The Real Guns CZ 550 FS Goes 375 Ruger Part II-Handload Development for a Junk Yard Dog

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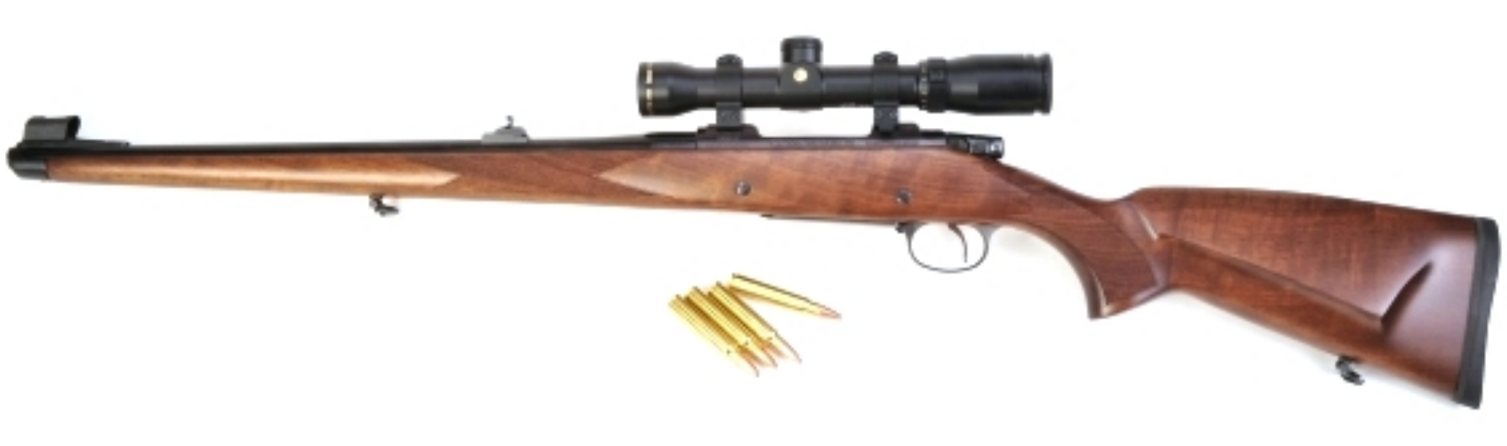


This project concluded with a shooting session with friends, a local contractor and his Marine Corp Reservist son-in-law. I think it is safe to say everyone liked this little gun with it's big bark and big bite. I think any time spectators hold up score cards after each shot to rate the pressure wave and shooter's reaction to recoil, we can pretty much assume everyone was having a good time. Fortunately, we ran out of ammo before the barrel melted.

A note on quality gunsmithing…

Dennis Olson should be a famous gunsmith. Maybe he is and I just don't know it as he never mentioned it in conversation. All I know is, for all of the mediocre work I have seen done by so many high profile gunsmiths and factory shops over the years, I feel fortunate I found one who is strong on the foundation work, long on finesse and fair on prices.

Dennis Olson – Gunsmithing

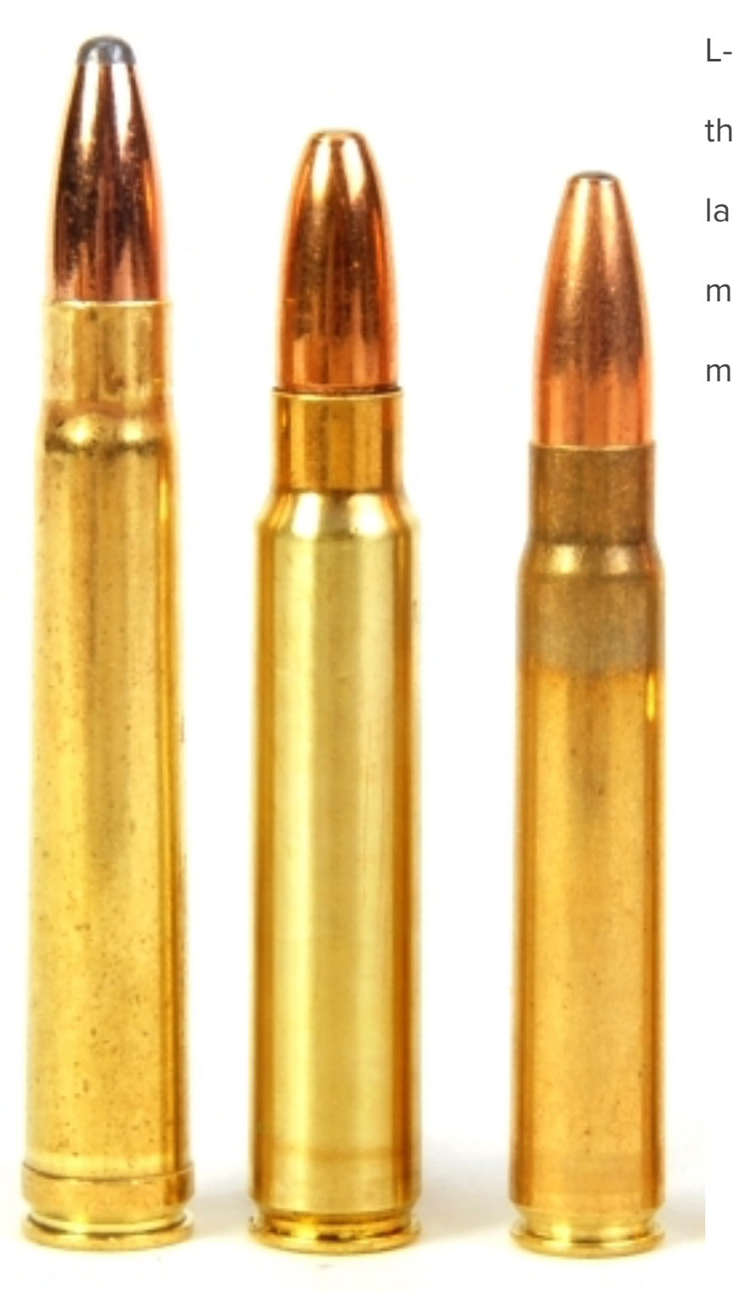
500 First Street

Plains, Montana, 59859

406-826-3790

He runs a really busy shop, but turn around on this **type of project**; barrel and action work, fitting and moderate refinishing is very reasonable. Lead time on complete rifles with very fancy stocks and artful metal work runs longer, about a year at this writing. As an example of the first category of work, for a few hundred dollars and a medium action CZ-550FS, I now own an slick, light weight and compact rifle that can be loaded down for deer and loaded up for cape buffalo. I was given no discount for this mention, or any other form of freebee. In fact, whenever I call and give my name, Dennis still responds with "Who?".

The .375 Ruger cartridge… in context



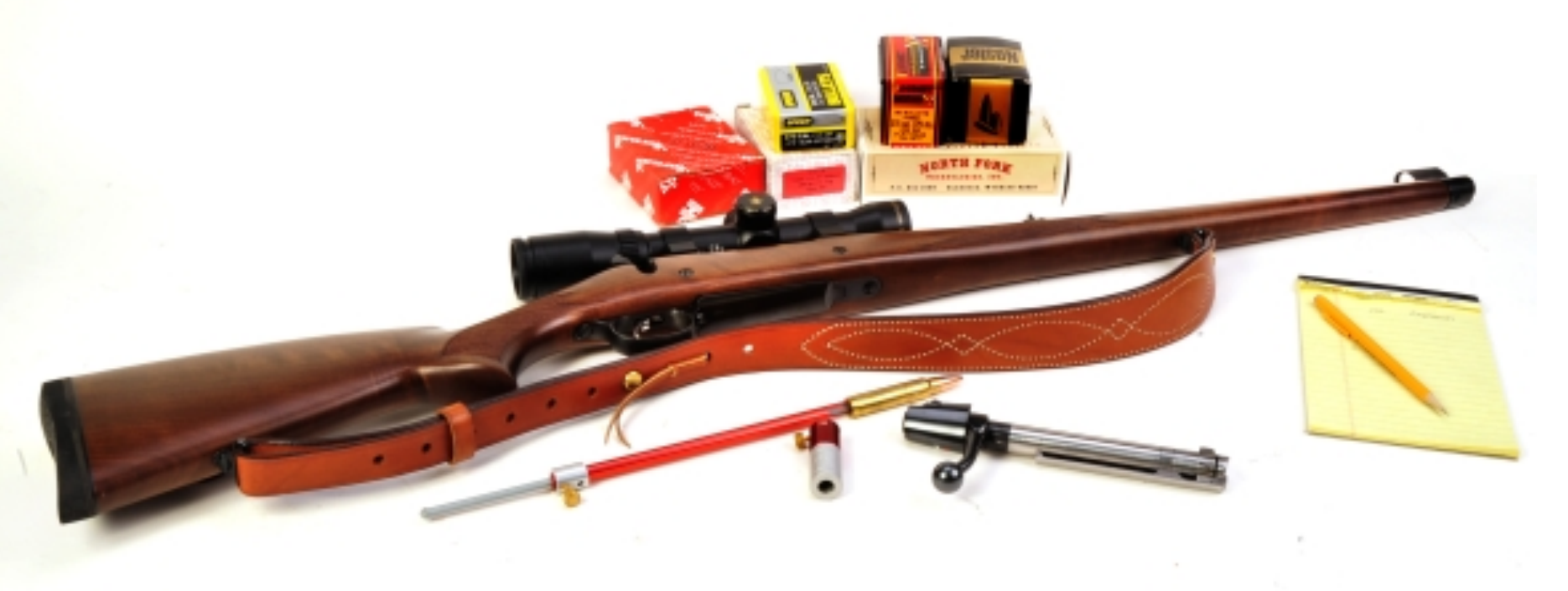
L-R, .375 H&H, 375 Ruger and the gun's original 9.3x62mm. The Ruger, shorter than the .375 H&H, actually has greater capacity because the case head diameter is as large as the belt on the H&H case. The .30-06 Springfield is noted in reference to the medium size action that can accommodate the .375 Ruger, in comparison to the magnum length action required for the .375 H&H.

Cartridge	.375 H&H	.375 Ruger	9.3×62	.30-06
Capacity Grains	95.0	99.0	78.0	68.2
Overall Length "	3.600	3.340	3.290	3.340
Case Head Dia. "	0.513	0.532	0.476	0.471
Bullet Dia. "	0.375	0.375	0.366	0.308

The 9.3×62 is not a slouch, however, it does underperform both the .375 Ruger or H&H cartridges by several hundred feet per second in comparable bullet weights, For this bore size and bullet weight, the velocity difference is major in determining kinetic energy levels and depth of penetration. As a plus, there are many more bullet types and weights for the .375 Ruger bore and, in these politically charged times, I would rather support American companies that offer these advantageous products.

Components, including brass, dies, proper powder, primers, and bullets are all readily available to the handloader and at reasonable prices.

A little check out was required…



New guns, even with familiar chambers, require requalification of all handloads. Free bores vary, twist rates and chamber differences all contribute to different pressure and accuracy results. Our earlier .375 Ruger handloads were based on the Ruger Hawkeye African with a 23″ barrel, rather than the 20″ barrel Alaskan. Our modified CZ 550 FS has a 20.5″ barrel, but with the same 12″ twist as the Ruger models in this chamber, so we had no idea what to expect.

We did a quick freebore check to make sure all of the bullets we intended to load had adequate leade clearance at the determined maximum cartridge length and that everything would tuck into the gun's magazine and load and eject reliably. Even the longest bullets with the most blunt ogives were good for 3.340″ with 0.040″ leade clearance. Bullets with more typically tapered ogives; Barnes, Speer, Sierra, GS, etc had sufficient magazine clearance and throat clearance to load to 3.460″ while retaining 0.040″ leade clearance.

Bullet selection and handloads

Bullet Manufacturer	Bullet ID	Bullet Weight Grains	Bullet Length"	B.C.	Cartridge Overall Length"	Net Case Capacity H_2O
Hornady GRSP	3706	225	1.129	0.320	3.325	88.5
Barnes TSX	37552	235	1.225	0.270	3.340	85.2
Speer SS	2471	235	1.058	0.301	3.240	88.3
North Fork	Premium Bonded	250	1.176	0.276	3.340	87.6
Nosler AccuBond	54413	260	1.388	0.473	3.340	82.2
GS Custom HV	375265	265	1.446	0.363	3.340	81.1
North Fork	Premium Bonded	270	1.305	0.335	3.340	84.0
North Fork	Premium Bonded	300	1.400	0.361	3.340	81.3
North Fork	Premium Bonded	350	1.600	0.365	3.340	75.8

The .375 H&H is routinely loaded down below 2,000 fps, which produces .375 Winchester level ammunition with cast and thin jacketed bullets. The .375 Ruger offers a similar opportunity. Why light load a hard charger like the .375 Ruger? Because this is such a small rifle, it would be no problem carrying it for any North American big game hunting, from deer to big bear by loading up and down the powder/bullet range to match the application. So this isn't a special occasion big and dangerous game rifle. It is a gun that can be rightfully pressed into service frequently.

Bullet	Weight Grains	COL	Powder	Charge Grains	MV FPS	ME Ft/Lbs	Recoil Ft/Lbs
Hornady GRSP	225	3.325	IMR 4198	45.0	*2202	2423	22
Hornady GRSP	225	3.325	Alliant 2400	32.0	*2053	2106	20
Barnes TSX	235	3.340	Varget	76.5	2966	4592	46
Barnes TSX	235	3.340	Re15	76.5	2832	4186	43
Speer SS	235	3.240	IMR 4198	45.0	*2219	2570	24
Speer SS	235	3.240	Re15	79.0	2946	4530	49
North Fork	250	3.340	H414	85.5	3000	4997	58
North Fork	250	3.340	Re15	78.0	2928	4760	53
Nosler AccuBond	260	3.340	Varget	73.0	2741	4339	49
Nosler AccuBond	260	3.340	Re15	74.0	2697	4200	48
GS Custom HV	265	3.340	IMR 3031	69.5	2763	4493	49
GS Custom HV	265	3.340	Re15	76.0	2832	4721	54
North Fork	270	3.340	Varget	74.0	2704	4385	51
North Fork	270	3.340	IMR 4895	74.0	2692	4346	51
North Fork	300	3.340	H414	78.0	2658	4707	59
North Fork	300	3.340	IMR 4895	70.0	2625	4591	55
North Fork	350	3.340	H 4350	71.0	2351	4297	59
North Fork	350	3.340	H 414	71.5	2313	4159	57
All loads utilized CCI 250 large rifle magnum primers * Light loads for deer and similar game or target practice							

Impressions… other than on my shoulder

With the exception of the 350 grain loads, the balance of the bullets, thanks to an ever improving ballistic coefficient in the face of a weight induced velocity drop, all have a maximum drop of 8″-9″ at 300 yards, on a 200 yard zero. That's about as flat shooting as a .30-06 Springfield. The very heavy for bore 350 grain bullets drop 12″ at 300 yards. That's pretty sensational from a cartridge of this type, especially when shot through a 20.5″ barrel.

250 Grain	Range			
Range – yds.	0	100	200	300
Velocity – ft./sec.	3000	2661	2346	2055
Energy – ft.-lbs.	4995	3930	3055	2344
Path – in.	-1.5	1.7	0.0	-8.1

This is probably a good example of a heavily constructed 250 grain North Fork bullet pushed to 3,000 fps. The bullet starts out at just under 5,000 ft/lbs of muzzle energy and, even with a modest BC, is still putting out 2,300 ft/lbs at 300 yards. The up and down on trajectory is a maximum of 1.7″ out beyond 200 yards. If I wanted to optimize, I could set zero at 237 yards and be point blank for 277 yards on a six inch target.

The light bullet, light jacket light charge loads that would be excellent for deer size game are so light in recoil, it's hard to believe it is the same gun. The report is very mild. IMR 4198 and Alliant 2400 were selected for light charges as they work well in these circumstances and burn producing very uniform pressure with partial case charges. They are also good choices for cast bullet loads. I suspect the velocity clustering of the 225 – 250 grain bullets were the result of the short barrel and incomplete burn case full powder charges, but this became less evident as bullet weight increased.

Accuracy was excellent with all bullets tested. The GS Custom bullets shot close to half inch at one hundred yards, all of the North Fork Bonded shot less than three quarter of an inch. The only bullet that shot greater than one inch after a little load tinkering were the Hornady 235 grain loads, inch and one quarter, but there were very light powder charges.

The Bushnell scope proved to be an excellent choice for this set up. Very bright image, more than enough magnification and lots of eye relief. Adjustments were uniform, the scope stayed put and the rings were just high enough for the sweep of the bolt handle to stay out of the way of the large scope eyepiece.

I'm more than pleased with the gun. It is one I will hang onto and shoot with a great deal of confidence.

The Real Guns CZ 550 FS Goes 375 Ruger Part I

The Real Guns CZ 550 FS Goes 375 Ruger Part II

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