

Test Gun Entréprise 1911 frame, 5" Bar-Sto barrel, WLP

Standard Loads

Powder Type	Start Grains	Standard Loads		Velocity FPS	OAL
		Velocity FPS	Maximum Grains		
230 Round Nose					
WSL	4.2	706	4.8	772	1.260
Unique	5.0	700	5.8	778	1.260
Titegroup	3.9	701	4.3	783	1.260
Red Dot	4.1	760	4.5	828	1.260
231	4.5	728	5.1	830	1.260
HP-38	4.8	742	5.3	841	1.260
Universal	5.4	714	5.9	844	1.260
WST	3.9	800	4.3	845	1.260
700X	4.0	755	4.8	852	1.260
Bullseye	4.5	819	5.1	887	1.260



IPSC Major Loads

Powder Type	Grains	Velocity FPS	OAL
200 Semi Wad Cutter			
700X	5.0	901	1.250
Bullseye	5.0	905	1.250
HP-38	5.5	908	1.250
231	5.7	918	1.250
230 Round Nose			
700X	4.2	782	1.260
231	4.9	796	1.260
Bullseye	4.5	819	1.260
HP-38	5.2	822	1.260



IPSC Heavy-Bullet Major Loads + P

Round Nose Flat Point	Powder Type	Grains	Velocity FPS	OAL
250 Round Nose	Clays	3.3	700	1.168
Flat Point	Titegroup	3.8	725	1.168
	Solo 1000	3.5	733	1.168
250 Round Nose	Bullseye	3.9	735	1.168
	Unique	5.0	745	1.168

Use the above loads exactly as listed.

These are MAXIMUM loads - Do not exceed charges, or shorten overall lengths. Do not fire these loads in pre-1950 revolvers. For use in pistols with fully supported chambers only.



NRA Bullseye Loads - 25 Yard Line

Powder Type	Grains	Velocity FPS	OAL
200 Semi Wad Cutter			
Bullseye	3.6	701	1.250
231	4.4	718	1.250
HP-38	4.1	726	1.250

NRA Bullseye Loads - 50 Yard Line

Powder Type	Grains	Velocity FPS	OAL
200 Semi Wad Cutter			
Bullseye	4.2	794	1.250
231	4.8	796	1.250
HP-38	4.4	798	1.250

Ramshot Powder Data**Laser-Cast**

10/9/02

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45 ACP

155g SWC	POWDER	GRAINS	VELOCITY	O.A.L.	PRIMER	P.S.I
	TRUE BLUE	9.8	1139	1.260	FED 150 LP	17,383
	TRUE BLUE	10.1	1188	1.260	FED 150 LP	19,563
	TRUE BLUE	9.4	1132	1.260	FED 150 LP	16,793

180g SWC	POWDER	GRAINS	VELOCITY	O.A.L.	PRIMER	P.S.I
	TRUE BLUE	8.6	1044	1.235	FED 150 LP	19,453
	TRUE BLUE	8.0	1000	1.235	FED 150 LP	17,513
	TRUE BLUE	7.3	912	1.235	FED 150 LP	13,633

45 ACP LOAD DATA

4/11/01

CALIBER	BULLET WT.	POWDER	START LOAD	MAX LOAD	START VELOCITY	MAX VELOCITY	MAX ENERGY
45 ACP	155g	HERCO	7.0	9.0	1051	1176	476
45 ACP	155g	N100	5.5	6.5	1032	1161	464
45 ACP	155g	AA#2	5.5	6.5	1014	1147	453
45 ACP	155g	AA#5	9.5	10.5	1074	1208	502
45 ACP	180g	BULLSEYE	4.3	5.3	816	1004	403
45 ACP	180g	RED DOT	4.0	4.8	797	918	337
45 ACP	180g	GREEN DOT	4.0	4.8	804	961	369
45 ACP	180g	UNIQUE	5.0	6.5	802	1017	413
45 ACP	180g	HERCO	8.0	9.5	881	1042	434
45 ACP	180g	HP 38	5.0	5.8	802	955	364
45 ACP	180g	WW 231	5.0	5.7	788	952	362
45 ACP	180g	TRAP 100	4.5	5.3	811	959	368
45 ACP	180g	HS 6	8.0	8.8	904	1018	414
45 ACP	180g	ROYAL SCOT	4.5	5.3	808	1027	421
45 ACP	180g	PEARL SCOT	5.5	6.1	891	1043	435
45 ACP	180g	SOLO 1000	4.5	5.3	917	1047	438
45 ACP	180g	SOLO 1250	5.5	6.2	798	1011	408
45 ACP	180g	SOLO 1500	8.0	8.8	891	1024	419
45 ACP	180g	540	8.0	8.8	889	1043	435
45 ACP	180g	WST	4.5	5.2	857	988	390
45 ACP	180g	WSF	6.5	7.3	908	1066	454
45 ACP	180g	N100	5.5	6.0	922	1011	408
45 ACP	180g	AA#2	5.5	6.2	896	994	395
45 ACP	180g	AA#5	9.0	9.8	947	1088	473
45 ACP	180g	WSL	4.5	5.2	821	959	368
45 ACP	180g	800X	6.0	6.8	812	910	331
45 ACP	180g	PB	5.0	5.8	797	911	332
45 ACP	180g	700X	4.0	4.8	801	879	309
45 ACP	200g	BULLSEYE	4.5	5.5	822	964	413
45 ACP	200g	RED DOT	4.0	5.0	793	931	385
45 ACP	200g	GREEN DOT	4.5	5.5	836	929	383
45 ACP	200g	UNIQUE	6.0	7.0	811	1011	454
45 ACP	200g	HERCO	5.5	6.5	819	988	433
45 ACP	200g	BLUE DOT	8.0	9.0	814	961	410
45 ACP	200g	HP 38	4.5	5.5	791	932	386
45 ACP	200g	TRAP 100	4.0	5.0	756	898	358
45 ACP	200g	HS 6	7.5	8.5	787	936	389
45 ACP	200g	N100	4.5	5.5	754	950	401
45 ACP	200g	AA#2	4.5	5.5	822	937	390
45 ACP	200g	AA#5	8.5	9.5	914	1038	478
45 ACP	200g	ROYAL SCOT	4.0	5.0	789	917	373
45 ACP	200g	PEARL SCOT	4.5	5.5	804	944	396
45 ACP	200g	SOLO 1000	4.0	5.0	744	866	333
45 ACP	200g	SOLO 1250	5.5	6.5	816	943	395
45 ACP	200g	SOLO 1500	7.5	8.5	821	954	404
45 ACP	200g	WW 231	5.0	6.0	837	966	414
45 ACP	200g	540	8.0	9.0	852	992	437
45 ACP	200g	571	9.0	10.0	884	996	440
45 ACP	200g	WST	4.5	5.0	837	942	394
45 ACP	200g	WSF	6.0	7.0	891	1011	454
45 ACP	200g	WSL	4.5	5.5	822	947	398
45 ACP	200g	700X	4.0	5.0	838	952	402

45 ACP LOAD DATA

4/11/01

CALIBER	BULLET WT.	POWDER	START LOAD	MAX LOAD	START VELOCITY	MAX VELOCITY	MAX ENERGY
45ACP	225g	WW 231	4.5	5.5	788	914	417
45 ACP	225g	540	7.0	8.0	815	923	426
45 ACP	225g	571	7.5	8.5	822	912	415
45 ACP	225g	WST	3.5	4.5	759	828	342
45 ACP	225g	WSL	4.0	5.0	723	844	356
45 ACP	225g	WSF	5.5	6.5	778	903	407
45 ACP	225g	ROYAL SCOT	3.5	4.5	733	819	335
45 ACP	225g	PEARL SCOT	4.5	5.5	764	858	368
45 ACP	225g	SOLO 1000	3.5	4.5	712	809	327
45 ACP	225g	SOLO 1250	5.0	6.0	728	941	442
45 ACP	225g	SOLO 1500	7.0	8.0	755	921	424
45 ACP	225g	N100	4.5	5.5	736	844	356
45 ACP	225g	AA#2	4.5	5.5	761	854	364
45 ACP	225g	AA#5	7.5	8.5	762	889	395
45 ACP	225g	HP 38	4.5	5.5	782	915	418
45 ACP	225g	TRAP 100	4.0	5.0	711	853	363
45 ACP	225g	HS 6	7.5	8.5	753	913	416
45 ACP	225g	BULLSEYE	4.0	5.0	738	918	421
45 ACP	225g	RED DOT	4.0	5.0	761	943	444
45 ACP	225g	GREEN DOT	4.5	5.5	743	956	457
45 ACP	225g	UNIQUE	5.0	6.0	762	921	424
45 ACP	225g	HERCO	5.0	6.0	781	903	407
45 ACP	225g	BLUE DOT	7.5	8.5	803	938	439
45 ACP	225g	AA#7	8.0	10.0	761	924	426
45 ACP	225g	700X	4.0	5.0	732	877	384
45 ACP	225g	PB	4.5	5.5	707	862	371
45 ACP	230g	BULLSEYE	4.0	5.0	789	924	436
45 ACP	230g	RED DOT	4.0	5.0	793	944	455
45 ACP	230g	GREEN DOT	4.5	5.5	806	967	477
45 ACP	230g	UNIQUE	5.0	6.0	782	917	429
45 ACP	230g	HERCO	5.0	6.0	786	912	425
45 ACP	230g	BLUE DOT	7.5	8.5	802	955	466
45 ACP	230g	N100	4.5	5.2	729	808	333
45 ACP	230g	AA#2	4.5	5.5	741	839	359
45 ACP	230g	AA#5	7.5	8.5	763	886	403
45 ACP	230g	ROYAL SCOT	3.5	4.5	706	804	330
45 ACP	230g	PEARL SCOT	4.5	5.5	733	871	387
45 ACP	230g	SOLO 1000	3.5	4.5	717	807	333
45 ACP	230g	SOLO 1250	5.0	6.0	712	814	338
45 ACP	230g	SOLO 1500	7.0	8.0	762	908	421
45 ACP	230g	WW 231	4.5	5.5	738	892	406
45 ACP	230g	540	7.5	8.5	821	883	398
45 ACP	230g	WST	4.0	5.0	714	836	357
45 ACP	230g	WSL	4.0	5.0	709	857	375
45 ACP	230g	WSF	5.5	6.5	781	932	444
45 ACP	230g	HP 38	4.5	5.5	731	884	399
45 ACP	230g	TRAP 100	4.0	5.0	762	849	368
45 ACP	230g	HS 6	7.0	8.0	719	862	379
45 ACP	230g	AA#7	8.5	10.0	766	923	435
45 ACP	230g	700X	4.0	5.0	714	872	388
45 ACP	230g	PB	4.5	5.5	708	851	370

Test Gun: Entreprise 5", WSP

Standard Loads

Powder Type	Start Grains	Velocity FPS	NEVER EXCEED	Velocity FPS	Minimum OAL
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155 Round Nose Semi Wad Cutter

WST	5.0	970	5.6	1034	1.126
WSL	4.7	1042	5.2	1102	1.126
HP-38	5.0	1045	5.4	1108	1.126
WAP	6.7	1050	7.2	1120	1.126
231	5.0	1045	5.4	1121	1.126
Universal	5.1	1066	5.6	1136	1.135
540	7.1	1076	7.7	1151	1.135
AA5	6.7	1081	7.3	1154	1.135

170 Semi Wad Cutter

AA5	5.5	926	6.1	998	1.135
WSL	4.3	969	4.7	1022	1.135
WAP	5.8	966	6.2	1025	1.135
HP-38	4.5	962	4.9	1028	1.135
231	4.6	967	5.0	1043	1.135
540	6.5	985	7.0	1050	1.135
Universal	4.6	1000	5.0	1065	1.135

180 Truncated Cone

Clays	3.2	848	3.4	880	1.130
WAP	5.4	814	5.9	884	1.130
WST	4.5	886	5.0	941	1.130
Unique	5.2	895	5.6	949	1.130
Red Dot	4.1	924	4.4	969	1.130
AA5	5.5	885	6.0	945	1.130
HS-6	6.6	908	7.1	973	1.130
Universal	4.7	933	5.1	979	1.130
540	6.2	896	6.9	998	1.130

Caution: These loads are intended for use in pistols with fully supported chambers ONLY!

DO NOT EXCEED MAXIMUM LOADS DO NOT REDUCE STARTED OVERALL LENGTHS

Test Gun: Entreprise 5", WSP

Standard Loads

Powder Type	Start Grains	Velocity FPS	NEVER EXCEED	Velocity FPS	Minimum OAL
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180 Round Nose Flat Point

WAP	5.4	795	5.8	842	1.122
WST	4.5	886	5.0	941	1.122
Unique	5.2	891	5.6	941	1.122
HS-6	6.6	890	7.1	957	1.122
Universal	4.7	917	5.1	961	1.122
540	6.2	877	6.9	978	1.122

200 Truncated Cone

540	5.5	835	6.0	886	1.135
AA5	4.7	823	5.2	907	1.135
Unique	4.2	825	4.7	910	1.135
Universal	3.9	832	4.3	912	1.135
HS-6	5.6	842	6.1	915	1.135

Caution: These loads are intended for use in pistols with fully supported chambers ONLY!

DO NOT EXCEED MAXIMUM LOADS DO NOT REDUCE STARTED OVERALL LENGTHS

.40 S&W

HANDGUN LOADING DATA



Test Gun: Glock M-22, WSP

Maximum loads for unsupported chamber service pistols

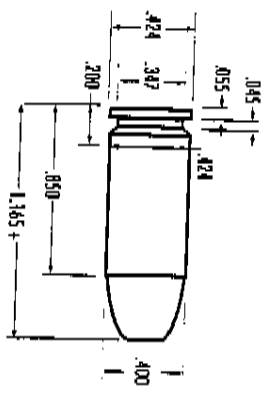
Powder Type	NEVER EXCEED	Velocity FPS	Minimum OAL
155 Round Nose Semi Wad Cutter			
WST	5.6	1029	1.135
231	5.1	1067	1.135
HP-38	5.1	1067	1.135
170 Semi Wad Cutter			
WAP	7.0	1092	1.135
Universal	5.3	1097	1.135
540	7.3	1101	1.135
AA5	7.0	1108	1.135
180 Truncated Cone, WAP or Round Nose Flat Point			
AA5	5.7	950	1.135
WSL	4.3	958	1.135
HP-38	4.6	983	1.135
231	4.7	986	1.135
WAP	5.9	989	1.135
540	6.6	998	1.135
Universal	4.6	1013	1.135
Unique	5.3	918	1.135
540	6.4	922	1.135
HS-6	6.8	934	1.135
Universal	4.8	935	1.135

* To use this load data for our 180 RN FP bullet, seat to minimum OAL of 1.125

Do not exceed these loads in pistols with unsupported chambers; read and understand text fully before loading.

Be certain your pistol will fully chamber these loads using dummy rounds. Your pistol should not fire out of battery (slide not fully forward)! Consult your pistols' manufacturer or a qualified pistol smith to make sure your pistol is safe before shooting.

.40 S&W Long Loaded



The current emphasis on run and gun stages has compelled many USPSA Limited competitors to bypass the 45 ACP for a high capacity .40. They are willing to sacrifice a degree of accuracy, case life and a margin of safety to cram three more rounds into their magazines. (Perhaps, if having teeth pulled added 5% to our scores, we'd do that too...) Fortunately, .40 S&W loses a lot of its bad bite when loaded out to overall lengths that function optimally in the various wide body 1911s. Standard overall length .40 S&W rounds often won't run in guns with 45 ACP-length magazines and steep, supported feed ramps. Long loaded .40s operate at a bit less pressure, restoring some case life and safety to the reload. **Caution:** Your barrels' rifling leade must be cut longer to accept these longer overall lengths reliably. Use dummy rounds to check chambering and function. Be certain that your pistol will feed and eject long rounds 100% and consult your pistol's manufacturer or your gunsmith if you have any doubts before you proceed. DO NOT shorten these overall lengths. These loads are only to be used in 1911-type pistols with fully supported chambers. Taper crimp at .420".

DO NOT EXCEED MAXIMUM LOADS NEVER REDUCE STATED OVERALL LENGTHS

HANDGUN LOADING DATA

.40 S&W Long-Loaded

Test Gun: Entréprise, 5" Bar-Sto, WSP

Major Power Factor IPSC Loads

Powder Type	Start Grains	Velocity FPS	Maximum Grains	Velocity FPS	OAL
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170 Semi Wad Cutter

540	6.3	915	7.2	1030	1.170
AA5	6.6	1018	6.7	1035	1.170

180 Flat Point

231	4.3	899	5.0	989	1.190
Universal	5.1	944	5.5	1016	1.190
Titegroup	4.2	960	4.6	1016	1.190
Unique	5.5	941	5.9	1018	1.190
WSL	4.3	918	4.8	1012	1.190
540	6.2	907	7.0	1021	1.190

200 Flat Point

Titegroup	3.5	828	3.9	884	1.190
AA5	5.0	841	5.3	886	1.190
HS-6	6.3	884	6.7	940	1.190
N350	5.0	888	5.4	944	1.190
Universal	4.2	860	4.7	951	1.190



Test Gun: Entréprise, 5" Bar-Sto, WSP

Minor Power Factor Action Loads

Powder Type	Grains	Velocity FPS	OAL
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155 Round Nose/ Semi Wad Cutter

HP-38	4.9	998	1.165
Clays	4.0	1000	1.165
231	5.1	1027	1.165
WSL	4.8	1029	1.165

170 Semi Wad Cutter

Clays	3.5	887	1.170
WSL	4.6	969	1.170
231	4.8	977	1.170
HP-38	4.6	986	1.170

Caution: Use only in pistols with fully supported chambers!

DO NOT EXCEED MAXIMUM LOADS NEVER REDUCE STATED OVERALL LENGTHS

40 Smith & Wesson
Test Gun: EAA Witness 5"
Primer: WSP

140g	Powder	Min. Gr.	FPS	Max. Gr.	FPS	OAL	Tech
	Hodg. Univ.	5.3	1075	X	X	1.130	BA
	HP 38	5.2	1086	X	X	1.130	BA

Ramshot Powder Data

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Laser-Cast

10/9/02

40 S & W

140g TC	POWDER	GRAINS	VELOCITY	O.A.L.	PRIMER	P.S.I
	TRUE BLUE	8.1	1192	1.130	REM 5 1/2 SP	29,610
	TRUE BLUE	7.8	1170	1.130	REM 5 1/2 SP	27,990
	TRUE BLUE	7.3	1104	1.130	REM 5 1/2 SP	24,260
170g SWC	POWDER	GRAINS	VELOCITY	O.A.L.	PRIMER	P.S.I
	TRUE BLUE	6.4	1022	1.130	REM 5 1/2 SP	33,240
	TRUE BLUE	6.0	966	1.130	REM 5 1/2 SP	28,530
	TRUE BLUE	5.6	918	1.130	REM 5 1/2 SP	25,240

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RELOADING DATA

Caliber	Bullet Wt. in Grains	Powder Type	Starting Load	Maximum Load	Starting Velocity	Max Velocity	Max Energy
40 SMITH	140	AA#2	6.0	6.5	1051	1126	394
40 SMITH	140	AA#5	8.0	9.0	1043	1168	424
40 SMITH	140	AA#7	10.0	11.0	1011	1148	405
40 SMITH	140	WW231	5.0	6.0	963	1129	396
40 SMITH	140	WST	5.0	6.0	956	1041	337
40 SMITH	140	540	8.5	9.5	1073	1196	445
40 SMITH	140	WSL	5.0	5.9	988	1157	416
40 SMITH	140	WST	5.5	6.5	1003	1066	353
40 SMITH	140	WSF	6.5	7.5	1064	1183	435
40 SMITH	140	BULLSEYE	6.0	6.8	1083	1221	463
40 SMITH	140	RED DOT	5.0	6.0	1038	1164	421
40 SMITH	140	GREEN DOT	5.0	6.4	1047	1184	436
40 SMITH	140	UNIQUE	7.0	8.4	1051	1266	498
40 SMITH	140	HERCO	7.0	8.5	1032	1261	494
40 SMITH	140	BLUE DOT	10.0	12.0	1014	1293	520
40 SMITH	140	800X	7.0	8.5	1018	1144	407
40 SMITH	140	SOLO 1500	7.0	8.5	974	1183	435
40 SMITH	140	HS6	7.5	8.5	1031	1164	421
40 SMITH	155	BULLSEYE	6.0	6.5	1141	1234	524
40 SMITH	155	RED DOT	5.0	6.0	1037	1168	469
40 SMITH	155	GREEN DOT	5.0	6.0	1024	1157	461
40 SMITH	155	UNIQUE	7.0	8.0	1036	1244	533
40 SMITH	155	HERCO	7.0	8.0	1103	1232	522
40 SMITH	155	BLUE DOT	10.0	11.4	1067	1273	557
40 SMITH	155	WW231	5.0	6.0	988	1143	450
40 SMITH	155	571	9.0	10.0	1061	1193	490
40 SMITH	155	540	8.0	9.0	1021	1164	466
40 SMITH	155	WSL	5.0	5.7	944	1161	464
40 SMITH	155	WST	5.0	6.0	921	1064	361
40 SMITH	155	WSF	6.5	7.5	1004	1197	493
40 SMITH	155	800X	7.0	8.5	1021	1134	443
40 SMITH	155	SOLO 1500	7.5	8.5	1033	1166	468
40 SMITH	155	HS6	7.5	8.5	1048	1181	480
40 SMITH	155	AA#2	5.0	6.0	941	1049	379
40 SMITH	155	AA#5	7.5	8.5	933	1068	393
40 SMITH	155	AA#7	9.0	10.0	888	1019	357
40 SMITH	170	SOLO 1500	6.5	7.5	903	1037	406
40 SMITH	170	HS6	6.5	7.4	934	1006	382
40 SMITH	170	800X	6.5	7.5	928	1064	427
40 SMITH	170	WW231	4.0	5.0	903	1021	393
40 SMITH	170	540	7.0	8.0	944	1107	463
40 SMITH	170	571	7.5	8.5	963	1088	447
40 SMITH	170	WST	4.5	5.5	898	1024	396
40 SMITH	170	WSL	4.0	5.0	961	1046	413
40 SMITH	170	WSF	5.0	6.0	944	1084	443
40 SMITH	170	AA#2	5.0	5.5	897	1021	393
40 SMITH	170	AA#5	7.0	7.5	931	1052	418
40 SMITH	170	AA#7	8.5	9.5	922	1061	425
40 SMITH	170	BULLSEYE	5.0	5.7	891	1043	411

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RELOADING DATA

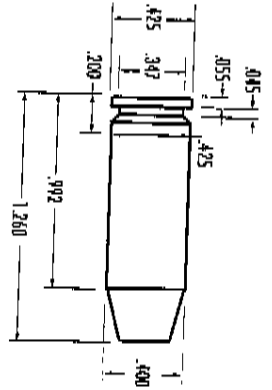
Caliber	Bullet Wt. in Grains	Powder Type	Starting Load	Maximum Load	Starting Velocity	Max Velocity	Max Energy
40 SMITH	170	RED DOT	4.5	5.2	864	1007	383
40 SMITH	170	GREEN DOT	5.0	5.7	933	1064	427
40 SMITH	170	UNIQUE	6.0	6.8	946	1073	435
40 SMITH	170	HERCO	7.0	7.5	1043	1144	494
40 SMITH	170	BLUE DOT	9.0	9.8	1051	1188	533
40 SMITH	170	2400	11.0	12.0	1063	1117	471
40 SMITH	175	BULLSEYE	5.0	5.5	921	1041	421
40 SMITH	175	RED DOT	4.5	5.2	831	1024	407
40 SMITH	175	GREEN DOT	4.5	5.4	861	1037	418
40 SMITH	175	UNIQUE	5.5	6.5	943	1073	447
40 SMITH	175	HERCO	6.0	7.2	966	1058	435
40 SMITH	175	BLUE DOT	8.0	9.0	894	1077	451
40 SMITH	175	2400	10.0	11.0	911	1044	423
40 SMITH	175	AA#2	5.0	5.5	866	944	346
40 SMITH	175	AA#5	6.5	7.5	904	1061	437
40 SMITH	175	AA#7	8.0	9.0	928	746	348
40 SMITH	175	WW231	4.0	5.0	840	980	373
40 SMITH	175	540	6.5	7.5	881	1046	425
40 SMITH	175	571	7.5	8.5	923	1028	411
40 SMITH	175	WST	4.0	5.0	804	933	338
40 SMITH	175	WSL	4.5	5.0	836	988	379
40 SMITH	175	WSF	5.0	6.0	877	1014	399
40 SMITH	175	800X	6.5	7.7	924	1064	440
40 SMITH	175	SOLO 1500	6.0	7.0	811	993	383
40 SMITH	175	HS6	6.0	7.0	814	966	363
40 SMITH	180	HS6	6.0	7.2	821	966	373
40 SMITH	180	800X	6.5	7.5	941	1063	452
40 SMITH	180	SOLO 1500	6.5	7.2	911	1022	417
40 SMITH	180	WW231	4.0	5.0	814	968	374
40 SMITH	180	540	6.5	7.5	824	1017	413
40 SMITH	180	571	7.5	8.5	904	1036	429
40 SMITH	180	WST	4.0	5.2	786	937	351
40 SMITH	180	WSL	4.0	5.0	836	982	385
40 SMITH	180	WSF	5.0	6.0	866	1049	440
40 SMITH	180	AA#2	5.0	5.5	822	908	329
40 SMITH	180	AA#5	6.5	7.0	904	1028	422
40 SMITH	180	AA#7	7.0	8.5	811	944	356
40 SMITH	180	BULLSEYE	5.0	5.5	948	1026	421
40 SMITH	180	RED DOT	4.5	5.0	898	1011	408
40 SMITH	180	GREEN DOT	4.5	5.5	883	1028	422
40 SMITH	180	UNIQUE	6.0	6.5	926	1071	458
40 SMITH	180	HERCO	6.0	7.0	949	1053	443
40 SMITH	180	BLUE DOT	8.0	8.5	966	1084	470
40 SMITH	180	2400	10.0	11.0	940	1038	431
40 SMITH	200	BULLSEYE	4.0	4.5	821	954	404
40 SMITH	200	RED DOT	3.5	4.0	743	906	364
40 SMITH	200	GREEN DOT	4.0	4.5	789	908	366
40 SMITH	200	UNIQUE	4.5	5.0	846	980	426
40 SMITH	200	HERCO	5.0	6.0	861	994	439

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RELOADING DATA

Caliber	Bullet Wt. in Grains	Powder Type	Starting Load	Maximum Load	Starting Velocity	Max Velocity	Max Energy
40 SMITH	200	BLUE DOT	7.0	7.5	824	936	389
40 SMITH	200	2400	8.0	8.5	846	933	387
40 SMITH	200	AA#2	4.0	4.5	738	806	288
40 SMITH	200	AA#5	6.0	6.5	831	922	377
40 SMITH	200	AA#7	7.0	7.8	706	804	287
40 SMITH	200	WW231	4.0	4.5	764	867	334
40 SMITH	200	540	6.0	6.5	837	919	375
40 SMITH	200	571	6.5	7.5	803	924	379
40 SMITH	200	WST	3.5	4.5	755	841	314
40 SMITH	200	WSL	3.5	4.5	771	862	330
40 SMITH	200	WSF	4.5	5.5	853	948	399
40 SMITH	200	800X	5.5	6.5	823	964	413
40 SMITH	200	HS6	5.5	6.0	747	833	308
40 SMITH	200	SOLO 1500	5.0	6.0	749	923	378

10mm Auto



The 10mm Norma Auto was first chambered in the infamous Bren 10 pistol of 1933. This was the brainchild of thoughtful experts who believed an effective defensive pistol round needed to penetrate a Chrysler Imperial - end to end. Although alternatives like .400 Cor-Bon are available, 10mm Auto is still the best cartridge choice when brute force from a 1911-sized pistol is required. Of course, just what that requirement may be has not been determined, as full-on 10mm Auto loads are far too powerful for responsible defensive use or competition. 10mm Auto may be down-loaded to reasonable levels but its big case yields greater extreme velocity spreads over comparable .40 S&W or 45 ACP loads. The long case also makes bullet selection and overall length very critical for reliable feeding in many pistols.

Despite these shortcomings, 10mm Auto has some advantages too. Reduced 10mm loads can deliver .40 S&W performance with much less pressure, greater safety margin and less wear on the gun. Cases last almost forever with reduced loads. And, for shooters who also load 45 ACP, the large pistol primer is a major convenience.

Caution: Be sure your pistol will eject loaded rounds — check with dummites. 10mm's large primer and relatively small case head create a potential for accidental firing by contact with the ejector. 10mm benefits from a fairly heavy taper crimp. For max loads, .4205" to .4210" is suggested. The reduced major loads listed here give the closest extreme velocity spreads of those we tested.

HANDGUN LOADING DATA

10 MM AUTO

DO NOT EXCEED MAXIMUM LOADS NEVER REDUCE STATED OVERALL LENGTHS

Test Gun: Enterprise 1911 frame, 5" Bar-Sto barrel, WLP

Standard Loads

Powder Type	Start Grains	Velocity FPS	Maximum Grains	Velocity FPS	OAL
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155 Round Nose

Unique	6.5	1093	7.1	1182	1.255
AA5	8.3	1173	9.2	1284	1.255
AA7	10.3	1119	11.5	1254	1.255
HS-6	9.6	1263	10.6	1364	1.255

170 Semi Wad Cutter

231	5.0	1031	5.6	1121	1.250
Unique	6.0	1021	6.7	1130	1.250
AA5	7.6	1041	8.4	1186	1.250
AA7	9.6	1080	10.6	1222	1.250
HS-6	9.0	1149	9.6	1229	1.250

180 Flat Point

Unique	6.1	1015	6.7	1075	1.260
AA7	9.2	991	10.0	1086	1.260
AA5	7.6	1045	8.2	1109	1.260
540	8.2	1132	8.8	1204	1.260
HS-6	8.7	1150	9.2	1205	1.260

200 Flat Point

Universal	4.8	931	5.6	1041	1.260
HS-7	8.2	1006	9.0	1089	1.260
AA9	10.9	1011	11.8	1105	1.260

DO NOT EXCEED MAXIMUM LOADS NEVER REDUCE STARTED OVERALL LENGTHS

Reduced Action Load

Powder Type	Grains	Velocity FPS	OAL
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155 Round Nose

Clays	4.4	1017	1.255
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FPSC Major Loads

Powder Type	Grains	Velocity FPS	OAL
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200 Flat Point

HP-38	4.8	920	1.260
Universal	4.8	931	1.260
Unique	5.5	937	1.260
700X	4.6	941	1.260

DO NOT EXCEED MAXIMUM LOADS NEVER REDUCE STARTED OVERALL LENGTHS

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RELOADING DATA

Caliber	Bullet Wt. in Grains	Powder Type	Starting Load	Maximum Load	Starting Velocity	Max Velocity	Max Energy
10MM	140	SOLO 1500	8.5	9.5	1066	1297	523
10MM	140	SOLO 1250	6.0	7.0	1022	1164	421
10MM	140	SOLO 1000	5.5	6.5	1041	1186	437
10MM	140	PEARL SCOT	6.0	6.5	1073	1191	441
10MM	140	ROYAL SCOT	5.5	6.3	1038	1179	432
10MM	140	AA#2	6.5	7.5	1043	1267	499
10MM	140	AA#5	10.0	11.0	1203	1353	569
10MM	140	AA#7	12.5	13.5	1266	1398	607
10MM	140	BULLSEYE	6.0	7.0	1074	1206	452
10MM	140	UNIQUE	7.0	7.8	1039	1244	481
10MM	140	HERCO	7.5	8.5	1064	1289	516
10MM	140	BLUE DOT	11.0	11.8	1168	1354	570
10MM	140	2400	13.0	14.0	1149	1361	576
10MM	140	WW231	6.2	7.2	1106	1243	480
10MM	140	540	9.0	11.0	1098	1355	571
10MM	140	571	10.0	11.5	1164	1374	587
10MM	140	WST	6.0	7.3	1104	1261	494
10MM	140	WSL	5.5	6.5	1122	1234	473
10MM	140	WSF	7.0	8.3	1141	1337	556
10MM	140	HP38	6.0	7.0	1098	1210	455
10MM	140	800X	9.0	10.0	1211	1364	578
10MM	140	HS6	9.0	11.0	1161	1384	595
10MM	140	HS7	10.0	12.0	1128	1368	582
10MM	155	WW231	5.5	7.5	1021	1288	571
10MM	155	540	9.0	11.0	1054	1381	656
10MM	155	571	10.0	12.0	1144	1329	608
10MM	155	WST	6.0	8.0	1043	1288	571
10MM	155	WSL	5.5	7.0	1083	1266	552
10MM	155	WSF	6.5	8.5	1081	1346	623
10MM	155	UNIQUE	6.5	7.7	1058	1248	536
10MM	155	BULLSEYE	6.0	6.5	1049	1231	521
10MM	155	HERCO	7.0	8.5	1036	1269	554
10MM	155	BLUE DOT	10.0	11.0	1081	1328	607
10MM	155	2400	11.0	13.5	1093	1284	567
10MM	155	AA#2	6.0	7.0	1023	1197	493
10MM	155	AA#5	9.0	10.0	1096	1243	532
10MM	155	AA#7	12.0	13.5	1206	1368	644
10MM	155	PEARL SCOT	6.0	6.5	1093	1204	499
10MM	155	ROYAL SCOT	5.0	6.0	1021	1193	490
10MM	155	SOLO 1000	5.0	6.0	1037	1188	486
10MM	155	SOLO 1250	6.0	6.8	1020	1163	465
10MM	155	SOLO 1500	8.0	9.5	1121	1306	587
10MM	155	HP38	5.5	7.2	1014	1265	551
10MM	155	HS7	10.0	12.0	1114	1321	600
10MM	155	800X	8.0	10.0	1164	1311	591
10MM	155	HS6	9.5	10.5	1141	1344	622
10MM	170	AA#2	5.5	6.5	904	1096	453
10MM	170	AA#5	9.0	10.0	1087	1261	600
10MM	170	AA#7	11.0	13.0	1106	1304	642

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RELOADING DATA

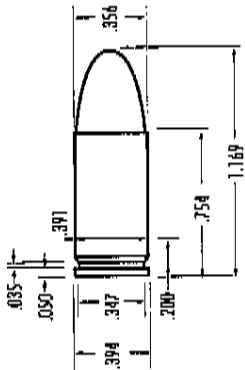
Caliber	Bullet Wt. in Grains	Powder Type	Starting Load	Maximum Load	Starting Velocity	Max Velocity	Max Energy
10MM	170	ROYAL SCOT	5.0	6.0	1007	1103	459
10MM	170	PEARL SCOT	5.5	6.5	1031	1112	467
10MM	170	SOLO 1000	5.0	6.0	987	1093	451
10MM	170	SOLO 1250	5.5	6.5	993	1106	462
10MM	170	SOLO 1500	7.5	8.5	1068	1209	552
10MM	170	BULLSEYE	5.5	6.2	966	1148	497
10MM	170	UNIQUE	6.0	7.0	1008	1164	511
10MM	170	HERCO	6.5	7.5	1014	1183	528
10MM	170	BLUE DOT	9.0	10.0	1039	1204	547
10MM	170	2400	11.0	12.5	1011	1222	564
10MM	170	WW231	5.0	6.0	1024	1168	515
10MM	170	540	8.0	10.0	1054	1288	626
10MM	170	571	9.0	11.0	1036	1280	618
10MM	170	WST	4.5	5.2	958	1048	415
10MM	170	WSL	4.0	5.5	966	1141	491
10MM	170	WSF	6.0	7.0	1036	1254	593
10MM	170	HP38	5.0	6.0	1046	1129	481
10MM	170	800X	7.0	9.0	1017	1236	577
10MM	170	HS7	8.0	10.0	966	1129	481
10MM	170	HS6	8.0	9.2	984	1164	511
10MM	175	HS7	8.0	10.0	933	1181	542
10MM	175	800X	7.0	9.0	1011	1241	598
10MM	175	HS6	8.0	9.0	1033	1181	542
10MM	175	ROYAL SCOT	5.0	5.8	961	1104	474
10MM	175	PEARL SCOT	5.5	6.5	924	1116	484
10MM	175	SOLO 1000	5.0	6.0	955	1088	460
10MM	175	SOLO 1250	5.5	6.5	922	1069	444
10MM	175	SOLO 1500	7.5	8.5	1036	1178	539
10MM	175	WW231	5.0	6.0	936	1071	446
10MM	175	540	7.5	9.5	938	1209	568
10MM	175	571	8.5	10.5	963	1198	558
10MM	175	WST	4.5	5.5	928	1064	440
10MM	175	WSL	4.5	5.7	964	1077	451
10MM	175	WSF	6.0	7.5	941	1166	528
10MM	175	BULLSEYE	5.0	6.0	988	1157	520
10MM	175	UNIQUE	6.0	7.0	1021	1143	508
10MM	175	HERCO	6.5	7.5	1051	1161	524
10MM	175	BLUE DOT	8.0	10.0	1089	1206	565
10MM	175	2400	11.0	12.6	1057	1212	571
10MM	175	AA#2	5.5	6.5	988	1097	468
10MM	175	AA#5	9.0	10.0	1089	1210	569
10MM	175	AA#7	11.5	12.5	1124	1268	625
10MM	175	HP38	5.0	6.0	966	1059	436
10MM	180	AA#2	5.5	6.5	956	1088	473
10MM	180	AA#5	8.5	9.5	1037	1196	572
10MM	180	AA#7	11.0	12.5	1098	1281	656
10MM	180	BULLSEYE	5.5	6.5	983	1136	516
10MM	180	UNIQUE	6.0	7.0	996	1158	536
10MM	180	HERCO	6.0	7.5	1023	1183	559

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RELOADING DATA

Caliber	Bullet Wt. in Grains	Powder Type	Starting Load	Maximum Load	Starting Velocity	Max Velocity	Max Energy
10MM	180	BLUE DOT	9.5	10.5	1036	1197	573
10MM	180	2400	10.5	12.5	1019	1209	584
10MM	180	WW231	5.0	6.0	981	1066	454
10MM	180	540	7.5	9.5	953	1211	586
10MM	180	571	8.5	10.5	1011	1201	576
10MM	180	WST	4.5	5.5	906	1039	431
10MM	180	WSL	4.5	5.5	959	1075	462
10MM	180	WSF	6.0	7.0	1011	1169	546
10MM	180	HP38	5.0	6.0	967	1073	460
10MM	180	ROYAL SCOT	4.5	5.5	951	1091	476
10MM	180	PEARL SCOT	5.0	6.0	915	1098	482
10MM	180	SOLO 1000	5.0	6.0	955	1061	450
10MM	180	SOLO 1250	5.5	6.5	922	1074	461
10MM	180	SOLO 1500	7.5	8.5	1036	1172	549
10MM	180	HS7	8.5	9.5	983	1108	491
10MM	180	HS6	7.5	8.5	926	1121	502
10MM	180	800X	7.5	8.5	1032	1193	569
10MM	200	WW231	4.5	5.5	883	1034	475
10MM	200	540	7.5	8.5	973	1104	541
10MM	200	571	8.0	9.0	981	1131	568
10MM	200	WST	4.0	5.0	836	984	430
10MM	200	WSL	4.0	5.0	821	1018	460
10MM	200	WSF	5.0	6.0	933	1065	504
10MM	200	HP38	4.5	5.5	851	1026	467
10MM	200	ROYAL SCOT	4.5	5.5	886	1011	454
10MM	200	PEARL SCOT	5.0	6.0	908	1059	498
10MM	200	SOLO 1000	4.5	5.5	858	991	436
10MM	200	SOLO 1250	5.5	6.0	889	1003	447
10MM	200	SOLO 1500	6.5	7.5	867	1030	471
10MM	200	RED DOT	4.0	5.0	831	983	429
10MM	200	UNIQUE	5.0	6.0	864	977	424
10MM	200	HERCO	5.5	6.5	822	988	433
10MM	200	BLUE DOT	8.0	9.0	956	1141	578
10MM	200	2400	10.0	11.0	1002	1126	563
10MM	200	AA#5	8.0	9.0	968	1120	557
10MM	200	AA#7	10.0	11.0	986	1161	598
10MM	200	AA#9	11.0	13.0	991	1152	589
10MM	200	HS6	7.0	8.0	933	1059	498
10MM	200	800X	7.5	8.5	987	1104	541
10MM	200	HS7	8.5	9.5	953	1127	564



The 9x19 is deservedly the most popular pistol/subgun round on earth. While controversial among us 45-centric Americans, a properly built 9mm pistol is capable of excellent accuracy, low recoil and can be loaded to deliver a serious punch. The 9x19mm's reputation for poor accuracy rests not with the cartridge itself, but has all to do with the shallow rifling and indifferent fitting of many service grade pistols for which it's lucklessly chambered. Laser-Cast bullets are hard enough to stabilize and group well from such guns. Best results will likely be had with heavier bullets and slower powders. Check your groove diameter and order + .001" over. For action competition 9x19mm will yield tighter extreme velocity spreads compared to such minor loads in .38 Super Auto. To obtain consistent velocities and function, pay close attention to taper crimp diameter and base sizing. A crimp diameter of .3785 is optimal for most brands of commercial brass. Do not reduce overall lengths from those listed for each bullet.

Test Gun: P-35, 4.5" barrel, WSP

Powder Type	Start Grains	Standard Loads		Maximum Grains	Velocity FPS	OAL
		Velocity FPS	Grains			
115 Round Nose						
Clays	3.4	1055	3.6	1088	1.10	
AA2	4.4	957	4.9	1093	1.10	
WSL	3.8	1038	4.1	1112	1.10	
231	3.8	1010	4.2	1115	1.10	
AA5	5.6	1088	6.2	1169	1.10	
HP-38	4.4	1085	4.8	1195	1.10	
122 Flat Point						
Solo 1000	3.1	950	3.5	1010	1.070	
Clays	—	—	3.2	1017	1.070	
AA2	4.0	1000	4.4	1072	1.070	
231	4.0	1032	4.4	1106	1.070	
AA7	7.1	1036	8.1	1135	1.070	
Unique	5.2	1085	5.7	1172	1.070	
AA5	5.5	1092	6.0	1167	1.070	
Universal	4.4	1108	4.7	1168	1.070	
HP-38	4.1	1097	4.7	1172	1.070	
124 Round Nose						
Solo 1000	3.2	945	3.6	1015	1.130	
Clays	—	—	3.2	1010	1.130	
AA2	4.1	1008	4.5	1080	1.130	
231	4.0	1020	4.4	1094	1.130	
540	5.0	1018	5.7	1105	1.130	
AA7	7.4	1056	8.3	1149	1.130	
Universal	4.2	1072	4.7	1154	1.130	
AA5	5.6	1052	6.2	1160	1.130	
Unique	5.2	1075	5.8	1175	1.130	
HP-38	4.2	1056	4.7	1179	1.130	

DO NOT EXCEED MAXIMUM LOADS NEVER REDUCE STATED OVERALL LENGTHS

DO NOT EXCEED MAXIMUM LOADS NEVER REDUCE STATED OVERALL LENGTHS

9x21

The 9x21 was developed in Europe to replace 9x19 Nato for civilian use where military cartridges are prohibited. Factory loads match Euro 9x19 ballistics, and handload data for 9x19 may be substituted, given identical overall lengths. (As always, work up from our start loads. Results may vary in your particular pistol.) At 9x19 overall length, 9x21 offers the sole advantage of being easier to reload.

FOR IPSC SHOOTING

9x21 had a brief period of popularity and glory as a "rule beater," after standard length 9x19 major loads were banned by USPSA for exceeding SAAMI pressures — by a lot. (SAAMI had no industry standards for 9x21, thus no liability exposure was incurred for permitting its use. Not that it was really a good idea, but we did it.) The various CZ clones in "short" 9x21 were practically the only option in handgun for a high-cap open gun and bridged the gap from the time of the single stack Super to our post-modern IPSC era. The advent of truly safe, dead reliable 1911 system wide body guns killed the demand for these transitional, unreliable 9x21 guns. 38 Super variants and 9x23 are far better alternatives for major loads in high capacity 1911s. 9x21 brass varies greatly by manufacturer. Make sure your dies will maintain and restore original dimensions for your particular lot, and do not mix brands. Standard length 9mm major loads are not recommended and safe alternatives are available, such as 9x23 Winchester or 9 Super Comp. The Italian CZ clones will work reliably and hold up longer with minor loads and should be reserved for competition where major power factors aren't required.

Use 9x19 Data. Do not decrease overall lengths from those stated.

DO NOT EXCEED MAXIMUM LOADS NEVER REDUCE STATED OVERALL LENGTHS

135 Round Nose

AA2	3.7	916	4.1	978	1.155
WAP	4.6	887	5.2	980	1.155
Universal	3.9	988	4.3	1054	1.155
AA5	5.4	1010	5.7	1058	1.155
231	4.0	996	4.5	1059	1.155
HP-38	3.8	991	4.4	1061	1.155
Unique	4.5	1004	5.0	1070	1.155

147 Flat Point

WAP	4.3	867	4.7	931	1.155
Unique	3.4	838	4.2	965	1.155
AA5	4.6	890	5.1	1000	1.155
AA7	6.5	946	7.2	1077	1.155



	Action Loads				
	Powder Type	Grains	Velocity FPS	FPS	OAL
115 Round Nose	HP-38	4.5	1108	1108	1.100
122 Flat Point	HP-38	4.0	1081	1081	1.070
124 Round Nose	HP-38	4.3	1071	1071	1.130
135 Round Nose	HP-38	3.7	969	969	1.150
147 Flat Point	Universal	3.6	886	886	1.155

DO NOT EXCEED MAXIMUM LOADS NEVER REDUCE STATED OVERALL LENGTHS

Ramshot Powder Data**Laser-Cast**

10/9/02

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9 MM						
	POWDER	GRAINS	VELOCITY	O.A.L.	PRIMER	P.S.I
115g RN	ZIP	3.8	940	1.128	REM 5 1/2 SP	15,867
	ZIP	4.1	1024	1.128	REM 5 1/2 SP	19,697
	ZIP	4.5	1072	1.128	REM 5 1/2 SP	22,247
	ZIP	4.8	1180	1.128	REM 5 1/2 SP	31,277
	TRUE BLUE	5.0	951	1.128	FED 100 SP	17,513
	TRUE BLUE	5.5	1015	1.128	FED 100 SP	19,993
	TRUE BLUE	6.0	1075	1.128	FED 100 SP	22,953
	TRUE BLUE	6.2	1161	1.095	FED 100 SP	30,313
	TRUE BLUE	6.4	1187	1.095	FED 100 SP	31,943
	TRUE BLUE	5.9	1117	1.095	FED 100 SP	26,883
124g RN	POWDER	GRAINS	VELOCITY	O.A.L.	PRIMER	P.S.I
	ZIP	3.2	841	1.128	REM 5 1/2 SP	15,477
	ZIP	3.5	914	1.128	REM 5 1/2 SP	19,467
	ZIP	3.8	993	1.128	REM 5 1/2 SP	24,317
	TRUE BLUE	5.7	1048	1.122	FED 100 SP	26,583
	TRUE BLUE	6.0	1106	1.122	FED 100 SP	30,793
	TRUE BLUE	6.2	1132	1.122	FED 100 SP	32,253
	TRUE BLUE	6.0	1096	1.128	FED 100 SP	29,383
	TRUE BLUE	5.5	1006	1.128	FED 100 SP	23,113
	TRUE BLUE	5.0	930	1.128	FED 100 SP	18,973
147g FP	POWDER	GRAINS	VELOCITY	O.A.L.	PRIMER	P.S.I
	TRUE BLUE	4.5	912	1.135	FED 100 SP	27,613
	TRUE BLUE	4.7	922	1.135	FED 100 SP	28,293
	TRUE BLUE	5.0	969	1.135	FED 100 SP	32,273
	TRUE BLUE	4.5	871	1.140	REM 5 1/2 SP	23,227
	TRUE BLUE	4.0	789	1.140	REM 5 1/2 SP	17,757
	TRUE BLUE	5.0	956	1.140	REM 5 1/2 SP	30,057
	ZIP	3.0	828	1.140	REM 5 1/2 SP	22,817
	ZIP	3.5	935	1.140	REM 5 1/2 SP	33,367
	ZIP	3.2	867	1.140	REM 5 1/2 SP	25,727

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RELOADING DATA

Caliber	Bullet Wt. in Grains	Powder Type	Starting Load	Maximum Load	Starting Velocity	Max Velocity	Max Energy
9MM	135	SOLO 1500	4.8	5.6	948	1072	344
9MM	147	AA#2	3.2	3.9	793	898	209
9MM	147	AA#5	3.6	4.8	808	966	305
9MM	147	AA#7	5.0	6.7	821	1013	335
9MM	147	BULLSEYE	3.5	4.2	902	1016	337
9MM	147	RED DOT	3.0	3.5	831	907	268
9MM	147	GREEN DOT	3.2	3.7	851	945	291
9MM	147	UNIQUE	4.0	4.5	849	1019	339
9MM	147	HERCO	4.5	5.0	877	1014	336
9MM	147	BLUE DOT	5.7	6.2	907	1033	348
9MM	147	SOLO 1500	3.5	4.8	873	978	312
9MM	147	HS6	4.5	5.2	833	988	319