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Bullet Performance

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Terminal Bullet Performance [Login/Join](#)

Dave Bush
One of Us



posted 06 August 2011 00:19

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Oh lord! I am just getting into the light and handy. Now, Nom Coms? Michael, and old man can only take so much change at one time... 😞

Dave
DRSS
Chapuis 9.3X74
Chapuis "Jungle" .375 FL
Krieghoff 500/.416 NE
Krieghoff 500 NE

"Git as close as y can laddie an then git ten yards closer"

"If the biggest, baddest animals on the planet are on the menu, and you'd rather pay a taxidermist than a mortician, consider the 500 NE as the last word in life insurance." Hornady Handbook of Cartridge Reloading (8th Edition).

Posts: **3728** | Location: **Midwest** | Registered: **26 November 2006**

I Bin Therbefor
One of Us

posted 06 August 2011 01:51

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[QUOTE]Originally posted by Dave Bush:
Sam and Michael:

I gotta tell ya that I am having an awfully hard job wrapping my mind around the "non com" concept. During my entire life, the quest has been to find a bullet that holds together over a wide range of velocity. . . I am not sure that I am down with the notion of the "non com" which is DESIGNED to shed the petals.

QUOTE]

Had some problem with this one myself. Here's what I think is going on:
The older bullets didn't peel in a controlled manner leaving a solid core to continue to penetration. The older bullets completely fragmented in a completely unpredictable manner, many times on the skin or very near the skin of the animal! This left a wounded and very angry animal with which to deal. In the case of a DG, this was a very bad thing. There was/is a very famous "Lion bullet" by an otherwise reputable manufacture that did just exactly that. Resulted in wounded and very angry Lions with not much slowing the Lion at all. There were also bullets during the early high Vel era that simply did the fragmentation bit without any penetration of any consequence. Surface flesh wounds.

The common answer was, keep the bullet from fragmenting at all costs.

There were also expanding bullets which assumed an almost ball shape and or broke into pieces, which seems OK until you realize that the balls and/or pieces did not follow any predictable path and didn't result in much penetration.

So the answer was to control the amount of expansion by various means to insure the bullet maintains a straight line penetration.

The noncon is an answer that has an interesting twist. The pedals shed but not near the skin and in a manner that does not negatively impact the bullet path - the straight line - of the remaining core or the pedals themselves. The solid like core that remains has a jagged end that tares the flesh in the worst (or best) possible way (depends if you're the shooter or the animal being shot). There is sufficient mass remaining for the noncon remaining core to act like a solid with a ragged metplat.

The pedals seem to do one of two things. They either remain in the wound channel, cutting flesh and insuring no wound channel closure behind the bullet, or they go off in a star like pattern, continuing to penetrate and doing some serious cutting on the surrounding tissue. In the case of a near miss of the vital areas, one or more of the pedals can enter those areas and cut lungs, veins, arteries or even enter the brain cavity from below.

The problem seems to be that while the bullet manufacturers did observe some negative thing happening, they constructed bullets that delt with the negatives but did not consider the question, what do I want the bullet to do, in any innovative manner.

The noncons, from CEB, NF and S&H are innovative. Although, the NF CPS does not shield pendals. They seem to combine the destruction better than an expanding bullet bullet with the penetration of a solid.

Anyway that's my story and I'm sticking to it for at least five (5) minutes.

Posts: **404** | Registered: **08 May 2005**

michael458
One of Us



posted 06 August 2011 02:45

[Hide Post](#)

quote:

Originally posted by Dave Bush:
Oh lord! I am just getting into the light and handy. Now, Nom Coms? Michael, and old man can only take so much change at one time... ☹



Oh Dave buddy, sometimes discovery is a "penetrating" affair!



Michael

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



michael458
One of Us



posted 06 August 2011 02:55

[Hide Post](#)

quote:

Originally posted by boom stick:
It would seem that the non con bullets designed for the 45-70 with a shorter ogive tip could magazine feed.

Boomy

If you don't get off this magazine thing, I am going to choke you the next time I see you!



HEH HEH.....

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



Cross L
One of Us



posted 06 August 2011 02:55

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If I am understanding this correctly-

The bullet path of a NON-CON could/should be described as a "cone of Destruction"

Initiated at impact and continuing to penetrate-
Petals of course spread in a cone pattern and do not penetrate as far but the core continues as a solid penetrator>

SSR

Posts: **6725** | Location: **central Texas** | Registered: **05 August 2010**



michael458
One of Us



posted 06 August 2011 03:13

[Hide Post](#)

quote:

Originally posted by Cross L:
If I am understanding this correctly-

The bullet path of a NON-CON could/should be described as a "cone of Destruction"

Initiated at impact and continuing to penetrate-
Petals of course spread in a cone pattern and do not penetrate as far but the core continues as a solid penetrator>

SSR

Cross

That's pretty much got the jest of the matter! About the only thing to add is the trauma inflicted during the process. It's much more than what you would expect. I think when those blades blow off it's releasing (I don't like this word, but for lack of better) energy or transfer of energy causing trauma. Blades or petals do not "penetrate" in the typical sense of the word, they actually slice their way through tissue. It always amazed me how deep they can penetrate in my test medium. Hell, the blades penetrate deeper than a typical 38 special bullet, blades only weigh 15-20 grs! How? They cut and slice their way, not push through.

But yes, you are pretty much spot on.

M

IBT

I happen to like your story above pretty good! I think it also is pretty much spot on, I concur. Thanks

M

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



michael458
One of Us



posted 06 August 2011 03:20

[Hide Post](#)

This morning I spent a good deal of time getting ready for testing Saturday morning. Spent time making new witness cards, getting loads together for doing the test with the 458 B&M 370 and 420 NonCon at simulated 300 yd velocities according to the hi BC reports yesterday. Also just had to see what one of these tips looked like in one of my .500 caliber bullets. So I did.



As you can see with the 3 bullets on the bottom that are .500 caliber the fit of the 458 Tips is not quite perfect to the edge of the angle. But there is not much there, and I think they just might work pretty good? So I rigged up the maple 50 with a scope, went out quickly and sighted a scope in, and run a couple of test loads through the 50 to see what is what. I will be testing for BC two different bullets in .500 caliber with the 458 Tips, a 345 and a 460. Then if all goes well I will do terminals on those as well as the .458s. Now, not sure how much difference that little edge effect might make if any at all. I suspect there won't be much to it, but we will find out in the morning.

Oh, and always remember, when you get your tips in the future, DO NOT PLACE them in the bullets until you have the bullets loaded in the case! HEH HEH HEH!!!!!!!



Michael

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**

capoward
One of Us



posted 06 August 2011 05:15

[Hide Post](#)

Michael,

Just pull that bent tip off...trim it flat and send it to Boomy to use in his 45-70...problem solved! 🤖

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

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**

capoward
One of Us



posted 06 August 2011 05:19

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🤖 Or maybe Sam can make a die to kinda smush that tip around a bit to make it more rounded like. 🤖

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

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**

srose
One of Us

posted 06 August 2011 05:46

[Hide Post](#)

I can do that!

Posts: **2823** | Location: **NC** | Registered: **08 July 2006**

RIP
one of us

posted 06 August 2011 06:13

[Hide Post](#)

"non com" 🤖
IBT, still can't spell "NonCon?"
Despite repeated correction here, he persists.
Is this the perseveration of mental retardation,
or blatant disrespect of the concept?
Either way, it is idiocy.

Boomie can just use a toenail clipper to shorten his tips. 😊

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**

boom stick
One of Us



posted 06 August 2011 06:15

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Ok fine
I'll be the exiled mag fed prophet.
Them modern pointy black talon of death non con bullets would look wicked loaded in those long cigar double rifle cases. The tips make them look like 50 BMG bullets. (that COULD feed from a 50 BMG magazine) Would be cool to see the 510 non cons with the black talon tip loaded and fired at 50 BMG velocities in the test medium you made Michael. Anyone in NC got a 50 BMG?

[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)

Posts: **27557** | Location: **Where tech companies are trying to control you and brainwash you.** | Registered: **29 April 2005**



Cross L
One of Us

posted 06 August 2011 06:17

[Hide Post](#)

Boomie

Just go ahead and go belt-fed---Talk about a DGR-



SSR

Posts: **6725** | Location: **central Texas** | Registered: **05 August 2010**



boom stick
One of Us



posted 06 August 2011 06:19

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Would be cool to see what distance you could get from say a 470 NE and still have the functional impact velocity minimum. Could make a 470 into a plains game rifle.

[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)

Posts: **27557** | Location: **Where tech companies are trying to control you and brainwash you.** | Registered: **29 April 2005**



Paul Truccolo
One of Us

posted 06 August 2011 06:30

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quote:

MIKE458 "Before I head off to roost, I just want you boys to take note of something! When does other bullet manufacturers come and participate with us Big Bore guys and talk bullets, cartridges loads, pressures things like that???"

I think what Mike posted on the B&M Series thread needs to be posted here as well in recognition of the co-operation, contribution and service provided to the T.B.P community by North Fork and C.E.B. 🙌

Posts: **531** | Location: **Australia** | Registered: **30 June 2011**



CCMDoc
One of Us



posted 06 August 2011 16:22

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That bent-tip version ... I like it. Reminds me of an 18 century night cap (no Michael458, not the alcoholic type). Think the rotations velocity of that tip would create an even bigger wound channel (sort of auger in)? 😊

Michael,
You are making those for the .620 and .585 non cons, I presume. Might make those rounds into long-range, 75 yard doubles!

Seriously, you guys continue to impress and amaze me with you great efforts and investigation. 😊🙌😄

NRA Lifer; DSC Lifer; SCI member; DRSS; AR member since November 9 2003
STILL waiting for my Taksdale double or a refund

Don't Save the best for last, the smile for later or the "Thanks" for tomorrow

Posts: **3448** | Location: **In the Shadow of Griffin&Howe** | Registered: **24 November 2007**



hughman
One of Us

posted 06 August 2011 20:04

[Hide Post](#)

quote:

Originally posted by michael458:

quote:

Originally posted by hughman:

Not sure whether I missed something or am just dense (or maybe both), but if the tipped bullet cartridge is too long to fit in the magazine, how do you load it in a CRF rifle?

Hugh

I am preparing for tomorrow morning right now, so not much time to reply back, and I want to catch up with Dave and the NonCons...

However HUGH---While it was on my mind---Smitty has an Exporter that can export the bullets to Canada, very reasonable price, very reasonable, and easy to do! Get up with Dan on this!

Just running by, back and forth, wanted to catch Hugh on this before I forget!

Michael

Thanks Michael...I will get the info from Dan. Unfortunately I am leaving for the buffalo hunt on September 7, so there is no way I can obtain, load, test, etc the CEB bullets in time for this trip. In the 450/400, I will have to use Hornady DGX & DGS unless the North Fork CPS I have on order arrive in time, which is now looking a bit doubtful.

On the tipped bullet feeding issue, I guess what people are saying indirectly is that, for a true CRF bolt gun, you have to either modify the extractor so it will jump the rim of the cartridge or else push in on the extractor spring to get the hook to jump the rim. Or am I still missing something???

Hugh

Posts: **106** | Location: **Ontario, Canada** | Registered: **27 January 2010**



michael458
One of Us



posted 07 August 2011 03:35

[Hide Post](#)

Hugh

No, these tipped bullets are just too long to fit down in the magazine. If you need one, just put it down as the top round in the magazine, which with the bolt open the tip will be above the feed ramp and you just feed it straight in is all. I have been doing it for two days, nothing to it.

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



hughman
One of Us

posted 07 August 2011 05:27

[Hide Post](#)

AAAAH HAAA!!!

Posts: **106** | Location: **Ontario, Canada** | Registered: **27 January 2010**



michael458
One of Us



posted 07 August 2011 18:24

[Hide Post](#)

I had an extremely ambitious agenda yesterday, far more than I originally thought. I spent over 5 hours on the range yesterday starting at around 6:30 am! Was not too hateful in the morning, around 81 degrees, and never really got too bad up in the day around 86-87 degrees, but still down at the terminal boxes moving them around, taking medium apart looking for blades, bullets, witness cards, and such, I was worn out, tired, sweat soaked and a mess by the time I got to a stopping point. No, I never had time to finish everything I intended, nor did I have enough test medium made up either. So I had to quit before finishing.

Also, spent 4 hours this morning getting the data ready to present and still don't have all of it entered into data sheets.

OK, where to start? How about lets look at the 458 caliber BBW #13s with added Hi BC tips and how they did in the terminal tests at Simulated 300 yard velocities??

Like I said, according to those Hi BCs we tested this week I was able to Simulate 300 yard impact velocities for the 370 gr BBW #13 NonCon and the 420 gr BBW #13 NonCon, with tips added of course. Here are the results of that;

I started with the 370 gr bullet.

458 B&M
8/6/2011
370 CEB BBW#13 HP NonCon
With Added Hi BC Tip
Velocity Simulated for 300 Yd
Impact
Muzzle Velocity 2079 fps
Impact Velocity 2043 fps
X2--Perfect Shear to 18 inches
Straight, found sideways in
medium



I placed witness cards starting at 2 inches and every two inches until the last one at 10 inches. Another at 20 inches and then 25 inches. I really did not expect these to go further, and they did not.

They sheared perfectly, exactly like the bullet does without the tips. The only difference I noticed was some instability right at the end of penetration, instead of them being nose forward, they were sideways. But it had to happen right in the last inch of penetration as there were no indications at all that the bullet tumbled before.

Muzzle Velocity 2079 fps
Impact Velocity 2043 fps
X2--Perfect Shear to 18 inches
Straight, found sideways in
medium



I could not ask for anything better, it was perfect performance.

Michael

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

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Posts: 8426 Location: South Carolina Registered: 23 June 2008
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michael458
One of Us



posted 07 August 2011 18:31

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Next up was the 420 BBW #13 NonCon with tips. After the 370 test this one gave me a surprise.



I knew when I started flipping down medium and got to 30 inches something was fishy? As you can see, one of these did not shear at all, and continued on a dead straight path to 48 inches! Which amazes me, and I really can't see how it can do that, but it does, other 13 NonCons at low velocity that do not shear do the same thing.

What Happened? I don't know really. These tested at low velocity I think sheared without the tip down to 1500-1600 fps. This one at 1959 did not? The other bullet sheared perfectly.

I don't have the answer YET--- So some more testing is required. I don't believe it's the long stud filling the cavity, I don't really think it's an issue of lower velocity either, but I am not sure of either of these yet. Right now, one did, one did not, possibly one of those quirks or something, who knows?

The tips do add some instability right at the end of penetration, this is true, but for what they are used for it does not make any difference.

More work is required before one can make a real determination.

M

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Posts: 8426 | Location: South Carolina | Registered: 23 June 2008



416Tanzan
One of Us



posted 07 August 2011 18:43

[Hide Post](#)

We'll be watching the results. The plugged 420 that went 48" has one other quirk, its resulting profile looks like a roundnose.

+--+--+--+--+

"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.

Posts: 4253 | Registered: 10 June 2009





quote:

Originally posted by CCMDoc:
That bent-tip version ... I like it. Reminds me of an 18 century night cap (no Michael458, not the alcoholic type).
Think the rotations velocity of that tip would create an even bigger wound channel (sort of auger in)? 😊

Michael,
You are making those for the .620 and .585 non cons, I presume. Might make those rounds into long-range, 75 yard doubles!

Seriously, you guys continue to impress and amaze me with you great efforts and investigation. 🍺🍺🍺

Hey Doc

Hi BC tips for .620 and .585 NonCons? Hmmmm? Actually have not thought, that big yet! LOL
HEH HEH.....

But, I did manage to do the BC tests on the .500s that I tipped up and showed you guys the other day!

And Yes, I shot the bad bent up tip as well, and have numbers on it too!

HEH.....

Here is what I have on the .500 caliber 345 gr CEB BBW #13 NonCon with and without Tips.

345 BBW #13 No Tip 75/H-4198 2508 Muzzle Velocity
45 Yard Chronographed Velocity 2220 Estimated BC-- .138

345 BBW #13 Tipped 75/H-4198 2524 Muzzle Velocity
45 Yard Chronographed Velocity 2381 Estimated BC-- .267

Gain in Velocity at 45 yds with Tipped Bullet is 161 fps

The BC is not up in the .600s but a very significant gain at any rate, and I am not 100% sure I am calculated that correct
anyway, I am not a BC expert, but this is what I got? And it's the same method I used for the 458s and that matched what
Dan had.

I can tell you this, at 50 yards they shoot damn good!

I used my Maple 50 B&M to do this work.



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This is what I got on the 460 gr CEB BBW #13 NonCon.

460 BBW #13 No Tip 69/H-4198 2248 Muzzle Velocity

45 Yard Chronographed Velocity 2056 Estimated BC-- .193

460 BBW #13 Tipped 69/H-4198 2251 Muzzle Velocity

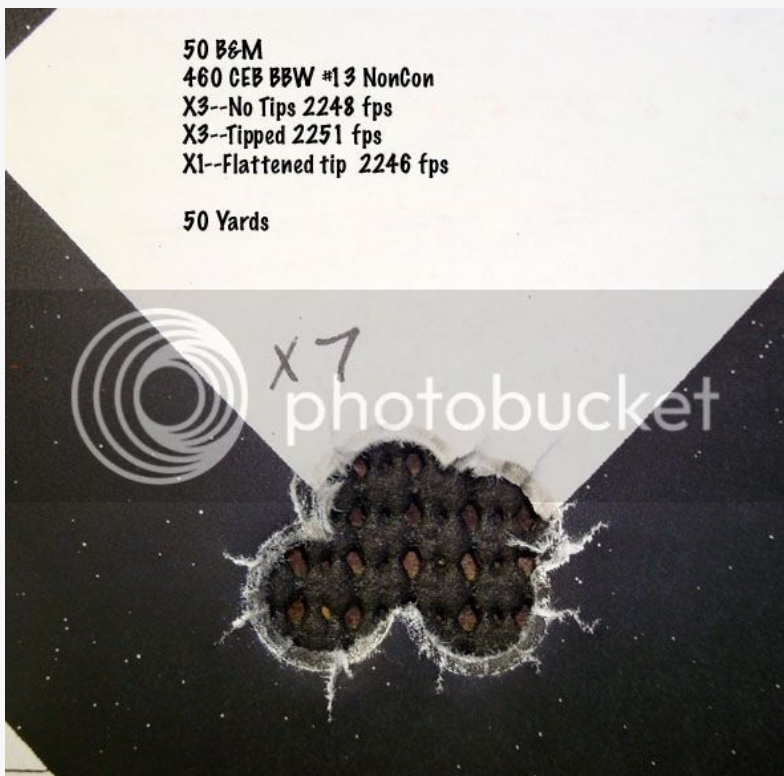
45 Yard Chronographed Velocity 2151 Estimated BC-- .357



And how about that "Sideways FN" what effect did it have?

460 BBW #13 Tipped Sideways FN--Muzzle Velocity 2246 fps 45 Yds 2077 fps Estimated BC-- .211

How did they shoot at 50 yards?



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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



michael458
One of Us



posted 07 August 2011 19:35

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One more little thing on these tips to consider. I am seeing a tendency for the tipped bullet to strike higher than the non tipped. This makes perfect sense, although they are in one hole at 50 yds, the higher ones in each group are the tipped BBW #13s. I will NOT BE TESTING THESE at 100 yds or more, this I leave to you and your individual rifles. But if I had to bet, I would bet that the tipped bullets will shoot 1 to 1.5 inches higher than the non tipped BBW #13s. Which is fine, and would be expected. So before going to the field with these tips---shoot your rifle at 100 yards to get POI on both.

Another thing on my mind, Tips and the Carnivores! Problem? Yep, maybe, POI.

Hmmmmmm?

Michael

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



416Tanzan
One of Us



posted 07 August 2011 20:15

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I would expect that the BC will go over .400 when the proper size tip is used. At the moment those tipped bullets have an extra ridge halfway down the nosepoint that has got to be adding significant drag.

I'm sure that Dan is working on this angle since he seems to love bullets over .500 BC.

+++++-----

"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.

Posts: **4253** | Registered: **10 June 2009**



RIP
one of us

posted 07 August 2011 20:45

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Well,

The one that did not fragment the hollow point was going less than 2000 fps at impact.

But it did shear off the tip, leaving the plastic stem inside the HP.

This did expose a flat circular rim of meplat around the filled HP.

This might explain better-than-round-nose penetration with that jagged pseudo-round-nose remnant of plastic leading the way?

Maybe this is a hint of impaired fragmentation at low velocity.

Use the tips for impact velocities over 2000 fps or expect this to happen, occasionally, or how often?

It suggests some velocity tests for the lab, or field tests on game.

But whatever large non-DG critter took one of those would still be dead.

The tendency to turn sideways in the last inch, even with the perfectly fragmenting ones?

That is expected with any perfectly performing bullet as it goes unstable and comes to rest inside the medium.

Frankly, I am amazed you do not see that more often with all the bullets you catch.

Yes that ridge of meplat beyond the .458 tip in the .500 NonCon has got to be a drag on BC.

What is amazing is that the "nightcap-tipped" deformed bullet did about the same as the non-deformed, mismatched-tip bullets.

Maybe it sprang back to attention when the load went off. 😊

Sample size: n = 1.

Those "Talon Tips" in the Carnivore NonCons: should be interesting.

Might overcome any low velocity failure to fragment the nose?

I still say the plastic "Talon Tips," NonCons, and BBW #13 FN solids in brass are great developments all.

CEB, Cutting Edge Bullets, are well named. 🙌

Page 181! 🌐

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



capoward
One of Us



posted 08 August 2011 01:14

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Talon Tips... 🤖 Great name!

Jim 🤖

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

John Wayne

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**



boom stick
One of Us



posted 08 August 2011 01:23

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Well these birds of prey sure can fly
A raptors talons are the business end and do the initial penetration. Agreed the carnivore bullet and the tips will be interesting. I still think that a shorter shaft tip could be a key in reliable shearing. If the tip breaks off on a short shaft the tissue should enter the cavity enough to blow the petals off in my theory.

[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)

Posts: **27557** | Location: **Where tech companies are trying to control you and brainwash you.** | Registered: **29 April 2005**



416Tanzan
One of Us



posted 08 August 2011 01:44

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quote:

Originally posted by boom stick:
Well these birds of prey sure can fly
A raptors talons are the business end and do the initial penetration. Agreed the carnivore bullet and the tips will be interesting. I still think that a shorter shaft tip could be a key in reliable shearing. If the tip breaks off on a short shaft the tissue should enter the cavity enough to blow the petals off in my theory.

sound promising

+-+-+-----+

"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.

Posts: **4253** | Registered: **10 June 2009**



RIP
one of us

posted 08 August 2011 02:07

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Maybe a little compressible air pocket beneath the shaft of the Talon Tip is what is needed to improve reliability of fragmentation, after all?
This would allow the tip to wedge the nose apart more easily.
Boom stick has been pushing for this.

Using the standard Talon Tip in the Carnivore will easily accomplish this, but the deeper cavity will be easier to fragment anyway.

Does the current Talon Tip bottom out in the non-Carnivore Noncon cavity?
I doubt it does for good engineering purposes. 😊
So, if not bottomed out, how much clearance is there?
Maybe it just needs a silly millimeter more of air space from shortening of the seating shaft of the tip.
The longer the seating shaft, the more secure the press fit will be.
Minimal shortening, if any, is the ideal,
and that depends on a sample greater than $n = 1$ for velocity less than 2000 fps at impact ...
But we don't want to work Doc M to death ...

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



capward
One of Us



posted 08 August 2011 02:15

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Talon Tips may be at their optimum match up with the Carnivore bullets...longer but lighter weight bullets with maximized BC due to the tips. Should be a great combination.

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

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**



michael458
One of Us



posted 08 August 2011 04:52

[Hide Post](#)

Yes guys, I don't know, low velocity, plugged HP, ????? Or combo of several of these things. What Boomy says is exactly what Sam stated the other day, but those tests were all full loads, high velocity, so everything sheared.

I don't think I am going to get time to sort it out this week, actually have some work to do mid week to the end of the week and will be out. But at least I will try and sort it out next week by doing the same test again, only cut the studs short so there is a pocket inside the HP. Hopefully this will prove out and will be a very very easy fix! I think it will work, sounds very logical to me, gives room for the tip to push inside the cavity, putting pressure inside, pushing blades outwards. Makes sense, we will try it.

No doubt the Carnivores will go to hell tip or no tip. .800 deep cavity, even with the long studs right now, that leaves .400 below the current stud. The only thing is POI with the Carnivores. Kept to the same velocity as the "Parent bullet" they will be same POI, or very very close as they have the same bearing surface, length, and so forth. I think they just might, but not 100% sure as they are a good bit lighter than the parent? We will also learn this as we move forward.

OK, have one more thing to leave you with. Our buddy Dave Bush sent some Punch bullets to test out a couple of weeks ago and I got started on those tests yesterday. I was doing some low velocity work with the 50 B&M Super Short and the 458 B&M Super Short, so it provided a good opportunity to start the tests with the Punch Solids.

In combination for comparison I also did the equivalent BBW #13.

Here are the 50s!

50 B&M Super Short



405 CEB BBW#13

420 Punch Bullet

50 B&M Super Short

8/6/11

1:12 Twist Rate

420 Punch Bullet 68% Meplat

43/LilGun

Muzzle Velocity 1985 fps

22 yd Impact 1925 fps

X1-42 Inches 2 Inches off Course

X1-41 Inches Straight



50 B&M Super Short
8/6/11
1:12 Twist Rate
405 CEB BBW#13 67% Meplat
43/LilGun
Muzzle Velocity 2006 fps
22 yd Impact 1959 fps
X1-45 Inches 1 Inches off Course
X1-46 Inches Straight



.500 Caliber



Posts: 8426 | Location: South Carolina | Registered: 23 June 2008

michael458
One of Us



posted 08 August 2011 04:57

405 BBW#13

420 Punch

The 400 Punch bullet did ok, but I really am some surprised at stability, especially in a 1:14 twist rate? The meplat is certainly big enough to stabilize.

I dropped velocity down in the 458 B&M Super Short to simulate 45/70 velocities. As you can see the BBW#13 gave more velocity than the Punch with the same load.

Both Bullets did a great job I think. Both certainly capable of handling some heavy issues.

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 will be testing these again in a Marlin 45/70. I have already done so with the 400 BBW #13, so just need to get the Punch bullets in. Probably next week at this point.



458 B&M Super Short
8/6/2011
1:14 Twist Rate
400 CEB BBW#13 67% Meplat
32/LilGun Simulate 45/70 Velocity
Muzzle Velocity 1819 fps
22 yd Impact Velocity 1769 fps
X2--43 Inches Straight



Posts: 8426 | Location: South Carolina | Registered: 23 June 2008

CCMDoc
One of Us



posted 08 August 2011 05:37

Michael458

<http://www.munitions.org/bbs/ubbthreads.php?ubb=showthread&p=12012>
Do you think the 6" difference in penetration is solely due to velocity or is the radius on the meplat or perhaps the shoulder on the CEB more responsible?

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outfit for BASC Life Conventional is BASC; AR member since November 9 2003

STILL waiting for my Taksdale double or a refund

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Posts: 3448 | Location: In the Shadow of Griffin&Howe | Registered: 24 November 2007

capoward
One of Us



posted 08 August 2011 06:15

quote:

Originally posted by CCMDoc:
Michael458

Do you think the 6" difference in penetration is solely due to velocity or is the radius on the meplat or perhaps the shoulder on the CEB more responsible?

Likely the radius on the Meplat. I pulled this from Page 88:

quote:

Well as much as I would love to take any sort of credit for this 493-BBW bullet, I cannot take one grain of credit for it! I am just the monkey behind the scenes. All Credit goes to our very own SRose and BBW (Bastard Bullet Works).

**.500 Caliber
493 gr
Design by Sam**



Did I say I was testing this bullet with a bunch of other tests today???? I think I did, no, I am sure of it, I did, and I tested it! YIPPIE. And it did just as damn good as I had hoped, and thought that it would!

**50 B&M
1:12 Twist Rate
493-Sam
65% Meplat
Muzzle Velocity 2185 fps
22 yd Impact Velocity 2122 fps
X2--63 Inches Dead Straight**





Muzzle Velocity 2185 fps
22 yd Impact Velocity 2122 fps
X 2--63 Inches Dead Straight

Posts: 4954 | Location: Central Texas | Registered: 15 September 2007

srose
One
of Us

posted 08 August 2011 06:31

[Hide Post](#)

quote:

Originally posted by michael458:
I'm Back! Clean up duty has been done! I am on the range again!

I had a few things I wanted to look at today. First up is a little 405 gr .500 caliber bullet pretty much that Sam designed for our 50 B&M Super Shorts. It has what I am calling a BBW Nose profile, Sams own. I tested a couple of larger versions some weeks ago, very good results and then the #13 profile hit us, and this nose profile took a back seat.


I got a lot more than I expected, far more. I expected 40-45 inches. To date, nothing has gone over 44 inches in the 50 B&M Super Short, until today. This is very incredible and totally unexpected. I suppose that SD can surely now be thrown out the window as a totally useless, and antiquated number that has outlived its usefulness. With todays modern bullets, SD is no longer a factor.

This is a superb bullet and gave excellent 100% Dead Straight Line Penetration! Both found in exactly the same depth, and both dead nose forward! One just can't ask for better than this!

An excellent nose profile that it is really not exactly like anything I have seen, so I name it the new "BBW Nose Profile"! If Sam would like to change that, he is welcome to do so.

This is an excellent bullet, just excellent! Sam, this one is a big winner, looks good, shoots good, and terminals are excellent!

M

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

50 B&M Super Short
9/21/2010
1:12 Twist Rate
405 BBW 66% Meplat
Muzzle Velocity 2048 fps
22 yd Impact Velocity 1981 fps
X2=54 Inches Dead Straight




X2=54 Inches Dead Straight



Posts: 2823 | Location: NC | Registered: 08 July 2006

boom stick
One of Us



 posted 08 August 2011 06:53

I think the radius is good for the fluid dynamics that adds to the penetration.

[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)

Posts: 27557 | Location: **Where tech companies are trying to control you and brainwash you.** | Registered: 29 April 2005

I wish I had taken some photos of the loaded cartridges, this bullet really makes for a handsome looking cartridge!

Michael

This one is a little more like it.

Sam

michael458
One of Us



posted 08 August 2011 14:03

[Hide Post](#)

quote:

Originally posted by CCMDoc:
Michael458

Do you think the 6" difference in penetration is solely due to velocity or is the radius on the meplat or perhaps the shoulder on the CEB more responsible?

Doc

I think it's a combination of things that gives the BBW #13 the edge. First, the Punch has a good nose profile, as we see from some of the earlier tests we did with some that Sam made. They are near the same, and had we not found the BBW #13 profile, I am quite sure we most likely would have went with a profile very similar.

Velocity does play a role as we all know. So that is a bit of it.

The biggest factor in the deeper and straighter penetration of the BBW #13 is the sharp edges of the Punch, and the larger meplat size. At one time I thought the sharper edge might add to stability, however it does not in my opinion, and in fact, just the opposite the more I see of sharp edge bullets. I concur with Boomy, "I think the radius is good for the fluid dynamics that adds to the penetration."

A smoother flow that is hard to upset. Of course we also know that the larger the meplat the less penetration we get. Most will also say that it hits harder up front, and in most circumstances I would concur that factor, however in this particular test the BBW #13 made a much larger cavity, that might have been due to the extra 75 fps or so? But it was substantial. The depth of penetration is not much of a concern to me with the Punch, more so the stability.

Michael

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

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Posts: 8426 | Location: South Carolina | Registered: 23 June 2008



michael458
One of Us



posted 08 August 2011 14:59

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At the request of North Fork I did a short study on a couple of bullets at low velocity to see what the lower end of expansion would be. We did some of this before I left for Africa, very interesting and we learned a good deal. I told you that we would do some more of this, and we are and will be as we can find the time to do so.

This is the .458 350 gr North Fork Premium, primary for the 45/70 I think. Since I was working with the 458 B&M Super Short anyway, and it's much easier to get low velocity loads with the 458 Super Short than many of my other cartridges, it makes it a prime candidate for this work.



**458 B&M Super Short
8/6/2011**

1:14 Twist Rate

350 North Fork SS FN

25/2400

Muzzle Velocity 1423 fps

22 yd Impact Velocity 1387 fps

21 Inches Penetration



**458 B&M Super Short
8/6/2011**

1:14 Twist Rate

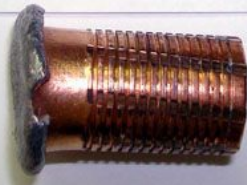
350 North Fork SS FN

27.5/2400

Muzzle Velocity 1545 fps

22 yd Impact Velocity 1503 fps

19 Inches Penetration



458 B&M Super Short

8/6/2011

1:14 Twist Rate

350 North Fork SS FN

43/LilGun

Muzzle Velocity 2156 fps

22 yd Impact Velocity 2084 fps

17 Inches Penetration



I could have used a couple of velocities between 1500 and 2100, and then some over 2100 to complete the study better, and will at later dates. But this gives a pretty good start.

.458 350 North Fork FN Premium



Muzzle Velocity 1423
22 Yd Impact 1387

1545
1503

2156
2084

350 North Fork FN Premium 458 Caliber

Posts: 8426 | Location: South Carolina | Registered: 23 June 2008

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Muzzle Velocity **1423**
22 yd Impact **1387**

1545

2156
2084



Michael

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

[visit our on-line store for AR Memorabilia](#)

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