

This topic can be found at:

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

michael458

10 December 2010, 15:21

Terminal Bullet Performance

Now lets look seriously at the new 458 caliber CEB BBW #13 Solids and Noncons.



These bullets did exactly what they were designed to do. Of course to all, while I am working with my own 458 B&M cartridges/rifles, these bullets will be excellent in other 458s, 458 Winchester, and extreme in the larger case 458 Lotts and up. NonCons Like Velocity, and velocity does not hurt the #13 solids either. These bullets totally enhance cartridges like the 458 B&M and the 458 Winchester far beyond what has been done in the past, even with premiums!

Also, once I get the all the standard B&Ms going with #13 solids and NonCons--I will be looking at the super shorts next.

So far in .500 caliber and now 458 caliber I am getting some deeper penetration in the test medium with the remaining slug as opposed to other brass NonCons I have worked with. Penetration is always a key issue with me.



I can't ask for better than this. The 4 inch witness card below shows the blades shearing and going away from center, exactly what they are supposed to do.



Lot's of trauma inflicted and transferred. Next time I take out the 458 B&M, this is my buffalo hammer! Of course this bullet will also do very well on anything else that happens to get in it's way! This is my new bullet in 458 B&M period--end of story!

Oh, and I want to add, do not forget that in this test medium a 500 gr Swift A from a 458 Lott at 2250 fps is a 24 inch diver, a 500 Woodleigh at 2250 fps in a lott is a 21 inch diver, a 500 Nosler Partition is a 19 inch diver! To give you perspective on penetration of this medium.

Michael

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michael458

10 December 2010, 15:33

I test lots of things, as you all know. Sometimes what you don't know is some of the tests I do that I don't talk about. When going to the field I trust very little without putting things to the test. When I placed a large order a couple of weeks ago for the already tested .500 caliber solids and NonCons, I decided to TEST CEB a bit. I placed a fairly large order for these 458s, Solids and NonCons. While they had done extremely excellent thus far with the two band #13s in .510 and .474 for the doubles, I wanted to test CEB to see if they could go to 458, brass, get the meplat and radius correct, without testing prototypes before hand! Oh man, when those gorgeous 450 #13s come in, I had little doubt that they would perform. The radius is PERFECT, the meplat size measures a perfect 67%, as ordered, just everything about them looked great! And sure enough, they are. I had to look up the prototypes Sam sent in 458, after testing the CEB BBW 13s--they were exactly the same in performance--and exceeded any 458 450 I had tested. None of the others are slouches either--and have been used in the field with great success.

458 B&M
12/9/2010
1:14 Twist Rate
450 CEB BBW #13 Solid
67% Meplat
Muzzle Velocity 2248 fps
22 Yd Impact Velocity 2212 fps
X2--62 Inches Penetration



photobucket



The 458 450 CEB BBW #13 passed with flying colors---And so did CEB!

CEB--If you are lurking about--Very Excellent!

Michael

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michael458

10 December 2010, 16:34

You know I have been on about the same POI-@50 yds with the #13 Solids and the Lighter NonCons.

In my experience with copper and brass solids and noncons from other manufacturers the lighter weight noncons always work with the solids, even if many times they are not exactly the same in design.

Well, it was purposeful that the BBW #13 Solid and the #13 HP is exactly the SAME bullet, with the exception of the HP and the lighter weight. They have the same bands, same nose profile, same bearing surface, and from all tests conducted thus far in .500 and .458, brass and copper, they have the same POI at 50 yds--Dangerous Game Range! I suspect this will hold for most of you as well.

Now, what is somewhat of interest, in yesterdays test work in the 458 B&M I used a load of 77/AA 2520. The 458 B&M Likes AA 2520 for the heavier bullets, 450s-500s. So that has been standard for several years. This load was used with both the 420 NonCon and the 450 #13 Solid. Results below;

420 #13 NonCon HP--77/AA 2520 X5
HI LO ES Average Pressure Trace
2259 2251 8 2254 fps 52357 PSI

450 #13 Solid--77/AA 2520 X5
HI LO ES Average Pressure Trace
2254 2246 8 2249 fps 60488 PSI

As you can see, everything but the pressure is the same. Even though the NonCon is lighter, same load, same velocity. One would expect higher pressure with the heavier bullet.

Now, this is an example and it is "Cartridge" related I believe. As in the 500 MDM and the 50 B&M the 460 Noncon and 500 gr #13 Solid is "CLOSE", 30-50 fps, with the 460 being the upper, it is not nearly exact as with the 458 B&M, which leads me to believe this is cartridge related. Even though the 500 MDM and 50 B&M these have the same POIs at 50.

Another rifle, an 18 inch 458 B&M exhibits the exact same behavior.

Just interesting stuff that comes out. I have also seen this with some other like designs in other NonCons.

Now something else that Sam brought to mind a couple of weeks ago--extremely interesting concept that we are going to look at.

Remember the EXTREMELY LONG BBW #13 in .500 caliber that Sam left for us to test while he was on the "Dark Continent"? Well this bullet was extreme to say the least, a very very large Hollow Base. Only having 1 to play with I gave it my best shot in the 500 MDM but came WAY short on velocity--and I suspect pressures also, which befuddled me some until Sam and I had a short discussion about it--2 heads are always great, especially ones like Sam and I--HEH HEH! Now, Sam mentioned that we had effectively "INCREASED CASE CAPACITY" with the large hollow base!!!! Wow--wait a second, Hollow Base--Increased Case Capacity--without increasing CASE SIZE--lower pressures obviously????? What a concept? Now in that test I was hooked up for pressure trace, but had a strain gage failure when the wire broke loose from the 500 MDM--which is now on it's 3 strain gage in 2 months! So I missed the pressure on that one, but I bet now it was very low--increased case capacity does that you know!

In that same bullet order a couple of weeks ago, Capoward wanted some .500 caliber 460 CEB BBW #13 Hollow Bases--same as the 500s, hollow base to 460. I also ordered some for testing, just a few, 500 or so. This should prove to be interesting, same weight bullet, one hollow base, the other Hollow Nose--pressures???? Velocity?? Penetration of the 460 as opposed to the 500 gr bullet???

Some interesting things come out of doing what we do!

Michael

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buffalo **10 December 2010, 17:11**

quote:

Originally posted by michael458:
Some interesting things come out of doing what we do!
Michael

You can say that again....
Best thread ever!!!

Ulrik

srose **10 December 2010, 17:15**

"Just a few 500 or so"

Michael you are the man!

michael458 **10 December 2010, 17:29**

quote:

Originally posted by srose:
"Just a few 500 or so"
Michael you are the man!



Ain't no Play here when it comes to having a bullet SUPPLY! I MIGHT let you have one or two if you are a very good boy!

I expect the remainder of that order to be in MAYBE today????

M

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michael458 **10 December 2010, 17:34**

quote:

Originally posted by buffalo:

quote:

Originally posted by michael458:
Some interesting things come out of doing what we do!
Michael

You can say that again....
Best thread ever!!!

Ulrik

Ulrik

I think this thread has been interesting to say for sure. I have learned a lot! I think it has given SOME folks a better understanding of how, what, why. I wish there would be more cross over from some of the other forums where the things we learn here actually apply. But you can lead them to the truth--But you can't always make them believe! What they don't believe--I know! So regardless, I know what I will be using in the field from this moment forward.

Best? Well, don't know, but it's for sure the longest! 😊

M

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capward **10 December 2010, 22:30**

quote:

In that same bullet order a couple of weeks ago, Capward wanted some .500 caliber 460 CEB BBW #13 Hollow Bases--same as the 500s, hollow base to 460. I also ordered some for testing, just a few, 500 or so. This should prove to be interesting, same weight bullet, one hollow base, the other Hollow Nose--pressures???? Velocity?? Penetration of the 460 as opposed to the 500 gr bullet???



Yep, the 460gr #13 HB bullet will be the perfect companion bullet to the 460gr #13 HP and 500gr #13 FN bullets...the fantastic trifecta.

Penetration? Here's my thinking regarding:

- 1) Loaded at the optimum velocity/pressure loading for the 500gr #13 FN in the 50 B&M. I'm thinking the 460gr #13 HB will penetrate somewhere $\frac{2}{3}$ - $\frac{3}{4}$ the penetration difference between the 500gr FN solid (63-64") and the 460gr #13 HP (33")...so should be somewhere between 53" and 56" penetration. Something like a "limited penetration" solid; i.e., the non-expanding NF CPS.
- 2) Load the 460gr #13 HB to the same pressure level as the optimum velocity/pressure loading for the 500gr #13 FN in the 50 B&M. I'm believing the HB bullet will closely match the

63-64" penetration of the 500gr FN.

3) Load the 460gr #13 HP bullet to the same pressure level as the optimum velocity/pressure loading for the 500gr #13 FN in the 50 B&M. I'm thinking the HP bullet will pick up an additional 3"-6" penetration as well.

4) And I believe those little 460gr #13 HB bullets will perfectly match to the 460gr #13 HP bullet in trajectory and POI out to maximum PBR!

Guess we'll find out if I'm correct or incorrect when you get a chance to range test the HB bullets. I'll test how closely they're matched to maximum PBR once my 50 MDM is finished and I finish doing load development.

Jim 🤖

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

John Wayne

michael458

11 December 2010, 02:32

BULLETS BULLETS BULLETS----Whew, well got my clothes back on now, after rolling naked in the new bullets! Nearly worn out, but I managed to take some photos of the new .500s. Will be a busy week next week I think!

Also received the rest of the run of .474s, 470 gr CEB BBW #13 HP and 500 gr CEB BBW #13 Solids, both in copper.

But here are the .500s



Here is the hollow base on the 460 CEB BBW #13. Remember, exactly the same bullet as the 500 gr CEB BBW #13--just a hollow base, bringing the weight down to 460 grs.



And a comparison of the two Hollow Points--the 425 gr CEB BBW #13 with a .800 deep cavity, and the 460 CEB BBW #13 with a .400 deep cavity. Not tested yet, the 425 version, this may be the "Cat Bullet" of the future???? We will see! I am looking for extreme trauma, longer blades, and still have the solid penetrate--an explosion inside the body cavity, but not to sacrifice penetration of the remaining bullet! Ever see a cat jump straight up in the air? HEH!!!



Michael

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srose 11 December 2010, 02:41

Michael,

I notice that the petal cuts in the .800 deep hollow only go half the depth of the hollow. Was this for a reason or just a missed set up when making the bullets.

Sam

michael458 11 December 2010, 02:52

Sam

That's as deep as that wobble broachy thingy majiggy goes, I think. Dan and I think it will shear on out from that point? We think? Don't know? But we think it! Hell, it could explode into 12 petals for all we know? Or Not? It's kinda one of those last minute Michael Visions sort of thing.

HEH

M

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capoward

11 December 2010, 03:04

quote:

That's as deep as that wobble broachy thingy majiggy goes



Very excellent bullets!!!!



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

416Tanzan

11 December 2010, 03:26

quote:

Originally posted by michael458:
Now, that being said, the experiment with the 416 NonCon did not go well. Small hollow point, thick blades/petals.



416 B&M
12/9/2010
1:14 Twist Rate
334 CEB BBW #13 HP
Muzzle Velocity 2449 fps
22 yd Impact Velocity 2387 fps
X1--21 Inches
X1--23 Inches Backwards
X1--26 Inches Sideways



Sometimes it does--Sometimes it Does Not!

While penetration was fine, blades did shear, but not evenly. Blades did not shear at once, but along the wound channel. They were heavy, twice the weight of normal, did damage no doubt. But by shearing unevenly they did cause instability and inconsistency as you can see. I come up way short of calling it a failure, more like just not exactly what I am looking for. Maybe a little too unpredictable for me. Would they do the job-- Oh yes, they are very effective and cause lot's of trauma. On predictable shots--broadsides, fine. Tough shots, like raking rear or frontal-- hmmm.....??????

It was only a test, to see what happens--now we know. The production runs will have a bigger HP. Within the next week or two!

Another experiment I have requested along these lines is coming, maybe today. Remember the .500 caliber 460 CEB BBW #13 HP? Perfect in 50 B&M and 500 MDM---big buffalo hammers! Well, a few days ago, I got to thinking about thin skinned cats and bears and LOTS of trauma. I asked Dan to make up a 100 of the brass Noncons in .500 with a .800 deep cavity as opposed to the .400 cavity in the 460 gr .500. I am thinking massive explosion inside the body cavity, long blades and petals going in 6 different directions, remaining slug continuing to penetrate. While I am very sure that penetration of the remaining slug will not equal the full 460 gr bullet by any stretch, I don't think it will come up short on penetration--especially on thinner skinned dangerous game, lion, leopard, bear even.

Now what got me to thinking this is Art Alphins "lion load" bullet. I think that is a failure and a issue waiting to happen, if it has not already. While the concept was good, the bullet is not good enough, and can blow up on bone or muscle before getting inside to vitals. Perfect shot broadside yes maybe--explosive effect, massive transfer of trauma is exactly what you want on kitties! But not at the "sacrifice" of penetration.

We will find out I suppose.

Michael

Well, you've got my attention again. It looks like the analysis is on target, 'uneven petal shearing', though perhaps the solution would be a more highly differentiated 'scoring' on the inside of the hollow point.

One thing for certain, a tumbling, sideways bullet will not penetrate as deeply as a stabilized flatnose. So the solution is to guarantee a 'clean' blowup. You and Sam and CEB ought to be able to find a way to do that.

In any case, the peanut galley is cheering on the 416s.

+ + + + +

"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

11 December 2010, 03:51

Hey Tanzan!!!

Good to hear from you! Hope all is well your side of the big pond!

Look here, spot on with the thick bladed 416s. It was an experiment only. New wobble broachy thingy majiggy is on the way, and will have proper shearing, dead straight steering CEB BBW #13 HPs within a week or so at most. Along with that brand new CEB BBW #13 Solid--at 350 grs. The NonCon will come in 325 or so. I promise a "Clean Shear Job" once that is done. Then the remaining solid left to penetrate like the rest have been doing. We are now getting clean perfect shears with the following

.500 caliber
460 Brass #13 NonCon
395 Copper #13 NonCon

458 Caliber
420 Brass #13 NonCon

In all future 458 caliber and 500 caliber NonCons, regardless of weight and material we have the right configurations.

To test this coming week the .474 Copper 470 NonCon

I think we got it down right from .458 to .510 caliber right now.

We will have work to do with 416, .410, 9.3, .585 and .620 to make sure we get the right configuration on those, copper and brass versions.

A step at a time, but conquer we will!

HEH

Michael

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eljefedouble

11 December 2010, 15:53

quote:

Originally posted by srose:
"Just a few 500 or so"

Michael you are the man!

Michael, do you have a 'Michael rest' Heavy rifle version of the Ransom Rest?
Pressure/penetration/accuracy/working up a load etc...just asking?

The theory of increasing volume with a hollow base-Very plausible.Am still waay behind in my reading, but sneak up here to have a quick read 😊

it dont mean a thing-if it aint got no zing!!

Esskay

11 December 2010, 17:02

quote:

Originally posted by michael458:

Now, that being said, the experiment with the 416 NonCon did not go well. Small hollow point, thick blades/petals.





Sometimes it does--Sometimes it Does Not!

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We will find out I suppose.

Michael

Mike,

Have only posted a couple of times but have followed this post with great interest. GREAT WORK, ALL OF YOU.

I have a suggestion here. The issue is uneven shearing of petals, leading to instability. How about a groove on the nose, just ahead of where the hole in nose ends (i.e. towards the nose)? By varying the depth of the groove, you can control how much penetration you get before the petals shear cleanly leaving you with...DRUMROLL please 😊 a cup point solid with semi-clean edges to carry on the penetration and inflicting trauma. Voila...the best of both worlds! In fact, the groove could be made L-shaped, the longer leg towards the tip for even cleaner separation. Sam could easily modify a half dozen of the 416 bullets you already have and it should be an easy experiment to see if it improves the situation. The profile change "should" make no difference to poi at the ranges we are talking about etc etc.

A drawing would explain what I am trying to say very easily but not having Acad or some such on my machine..sorry. If you pm me a number I can call you and try to explain better.

Regards

Esskay

Saeed Ansari

srose **11 December 2010, 19:41**
 OK guys, I'm loading 470 NE ammo for Michael's and myself's maybe final test with my double. I have loaded lots of ammo with the new CEB BBW#13s with both solid and non cons. I have control rounds loaded with Woodleigh softs. I have loaded Barnes Banded, Woodleigh Hydro and NF for T-Rex tests. Got both IMR4831 and H4831 loads for pressure. Loaded a 80 grain load of IMR4895 for someone who requested it. Have cast bullets loaded for strain test. While I'm at it do any of you have loads you wish to be tested in the 470 that we have not done yet? If we have time I will be glad to test any favorite load you have if I feel it is safe. Let me know ASAP as I will be at Michael's tomorrow.

Sam

465H&H **11 December 2010, 20:54**

Sam,
 I have been using 110 grains of H-4831 in my 470 for several years with various 500 grain bullets. I get right at 2,145 fps with all of them and it is a very accurate load from my double. Please try it if you haven't already.

465H&H

srose **11 December 2010, 22:43**

465H&H, I loaded 109 grains of H4831 and if that won't do I'll load 110 grains.

Sam

michael458 **11 December 2010, 22:45**

Hey Esskay

Thanks!

I think I get the jest of what you are talking about, and it's a good idea, I can't fault it. But do remember, this particular test was just that, a little experiment. This one did not work. We have the formula for getting it to work perfect, 100% of the time, but was just experimenting a bit with the small diameter HP and thicker blades is all. Back to reality, the production run will be like the other brass HPs in 458 and .500. Got the copper right too so that it does the exact same thing as the brass now--or at least so far. Sam and I will be testing the .474 caliber 470 gr Copper HPs this week.

Very good idea however. Keep them coming!

Michael

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rose

11 December 2010, 22:52

Michael,

Don't forget those double #13s with the angle groove behind the nose I made for you in .510. I have not seen where you posted shooting those.

Sam

rose

11 December 2010, 22:53

quote:

Originally posted by michael458:

After the long day of testing the barrel strain on the 470 Doubles, Sam and I kicked around this idea on some HPs.

Pop Quiz--what about these .510 caliber Hollow Points? And no smart ass remarks from the "Peanut Gallery".

These are the ones I'm talking about.

Sam



michael458

11 December 2010, 23:03

Moving on to the next test! How about those Hollow Bases? Well, no I did not do terminals on the .500 caliber 460 CEB BBW #13 solids today, but I did do some pressure traces, as Capo and myself, and Sam are interested in how that hollow base might also reduce pressures!

I tested today in the 50 B&M the 460 CEB BBW #13 Hollow Base with 70/IMR 4198 along side the 460 gr CEB BBW #13 Hollow Point! Both weight 460--same bearing surface, same bands, same everything.

The 460 HP rolled in at 2278 fps at 61728 PSI. Now I had a test on this last week and the pressures run 59351 PSI, this is not so bad running pressure traces, not a lot of real differences.

The 460 Hollow Base came in at 2258 fps at 68598 PSI!!!! Oppps! Pressure increased greatly! Case study, along with a slightly sticky bolt confirms this. I will drop that to 68/IMR 4198.

Next I worked with the 500 MDM with the 460s!

I had a prior test with the 460 CEB BBW #13 HP with 98/RL 10X the other day, it was 2592 fps at 62438 PSI. Today's test the 460 HP with 98/RL 10X gave me 2581 fps at 61728 PSI. Very close.

Now I was a little concerned about the 460 Hollow Base! With 98/RL 10X it gave 2577 fps and only 57232 PSI! 4496 PSI less. Now, from one day to the next, that's still not a lot of difference as conditions change--but back to back same day, same hookup, it is enough to take notice of--as is the test done with the 50 B&M.

Conclusions?

Hmmmm? In one cartridge pressures were higher, unexpected! In the bigger cartridge, pressures were lower, as expected.

Possibly the "Larger" case capacity allowed the HB to lower the pressures. The load in the 50 B&M, with its lesser capacity was compressed. But so was the HP--with its flat base?

Conclusions, well, there are none to be had just yet. Inconclusive. Right now, I think it has to go by cartridge and load as to whether the HB will lower pressures. The HB on this bullet is actually small in diameter, possibly a wider HB covering more surface area than depth might make a bigger difference in lowering pressures?

One Cartridge Yes--the other No!

Interesting stuff I think.

Michael

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michael458

11 December 2010, 23:28

OK, how about my "Lion" bullets! The .500 caliber 425 gr CEB BBW #13 Hollow Point, deep .800 cavity? They will do the job, and I really can't call them a failure, but they do not behave the way I want them to behave! Yes, I know probably what would fix them, maybe. They need a longer slit inside all the way to the bottom of the cavity to shear proper, maybe.

Like a deep copper cavity, the blades want to hang on too long. Instead of shearing at 2-3 inches of penetration, and moving away from center, the blades want to hang to the bullet and do not shear until 5-6 inches of penetration. They do not shear away from center, but shear close to, and within the wound cavity. Destruction of material is massive, lot's of trauma inflicted and it's an ugly wound channel. A mess! But also not predictable.

For the most part the remaining slug continues straight, had one veer off course a bit. All were found sideways at the end of penetration. With this sort of bullet and it's mission, that's really not extremely important.

One thing that I don't like is the fact the petals don't start shearing until 5-6 inches of penetration in this test medium. The .400 cavity shears perfect every time at 2-3 inches, moves from center in a predictable pattern. Right now, that seems about perfect, once inside the body cavity you get the shearing effect, explosive, sending blades in 6 directions from center--we even know that the blades can exit the body of a deer broadside. So even on buffalo, those blades are going thru vitals, and causing trauma and blood loss in the vitals. While the slug continues on it's merry way!

Now, if we don't get a shear until 5-6 inches, then take a look at a deer--or leopard. They are not very wide broadside, it might be possible the shear does not take effect until too far past the point of where you want that shearing effect?

Like I said, these are not really a failure per say, but just not behaving like I want them to. It was an off the cuff thought to begin with, and yes I could probably get it right with some more work, and I might do so later, but now, we got the right formula with the standard bullet, and no lion nor leopard can handle much of that!

I will most likely use some of these on some kudu or something next season to give them a try out. I am sure they will do the job!





Michael

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capoward

12 December 2010, 01:33

Michael,

That is most definitely very interesting results the 460gr #13 HB in the 50 B&M vis-à-vis in the 500 MDM. While It also appears that the current version will work OK in the 50 MDM as it does the 500 MDM...you are correct – base hole diameter/depth is as critical to proper HB bullet performance as it is to the HP bullet performance.

Here's a not to good view of Sam's original 360gr BBW and the production 460gr CEB BBW #13:

Difference in Hollow Base Diameter



.500 360gr BBW 69% Meplat

.500 460gr CEB BBW #13 HB

The 360gr worked fine in the 50 B&M but the 460gr didn't. Most likely it was due to the shorter overall bullet length but it is easy seen that Sam's prototype BBW 67% Meplat HB bullet had a slightly larger diameter HB hole than the production CEB BBW #13 HB bullet.

I wonder if Sam would be willing to take one of my boxes of 500gr #13 FN bullets and tinker with HB hole diameter and depth to produce a say 3 each of six different hole diameter/depth possibilities – while maintaining 460gr bullet weight – for testing with the 50 B&M cartridge. Then test one bullet of each option for pressure and velocity and then run the remaining winners for POI accuracy? Once settled we should have a "new" 460gr CEB BBW #13 HB that will work properly with all relating .500 caliber cartridges (that it'll properly seat in that is).

Jim 🤖

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

srose

12 December 2010, 01:45

Jim,

Sure I'll be glad to modify your bullets if you think it is worth while. Tell me exactly what you want and I'll get er done.

Sam

465H&H

12 December 2010, 01:56

quote:

Originally posted by srose:
465H&H, I loaded 109 grains of H4831 and if that won't do I'll load 110 grains.

Sam

\

Sam,

It is like a grenade, close is good enough.

465H&H

srose 12 December 2010, 03:39

465 H&H, I've got you covered. I loaded a couple rounds with 110 grains. I'll let Michael shoot those!

Sam

capoward 12 December 2010, 03:49

Sam & Michael, you have a PM.

Jim 🤖

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

michael458 12 December 2010, 04:27

quote:

Originally posted by srose:
465 H&H, I've got you covered. I loaded a couple rounds with 110 grains. I'll let Michael shoot those!

Sam

Man, that's a sissy gun! Probably weighs 11 lbs or so, smallish bore! I ain't scarrt!

HEH

Hey, all this about the Hollow Base--Don't worry about that--remember, in the 50 B&M that is a fairly seriously compressed load of IMR 4198. Long sticks. Let me try a load of RL 10X in the 50 and see what happens.

Also, the 500 MDM the hollow base worked as it should, less pressure.

This is more cartridge/powder related than bullet problems or issues.

So before we go nuts, lets try some easy tests--different powder being first up.

M

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michael458 12 December 2010, 16:37

Regarding the two recent tests with brass HP NonCons. 416, small diameter cavity, thick blades, .500 double deep cavity.

Seems to be some confusion thinking there is a problem, or issue--There is not, both of these bullets are just merely a test to see what happens is all. Don't confuse the issue thinking there is a problem. These are some of Michaels Visions so that I can have a deeper understanding of how the material will react by doing different things with it. And we are learning this.

See below--we got it, just want to see some other things too.



458 B&M
12/9/2010
1:14 Twist Rate
420 CEB BBW #13 Hollow Point
Muzzle Velocity 2259 fps
22 yd Impact Velocity 2195 fps
X2--28 Inches Penetration
X2--30 Inches Penetration



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500 MDM
1:12 Twist Rate
11/20/2010
460 CEB BBW#13 Hollow Point
Muzzle Velocity 2672 fps
22 yd Impact Velocity 2598 fps
X2--37 Inches Total Penetration



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460 CEB #13 Brass HP

50 B&M
1:12 Twist Rate
11/17/2010
460 CEB#13 Brass HP
Muzzle Velocity 2283 fps
22 Yd Impact Velocity 2215 fps
Retained Weight 351 gr
33 Inches Penetration

4"



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50 B&M
1:12 Twist Rate

11/17/2010

460 CEB#13 Brass HP

Muzzle Velocity 2283 fps

22 Yd Impact Velocity 2215 fps

Retained Weight 351 gr

33 Inches Penetration



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Blades Show

50 B&M
1:12 Twist Rate
395 CEB #13 Copper HP
Muzzle Velocity 2413 Fps
22 yd Impact Velocity 2348 fps
Retained Weight 315 gr
25 Inches Penetration



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50 B&M
1:12 Twist Rate
395 CEB #13 Copper HP
Muzzle Velocity 2413 Fps
22 yd Impact Velocity 2348 fps
Retained Weight 315 gr
25 Inches Penetration



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What I consider the North Fork NonCon!

458 B&M Super Short
1:14 Twist Rate
325 North Fork CPS
Muzzle Velocity 2265 fps
22 yd Impact Velocity 2172 fps
X2--26 Inches Dead Straight



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500 MDM
1:12 Twist Rate
450 North Fork CPS
Muzzle Velocity 2510 fps
22 Yd Impact Velocity 2438 fps
#1--32 Inches
#2--35 Inches
Incredible Trauma Inflicted



50 B&M
1:12 Twist Rate
450 North Fork CPS
Muzzle Velocity 2249 fps
22 yd Impact Velocity 2188 fps
X-2--32 Inches
Incredible Penetration

50 B&M
1:12 Twist Rate
450 North Fork CPS
Muzzle Velocity 2265 fps
22 yd Impact Velocity 2198 fps
X-2--31 Inches
Incredible Trauma Inflicted





This type bullet, the concept, is all quite new to many of us. We all grew up and every year or so the major manufacturers come up with the "Miracle Bullet" of the year, eh? Big write ups in the magazines, full of some sort of BS and so forth. None of them actually having much of an understanding of what is happening--yes it works, dead animals everywhere! You see, to stay in the market place, they have to have something new--sometimes rushed to the market place to get a share of the market-not really tested and understood sometimes as well as it should be, thus, the very reason I test everything before going to the field, I just don't trust what I am told by these monkeys sometimes! You see the problem is this, I know some of these monkey experts, and I know what they know, but they don't know, what I know. I am no expert at this by any stretch of the imagination, never claim to be, just a student of--so where does this leave the Monkey Experts? Exactly right!

What do all the proper designed NonCons have in common? Penetration! Penetration beyond any conventional premium bullet across the board, every caliber, rifle, cartridge. They can take a marginal cartridge and enhance it to the point that is now far more than "adequate". Take for instance my own little Super Short series. With the conventional bullet available, they are just dandy for a lot of chores, and so easy to work with it makes them desirable, even if they come up short in some areas. A NonCon enhances these cartridges to the point that they are now viable for much larger duties, and move at least to an "adequate" status, if not much better than that! How? Because of reliable and repeatable penetration!

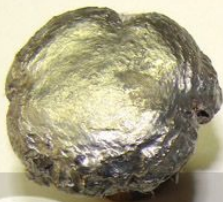
I have come back to this post and want to add some reminders for you pertaining to this test medium, and comparisons to our very best big bore conventional premium bullets. Just FYI! All these bullets below are great bullets, and nothing at all against them. I have used most of them in the field with excellent results.



458 Lott
550 Woodleigh Soft
21 yd Impact 2100 fps
22 Inches Total Penetration
Retained Weight 539 grs.



416 B&M 350 Swift A Frame
Impact 2401 fps
Total Penetration 18 inches
Retained Weight 345-346-347



**458 Lott
500 Swift A Frame
Muzzle Velocity 2260 fps
25 yd Impact
24 Inches Penetration
Wet News Print Only
Retained Weight 494 grs**



**458 Lott
500 Woodleigh Soft
Muzzle Velocity 2240 fps
25 yd Impact
21 Inches Penetration
Wet News Print only
Retained Weight 487 grs**



458 B&M
480 Hornady DG
Muzzle Velocity 2118 fps
21 yd Impact Velocity 2070 fps
19 inches total penetration
Retained Weight 393 grs



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458 B&M
450 Swift A Frame
Muzzle Velocity 2156 fps
50 yd Impact
20 inches Total Penetration
Retained Weight 445 & 449 grs



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**416 B&M
400 Swift A
73/AA 2520**

**Muzzle Velocity 2351 fps
21 yd Impact Velocity 2321 fps
21 inches Penetration
Retained Weight 396 grs**



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**458 B&M
500 Woodleigh SP
77/AA 2520**

**Muzzle Velocity 2125 fps
21 yd Impact Velocity 2081 fps
21 inches Penetration
Retained Weight 498 & 478 grs**



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This little story this morning should speak volumes to you.

I sure miss shooting these this fall, in the field! But you see I took this year off, with the exception of the little Arctic trip for the two muskox--which don't count, I did not even get to use my rifle or ammo! So I missed an entire year of field study! But thanks to Sam, 465HH, and some others we are getting some field work done with these. And by all accounts so far the NonCons are doing what they are supposed to do and doing well it seems. I have some plans next year for some shooting, but my Africa trip will be "In Season", and there are no deals to be had much on "In Season" critters as many of you know. I have at least 5 buff cows now, and a chance for a couple of bulls, then I am going to drop back down to my friends place in RSA and hammer some thin skinned critters for test work with these bullets.

I also suspect that MANY of you will be going to the field with these next year and I think we will all have a great understanding of how these perform on a variety of critters at this same time in 2011. It's going to be another fun year here on the "Terminal Bullet Performance" thread, I wonder what we might discover in yet another year?

Well rambling on a bit this morning, Sam and I have a couple of busy but fun days ahead of us! Think we might go get Sake Soaked tonight to get prepared--HEH HEH HEH!!!!!!!

Michael

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capoward

13 December 2010, 02:06

Good overview Michael. Nice reminder of how the current NonCons compare to the traditional premium expanding bullets. Without doubt the CEB BBW #13 NonCons are exceeding expectations! Very all right!!

Jim 🙄

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

buffalo

14 December 2010, 13:18

Hey Michael and Sam... - are U working hard? Or did u guys have too much Sake 🍷
Waiting to hear about your testing.. 😊😊😊

michael458

14 December 2010, 15:53

Jim

I think it was time to do a review on the NonCons and the Premiums as direct comparisons. Or else some of the Lurkers forget and confound.

Buffalo

Actually Sam and I got a very good start yesterday morning and by afternoon had accomplished what we had to do on the 470 work. I am busy now trying to put everything together, and will take at least as long as doing the actual test work--about the same amount of time to do the work, then work the data and record everything! I believe in keeping decent records of stuff, else one gets lost.

Probably this afternoon before I can get started posting results on many different things, coming up, there of course were barrel strain tests, T'Rex tests, Dacron vs Foam, normal pressure tests, and I have to refer back to the field notes to remember other things!!!!!!

Michael

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buffalo

14 December 2010, 17:07

Michael-

You guys keep impressing me big time.. Amazing work. Just wish I could have this hole thread as a printed book - to be able to go back and - in an easy way - find old data..

Looking forward to read about your results..

Ulrik

450NE

14 December 2010, 18:44

Michael and Sam,

I'm dreaming of a BBW #13 Copper Christmas...
With visions of test results dancing in my head!
Many thanks for all your work.

Merry Christmas to all and to all GOOD SHOOTING!
Mike

jeffeosso

14 December 2010, 19:56

write a book, mm!

#dumptrump

opinions vary band of bubbas and STC hunting Club

Information on **Ammoguide** about
the [416AR](#), [458AR](#), [470AR](#), [500AR](#)
[What is an AR round?](#) Case Drawings [416-458-470AR](#) and [500AR](#).
[476AR](#),
<http://www.weaponsmith.com>

michael458

15 December 2010, 03:02

Buffalo

I think Jim has figured a way to get it into a pdf format? Heh!

450 NE

Well, copper Christmas? Hmmmm--- Might be a "Brass Christmas" See below!

No thanks needed. And a very Merry Christmas to you as well, along with everyone involved on this thread!

Jeffe

Ain't nobody want a read a book from me!



HEH HEH!

M

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

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michael458

15 December 2010, 03:13

I have been at it guys, working to try and get something posted today, but just can't get it all done. Will have to work on it again tomorrow too. I did manage to get the barrel strain results up, and did a post on the double rifle forum, I am going to repeat that post here too. So here it is;

Lot's to report, and I yet do not have it all put together, especially the T'Rex terminals that Sam and I did yesterday. But I do have the barrel strain reports ready--I think!

If you have been following this thread at all, you know Sam and myself were busy yesterday doing the "barrel Strains" on the new copper 4 band .474s caliber bullets.



As suspected the barrel strains on the new 4 band bullet were well within reason, and lower than most everything on the market. We ran several tests with the 500 CEB BBW #13 and the 470 NonCon. The 500 gr CEB BBW #13 Copper came in on average 21430. With the Woodleigh SP on average of 22895. I think all of you consider that a proper bullet for doubles, so I consider that as a benchmark so to speak, and Sam agrees.

The barrel strain data sheet has grown to 2 pages now, and I apologize for that. This will be available to you via the B&M site, under Additional Research in down loadable pdf format, as soon as I can get time to add the report, hopefully this week.

470 Nitro Double Rifle Test						
Bullet	Load	Velocity FPS	Chamber Pressure PSI	Barrel Strain Pressure PSI		
500 Kynoch	Factory	2084	45909	18250		
466 Brass BBW #13	106/IMR 4831	2141	39172	20013		
500 CEB BBW #13--2 Band Copper	106/IMR 4831	2142	30029	20265		
470 CEB #13 HP--4 Band Copper	106/IMR 4831	2145	42023	20517		
500 BBW #13--4 Band Brass	106/IMR 4831	2210	NA	21399		
500 CEB BBW #13--4 Band Copper	106/IMR 4831	2152	NA	21273	Average	
500 CEB BBW #13--4 Band Copper	106/IMR 4831	NA	NA	21588		21430
500 Barnes Copper Tube Lead Core	106/IMR 4831	0	43214	21525		
500 North Fork FPS	106/IMR 4831	2177	46086	21777	Average	
500 North Fork FPS	106/IMR 4831	2142	NA	20927		21284
500 North Fork FPS	106/IMR 4831	2106	NA	21147		
500 Barnes Banded Lubed	106/IMR 4831	2167	47464	22281	NOTE	
500 Swift A Frame	106/IMR 4831	2169	48993	22344		
500 Hornady DGS	106/IMR 4831	2104	44147	22533		
500 Barnes Banded	106/IMR 4831	2169	46738	22848		
500 Woodleigh SP	106/IMR 4831	2104	36892	21903	Average	
500 Woodleigh SP	106/IMR 4831	2110	NA	23888		22895
500 Trophy Bonded	106/IMR 4831	2124	44458	23037		
500 Woodleigh FMJ	106/IMR 4831	2110	44899	23667		

500 Woodleigh Hydro	106/IMR	4831	2209	51746	22880	
					Test #2	24045 NOTE
500 Barnes RN Mono	106/IMR	4831	2177	48811	25494	NOTE
525 Cast Gas Check	91/IMR	7383	1976	46738	28508	
525 Cast	75/IMR	4895	NA	NA	32352	
NOTE: 500 Barnes Banded Lubed--2 rds fired #1 gave high barrel strain of 23163 #2 gave 21399. Current theory is that on #2 barrel was lubed at that point, not so on #1?						
NOTE: 500 Woodleigh Hydro--Test #1 gave 24297 and 21462. A very wide spread for barrel strain? Test #2 was only 1 round, but gave 24045, So I ranked this bullet at the 24045						
NOTE: 500 Barnes RN Mono--Highest reading recorded of all bullets tested.						

I think now is the time to tell you that Sam and I have made a decision concerning the materials the bullets are made of. If you take a look at the barrel strain sheet, you will see we tested a few of these bullets made in "brass". From the first set of these tests we had a brass BBW #13 that gave even less barrel strain than the 2 band original copper #13. But was still very close. Now once again we tested a brass version, and it came in equal to, or slightly better than the copper bullet! In addition, the NonCons work much better in brass, than in copper as well. In all T'Rex tests conducted since I started doing T'Rex tests a year ago, brass solids always come out on top in that arena as well. If barrel strain remains low with these new bands, Sam and I both think that the production runs should be done in brass. Another great attribute to the brass bullet is also one that everyone can understand, it comes at a much reduced price when compared to copper!

Right now--Today--brass has EVERYTHING going for it, barrel strain, NonCon performance, tougher construction, and price to boot! There is no downside as long as barrel strain remains equal in the very near future test work, which we will be doing again within the next week or so to CONFIRM this beyond doubt.

In addition to that Sam named the new line of bullets for you guys too, along with a minor band change, a bit more spacing between the top 3 bands so you guys can crimp, and choose where you want to seat the bullet, some added versatility. The new bullets will be designated "Nitro Express" Bullets!

Sam and I have much more for you, I just have not had time to get it all put together today. We have more on the Dacron vs Foam for you, we have T'Rex terminals to post, we have the 470 NonCon we tested in copper, along with several other things that can be discussed as well. I will work on this tomorrow again for you and get it up as I can.

Posted here as well as terminals upstairs.

Michael

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CCMDoc

15 December 2010, 03:23

Again,

Incredible work! 😄👍😊

Thanks for the education and information.



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