

Moapa Valley, NV

30 Super Carry Ballistic Gel Test 2023
02DEC2023 0900-1015 hours

46-50 degrees F

Conducted by Dan Reedy and Ally Corless

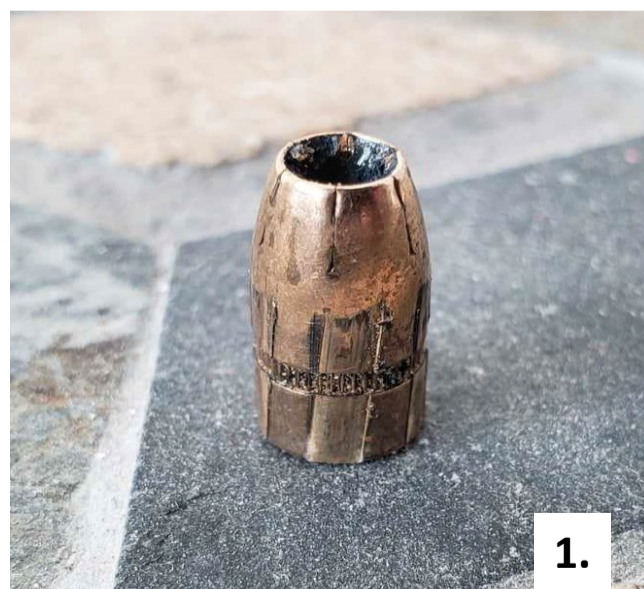
All rounds tested were fired into Clear Ballistics Gel and through 4 layers of denim unless noted otherwise. Levi 559 100% cotton jean used as barrier. 10% Gel, 20" Shooter's Block used for testing. Competition Electronics ProChronoLTD chronograph used to record all velocities. Chronograph placed 6 feet in front of muzzle.

Load	Gun used	Caliber	Weight (grains)	Bullet Type	Velocity (FPS)	Penetration (inches)	Diameter (inches)	Recovered weight (grains)	Notes
Hornady Critical Defense	S&W 351C	22WMR	45	FTX	1001	12	0.22	44.9	Flipped 180 degrees at end of travel
					1013	12.25	0.22	44.8	n/a
Federal HST	S&W Shield Plus	30SC	100	JHP	1182	20+	n/a	n/a	Not recovered
					1168	20+	0.312	99.9	Recovered in dirt behind table. No expansion or deformation
					1161	20+	n/a	n/a	Not recovered
					1179	20+	n/a	n/a	Not recovered
					1169	20+	n/a	n/a	Not recovered
Hornady Critical Defense	S&W Shield Plus	30SC	100	JHP	1150	15	0.45	99.2	n/a
					1146	14.5	0.43	99.2	Flipped 180 degrees in middle of travel
					1164	16	0.45	99.4	Flipped 180 degrees in middle of travel
					1146	15.75	0.46	99.4	Turned 120 degrees upward then rearward toward end of travel
					1156	15.5	0.48	99.1	n/a
Remington HTP	S&W Shield Plus	30SC	100	JHP	1173	20+	n/a	n/a	Not recovered
					1161	20+	n/a	n/a	Not recovered
					1177	20+	n/a	n/a	Not recovered
					1165	20+	n/a	n/a	Not recovered
					1174	20+	n/a	n/a	Not recovered
Speer Gold Dot	S&W Shield Plus	30SC	115	JHP	1086	18.75	0.312	115.3	No expansion or deformation
					1066	20+	n/a	n/a	Not recovered
					1070	20+	n/a	n/a	Not recovered
					1071	17.55	0.312	114.2	Tumbled 90 degrees vertically, rear sticking out of side of block, no expansion or deformation
					Did not record	20+*	0.312	114.8*	* Projectile recovered from berm. No expansion or deformation.
Remington UMC	S&W Shield Plus	30SC	100	FMJ	1195	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
					1208	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
					1199	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
					1228	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
					1221	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
CCI Blazer Brass	S&W Shield Plus	30SC	115	FMJ	1077	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
					1084	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
					1066	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
					1064	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
					1065	n/a	n/a	n/a	Fired through chronograph, no gel testing conducted
End of test data									

My assumption regarding lack of expansion and resulting over-penetration of most rounds here is due to velocity. I believe that these 30SC loads were developed with 4+ inch barrels in mind, as would be found in holsters of law enforcement across the US. Only Hornady lists the length of their test barrel on the public product page for their load--a 4-inch barrel. After querying Federal, Remington, and Speer/CCI, they also stated they used a 4-inch barrel for all 30SC testing. Stated velocities across all brands on their product pages are approximately 58-86FPS higher than velocities achieved during this testing procedure. In the past we've seen failings of popular 9x19 loads in shorter barrels due to a reduction in velocity. This would also explain why Jeremy Stafford's testing of the 3.68-inch S&W Shield EZ achieved appropriate penetration and expansion when using Speer Gold Dot and Federal HST, being closer to a "duty" 4-inch barrel. Curiously, there are ZERO firearms in 30 Super Carry with 4-inch barrels available to the public as of this writing. Unfortunately the consumer is often left wanting, given far less concern during the product development cycle than government contracts. As of this writing, my recommendation is to use Hornady Critical Defense when paired with the S&W Shield Plus in 30 Super Carry. Additionally, I recommend that ammunition manufacturers rework their ammunition to function at wider gaps in velocity. Coming up with "short barrel" variants of their 30SC loads, much like they've done with 9x19 would also be a good place to go. Experimenting with +P loads, or different bullet weights, much like with 9x19 could create options that are relatively agnostic regarding barrel length. Additionally, I suggest that firearms manufacturers offer additional barrel lengths to take advantage of the currently available ammunition.

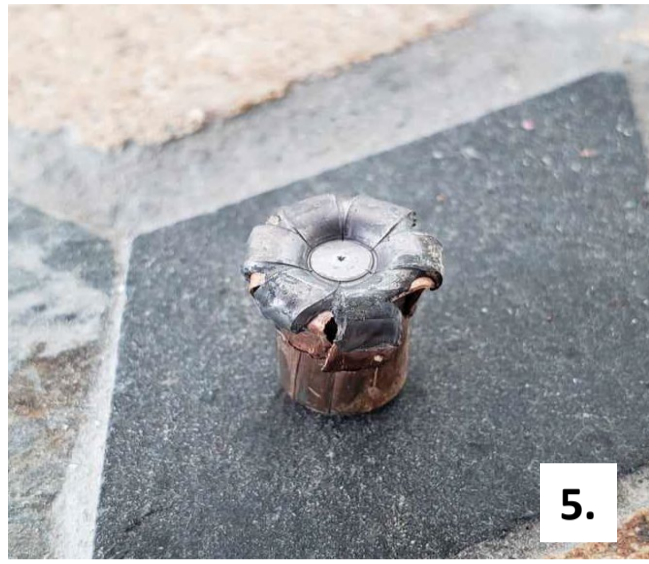
Velocities per the manufacturer:

- Federal HST 100gr: 1250FPS
- Hornady Critical Defense 110gr: 1250FPS
- Remington HTP 100gr: 1235FPS
- Speer Gold Dot 115gr: 1150FPS



- 1. Federal HST 30SC, 100gr JHP
- 2. Speer Gold Dot 30SC, 115gr JHP
- 3. Speer Gold Dot 30SC, 115gr JHP

4. Speer Gold Dot 30SC, 115gr JHP



- 5. Hornady Critical Defense 30SC, 100gr FTX
- 6. Hornady Critical Defense 30SC, 100gr FTX
- 7. Hornady Critical Defense 30SC, 100gr FTX
- 8. Hornady Critical Defense 30SC, 100gr FTX
- 9. Hornady Critical Defense 30SC, 100gr FTX



- 10. Hornady Critical Defense 22WMR, 45gr FTX
- 11. Hornady Critical Defense 22WMR, 45gr FTX