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

someoldguy 05 March 2011, 13:30

#### **Terminal Bullet Performance**

quote:

Michael and most of the rest of us are all about reality. Dont care much why it works or if its the theoretical "best" as long as it does work. Making things better never should preclude finding something better yet,



So we're not about reality here, huh? I'm gonna pretend I didn't read that!



\_\_\_\_\_

Glenn

michael458 05 March 2011, 15:11

Andy, "Theoretical"? Hmmmmm? I must be missing something I suppose.

Anyway.....

New Yorker Magazine. Hmmmmm, you know, I don't have much faith in "magazine articles" written by folks with agendas. It must be very difficult to come up with something to keep the ball rolling each month, not a job I would want.

Absolutes? None in our world that I know of. Regardless of whether we discuss the type rifle, the action, the barrel, the bullet, the powder the primer, it's of little matter, all can and have failed at one time or the other, regardless of the care we take in getting there. There are NO ABSOLUTES in our business of shooting and hunting. Everything we might do before going to the field might fail in the field once we hit the ground. Things break and nearly always when we don't expect. If it's mechanical it can fail. Rifles fail, regardless of design. Bullets fail at times for many reasons. Primers fail! Springs break. Scopes come loose! Things happen!

We work hard on the range, in the load room, terminal tests, rifle abuse before going to the field to lessen these failures. While most of the time we are successful in these endeavors, there are times that failures occur in the field that we cannot account for. Variables in the field are numerous that we will encounter. Naturally the more work we do before getting to the field will prepare us for many of these and we will overcome many of them if not most, but there will never be any absolutes involved. The more work we do ahead of time, the more our chances of success if we choose properly. I suspect it is this way with many other endeavors as well other than our interests in shooting and hunting. I can only attest to what I am familiar with.

I don't don't go to the field based on "theoretical discussion". There is a hell of a lot more backing me than that. I will leave that for the folks that have little or no field experience, in the meantime I continue to do my homework before the reality as I have done for the last 20 years.

It's been a busy week this past week. As mentioned, lot's of range maintenance this week with some improvements to the range. While I am not a "Clean Freak", I do like for things to be presentable. On the walls in my range the acoustic foam that lines the inside walls has become somewhat dirty, dusty, smokey over the last few years! Well, can't really clean the stuff proper, and it's been driving me insane for some time. Had a brainstorm the other day. Needed something to cover the walls, but could not interfere with the sound, or light reflection, and have the ability to clean easy and regular! You know that white plastic lattice you pick up at Lowes for borders at the bottom of outdoor decks and such? Seems that was the perfect solution for my troubles. We lined the entire range with this and it turned out great. The holes allow sound to enter in, disperse within the acoustic foam, it's white so it reflects light, does not absorb it, it's plastic, a damp mop or cloth will keep it clean easy! And it looks great as well! Today I have both boys and myself on serious cleanup duty on the range all day, lot's of reorganizing, pressure washing floors, working on impact boxes, some painting and so forth! Next week I will start back terminals and test work on a NEW and improved, and CLEAN range!

Now off to get things started!

Michael

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

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Andy 06 March 2011, 08:27

http://www.rathcoombe.net/sci-...listics/methods.html

I was surprised to see the link that Gerard posted had so many of my data points without giving me credit or explaining the test proceedure.

375, 416, 458, 450 GA, 450 Daklota data in plywood.

The test certainly goes on to show how inadequate wet pack is. I have shot literally hundreds of critters with 55 grain Federal Tactical .223 (which is a Trophy Bonded Bear Claw) and it has never, ever had less than about a foot of penetration and is usually not recovered or if it is in the 17-18 inch range.

This is true of deer, coyote and dog.

So obviously the paper was not soaked long enough.

The wet pack test shows 6.5 inches penetration. Rediculous!

Just because you present data in a scientific manner does not mean that the data itself is worthwhile.

Andy

capoward 06 March 2011, 09:56

Andy,

I'm not quite sure who or what you're upset at...but I'll stay out of that anyway.

Regarding the value of wet pack testing, I've read the Rathcoombe' website article twice and do not notice where the composition of the test wet pack is articulated. That said, if the wet pack is always prepared with the same composition then it would be valid for comparison testing of different bullets...in the wet pack. A valid correlation in game animals may be lacking though.

Michael has articulated how he prepares his bullet box(s) wet pack multiple times in this thread; it is prepared intentionally to *stress* the tested bullets to their maximum hence the reduced penetration seen in his test box(s) vis-à-vis the additional penetration the same bullets will show in game animals. Michael has been using his wet pack for a number of years now and does have correlation data between bullet performance in his wet pack and the same bullet's performance in game animals. I believe Michael has stated that bullet penetration in heavy boned DG animals is 30+ percent greater than the same bullet's penetration in his bullet box' wet pack and even greater in lighter boned plains game. I imagine the percentage would be even greater in the typical lightly constructed deer, coyote or dog.

Me I'm new to big bores and the 50 MDM that I'm currently having built will be my first, but not last big bore rifle. I personally find Michael's bullet box wet pack testing most helpful in eliminating bullets that I might otherwise have used with this rifle and already have in excess of 250 each of the CEB BBW #13 460gr HP NonCon, 460gr HB FN Solid, and 500gr FN Solid, all selected due to their performance in the bullet box, as well as a few hundred Hornady' 500gr FN and HP C&C bullets for play and practice with a few hundred more on their way...All just waiting on my rifle to arrive.

Jim 📆

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

someoldguy 06 March 2011, 14:39

quote:

I was surprised to see the link that Gerard posted had so many of my data points without giving me credit or explaining the test proceedure.

Rathcoombe's contact information is on that page you cited. Why don't you e-mail him and ask him about it? It wasn't Michael, Gerard or any other member here who came out with those tests you find so objectionable.

Glenn

michael458 06 March 2011, 16:25

Andy

I have been testing in wet print for about 20 yrs now. I have also done enough field work to know what works, and what does not. Jim is correct, over the years I have been able to come up with a "RULE OF THUMB" (Not Absolute) to correlate data between the test and actual animal tissue. With expanding bullets one will receive something along the lines of 80-100% more penetration in animal tissue, than that of the test work. For solids, 30-35% more penetration in animal tissue than that of the test work. Wet print is a solid continuous medium, fairly consistent, and denser than animal tissue overall. Now there are always exceptions, and no absolutes as stated. One hits bone, heavy muscle, and other factors in the field that can't be accounted for in the lab. The medium I use, I believe to be a "Reasonable" medium in which to test bullets we will be hunting with in the field. It does put stress on the bullets, and that is part of the equation, no free rides in the tests. There are no free rides in the field. It is aqueous material, minimum soaking

overnight. Re-soaked before shooting, and allowed to drain. I do not use straight wet print. About 5-6 yrs ago I started inserting magazine/catalog material, along the lines of 1.5 inches of mag/catalogs and 6 inches wet print throughout the test medium. I more or less stumbled onto this formula as a way of utilizing a by product of my wife's mail each day! She receives 4-5 inches of these damned catalogs a day! It does not take long to be over run with these things! Now what I did not realize at the time is that it changed my end results drastically with both expanding and primarily solids. It brought my penetration down by some 30% or so, which just about correlates with the magazine/catalog material inserted! If I was going to utilize this, I had to keep it consistent as possible and start data all over again. Which I have. I have found that by the insertion of the magazine/catalog material that this really puts solids to the test more so than the expanding--the reason is solids will go through much more material, having much greater chance of running into issues with it. Somewhat less consistent than straight wet print, which is not entirely bad, as animal tissue certainly is not consistent. At times I have solids hit staples, backing edges of magazines, and such, that can cause a bit of an issue with a bullet that is just not quite up to par. Of course, this is what we want, to find the point at which some bullets will fail, while others will be successful, on a consistent basis. Now this does not mean that a SOLID that fails consistently in the test work will fail consistently in animal tissue. What it means is that if a SOLID bullet is consistently SUCCESSFUL in the test medium, then it is more than likely going to be consistently SUCCESSFUL in the field.

On expanding bullets what I find and have done is that if a bullet fails in the test medium, then it is likely to fail in the field as well. Successful in the test medium, very likely to be successful in the field. There have been times I did not listen to my test work in the early days, and I suffered the same failures in the field as I did in the test work.

Now you are on about how inadequate "Wet Pack" is, I do not agree with that of course, I have done too much of it in comparison with field work.

I have not studied the test work at length that you are in contention with, but just from your own observations on deer, coyote, and dogs with your 223s it seems to correlate some with what I have seen--6.5 inches of penetration vs your 12 inches to 18 inches. Double 6.5 comes in at 13 of course. Falls in line with my findings.

I will not speak to others work, I can only relate to mine in comparison direct to animal tissue which I have some experience with both.

Now you relate data gathered in "Plywood", this is all about doing test work and taking that test work to the field. I am not the only tester on this thread, several others of note, Mike, RIP and a few others along the way. Now we would like for you to relate your test work as well. I am sure we can all learn something and would be welcomed.

Michael

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MikeBurke 06 March 2011, 18:03

Andy,

I am the Mike that Michael referenced in the above post.

I am not as eloquent nor prolific in my writing as Michael so this will be a little short.

Saturated newspaper is not animal flesh; however it is a consistent media for test purposes. I agree with Michael's assessment of bullet penetration in newspaper versus animal flesh.

I was questioned once before about the validity of a test. I recorded a video knowing where the bullet would stop in the media. I could do it again this morning with complete confidence because of the consistency of our test media.

This is the video.



michael458 06 March 2011, 18:10

quote:

I am not as eloquent nor prolific in my writing as Michael so this will be a little short.

Yeah Yeah---The real meaning of that is this "LONG WINDED"



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MikeBurke 06 March 2011, 18:14

"Prolific" sounded....well.... more eloquent.

Andy 07 March 2011, 01:27

Michael, if you search for some of my posts on big bore penetration you will find some like this below. I also did one of all premium 458 expanding bullets, and used 5 gallon nylon water buckets. Helped RIP calibrate his buffalo, combining my work on plywood, water and elephant.

You have probably seen it already, and I think I posted it here some years ago, but IWBA published a protocol to use for wetpack so it correlated to IWBA gelatin. I thought it was actually easier to mix Kind and Knox gelatin than follow their proceedure however.

Andy

Posted 30 January 2005 22:02 Hide Post Andrea,

Here are the reuslts of a study I made several years ago of penetration of FMJ and solids at different rotational velocities.

I have no idea if this correlates to elephant heads, body shots, or craters on the moon, but treated all bullets equally and probably is a meaningful representation of relative energy over unit of frontal area (penetration).

Andy

PENETRATION OF FMJ RN BULLETS IN 375, 416, AND 458 CALIBER RIFLES AT STANDARD AND ENHANCED VELOCITY AND ROTATIONAL VELOCITY.

C 2001 Andy Tillman

Boards Caliber Bullet Velocity Twist Shots/Comment

458 x 404 (Similar to 460 GA).

71 1/2 458 x 404 500 FMJ 2,367 fps 1-10 One to two more boards than 1-14 twist which had slightly higher velocity.

71 1/2 458 x 404 500 FMJ 2,367 fps 1-10

48 458 x 404 450 GSFN 2,450 fps? 1-12 Perfectly straight bullet path.

 $46\ 458\ x\ 404\ 500\ FMJ\ 2,334\ 1-10$  Hit left edge. Exited side of stop-box. Tipped at 40 boards (13 more than 1-14 twist). Penetrated 10 boards more than 1-14 twist. Threw wood 30 feet!

 $28\,458 \times 404\,500$  Barnes X 2,334 1-10 Unstable. Expanded and turned 180 degrees. Fully sideways at 23 boards, traveled base forward until 28 th. Climbing (upward) wound profile like  $5.45 \times 39$ mm.

450 Ackley

70 1/2 450 Ackley 500 FMJ 2,400 1-14 1-2 boards less penetration than 1-10 twist.

69 1/2 450 Ackley 500 FMJ 2,400 1-14

36 450 Ackley 500 FMJ 2,400 1-14 Exited side of stop-box. Tipped at 27th, fully sideways @ 31 boards. Ten boards less penetration than 1-10 twist.

458 Winchester (BRNO 602 with 25 inch barrel).

62 Simulated 458 Winchester 2,030 1-10 (Down-loaded 458 x 404). Penetrated 3-4 more boards than standard twist.

59 458 Winchester 500 FMJ 2,021 1-14 Circa 1980 Remington/FMJ

58 458 Winchester 500 FMJ 2,105 1-14 Federal Premium/FMJ

39 Â1/2 458 Winchester 450 GSFN 2,050 1-12 Simulated 458

23 458 Winchester 510 RNSP 2,105 1-14 Expanded. Federal Premium.

21 458 Winchester 510 RNSP 2,021 1-14 Expanded. Circa 1980 Remington.

416 x 375 Improved (Similar to 416 Remington or Hoffman but with 1-10 twist).

71 416 X 375 Imp 410 Kynoch FMJ 2,400 1-12 Three shots. Very consistent performer. Kynoch is copper clad steel jacket like Hornady.

375 Improved (Similar to 375 Weatherby or 375 JRS), 22 Â1/2 inch barrel.

71 375 IMP 300 FMJ 2,791 1-8

70 375 IMP 300 FMJ 2,791 1-8

50 375 Improved 300 FMJ 2,791 1-8 Exited side of stop-box. 13 more boards than standard twist that exited.

375 H & H (22 inch barrel)

65 375 H & H 300 FMJ 2,570 1-8 Penetrated 4 more boards than standard twist.

61 375 H & H 300 FMJ 2,570 1-12 Twice

37 375 H & H 300 FMJ 2,570 1-12 Exited side of stop-box.

NOTES:

Stop-box made from 12 x 12 inch square sheets of  $\hat{A}^{34}$  inch thick pine spaced  $\hat{A}^{34}$  inch apart.

Range, 25 yards

All FMJ bullets were copper clad steel jacketed Hornady unless noted otherwise. The Kynoch had a slightly more rounded meplat than the Hornady.

#### QUICK ANALYSIS:

A faster than normal rate of twist in both 375 and 458 caliber rifles at both standard and "improved†velocity levels resulted in 3-4 more pine planks being penetrated than at standard 1-14 or 1-12 rates of twist.

Rotational velocity was not as important as increased velocity. The 458 wildcats (2,400 fps) penetrated 10-12 more boards than the standard 458 Winchester. The 375 improved (2,800 fps) penetrated 6 more boards than the 375 H & H.

A very high rate of twist (1-8) resulted in a penetration gain of 4 more boards over a standard 1-12 twist in the standard velocity 375 H & H.

Rotational velocity of greater than 1-10 twist may be beneficial when using monometal bullets of high SD. These very long (1.6 inch) bullets may also benefit from careful design, keeping the center of gravity exactly the same as its center of form.

There does not appear to be such a thing as a  $\hat{a} \in \text{cmagic} \hat{a} \in \text{constant}$  velocity threshold of 2,400 fps as some observers have suggested. The 375 improved at 2,800 fps penetrated 9-10 more boards than at 2,570 fps.

No increase in penetration was noted using contemporary versus vintage 458 Winchester ammo. When loaded with the same 500 gr Hornady FMJ bullets, circa 1980 Remington 458 Winchester ammo actually penetrated one more board than higher velocity Federal premium ammo loaded in 2001.

Most bullets could be de-stabilized by an edge hit on the 12 x 12 inch boards, or an overlapping hit on previous shots.

The quicker twist bullets were somewhat more consistent than slower twist but not enough shots were made to verify this with absolute certainty.

When FMJ bullets did exit the side of the stop box, the quicker twist did so 10-13 boards later than the standard twist.

A 458 Winchester could have the same rotational velocity as a 450 Ackley just by using a 1-12 twist.

## ROTATIONAL VELOCITIES TESTED:

```
1-14 @ 2,021 fps = 1,717 revolutions per second (rps). 1-14 @ 2,105 fps = 1,789 rps. 1-14 @ 2,400 fps = 2,040 rps 1-12 @ 2,050 fps = 2,050 rps 1-12 @ 2,400 fps = 2,400 rps. 1-12 @ 2,450 fps = 2450 rps 1-12 @ 2,570 fps = 2,570 rps. 1-12 @ 2,570 fps = 2,570 rps. 1-8 @ 2,570 fps = 3,855 rps. 1-8 @ 2,800 fps = 4,200 rps.
```

If I havent given you a headache yet, here is a link to one of the test results in water.

### http://forums.accuratereloadin...=862104939#862104939

I have not posted much in the last few years. This was one of my last as I recall.

I dont think I ever posted the entire 28 bullet test on line of expanding bullets in water, it was just too long, but quite a few of the photos and data will show up in a search.

Bullets that were recovered from nylon water buckets correlated 90-95% for expansin and weight retention to George Hoffmans collection of 416's taken from from buffalo. It is a quick and easy way to sort out a true premium bullet from a pretender. (As I recall, I liked 11 of the 28).

Andy

michael458 07 March 2011, 03:01

Hey Andy

No Andy I have not seen much if any of that info, it predates my existence here by a few years. And really have not had time to go back that far. Good info however, and while I have not made a study out of it just yet, just briefly looking through it seems that some of your results seem to fall in line with mine.

Good information, thanks for taking the time to post it for us.

Not to be rude, but I will look at it a bit more in depth perhaps tomorrow!

Thanks

Michael

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07 March 2011, 05:17 drewhenrytnt

Michael.

Any additional testing on .375 NonCons?

I am gonna have to use an alias so as not to confuse the audience which Andy is asking questions.

South Texas Sasquatch

We Band of Bubbas N.R.A Life Member TDR Cummins Power All The Way Certified member of the Whompers Club

michael458 07 March 2011, 14:22

Sasquatch ( 👻 )



I have a plan of getting on some much needed terminals, this week. Range maintenance has been completed now, some other things are out of the way as well, and I will be starting some lower velocity NonCon work along with some North Forks.

No plan on the 375 NonCons, unless I can shoot them down a 416 caliber barrel of course? I think stability would be severely effected however. Maybe I will just throw them into the medium like a baseball pitcher? You see, there are no 375 caliber rifles here on the compound to work with--No Sam, I don't want any either.

Michael

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07 March 2011, 17:29 srose

Michael,

Don't worry I won't bring any 375s to your newly cleaned range. I know you don't want to pollute it with a 375. I'm about done playing with with that caliber anyway.

Sam

drewhenrytnt 07 March 2011, 20:39

If there are no 375 caliber rifles on the compound how did you accomplish this feat?? Houdini??

Posted 25 February 2011 15:09 Hide Post

Sam and I did some test work the other day with the 375 CEB BBW #13s both 300 solid and the Noncon, along with the .409s.

The 375 275 CEB BBW#13 NonCon will require some more test work, as you can see we lost one, and while penetration was good, and trauma inflicted was very good as always, you see it shed blades a couple of different sizes? Penetration is short of most other NonCons on this one, but it was dead straight, did not tumble, or veer at all, found nose forward. More test work is required on this one and possibly make the cavity wider, blades thinner. Only after some more test work is done however.

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michael458 07 March 2011, 21:34

quote:

If there are no 375 caliber rifles on the compound how did you accomplish this feat?? Houdini??

### Sasquatch

Oh but there are times I can work some magic! ©



HEH HEH.....But not on this one. Sam was here and either had his 375 HH double I think--or his 375 B&M, right now I am not 100% sure of which it was.

Also on the range right now doing PTs, and some low velocity 458 NonCon terminals in a real caliber, .458!

Michael

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07 March 2011, 21:55 Cross I

Low velocity as in 458 SS velocities?? That is a cute interesting Cart.

Grins heh dont forget the 416 325 NF SS Will need an elk/nilgai/PG load

Brian has a package headed his way.

SSR

michael458 07 March 2011, 22:23

CrossL

No, low velocity 458 B&M---this is part of the terminals being done for the 450 CEB NonCon that is used in the 450 NE. Starting at 2150 fps, instead of the B&M velocity at a touch over 2200. News is that it works down to around 2050 fps fine. At 1900 fps it does not shear at all. So I think we must thin the 458s out a bit as well as the 409s and 416s.

Yes, the 416 325 North Fork SS was a major part of my North Fork order, and now is an excellent time to work up a load in the 416 B&M--I have a load, but it's not max yet, have PT gages on 416, I think I will look at that this week, along with some terminals on it.

Don't let me forget!!!!

Excellent --

М

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someoldguy 07 March 2011, 23:39

auote:

South Texas Sasquatch...go ahead and ask Jeffeosso why I refer to myself as Sasquatch!



Glenn

capoward 08 March 2011, 06:11

quote:

Originally posted by someoldguy:

quote:

South Texas Sasquatch...go ahead and ask Jeffeosso why I refer to myself as Sasquatch!

Please don't tell us it's because you run through the woods naked! 😯



Well if its not the naked part...it can only be to an excessive amount of full body hair...or some really ginormous feet!!!





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

**CCMDoc** 08 March 2011, 06:32

quote:

Originally posted by capoward:

Well if its not the naked part...it can only be to an excessive amount of full body hair...or some really ginormous feet!!!



Sounds like most of my Italian family - both men AND women.

Of course no better on my wife's side ... they're Greek.

Well, I did want to lose weight and after this I'll have no appetite for several weeks.

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 tomorow

drewhenrytnt 08 March 2011, 09:31

Its the feet. My boot size is 18.

We Band of Bubbas N.R.A Life Member TDR Cummins Power All The Way Certified member of the Whompers Club

08 March 2011, 11:23 capoward

auote:

Originally posted by drewhenrytnt: Its the feet. My boot size is 18.

Most definitely your pseudonym is applicable.



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

someoldguy 08 March 2011, 13:31

_	quote: Its the feet. My boot size is 18.	
_	basketball player sized feet.	
Glenn		
CCMD	Ooc .	08 March 2011, 15:40
q	quote:	
C It	Originally posted by drewhenrytnt: Its the feet. My boot size is 18.	
And at	t only 5'5" tall	
NRA Life STILL V	fer; DSC Lifer; SCI member; DRSS; AR member since November 9 2003 waiting for my Taksdale double or a refund	
	Save the best for last, the smile for later or the "Thanks" for tomorow	
some	oldguy	08 March 2011, 16:4
	quote:	
A	And at only 5'5" tall	
Why do	loes the letter L come to mind?	
Sorry, I	Doc made me do it!	
Glenn		
Cross	:L	08 March 2011, 17:0
q	quote:	
С	Originally posted by someoldguy:	
	quote:	
	And at only 5'5" tall	
v	Why does the letter L come to mind?	
S	Sorry, Doc made me do it! 📵	
_		

sounds closer to Hobbit from the tracks





SSR

michael458 08 March 2011, 18:05

That is some BIG FEET--Sasquatch is very Appropriate!

For the most part I completed the Chamber Pressure test work on the loads and bullets concerned in the barrel strain tests. No great revealing miracles worked. It would appear that weight of the projectile is a bit more important in chamber pressures than bearing surface and diameters.

## Some things of note;

While chamber pressures of the 480s ran higher than some of the common conventional bullets, velocities were also notably higher.

Difference between the Woodleigh Soft Chamber Pressures and Woodleigh FMJ Chamber Pressures is notable, while velocity remained constant between the two. And barrel strain significantly lower with the Woodleigh Soft.

Woodleigh FMJ and all the 480 CEBs Chamber Pressure near the same--Velocity of the 480 CEB Much higher, friction and bearing surface effects.

500 Barnes Banded, lowest barrel strain due to .456 actual diameter (I suspect), and highest pressure of all tested?

Big Winners overall---Cutting Edge Bullets and North Fork, as we all suspected.

Big Losers in My opinion--All Cast Bullets, Woodleigh FMJ, of course the old Barnes RN without bands, the old Barnes X with No bands, looser bullets in all tests conducted.

458 B&M Barrel Strain Data	All Tests	Conducted	d with 56/H-32	22	
	500 Wood	leigh Sof	t Considered B	enchmark Bu	illet
Bullet	Diameter	Done 2/ Velocity	28/2011 Barrel Strain	Done 3/ Velocity	7/2011 Chamber Pressure
416 Caliber 400 North Fork FPS	0.416	1359	10294	NA	
500 Barnes Banded	0.456	1860	11414	1870	49801
480 CEB #13 3 Band X2457 X1456		1892	11653	1899	45678
450 CEB #13 4 Band	0.458	1907	11695	1880	38366
480 CEB #13 3 Band X3 .457	0.457	1888	11777	1884	45018
480 CEB #13 3 Band X2458 X1456		1889	11781	1886	45183
480 CEB #13 4 Band NE	0.457	1876	11909	1891	45348
480 CEB #13 3 Band X2458 X1455	0.00000	1895	11942	1893	45403
480 CEB #13 3 Band X2458 X1457		1893	11983	1889	45283
420 CEB#13 NonCon HP 4 Band	0.458		12043	1926	33300 33000
450 North Fork FPS	0.458	1 100000	12107	1900	
450 North Fork Bonded Soft	0.458		12321	1870	
450 CEB #13 NonCon HP 4 Band	0.457		12409	1914	
325 Hornary Flex	0.458		12519	NA NA	NA
450 Barnes Banded	0.456		12700	1893	
405 Remington	0.458		12733	NA NA	NA 41934
450 North Fork CPS	0.458		12761	1869	
450 Woodleigh Hydro	0.457		12945	1895	
350 Speer	0.4575	v	13205	NA	NA
450 Swift A Frame	0.458		13492	1852	2000
350 Barnes TSX	0.457	1823	13507	NA	NA
500 Hornady RN Soft	0.457	1830	13702	N A	NA
500 Woodleigh Soft	0.457	1799	13852	1812	41926
400 Barnes Buster	0.458	1877	14283	NA	NA
500 Swift A Frame	0.458	1848	14619	NA	NA
500 Woodleigh FMJ	0.457	1809	16044	1812	45623
500 Barnes X Old No Bands	0.457	1876	17376	NA	NA
460 Cast Performance	0.459	1908	17578	NA	NA
500 Barnes RN Old Solid	0.457	1871	17579	NA	NA
450 Barnes X Old No Bands	0.457	1914	18274	NA	NA
430 Cast True Shot	0.459	1915	19649	NA	NA

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buffalo 08 March 2011, 18:16

Excellent work Michael..

michael458 08 March 2011, 18:29

I have been making some "CORRECTIONS" on the BBW #13 NonCons. In particular the following: 9.3, 375, .409, and .458.

The cavity for all of these are being enlarged, thinning out the blades some for lower velocity shearing. While they will still do the same at higher velocity, this will make them a little more consistent when velocity drops. Of course at 2100 fps or so we know that the .409s did not shear at all, this will rectify that. I strongly suspect that if velocity dropped in 9.3 and 375 to the same levels they would be the same as well, so "nip it in the bud" before it happens.

9.3 and 375 are fine at velocity, but some longer range might drop velocity to a point that they don't shear, so fix it before it's an issue.

Now, concerning .458s. There was some question about the current 450 NonCon, the match to the 480 CEB BBW#13 Solid, at low velocity, starting 2150 fps. While doing the barrel strains and chamber pressures I of course had to get a lower velocity load in the 458 B&M to record proper barrel strains without interference from higher velocity bumps, noise, pressures and recoil. I tested both the 450 and 420 .458 NonCons at around 1900 fps impact velocity, none of them sheared at all at this velocity. But boy did they penetrate!!



Taking the velocity up a notch to 2120 fps and an impact of around 2090 did the trick on these.



In light of this we have changed the 458s as well, enlarging the cavity, thinning the blades for lower velocity shearing.

I am loading some more now to do some other low velocity work with as well, my .500s being one of those.

Michael

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CCMDoc 08 March 2011, 18:45

# quote:

Originally posted by michael458:

In light of this we have changed the 458s as well, enlarging the cavity, thinning the blades for lower velocity shearing. Michael

Think you'll need to do that for the .585 and .620 Non-Cons too? I mean, the cavities are so small they'd probably pack up with ...

oh, I don't know ... bowling balls maybe ... that they might not open up at all!



What would we be left with then ... a tiny caliber-sized hole! That's no good ... no good at all!

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 tomorow

michael458 08 March 2011, 19:09

to find them??? HEH HEH.....

Need to test them however, just to see if they shear when you start them off at say 2000 or so, I think they will without much issue.

М

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drewhenrytnt 08 March 2011, 21:35

quote:

Think you'll need to do that for the .585 and .620 Non-Cons too?

Will velocity make any difference? I could see them not shearing at 600NE velocities, what about manageable or should I say tolerable OverKill velocities?

Sasquatch 6'3" 300lb

We Band of Bubbas N.R.A Life Member TDR Cummins Power All The Way Certified member of the Whompers Club

michael458 08 March 2011, 21:47

Right now, the .585s and .620s are most certainly good to go (I think) at 2100 fps---Dropping to 1900 fps I don't know. I think probably, maybe, but Doc is going to have to do the work on that. Would suggest low velocity, 1900 fps impact or so, and of course 2100-2300 fps, whatever is comfortable. With both calibers. NonCons love velocity, I don't think there is an upper limit on the NonCons, other than what the cartridge and shooter can take!

Μ

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CCMDoc 08 March 2011, 22:01

Hopefully have some of the answers regarding the 620 and 585 No-Cons and preferred velocity in the coming few months.

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 tomorow

capoward 08 March 2011, 22:21

quote:

Originally posted by michael458:

Now, concerning .458s. There was some question about the current 450 NonCon, the match to the 480 CEB BBW#13 Solid, at low velocity, starting 2150 fps. While doing the barrel strains and chamber pressures I of course had to get a lower velocity load in the 458 B&M to record proper barrel strains without interference from higher velocity bumps, noise, pressures and recoil. I tested both the 450 and 420 .458 NonCons at around 1900 fps impact velocity, none of them sheared at all at this velocity. But boy did they penetrate!!



Taking the velocity up a notch to 2120 fps and an impact of around 2090 did the trick on these.



In light of this we have changed the 458s as well, enlarging the cavity, thinning the blades for lower velocity shearing.

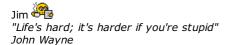
I am loading some more now to do some other low velocity work with as well, my .500s being one of those.

Michael

### Michael,

It appears the current CEB BBW #13 420gr and 450gr HPs are the perfect as is for buffalo using the 458 Lott, 450 Ackley, 450 Dakota, and 450 Rigby cartridges! Perfect petal shear at "up-front and close" distances, while giving plenty of penetration for those ass-tube shots at longer range for those "shot but escaping" critters that just don't want to die.

Oh yes, on the .500 caliber HPs, how about testing running a 22yd impact velocity of say 1750 to 1800fps?



michael458 08 March 2011, 22:35

Jim

The 458s as is will work fine within 50 yds, even in slow burners like the 450 NE. Still happy in the 458 B&M, so they would still be happy in 458 Winchester as well. Regardless of all that, still on new batches run the cavity will be bigger, and blades thinner to shear at 1900 fps impacts and less. It cannot be detrimental to thin the blades, as their penetration does not depend on weight at all, they slice their way through penetration. Weight of the blades makes little difference. They don't weigh anything anyway.

 $The \ .500s \ are \ already \ loaded! \ Velocity--maybe \ around \ 1800? \ Just \ have \ to \ test \ and \ see, \ have \ never \ run \ any \ that \ slow.$ 

Μ

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ııcı	hael458 08 March 2011, 22:
	quote:
	Sasquatch 6'3" 300lb
nd	canoes for feet!
)	
re t	those feet registered as "Deadly Weapons" I wonder?
tp:	://www.b-mriflesandcartridges.com/default.html
	New Word is "Non-Conventional", add "Conventional" to the Endangered Species List! Outside The Box of "Conventional Wisdom"
cei	Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do ive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor one else.
om	neoldguy 08 March 2011, 23:
	quote:
	Sasquatch 6'3" 300lb
) id I	I say what a pleasure it's been to meet you, sir?
	I say what a pleasure it's been to meet you, sir?  quote:

Glenn

capoward 09 March 2011, 00:07

quote:

Originally posted by michael458:

The 458s as is will work fine within 50 yds, even in slow burners like the 450 NE. Still happy in the 458 B&M, so they would still be happy in 458 Winchester as well. Regardless of all that, still on new batches run the cavity will be bigger, and blades thinner to shear at 1900 fps impacts and less. It cannot be detrimental to thin the blades, as their penetration does not depend on weight at all, they slice their way through penetration. Weight of the blades makes little difference. They don't weigh anything anyway. Thinning the blades with a larger diameter cavity is definitely a good thing...get them to shear at 1800fps would be an awesome thing for the NE crowd as that would equate to an approximate 120yd bullet impact.

The .500s are already loaded! Velocity--maybe around 1800? Just have to test and see, have never run any that slow. Yes I know, but that's only equates to an approximate 125yd or so bullet impact with a standard velocity 460gr HP loading from the 50 B&M which some of us just might attempt!

Comments above in RED.

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