

This topic can be found at:

<https://forums accuratereloading.com/eve/forums/a/tpc/f/4711043/m/2861098911>

**Cross L**

02 May 2012, 04:41

**Terminal Bullet Performance**

Well, now I can play with some things----my very first Chronograph just arrived.

no more guessing-----

and I will be able to really make the non-cons work.



SSR

**boom stick**

02 May 2012, 05:06

Will you be using tips for higher velocity impacts?  
Curious to see your lion tamer bullet report.

[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)

**Cross L**

02 May 2012, 06:39

Thats the beauty of having a chrono--I am looking at impact zones between 25 and 100 yards so will play with loads. the ability to load down into magazine and not have to worry about extra pieces VS the added velocity w/ tips--

wonder what the difference will be at 100/

I am a BIG believer in both Murphy and the KISS Principle.

Esp when in tight brush and quarry is running-I have fumbled a reload grins--shit happens-

SSR

**boom stick**

02 May 2012, 06:47

I think CCMDoc used the 9,3 non cons or was it the 375 in a 375 flanged on leopard.  
Not sure if the soon to be 416 Raptor will be ready for your hunt. I'm sure under 100 yards you will have a dead kitty with enough velocity at that range. I like the idea of the tips for over 100 yards.

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

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**Cross L**

02 May 2012, 07:00

Yeah I am thinking that 100 is gonna be around the break-point on tip-vs-no tip

be fun to play with any way.

SSR

**416Tanzan**

02 May 2012, 09:47

Cross,

When you get your Chronograph set up, you can plug the values into [jbmballistics.com](http://www.jbmballistics.com)

[http://www.jbmballistics.com/c...bmtraj\\_drift-5.1.cgi](http://www.jbmballistics.com/c...bmtraj_drift-5.1.cgi)

There is even a field for the number of feet the the chronograph is in front of the muzzle.

It will show you exactly the remaining velocity, drop, wind drift, etc. at any interval you want out to whatever distance you want up to 3000 yards. (yes, three zeros).

100 yards is probably the realistic cut-off point where the bullet is losing so much velocity and energy that it needs a tipped-BC for anymore distance. It is not efficient to increase recoil, calibre, and muzzle energy unnecessarily, when a plastic tip simply preserves what one already has.

+ + + + +

"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.

**michael458**

04 May 2012, 01:14

I like the idea of the Talon Tips on that first all important round in the chamber. Without the tips you can expect a BBW#13 NonCon to loose 150 fps + - at 50 yards. With the tips, you gain at least 1/2 that back. At proper DG ranges, 25 and in, you won't know you lost much of anything, and hit much harder than without. We know NonCons love velocity, I can't see a downside to feeding that 1st round in with a tip added. Follow by NonCons, or Solids in the magazine. Get the first one in the front end part, and I have found that a follow up is hard to get--its down by the time you load for the second shot. HEH.....

Tips! Dan and I decided to have all tips with an HP in them down to .224. 224 tips are so fragile and tiny, they do not need a HP. An HP in all the other tips does indeed aid in LVSP, and in some cases takes LVSP lower than what the same bullet is as a straight NonCon--another added benefit to the tips. I have all the big bore tips on the way, all new ones, all with HPs. New tips are in the works for less than .366 caliber bullets, all with HPs. When I get the big bore tips in, I will resume LVSP work. 9.3 and .416 are completed with the new tip. I will need to do the new .500s, .474s, .458s, and .510. AGAIN!

The other day I was working with the .338 Raptors. I conducted 13 LVSP tests with the two bullets. Each test I have to walk 200 yards minimum. I got my exercise that day!

Later

M

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**boom stick**

04 May 2012, 01:47

Are the pencil pinchio tips getting the hollow point or if Dan making ogive tips HP for all?

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

**michael458**

04 May 2012, 04:00

quote:

Originally posted by boom stick:  
Are the pencil pinchio tips getting the hollow point or if Dan making ogive tips HP for all?

Boomy, I don't think there are any design differences from 338 down, tips will be the same design, just with an HP in them as I understand. A very good move, and will totally eliminate any and all LVSP issues.

From 9.3 up, the tips will be like the ones I used before the hunt, and shown in the 9.3 and the 416s a few pages ago. Soon as they all get in I will take some photos for us.

M

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**Esskay** 06 May 2012, 08:07

Good Grief. Nothing posted by DocM for 2 days???

I am going to have to find some anti-addiction medication 😞

**michael458** 06 May 2012, 15:58

Esskay  
Not to worry, have been very busy here. Friday was photo/video day here on the range. Had the guys come in, do video and photos of the rifles all day Friday, finished around 5:30 that afternoon. Lot's of work doing that stuff with pros. They used the range as a studio.

Then, Saturday morning early, I used the same props to take a lot of photos as well. Not as good as the pros, but good enough!

Then, I did the LVSP work on the 308 Raptors--100 and 130. Good news is, the 100 ESP Raptor in .308 has a LVSP of 1600 fps at least. I had some shear down to less than 1550, however 1600 fps is a safe bet.

The 130 ESP Raptor, little more ass behind it, would consistently shear down to 1550 fps, I had shear at less than 1500 fps, but not every time, so 1550 a safe bet for LVSP.

Next order of business is to see what I can run that 100 gr bullet in various different 30s, which I don't have a lot of anyway--30/30, 308, and 300 Win and test that. Already have some data with the 130.

Dan was also testing this weekend, long range test in sim blocks. We are testing rotational velocity at longer range as well to see if faster rotation aids in shear values instead of just downloading and testing at low velocity. Theory is, added rotation in the field at 600-800 yards or so might aid in shear--at first glance it might??? So there is a lot of work going into this, not only here, but at CEB as well. Quite a bit more than always gets reported sometimes. Believe me, I want to know, CEB wants to know, and in the end, you will know what is going on with the bullet of your choice! No guess work here!

Michael

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**mete** 06 May 2012, 17:54

How does one measure rotational speed ? Just try different twist rates ?

Little mention has been made of the 223 on this thread .What are some experiencs with it and what are appropriate types of game for it ?

**michael458** 06 May 2012, 18:28

quote:

Originally posted by mete:  
How does one measure rotational speed ? Just try different twist rates ?

Little mention has been made of the 223 on this thread .What are some experiencs with it and what are appropriate types of game for it ?

Mete

I don't think I stated that rotation business correctly--What is being tested is the bullet at actual long range at reduced velocity. Starting out at full velocity--testing at 600-700-800 yards and getting the velocity at that range, at full rotational speed to see if there is a difference in actual long range performance and merely downloading the bullet to lower velocity to get LVSP.

Being in the "Big Bore" forum, we have actually done quite a bit on the 223 BBW#13s and Raptors. I don't recall the pages it might be on, but the performance of these tiny bullets have been quite respectable. So much so, that by Tuesday of this week I expect my tiny bores to be returned with 1:8 twist barrels installed, and my girls using them with the Raptors to take some game. This past deer season here in SC I had a friend of mine using the 55 BBW#13 in a 223 WSSM for about a dozen deer. He was very impressed with the performance, total penetration was achieved on all, no bullets recovered, none went more than a few steps. Sam R shot a couple of deer with those same bullets and some with the 40 gr Raptor as well--all turning in incredible performance. These bullets do in fact extend the performance of the 223 calibers beyond what I would have used them for in the past. To what extent, I can't say for sure, as I have never used a 223 on anything larger than a jack rabbit. But knowing what they did on the deer taken, how they test here in the lab, personally if I shot deer then I would use them, I would also say they would be very effective on up to impala size animals as well.

What is the best way to enhance the performance and capabilities of any cartridge, small bore or big bore? The Bullet my Man--The Bullet!

Michael

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**buffalo**

**06 May 2012, 18:34**

just came back from RSA, shot two hippos. One in the water with a 338 Win Mag and a TSX bullet in the brain. The other was at night using my new 500 Acc Rel. Used the 570 grs BBW#13 solids. One shot broadside in his right shoulder, smashed the shoulder and continued onward to go through vitals and smashing opposite shoulder and was lodged in the shoulder muscles.. Ran 10 yards and fell over stone dead.. Placed three more shots into him from the rear, two through the hipbone and one just in front of his right rear leg. One bullet lost, but found the one bullet shot through the heaviest part of the hip/pelvis bone. It was somewhat distorted - looked like the TRex test Michael have performed- and was found just next to the heart.. The solid shot just in front of his right rea leg was found lodging against the scull (was found when they skinned the head)... Not bad at all eh?? I loaded them to a muzzlelevel of 2320 fps... I have one question for all of you - NONE of the bullets recovered showed any rifling marks.... I have slugged the bore and it is .50944" / .50019" which is perfect. The CEB bullets are exactly .510" over the bands before beeing shot and they all measure around .501" after recovery... What happened??? Is a part of the bullet worn of on its way through the hippo or is a part of the bullet "stripped off" on its way down the bore?? (1-10" twist)??? Maybe someone can post a pic of the bullets for me? I will be happy to send a few photos on email...

**michael458**

**06 May 2012, 19:26**

Buffalo

Welcome back, and congrats. Sounds like good clean fun to me.

Now, as for your bullets having no engraving on them???? Strange, looking for photos now;

This is a 500 BBW#13 .500 that shot through the shoulders of buffalo, and straight into the ground the other side. Dug it out of the ground. Engraved, but somewhat wiped off due to bone and ground. Ground was rocky, small rocks and such, sandy. I think it wore off most or a lot of the engraving.



This is the .510 570 BBW#13 Solid tested in the test medium, engraving good to go. Although the photos comes up a bit short on clarity--Sorry!

**510 Wells**  
**1:15 Twist Rate**  
**1/12/2011**  
**570 CEB BBW#13 Solid**  
**Muzzle Velocity 2323 fps**  
**22 yd Impact Velocity 2304 fps**  
**X2--66 Inches Dead Straight**



Some T'Rex tests going through the cinder blocks, engraving is wiped pretty good on these.

**470 Nitro**  
**12/13/2010**  
**T'Rex Test**  
**5" Wet Print**  
**Block #1 1.25 Inch**  
**15 Inches Wet Print**  
**Block #2**  
**Remainder Wet Print**  
**500 BBW #13 Solid Brass**  
**X1--Through both Blocks Dead**  
**Straight to 26 Inches**





Close up of one of the recovered noncons showing engraving good. 535 BBBW#13 NonCon .510.



Now here this is expected in one of my 470 Capsticks where they stuck a .477 barrel on, and bullets are .474.

470 Capstick  
3/31/2011  
460 CEB BBW #13 NonCon Brass  
Muzzle Velocity 2115 fps  
22 yd Impact Velocity 2050 fps  
X2--23 Inches Penetration Before  
Losing Stability in .477 Barrel  
Over Size Barrel



Over Size Barrel



In looking through some photos I found this on some of the cast, engraving shallow, almost wiped after going through some critter tissue

**45/70 Marlin Guide  
420 Cast Performance  
Muzzle Velocity 1920 fps  
Buffalo @ 60 yds Shoulder  
Retained Weight 270 grs**



**45/70 Marlin Guide  
460 Cast Performance  
Muzzle Velocity 1710 fps  
Giraffe @ 50 yds  
Retained Weight 415 grs**



This Barnes is pretty well wiped too after hitting a brick.



On this Barnes that got the T'Rex test you see most of the smaller width bands are pretty well wiped, you pick up the engraving on the larger bottom band.



OK--So we know your barrel is good to go.. We know the BBW#13 is .510 and it should be happy. So you don't have an oversize barrel, like I do on the 470 Capsticks. So that can't really be the issue.

After looking at some of the bullets going through the T'Rex, some going through bone and ground, other bullets also getting wiped in places, my opinion leans heavy towards the bullet passing through heavy bone, and having 4 smaller bands they are getting wiped as they pass through the bone material. All the T'Rex bullets are much smaller in diameter when recovered as well. Going through bone can concrete blocks is tough on bullet materials. Exactly why at times I do a hard test like the T'Rex test.

That is about the best opinion I can come up with right now.

Michael

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jwp475

06 May 2012, 19:54

I concur with your opinion..... 🍷



A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.  
- Winston Churchill

**buffalo** 06 May 2012, 20:06

some pics are soon on their way to you Michael.... thanks... 😊

**416Tanzan** 06 May 2012, 20:08

Buffalo,

I have one question that needs an answer before further Q&A.

What kind of engraving have you found on your bullets before this?  
Have you shot the bullets into water or wet paper, and if so, did you find rifling engraving?

The reason I'm asking is that I'm still trying to learn about the effects of 5/4" freebore followed by a tapered 2%(?) leade into the rifling. Here is a picture of two bullets that someone sent me from a hippo and an elephant skull that were shot from a 500 AccR.



both bullets are .510", fired from a 500AccR at probably just over 2000 fps muzzle.

If you look carefully, you can see the rifling on both bullets. The left was taken from a hippo, the right bullet, with petals shorn, from an elephant skull. (We're not supposed to ask why a TSX was fired at an elephant skull, 😊, but it dropped tembo. The TSX is not a bad bullet.)

One difference between Buffalo's bullet(s) and the bullets pictured in this post is velocity. The bullets in the picture here probably started out around 2100-2000 fps and dropped a little lower at impact. Note how the main body of the petals in the left bullet have not been forced back. The shearing of the petals in the right bullet can be attributed to unpredictable results when going through elephant skull.

For comparison I present a 416 TSX from about 2100 fps impact, and a 416 TSX at about 2600 fps impact. AT 2600+ the petals are smashed into a mushroom, at 2100 fps they still have some shape but are still further back than the .510 examples earlier in the this post.



2100 fps impact (.416" 350 TSX)  
Here is the same bullet from the top



2100 fps impact (.416" 350 TSX) from the top.



2600 fps impact (.416" 350 TSX)

Now I'm told that both Buffalo's barrel and the barrel that shot the two bullets above used the same reamer, which means 1 1/4" freebore.

The nagging question on the difference is that perhaps the slow bullets (2000 fps) engaged the rifling properly, but buffalo's faster bullets (2300 fps muzzle) sheared off the rifling marks when engaging at 1.25"? Is that even possible? I have no idea.

It would be easy to clarify if Buffalo has a pool where he can legally shoot a 500AccR without disturbing the peace or the neighbors.

+ + + + +

"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.

**buffalo** **06 May 2012, 20:19**  
Tanz - I havent tried to shoot bullets in other mediums yet... didnt have time before I left.. was in a hurry you know... But will sure do it asap... I dont think bullet material can be stripped off down the barrel eh?? Well we will see. I suspected an oversize barrel when I found the bullets and had my gunsmith slug the barrel as soon as I got home. It was perfect... Hmm - we will see... I am now loading photos from camera to my computer and will send some to Michael asap...

**michael458** **06 May 2012, 21:41**  
I have the photos from Buffalo---and now I am not so sure what the issue is with the engraving. On the two bullets to the right they look great--just no engraving???? The messed up bullet on the left is like nothing I have ever seen? That cavity in the nose? And, it did not collapse on that cavity??? A lesser bullet would have been flattened. I saw a Barnes solid once that had been hit by a second Barnes solid from an elephants head.

I don't know?





Big Darned hippos!





Michael

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**416Tanzan**

**07 May 2012, 01:06**

Buffalo,

can you get a clean micrometer reading on the bands of those bullets?

The bands should be about .510".

If the rifling has scraped the bands instead of cutting rifling tracks, then the bands should be close to .500".

Which are they? If we know those measurements we can start to chase theories and explanations.

+ + + + + + + +

"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.

**RIP**

**07 May 2012, 02:55**

It has been verified that the barrel slugged .50944" in the grooves, with lands of .50019", per Buffalo's micrometer.

And he says the CEB bands measure .510".

If the throat of the rifle has 1.250" of parallel-sided free bore (Of what diameter?) followed by a 2-degree leade angle into the rifling:

That is indeed an extremely long throat,

surpassing even Roy Weatherby's wildest creations of the 1940s and 1950s.

But it would certainly not have anything to do with wiping the rifling engraving off the bullets,  
or sizing them down to .501" as recovered.

Nor would velocity differences of 2000 fps versus 2300 fps.

Nor would twist of 1:10" cause a smaller recovered bullet.

I have been shooting 1:10" twist 500A2 and 500 Mbogo for some time,

with throats of .350" to .588" of free bore length,

and have recovered bullets from bison and cape buffalo, as well as water buckets (Iron WaterBoard Buffalo),  
MVs usually over 2300 fps.

Nothing strange, ever.

Elephant/hippo skull/bones sanding/wiping/sizing-down a linearly translating/spinning bullet?

That's the most slashes I ever used in one sentence.



**srose**

**07 May 2012, 03:44**

Now that is strange!!!!!!!!!!!!!! The no rifling could be from the loonng throat but that cavity has got me scratching my head. Could have been a flaw in the brass because it looks dark inside. I have seen this in steel before where the metal was contaminated with oil while being formed. I small nick in the rod as it was being extruded or rolled could be the cause.

Sam

**michael458**

**07 May 2012, 03:46**

RIP

Everything you said---Me Too--

The driving bands are not damaged enough from bone to have wiped the engraving.

Would look more like the bullets from the T'Rex if that had been the case. So I think now that it is not the bone crunching wiping the engraving.

Has to be something else I think.

Still

M

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**boom stick**

07 May 2012, 04:49

Strange African voodoo going on.

My first thought was the metallurgy was off. Maybe get the bullet tested. The rifling thing is weird.

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

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**capoward**

07 May 2012, 04:54

quote:

NONE of the bullets recovered showed any rifling marks.... I have slugged the bore and it is .50944" / .50019" which is perfect. The CEB bullets are exactly .510" over the bands before beeing shot and they all measure around .501" after recovery... What happened???

Plus the photographs do not show displaced band material within the trash grooves...bands are just leveled off. Definately crazy!

*Edit Added: Take another look at the blown nose bullet...there's barely a smudge of engraving on the base band - almost center of the base.*

Jim 🤖

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

**boom stick**

07 May 2012, 05:17

I'm thinking the long throat allowed the bullets to gain too much momentum and the rifling just cut off the bands tops. It's like the rifling sanded off the bands due to lack of spin.

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

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**ptaylor**

07 May 2012, 06:09

quote:

Originally posted by boom stick:  
I'm thinking the long throat allowed the bullets to gain too much momentum and the rifling just cut off the bands tops. It's like the rifling sanded off the bands due to lack of spin.

This is troubling, I have a 500ar with long throat and I've never been able to get cast bullets to shoot well in it.

Wouldn't this have caused tumbling?

Buffalo, were the bullets found nose forward? How was the would channel? strait?  
What was your accuracy and load work up like before leaving?

**mete**

07 May 2012, 06:11

Your going to blame us metallurgists ? 🤖 Is the original rod made by extruding or continuous casting ? If you want you could send me the weird bullet and a sample of the rod.

If there was no engraving of the bullet the bullet would tumble .All it needs is .002" or perhaps less to rotate.

I was looking up some stuff about BIG bore like 155mm and the rotating band actually melts a bit .Would the long throat cause this ?? 🤖

**capoward**

07 May 2012, 06:47

quote:

Originally posted by ptaylor:

quote:

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This certainly raises a few questions.

1st is the long throat designed so that you can use the long-heavy VLD 50 BMG bullets? If not, why such a long throat?

2nd is the thought process assumption headed towards a combination of the long throat, the 2° throat angle, and the bullet velocity causing the rifling to scrub the banding rather than engrave the rifling on the bands? (Sorry 'bout the poor wording here.)

Jim 🤖

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

John Wayne

**boom stick**

07 May 2012, 06:58

Jeffeesso can chime in and give details but the 500 Accrel had the long throat designed to shoot the cheap milsurp bullets. There could be made a normal throat version made if desired. The minimal banding works well in normal throats. Other bullets have a lot more bearing surface so no issue with those. I think this is a throat issue and not a minimal band issue. The brass mushroom issue is the real puzzle. I'm thinking it was a matalurgy thing or the hippo had some surgery and had plates and pins in his bones.

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

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**capoward**

07 May 2012, 07:53



That brass mushroom cavity certainly leans towards a metallurgy issue during the brass rod manufacturing process.

Ok...long throat for milsurp bullets...

Jim 🤖

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

John Wayne

**RIP**

07 May 2012, 07:55

Sam,

I too think you are right about a metallurgical defect causing that weird nose bulge and split on the one solid.

Crap do occasionally happen, even at the Cutting Edge of Technology. 😊

Saeed recycles copper lightning rods and gets the occasional split bullet when making his Walterhog.

Still no explanation for the undersized bullets with no engraving from the rifling.

A long throat could not possibly do that.

How much speed does a bullet pick up in 1 inch of initial travel from case mouth?

Once it gets fully engaged in rifling it has a long way to go with a lot of pressure behind it.

The bullet is not even spinning as it is going down the throat, must hit the rifling initiation fairly square-on and then start to spin.

The old standard .458WinMag throat was a sloppy wide funnel that was 1.1" long before rifling fully engaged.

Never a problem.

**If the bands on the bullets recovered above are only .501" diameter, then the inter-band (nonbearing surface) shaft has got to be about .490", by eye-ball alone.**

That would be a .500-caliber bullet, not a .510 caliber bullet.

Did lightning strike twice in that batch of bullets?

I been thinking about getting a copy of the Walterhog made by CEB.

Might call it the "Walter Ho!" bullet as in "Tally Ho!"

Might get it made out of brass and send some to Terry Wee-wee-land as a sample to try.

Using them as rectal suppositories (most intelligent part of his body) might be the only way to convert that Luddite to proper thinking. 😊

quote:

Originally posted by RIP:

....

I been thinking about getting a copy of the Walterhog made by CEB.

Might call it the "Walter Ho!" bullet as in "Tally Ho!"

Might get it made out of brass and send some to Terry Wee-wee-land as a sample to try.

Using them as rectal suppositories (most intelligent part of his body) might be the only way to convert that Luddite to proper thinking. 😊



Speaking of the 'Walterhog', did you ever have Rob make you the US version?

Jim 😊

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

John Wayne

RIP

07 May 2012, 09:18

"Speaking of the 'Walterhog', did you ever have Rob make you the US version?"

Jim,

No. Never a plan. That was something else that never happened, and has since been forgotten.

Bridger Bullets once made a copy of the Walterhog,

and the first three I ever shot of those in a .375 Wby WITH CALIBER LENGTH, NARROW DIAMETER FREE BORE 😊

is still the smallest three-shot, 100-yard group I have ever fired.



There is definitely something very "smart" about that bullet design. I can't help but think that it might be good for another kind of "smarting."

Letter to Terry Wee-wee-land:

Dear Terry,

Try this Walter Ho. It might make you smarter.

You might want to coat it with something besides moly, for comfort, before "seating" it, and do wear an exam glove when handloading.

Sincerely,



capoward

07 May 2012, 11:03

quote:

Originally posted by RIP:

"Speaking of the 'Walterhog', did you ever have Rob make you the US version?"

Jim,

No. Never a plan. That was something else that never happened, and has since been forgotten.

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and the first three I ever shot of those in a .375 Wby WITH CALIBER LENGTH, NARROW DIAMETER FREE BORE 😊

is still the smallest three-shot, 100-yard group I have ever fired.





There is definitely something very "smart" about that bullet design.

That is a very nice group!

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

416Tanzan

07 May 2012, 11:10

So the following is not a typo but a datum?

quote:

The CEB bullets are exactly .510" over the bands before being shot and they all measure around .501" after recovery... What happened???

and then

quote:

A long throat could not possibly do that.  
 How much speed does a bullet pick up in 1 inch of initial travel from case mouth?

ever heard of a derringer? (but surely a much faster power.)

quote:

Once it gets fully engaged in rifling it has a long way to go with a lot of pressure behind it.  
 The bullet is not even spinning as it is going down the throat, must hit the rifling initiation fairly square-on and then start to spin.  
 The old standard .458WinMag throat was a sloppy wide funnel that was 1.1" long before rifling fully engaged.  
 Never a problem.

So the scraping theory of the riflings is said to be impossible, and yet we need to explain what is going on. And the 458W might have operated below shear threshold, if such a concept is applicable for this situation. Back in the day people used to experiment with two and even three calibre-length freebore.

The comparison of the brass CEB with the copper TSX bullets, in a duplicate rifle with the same throat suggests that either the all-copper bullet is able to take the cut of the lands with some initial throat momentum, OR, the lower speed of the all-copper allows it handle the riflings. It would be funny if we need to use slower velocities in order not to skid through the very long throat. Well, at least there is a 647 grain TSX in .510" with a BC of .572. I could learn to hunt at 2100 fps muzzle velocity or less.

It does raise a big question about a 350 grain brass bullet at 2900 fps muzzle velocity. Will it shear its bands? And I can't believe that something with a long plastic tip would be stable if it shears its bands.

The summer tests will be interesting.

+++++

"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 May 2012, 11:21

Just trying to think creatively here outside my realm of experience:

If band-shearing is happening, maybe a slower powder will allow the bullet to hit the riflings with a speed below 'shear-threshold'? And still reach some decent velocity?  
Something like a Alliant R-17 or a Hodgdon Levevolution.

For the record, bringing the picture from 234 to page 235,  
here is a picture of the TSX 570 grain .510" bullets shot from an IDENTICALLY THROATED 500AccR as Buffalo's.  
Muzzle-velocity was not chronographed but has been estimated at 2000fps-2100 fps,  
based on load of 80 grain H335 and the lack of petal smashing/flattening in recovered bullets (the petal shear/cut in the skull is a different issue). These bullets do have nice rifling marks and show that some combinations of long throat do work.



left bullet from hippo, right bullet from eley skull.

+ + + + +

"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 May 2012, 11:54

Tan,

The .500 350gr ESP Raptor has excellent accuracy as demonstrated by RIP in the *Cutting Edge Bullets 49-10 Loads: 12.7x68mm Magnum* thread...but the reamer specification for that cartridge is a normal throat.

Perhaps Jeffe could capture a couple of the .510 Raptors fired from his long throat AR? If the bands are properly engraved without the scraping then the issue is narrowed down to either Buffalo's rifle or the possibility that a faulty brass rod was delivered to CEB. Looking at the cavity in that one bullet - I think the fault likely lies in a faulty brass rod.

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

**buffalo**

07 May 2012, 11:57

Hmmm guys - I am still puzzled by all this.... 🤔

I will very soon try to shoot some CEB solids AND some Barnes FN solids (with much larger bearing surface) into some wet media .... Hmmm - never experienced this before.... 🤔