

Pat Rogers Memorial Revolver Round Up 2022, Ballistic Gel Test

Gunsite Ranch

November 21, 2022

0800-1200 hours

19-40 degrees F

Conducted by Chuck Haggard and Mark Fricke

All rounds tested were fired into Clear Ballistics Gel; either into Bare Gel (BG) or thru 4 Layers of Denim (4LD) as noted

Firearm (See notes #1 for more info)	Caliber	Load tested	Weight (grs.)	Bullet type	Vel. (fps)	Penetration (inches)	Diameter (inches)	Recover d weight (grains)	Comments
Ruger LCR	.38 Sp.	Fed Am. Eagle	158	LRN	661	14.25	0.356	157.0	Tumbled and inverted at 4-7 inches, BG
Ruger LCR	.38 Sp.	Western	200	LRN	587	16.75	0.356	199.5	Tumbled twice and end up base first, BG
Ruger LCR,	.38 Sp.	Precision Delta	158	LSWC	554	13 1/8	0.354	157.0	Tumbled and ended base first, BG
Ruger LCR,	.38 Sp.	Seller & Bellot	148	HBWC	579	7 3/8	0.372	148.0	Shallow penetration, 4LD
Ruger LCR,	.38 Sp.	Georgia Arms	148	HBWC	725	15.75	0.430-0.432	146.8	New "SNUB" load, expansion, BG, #2
Ruger LCR,	.38 Sp.	Georgia Arms	148	HBWC	751	14.5	0.385	146.9	New "SNUB" load, slight expansion, 4LD #2
Ruger LCR,	.38 Sp.	Handload	230	LWC	575	26.0	0.353	234.3	Yawed and inverted, BG, #3
Ruger LCR	.38 Sp.	Remington	140	000bk x2	755	15/17 3/8	0.344/0.350	137.4	Multi-load, 70 gr each, recovered wt. 69/68.4, BG
Ruger LCR	.38 Sp	M-41, WCC 71	130	RNFMJ	686	18 7/8	0.356	131.3	USAF load, tumbled sideways at 7.5" to 14" inverted, BG
Ruger LCR	.38 Sp	PMC	132	RNFMJ	702	14.5	0.356	139.8	Tumbled, inverted, traveled base forward, BG
Ruger LCR	.38 Sp	Fort Scott Mun.	80	TUI	903	13.5	0.354	79.9	Solid copper, yawed at 3-4" and at 6-7", BG #4
Ruger LCR	.38 Sp	PPU	158	LSWCHP	702	10.5	0.350	154.6	Stayed point on, non +P, no expansion , 4 LD
S&W M-637-1	.38 Sp	CCI Blazer	110	JHP +P	857	13.5	0.425	109.9	Old US Border Patrol load, BG
Ruger LCR	.38 Sp.	Horn. Crit Def	90	FTX	868	9.0	0.454-0.486	90.5	Lite, Shallow penetration, BG
Ruger LCR	.38 Sp.	Horn. Crit Def	90	FTX	894	15.25	0.354	90.2	Lite, No expansion, 4LD
Ruger LCR	.38 Sp.	Federal Punch	120	JHP +P	845	13.25	0.489-0.491	119.2	Good expansion, BG
Ruger LCR	.38 Sp.	Federal Punch	120	JHP +P	869	22.0	.354	119.3	No expansion, nose was not plugged, 4LD
Ruger LCR	.38 Sp	Corbon	110	DPX +P	969	9.5	0.646-0.654	110.1	Excellent expansion, Shallow Penetration, BG
S&W M-642-1	.38 Sp.	SIG V-Crown	125	JHP	788	17.5	0.355	125.0	No expansion, nose was not plugged, 4LD
Ruger LCR	.38 Sp	Speer Gold Dot	135	JHP +P	817	19.5	0.353	134.7	No expansion, filled with denim, yawed at 4", 4LD
Ruger LCR	.38 Sp.	Handload	148	Safe Stop	803	18.0	0.342	148	Cirillo's Load, inverted, stopped base forward. 4LD, #5
Ruger LCR	.357 mag	Remington	140	000bk x2	957	14/17.75	0.357/0.353	137.3	Multi-load, 70 gr each, recovered wt. 66.4/67.8, BG
Ruger GP100	.357 mag	Fed. Vital-Shok	180	LFP (GC)	1051	32+	0.356	175.6	2.75" barrel, Dangerous game load, BG #6
Ruger LCR	.357 Mag	Speer Gold Dot	135	JHP	993	13.3	0.564-0.576	134.5	Short barrel load, Stop sideway. BG
Ruger GP100	.357 mag	Winchester	110	JHP	1275	9.2	0.460	88.0 total	4.25" Fragmented, shallow penetration BG, #7
Ruger GP100	.357 mag	Winchester	110	JHP	1183	12 7/8	Unk.	Unk	Bullet is missing and not measured, 4LD #8
Ruger LCR	.357 mag	Horn. Crit Def	125	FTX	1158	16.5	0.439-0.470	125.3	Wide wound channel, 4LD
Colt King Cobra	.357 mag	Barnes	125	CHP	Unk	17 5/8	0.691-0.692	125.1	Excellent expansion and penetration, 4LD
Ruger LCRx	.32 H&R	Buffalo Bore	100	JHP	1100	18.25	0.311	99.9	No expansion, inverted and went base first, 4LD
Ruger LCRx	.327 mag	Fed HydraShok	85	JHP	1286	32+	Unk	Unk	Curved upward and exited the block, not recovered
Ruger LCRx	.327 mag	Fed HydraShok	85	JHP	1238	31	0.309	84.5	No expansion, nose plugged with denim, 4LD
S&W M-58	.41 mag	Win Silver Tip	175	JHP	1134	22.25	0.520-0.547	171.1	Excellent penetration and expansion, 4LD

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S&W M-22-4	.45 ACP	Win 1911	230	JHP	862	21.75	0.442-0.449	230.1	No expansion, 4LD
S&W M-22-4	.45 ACP	Underwood	230	JHP +P	NR	19 5/8	0.442-0.449	230.4	No expansion, 4LD
S&W M-22-4	.45 ACP	Underwood	230	JHP	862	21.75	0.456	231.8	No expansion, nose plugged with denim, 4LD
S&W M-351c	.22 mag	Aguila	40	JSP	1064	13.0	0.225	39.5	Yawed at 3-5" & 6-7", SP deformed slightly, 4LD
S&W M-351c	.22 mag	Speer	40	JHP	1119	12.5	0.225	40.0	Yawed at 2-7", no expansion, 4LD #9
S&W M-351c	.22 mag	Federal Punch	45	NP-JHP	1075	13.0	0.225	45.0	Yawed at 6.5-9.5, no expansion. 4LD #10
S&W M-351c	.22 mag	Horn Crit Def	45	FTX	1013	12.25	0.218-0.222	45.1	Yawed at 6-7", no expansion, 4LD
S&W M-317	.22 LR	Remington	40	LRN	907	9.0	0.217	40.1	Shallow penetration, stayed point on, 4LD
S&W M-317	.22 LR	Remington	40	LRN	940	9.0	0.215	40.3	Shallow penetration, yawed, stopped sideways, 4LD
S&W M-317	.22 LR	Fed Am. Eagle	45	LRN	823	9.75	0.223	44.8	Shallow penetration, Suppressor load, BG
S&W M-317	.22 LR	Fed Am. Eagle	45	LRN	786	9.0	0.217-0.222	44.7	Shallow penetration, Suppressor load, BG
S&W M-317	.22 LR	CCI Velocitor	40	CPHP	975	12.5	0.214-0.217	39.6	Yawed, stopped sideways, no expansion, 4LD
S&W M-317	.22 LR	CCI Velocitor	40	CPHP	915	10 3/8	0.241	39.6	Stayed point on, no expansion, 4LD #11
S&W M-317	.22 LR	CCI Velocitor	40	CPHP	954	9.5	0.240	39.5	Yawed & inverted, no expansion, 4LD #11
S&W M-317	.22 LR	CCI Velocitor	40	CPHP	1027	13.5	0.225	39.2	360 deg, tumble, ended point on, no expansion, 4LD
S&W M-317	.22 LR	Federal Punch	29	NP-LFP	1096	13.75	0.216-0.227	28.7	Good penetration, stayed point on, 4LD, #12
S&W M-317	.22 LR	Federal Punch	29	NP-LFP	1153	14.5	0.223	28.7	Good penetration, stayed point on, 4LD, #12

SEE NOTES AND PHOTOS ON THE FOLLOWING PAGES.

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Notes and comments:

- #1 Guns used in this test;
Ruger LCR (.357 mag) 1.87" barrel S&W M-642-1.875", S&W M-637-1 2.125" Ruger GP100 (.357 mag) 2.5" & 4.25" barrel
Colt King Cobra (.357 mag) 2" barrel Ruger LCRx (.327 mag) 1.87" barrel S&W M-22-4 (.45 ACP) 4" barrel
S&W M351c (.22 mag) 1.875" barrel, S&W M-317 (.22LR) 1.875" barrel
- #2. Georgia Arms Ammunition, a new .38 Special Wadcutter loading purpose built for defensive use in short barrel AirLite/Airweight and similar revolvers. The denim wad was at the nose of the bullet.
- #3. Handloaded 230 grain Type 3 Wadcutter designed for bowling pin shoots.
- #4. "TUI"- Tumble Upon Impact.
- #5. "Short Stop" is the bullet designed by the late NYPD Legend Jim Cirillo. It uses a "V" cut into the bullet. With his death these bullets are no longer made, it was tested for historic references only. This load was 4.1 gr. of Accurate #2
- #6. Federal "Cast Core Flat Point" bullet with Gas Check (GC)
- #7 Bullet fragmented into 3 pieces- Main bullet 64 gr., 1st fragment - weight 12.4 gr., penetration 6", 2nd fragment - weight 11.6 gr. Penetration 5.5".
- #8 Bullet was recovered from the gel but was lost so it was not weighed or measured.
- #9 The bullet nose did was not plugged but still did not expand.
- #10 The bullet nose did was not plugged but still did not expand.
- #11a. "11a" remained point one and penetrated 10 3/8". "11b" tumbled and inverted base first curving then striking "11a" base to base, reducing its penetration.
#11b
12. Last year this load was tested and had shallow penetration. It appears Federal changed this loading and now has sufficient penetration to be an option for the .22 LR.

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1. .38 Special, Federal American Eagle - 158 gr. LRN, BG
2. .38 Special, Western - 200 gr. LRN, BG
3. .38 Special, Precision Delta – 158 gr. LSWC, BG
4. .38 Special, Sella and Bellot – 148 gr. HBWC and denim cut by the bullet, 4 Layer Denim
5. .38 Special, Georgia Arms – 148 gr. HBWC “Snub” load, BG
6. .38 Special, Georgia Arms – 148 gr. HBWC “Snub” load and denim cut by the bullet, 4LD
7. .38 Special, Handload – 230 gr. Type 3 wadcutter designed for pin matches, 4LD
8. .38 Special, Remington Multi-Ball, 2-000 buckshot, BG

9. .38 Special, WCC 71 M-41, USAF loading - 130 gr. FMJ, BG
10. .38 Special, PMC – 132 gr. FMJ, BG
11. .38 Special, Fort Scott – 80 gr. TUI (Tumble upon Impact), BG

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- 12. .38 Special, PPU - 158 gr. LSWC-HP, BG
- 13. .38 Special, Blazer - 110 gr. JHP +P, BG
- 14. .38 Special, Hornady Critical Defense Lite – 90 gr. FTX, BG
- 15. .38 Special, Hornady Critical Defense Lite – 90 gr. FTX, 4LD

- 17. .38 Special, Federal Punch – 120 gr. JHP +P, 4LD
- 18. .38 Special, Corbon 110 gr. DPX +P, BG
- 19. .38 Special, SIG V-Crown – 125 gr. JHP +P, 4LD
- 20. .38 Special, Speer Gold Dot, Short Barrel – 135 gr. JHP +P, 4LD

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16. .38 Special, Federal Punch – 120 gr. JHP +P, BG

21. .38 Special, Handload – 148 gr. Short Stop, 4LD

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- 22. .357 Magnum, Remington Multi-Ball – 140 gr 000 Buck (x2), BG
- 23. .357 Magnum, Federal Vital-Shok – 180 gr LFP- GC, BG
- 24. .357 Magnum, Speer Gold Dot – 135 gr. JHP, BG
- 25. .357 Magnum, Winchester – 110 gr. JHP, BG
- 26. .357 Magnum, Hornady Critical Defense – 125 gr. FTX, 4LD
- 27. .357 Magnum, Barnes – 125 gr. Copper HP, 4LD

- 28. .32 H&R Magnum, Buffalo Bore - 100 gr. JHP, 4LD
- 29. .327 Magnum, Federal Hydra-Shok – 85 gr. JHP, 4LD
- 30. .41 Magnum, Winchester Silver Tip – 175 gr. STHP, 4LD
- 31. .45 ACP, Winchester 1911 – 230 JHP, 4LD
- 32. .45 ACP, Underwood – 230 gr. JHP, 4LD
- 33. .45 ACP, Underwood – 230 gr. JHP, 4LD

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- 34. .22 Magnum, Aguila – 40 gr. JSP, 4LD
- 35. .22 Magnum, Speer Gold Dot – 40 gr. JHP, 4LD
- 36. .22 Magnum, Federal Punch – 45 gr. Nickel plated JHP, 4LD
- 37. .22 Magnum, Hornady Critical Defense – 45 gr. FTX, 4LD

- 38. .22 Long Rifle, Remington – 40 gr. LRN, 4LD
- 39. .22 Long Rifle, Remington – 40 gr. LRN, 4LD
- 40. .22 Long Rifle, Federal American, Suppressor load – 45 gr. LRN, 4LD

- 42. .22 LR, CCI Velocitor – 40 gr. Copper Plated LHP, 4LD
- 43. .22 LR, CCI Velocitor – 40 gr. Copper Plated LHP, 4LD, (#11b)
- 44. .22 LR, CCI Velocitor – 40 gr. Copper Plated LHP, 4LD, (#11a)
- 45. .22 LR, CCI Velocitor – 40 gr. Copper Plated LHP, 4LD
- 46. .22 LR, Federal Punch – 29 gr. Nickel Plated LFP, 4LD
- 47. .22 LR, Federal Punch – 29 gr. Nickel Plated LFP, 4LD

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41. .22 Long Rifle, Federal American, Suppressor load – 45 gr. LRN, 4LD