 338 federal/338 ME to 338 Lapua.

577 BME 3"500 KILL ALL 358 GREMLIN 404-375

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boom stick

08 November 2011, 02:42

I'm guessing that Elephant was no match for the mighty 600 NE and the CEB BBW13
Congrats Doc and Dad!

quote:

Originally posted by michael458:
Hey Don't forget our boy CCMDoc is on the African plains right now! Him and his Dad are hunting and it appears they are shooting as well! Look at what I got today via email!



I am told this is with a 375 caliber something or other, and the 270 BBW#13 NonCon I believe. No details yet of course. I leave that to Doc when he returns!

And of course, this one explains itself!



I don't know about you guys, I can't wait to hear this report!

Michael

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JTPinTX

08 November 2011, 03:00

Thanks for the kind words Micheal, I am trying to wade though this thread from the beginning, it is a daunting task! As soon as I get your package I will kill another box of newspaper. When I get done with the .223 if I have a few left I will shoot a couple in my 12 twist .220 Swift. Should be interesting.

BTW, whacked a doe Sunday using the .223 and one of the old discontinued 60 grain Nosler solid base. One shot quartering through the heart and she was dead as a box of hammers. Typical high heart shot though, ran wide open dead on her feet for about 60 yards.

That makes two down, have about 45 MLDP doe tags left to go. Gotta get busy with that.

boom stick

08 November 2011, 03:06

Would be cool to see you use some of those deer tags with the 40 grain Raptor.

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michael458

08 November 2011, 04:11

Mike

Yes, I have been back and to with Carl a time or two today, have not talked to Brian since last week, don't know status, but can't be long on the 458 B&Ms!

I have a interest in the 223 Raptors to. Dan and I talked this morning, we will sort them out. Correct, a BBW#13 can be light for caliber, and still whip the larger conventionals, on all counts, trauma inflicted, and penetration. I think in some calibers we will see two Raptors in attempt to cover more scenarios with different rifles.

No worries, by the time you go to Zim next year, we will have them sorted out, and you will be pleased with them.

Tanz, Scope, Nikon. I will order one tomorrow! And get going on it. Made a note tonight.

Boomy, I think Dan wanted a 225 338 to play with. The 225 may or may not hang around, depends. I like a 200 for the Raptor in 338s. But, the 225 shot one hole this afternoon in the 338 WSM and almost a hole with the 338 Ultra. 338 WSM at 2780 fps--This one has a 22 inch barrel, and in the Ultra 3150 fps in 24 inches. That big Ultra has to have 24 to burn, at least. I will test them tomorrow, I am very particularly interested in the Solid end of that thing-it looks incredible. Photos tomorrow as well.

Hi JTP

Glad you came up to join us. Yes, this is one hell of a thread. I sent out some test bullets to you today via USPS. Sent a few 55 gr BBW#13 NonCons, if it stabilizes in your 1:12 twist, then it will most likely be about as good a bullet as you have tested. It should stabilize, without the tip, page 202, I think? You see where I shot it in 1:12 in a hole at 50, add the tip, sideways, I did not send tips with the 55 NonCon. I also threw a few of the new 40 gr ESP Raptors for your review as well. Experimental right now, things still pending. They tested very good for me. As for deer, mentioned today I think, buddy of mine has hammered 3 deer here with the 55 BBW#13 NonCon, 3 rounds, two dropped to the shot, 1 made it 20-25 yds and down. I think the 40 Raptor would be doing the same.

Dan is working hard on the Raptors and the stability. Word late this evening that I was correct on the instability of the 6.5 110 Raptor, with tips added. As showed up in the terminals as well. 110 gr is close, but not quite. I think 100 grs is going to turn the trick, and also some Talon Tip manipulation as well. CEB is a hell of a team and they have lot's of expertise in this area, and a whole lot of long range experience there. They will get it matched up right, that much I have 100% confidence in. After that, it's all down hill, we all know what a BBW#13 NonCon can do!

Tomorrow!

Michael

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JTPinTX

08 November 2011, 05:08

Loading up some of the other test rounds tonight for the next go. Really looking forward to seeing those bullets. If I had enough, I sure would not be opposed to doing some nanny slamming with them. Got to have enough though that I am confident of the zero in my rifle. If they shoot the right place, who knows. I have some places I can get up close where the zero doesn't have to be quite as fine.

prof242

08 November 2011, 07:53

DAMN! Over 350 .338 bullets from Nosler, Barnes, and A-Frame. Guess I'll have to throw them out and use the Raptors in my .338WSM and .338-06. 😞

IMHO, the 200gr would probably be best for the Raptor. Used 210gr Nosler Partitions in Africa a year and a half ago and they worked fine. The 165 is an idea, but will await the testing.

I like the idea of the 100gr 6.5mm bullets for my 6.5WSM.

Got a VX-R 1.25-4x scope on my Browning BLR in .450 Marlin now. Also have had a magazine modified to handle 2.9" OAL. On Friday, will try those .458 bullets you sent, Michael, for accuracy. What weight are you thinking of for the Raptor .458?
Max

.395 Family Member
DRSS, po' boy member
Political correctness is nothing but liberal enforced censorship

boom stick

08 November 2011, 08:50

Looking at the 370 grain 457 non con I think that could be made into a 350 grain Raptor to do double duty in a lever and a bolt. Maybe a 350 and a 425 grain?

[577 BME 3"500 KILL ALL 358 GREMLIN 404-375](#)

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michael458

08 November 2011, 15:39

Max

Yes, 338 Raptors. I have suggested that in 338 a very popular caliber and lot's of cartridges in 338, that we have a 170-180 gr Raptor, for the small capacity cartridges, a 200 for medium capacity, and a 225 which I am testing this morning for the big dogs of 338. We will see, I concur I want a 200 gr for my 338 WSMs. Although I really should not care, as I know I will never take one out because of the 9.3 B&M filling all my medium needs or desires, and even in a smaller rifle. My 338 WSM is a 22 inch tube.

Yes, 100 gr 6.5 Raptors I think is the ticket, 6.5 WSM and 6.5 X55.

For sure 458 caliber Raptors. I am thinking 350 grs myself.

This has not been discussed between Dan or I yet, but I am thinking 416 300 gr Raptors, 458 350 gr Raptors, 475 maybe 375 gr Raptors, .500 375 or 400 gr Raptors, .510 400-425 gr Raptors.

M

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