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For the real LAPUA aficionado

VIHTAVUORI
SMOKELESS POWDER

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SINGLE ACTION JACKSON

HOLY TERROR
EVIL ROY

ISLAND GIRL

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LEAD DISPENSER

EASY RIDER

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HANDLEBAR DOC

RELOADING DATA

FOR COWBOY ACTION SHOOTING

Using VihtaVuori Smokeless Propellant & Lapua Components

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Safety Information:

All of this reloading information has been provided by Long Hunter Shooting Supply. Do not attempt any extrapolations. Please follow the data as written. It is a must for every reloader to read the reloading safety rules below.

Reloading Safety

Reloading is an enjoyable and rewarding hobby that is easily conducted with safety. But like many other human endeavors, carelessness or negligence can make reloading hazardous. The essence of reloading safety is proper handling and storage of primers and powder. As important is strict following of the instructions given by the manufacturers of the reloading equipment as well as the reloading components.

Before you get started, read the safety rules below and keep them in mind whenever reloading. Attention paid to detail and patience ensures safety and quality!

- ☆ Reload only when you can give it your undivided attention. **Do not reload**, when fatigued or ill. Develop your own reloading routine to avoid mistakes. Avoid haste, load at a leisurely place and keep in mind that **absolutely no reloading under the influence of alcohol or drugs!**
- ☆ Always wear proper eye protection. It is an unnecessary risk to reload without safety glasses.
- ☆ Store powder and primers out of reach of children and away from heat and open fire. **Follow the manufacturer's instructions on your powder canister. Never smoke during a reloading session!**
- ☆ Keep no more powder than needed available. Immediately return the unused powder to its original factory container to preserve its identity and usable life time.
- ☆ Do not use any powder unless its identity is positively known. Scrap all unidentified powders according to the manufacturer's instructions on your powder canister. **Keep in mind that the trial-and-error method may lead to serious injury!**
- ☆ **Do not store primers in bulk! Doing so will create a bomb!** Bulk primers will very likely mass detonate. The blast of a few hundred primers corresponds to a hand grenade in a room! Do not force primers in any circumstances. Take special care when filling and handling auto primer feed tubes. Keep primers in their original factory packing until used. Return unused primers to their original packing.
- ☆ Do not use primers if their identity is lost. Discard them according to the manufacturer's instructions.
- ☆ Start loading with the starting load according to the loading data. If there is no indication of the starting load, use 15 % lower charge than the listed maximum load. Increase the charge using small steps watching for overpressure signs from the primer and the case head at each step. **If you detect overpressure signs immediately stop shooting and reduce the charge.** Disassemble always the defected cartridges. **NEVER EXCEED THE MAXIMUM LOADS!**
- ☆ Check visually the powder level in the cases so you are absolutely sure that you have no double

powder charge. When a double powder charge is fired it may result in a gun damage, personal injury, even death.

☆ If you change the lot of any component or if you change any of the components of your reload, you must develop your load from the starting load again. A different component as well as a component from a different manufacturing lot may cause changes in cartridge pressure.

☆ You must absolutely follow the given cartridge overall lengths (C.O.L.) according to the reloading tables. The change in the bullet seating depth has a significant influence on the cartridge pressure.

☆ **Never reduce loads under the listed starting load.**

☆ Keep your reloading bench in good order. Clean up spilled powder and primers promptly and completely. Remember that the reloading bench is not a temporary store for other tools, used car spare parts etc.

☆ Use your reloading equipment according to the manufacturer's recommendations. Study the instruc-tions carefully and don't hesitate to ask, if you don't understand everything.

☆ **Be safe, be conscientious!**

LEAD EXPOSURE

A continuous lead exposure has been found out to create lead accumulation to living bodies, specially to the nervous system causing little by little serious physical impairment. Some unused reloading components as well as fired cases can contain lead or lead compounds, it is possible to a reloader to get exposed during reloading. Primers and bullets contain lead and it may be present as a residue in fired cartridge cases, too. There are different ways lead may enter the body. However, the two most common are considered to be the mouth and the breathing. Therefore with simple precautions described underneath the possible lead exposure and its dangerous consequences can be avoided.

☆ **WASH YOUR HANDS** thoroughly with warm water and soap after shooting or reloading.

☆ **DO NOT EAT OR DRINK** during a reloading session. When handling fired cartridge cases the residual containing lead most likely gets to your hands. Therefore eating something requiring a straight hand contact during a reloading session hazards the reloader to lead exposure. Keep your hands away from your nose or your mouth during a reloading session.

☆ **KEEP GOOD HOUSEHOLD AT YOUR RELOADING SITE.** Regular cleaning prevents the accumulation of residuals. Use a damp cloth or mop to clean up the reloading bench as well as the floor underneath. **DO NOT USE A VACUUM CLEANER!** The use of it dues to a potential risk of exposure because of spilled powder it collects up. Furthermore an ordinary vacuum cleaner more spreads than collects up the dust containing residuals. Do not use any carpet at your reloading site. Carpet is hard to keep dust-free and it can create static electricity that can accidentally fire a primer.

☆ **PROTECT YOUR BREATHING AGAINST THE DUST IN THE RELOADING AREA.** When using a dry cleaning media in tumbling the cartridge cases keep in mind that the lead residual from the fired cases moves to the dry cleaning media, where it accumulates by use. Wear always a dust mask when pouring the dry cleaning media out of the tumbler and be careful not to spill the media on your reloading bench.

PREFACE

As a master Distributor for Vihtavuori/Lapua and an active cowboy action shooter, I have answered numerous requests for load data. This loading manual was developed in hopes of answering most of these questions. Please understand that this data was developed in my shop and tested in a controlled indoor environment. I am not a registered ballistician, nor do I own pressure test barrels. All information was compiled from using firearms and tested at an average temperature of 70 degrees. Therefore, I strongly suggest you start your loads at the maximum charges in this manual and then work your way down. This is especially true if you shoot in a cold climate. If you have access to a chronograph, please use it.

The following list of factors can change or alter your results:

1. **Bullet Diameter** - Good examples are the 38 Special and .357 Magnum loads. The data was compiled while using a .357 diameter bullet from Hunter Supply. If a .358 bullet is used, it will create more pressure from restriction and the velocity will increase.
2. **Barrel Length** - The average velocity can vary as much as 125 feet per second between a 4 5/8" and a 7 1/2" barrel. The guns used are listed at the beginning of each caliber, so consider this when working your load.
3. **Chamber Diameter** - Pressures are directly affected by the size of the chambers. All test rounds were fired through a single chamber.
4. **Cylinder Gap** - The cylinder gap allows gases to escape as the bullet leaves the cylinder and enters the barrel. As the cylinder gap increases, so does the escaping gas. Velocity will vary depending on the size of the gap.
5. **Manufacturing Variations** - Wall thickness of brass and compounds used in primers are not an industry standard. They may not vary greatly, but differences in velocity will be noticed.
6. **Temperature** - As with all powders, the colder the climate, the slower the velocities. Again, if you shoot in a cold environment, stay at the upper end of this load data for consistency.

Handgun Data

32 S&W - Iver Johnson - Break Top Pocket Pistol 3" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N310	76 RNFP	.313	1.0	503
			1.2	562
N320	76 RNFP	.313	1.3	528
			1.6	617

- Starline Brass
- Winchester Small Pistol Magnum Primer
- Hunter Supply Bullets
- Taper Crimp

32 S&W Long - Ruger New Model Single Six - 4 5/8" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N310	76 FP	.313	1.9	669
			2.2	797
	115 FP	.313	2.0	716
			2.4	805
N320	76 FP	.313	2.4	630
			2.8	804
	115 FP	.313	2.2	722
			2.7	812

- Lapua Brass
- Winchester Small Pistol Magnum Primer
- Hunter Supply Bullet
- Roll Crimp

32 H&R Magnum - Ruger New Model Single Six - 6" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N310	76 FP	.313	2.0	676
			2.4	782
	115 FP	.313	2.1	705
			2.5	771
N320	76 FP	.313	2.6	653
			3.0	821
	115 FP	.313	2.4	734
			2.9	816

- Starline Brass
- Winchester Small Pistol Magnum Primer
- Hunter Supply Bullet
- Roll Crimp

32-20 - EMF Hartford CT Model 7 1/2" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N310	76 RNFP	.313	2.5	761
			3.2	995
	115 RNFP	.313	2.2	677
			2.9	796
N320	76 RNFP	.313	3.0	779
			3.5	953
	115 RNFP	.313	2.7	667
			3.2	781

- **Starline Brass**
- **Winchester Small Pistol Magnum Primer**
- **Hunter Supply Bullets**
- **Taper Crimp**

38 Special - Ruger Blackhawk 4 5/8" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N310	125 FP	.357	3.0	673
			3.4	764
	140 FP	.357	3.0	691
			3.4	780
	158 RNFP	.357	2.9	672
			3.4	791
	162 RNFP	.357	2.9	676
			3.4	792
N320	125 FP	.357	3.2	591
			3.5	656
			3.8	707
	140 RNFP	.357	3.2	606
			3.5	668
			3.8	723
	158 RNFP	.357	3.1	615
			3.4	667
			3.7	701
	162 RNFP	.357	3.1	618
			3.4	671
			3.7	719

- **Lapua Brass**
- **Winchester Small Pistol Magnum Primer**
- **Hunter Supply Bullets**
- **140 Grain Bullet - Laser-Cast**
- **Taper Crimp**
- **162 FP - 1.518 AOL**

357 Magnum - Ruger Blackhawk 4 5/8" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N310	125 FP	.357	3.0	657
			3.4	739
	140 FP	.357	3.0	661
			3.4	764
	158 RNFP	.357	3.0	679
			3.3	753
N320	125 FP	.357	3.3	598
			3.6	669
			4.0	727
	140 FP	.357	3.2	614
			3.5	673
			3.9	741
	158 RNFP	.357	3.2	630
			3.5	694
			3.8	758

- **Lapua Brass**
- **Winchester Small Pistol Magnum Primer**
- **Hunter Supply Bullets**
- **140 Grain Bullet - Laser-Cast**
- **Taper Crimp**

38/40 - Cimarron Model P - 7 1/2" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N310	140 RNFP	.401	4.7	619
			5.4	695
N320	140 RNFP	.401	5.5	597
			6.0	662
	180 RNFP	.401	5.2	604
			5.8	691
N330	180 RNFP	.401	6.9	658
			7.5	738

- **Starline Brass**
- **Winchester Large Pistol Primer**
- **Hunter Supply Bullets**
- **Taper Crimp**

.44 Russian - Ruger Bisley 5 1/2" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N310	160	.430	3.1	598
			3.5	692
	200	.430	3.0	612
			3.4	695
N320	160	.430	3.9	599
			4.5	715
	200	.430	3.6	595
			4.0	679
	240	.430	3.4	632
			3.8	686
N330	200	.430	4.6	607
			5.2	711
	240	.430	4.0	636
			4.4	714

- **Starline Brass**
- **Federal Large Pistol Magnum Primer**
- **Hunter Supply Bullets**
- **Roll Crimp**

.44 Special - Ruger Bisley 5 1/2" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N310	160	.430	3.6	605
			4.0	710
	200	.430	3.5	622
			3.8	715
N320	160	.430	4.4	624
			4.9	683
	200	.430	4.3	627
			4.8	695
	240	.430	3.9	622
			4.4	689
N330	200	.430	5.1	611
			5.7	693
	240	.430	4.6	631
			5.2	717

- **Starline Brass**
- **Federal Large Pistol Magnum Primer**
- **Hunter Supply Bullets**
- **Roll Crimp**

.44 Magnum - Ruger Bisley 5 1/2" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N320	160	.430	4.9	638
			5.6	716
	200	.430	4.7	603
			5.3	697
	240	.430	4.4	646
			5.0	724
N330	200	.430	5.5	598
			6.2	689
	240	.430	5.0	617
			5.7	686
N340	200	.430	5.9	617
			6.5	703
	240	.430	5.2	612
			5.8	678

- **Starline Brass**
- **Federal Large Pistol Magnum Primer**
- **Hunter Supply Bullet**
- **Taper Crimp**

44/40 - Colt S.A. 4 3/4" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N320	160 FP	.427	6.0	661
			6.7	733
	200 RNFP	.427	5.8	616
			6.5	708
	240 RNFP	.427	5.6	611
			6.3	714
N330	200 RNFP	.427	6.8	613
			7.5	682
	240 RNFP	.427	6.0	551
			7.2	712
N340	200 RNFP	.427	7.2	627
			7.8	707
	240 RNFP	.427	6.7	622
			7.5	734

- **Starline Brass**
- **Federal Large Pistol Magnum Primers**
- **Hunter Supply Bullets**
- **Taper Crimp**

45 Schofield - Navy Arms Schofield 7" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N320	160 FP	.452	5.5	611
			6.0	709
	200 RNFP	.452	5.1	564
			5.6	656
			6.0	716
	250 RNFP	.452	4.6	649
			5.0	705
			5.5	746
N330	200 RNFP	.452	5.9	533
			6.8	663
	250 RNFP	.452	5.6	629
			6.3	687
N340	200 RNFP	.452	6.5	559
			7.4	667
	250 RNFP	.452	6.0	630
			6.5	691

- **Starline Brass**
- **Federal Large Pistol Magnum Primers**
- **Hunter Supply Bullets**
- **Taper Crimp**

45 Colt - Cimarron Model 'P' 7 1/2" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N320	160 FP	.452	6.5	733
			7.0	808
	200 RNFP	.452	5.9	635
			6.3	719
			6.8	776
	250 RNFP	.452	5.5	661
			6.0	729
			6.5	778
N330	200 RNFP	.452	6.8	631
			7.3	694
	250 RNFP	.452	6.6	665
			7.1	721
N340	200 RNFP	.452	7.1	611
			7.6	692
	250 RNFP	.452	6.8	671
			7.3	736

- **Starline Brass**
- **Federal Large Pistol Magnum Primers**
- **Hunter Supply Bullets**
- **Taper Crimp**

30-30 Winchester 94 - 26" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N133	165 FP	.311	17.5	1303
			20.0	1585

- Remington Brass
- Federal #210 Primer
- Hunter Supply Bullet
- Roll Crimp

38-55 Marlin 336 Cowboy - 24" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N133	260 FP	.375	19.0	974
			22.0	1159

* Winchester Brass
* Federal #210 Primer
* Hunter Supply Bullet
* Roll Crimp

45-70 Winchester 1886 New Model - 26" Barrel

Powder	Bullet	Diameter	Grains	Average FPS
N133	300 FP	.459	34.0	1422
			38.0	1577
N133	405 FP	.459	30.0	1060
			33.0	1171
			36.0	1338

- Starline Brass
- Federal #210 Primer
- Hunter Supply Bullet
- Roll Crimp

Shotgun Data

12 Gauge - Original Winchester 97 - 20" Barrel

Powder	Oz. Shot	Grains	Primer	Hull	FPS
N312	1.0	14.5	Fed. 209A	Win. AA	971
		15.5			1037
	1-1/8	13.5	Fed. 209A	Win. AA	956
		14.5			1004
N3SL	1.0	17.0	Fed 209A	Win. AA	1023
		19.0			1117
	1-1/8	16.0	Fed 209A	Win. AA	1031
		18.0			1111

20 Gauge - From VV Shotgun Data

Powder	Oz. Shot	Grains	Primer	Hull	FPS
N3SM	7/8	15.5	Fed 209A	Fed. G. M.	1137
		16.5			1200
N3SH	1.0	16.0	Rem. 209P	Win AA	1118
		17.0			1167

NOTES

NOTES

To purchase VihtaVuori Smokeless Propellant and Lapua components, please visit www.vihtavuori-lapua.com to find the dealer nearest you.

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