

Are NAA minis 'junk' guns?

Independent Testing of NAA firearms

With the possible exception of so-called 'assault weapons', no class of firearms is more vilified by both politicians and the popular press as small, concealable handguns such as the sort manufactured by North American Arms. These weapons, popularly and derisively known as 'Saturday Night Specials' or 'junk' guns, are those which do not 'pass' the ATF Import Factoring Criteria, which is intended to evaluate handguns according to their suitability for 'sporting use'. This evaluation places a heavy scoring bias against guns of small frame size and small caliber and wholly discounts the value of a handgun as a concealable personal protection weapon.

Several states, including CA and MA, either have or are considering prohibiting the manufacture and distribution of these handguns. These laws often make exceptions for firearms which meet extraordinary standards, which include independent and certifiable testing to indicate the likelihood of accidental discharge, reliability in functioning, representations regarding accuracy, and the inclusion of safety locking devices upon the original sale of the product.

North American Arms is pleased to publish the results of a series of comprehensive and expensive tests conducted primarily by H.P. White Laboratory of Street, MD. These results suggest to us that NAA products meet or exceed all of the testing criteria commonly identified in the various states' regulations.

The following are the results of independent testing performed on a NAA .22 Magnum and a .32 ACP Guardian. The NAA .22 Magnum is mechanically identical to all of our Mini-Revolvers. The .32 ACP Guardian is mechanically identical to all of our Guardians.

H.P.White Laboratory, Inc. conducted the tests, and is acknowledged as the leading privately owned laboratory engaged in small arms and ammunition research, development and testing.

(ANSI/SAAMI Testing of .22 Magnums)

HP White Laboratory, Inc. Testing

H.P.White Laboratory, Inc.
3114 Scarboro Road
Street, Maryland 21154-1822
Telephone: (410) 838-6550
Facsimile: (410) 838-2802

18 March, 1997
(HPWLI 7342-01A)

North American Arms, Inc.
2150 South 950 East
Provo, Utah 84606

Attention: Mr. Ken Friel

Gentlemen:

Your letter of 11 March 1997 requested Safety Testing of two North American Arms, Inc. .22 Magnum Mini-Revolvers received on 14 March 1997 via United Parcel Service. Only one revolver (Serial Number Z37225) was required for the tests. Both revolvers appeared to be in new condition, and each was accompanied by an "Owner and Instruction Manual".

Prior tot testing, the revolver was loaded with Western Super X, caliber .22 WMR, JHP ammunition, Lot Number ED51, and fired to confirm proper functioning. It fired without incident.

Testing was conducted indoors at ambient conditions and using procedures specified in ANSI/SAAMI Z299.5-1990, VOLUNTARY INDUSTRY PERFORMANCE STANDARDS - CRITERIA FOR EVALUATION OF NEW FIREARMS DESIGNS UNDER CONDITIONS OF ABUSIVE MISHANDLING FOR THE USE OF COMMERCIAL MANUFACTURERS. Jar-Off Tests, Paragraph 7 were conducted "by the book". The ANSI/SAAMI Z299.5 directions for the Drop Tests, Paragraph 6 and the Exposed Hammer Tests, Paragraph 6 are ambiguous when applied to your revolver design. Paragraphs 5.1.2 and 6.1.2 state that testing is to be done "...with the firearm in the "Safe Carrying" condition...". Your Owner and Instruction Manual is very explicit in explaining that the safe carrying condition is with the hammer down in a safety slot which holds the cylinder between chambers. Paragraphs 5.2 and 6.2 of ANSI/SAAMI Z299.5 states that for "...a multi-chambered gun, the primed case(s) shall be in the chamber (s) directly in front of the firing pin(s)". Obviously, it is not possible to simultaneously satisfy both of these conditions with your design. We chose to consider the directive for the firearms to be in "Safe Carrying" condition, as you define it in your literature, to be the overriding instructions. Therefore, the Drop Test and Exposed Hammer Test results reported below are for the revolver with the hammer down in a safety notch. The chambers on both sides of the notch were loaded with primed cases. Table I presents a summary of information on the attached Data Records.

TABLE I. SUMMARY OF RESULTS

Test	Paragraph (a)	Revolver Serial Number	Drop Height (in)	Trials	Results Fires	Results Pass/Fail
Drop	5.0	Z37225	48	6(b)	0	PASS
Exposed Hammer	6.0	Z37225	36	6	0	PASS
Jar-Off	7.0	Z37225	12	6(b)	0	PASS

(a) Reference paragraphs of ANSI/SAAMI Z299.5-1990

(b) Once in each of six cardinal orientations.

Based on the data presented in Table I and the attached data records, the North American Arms, Inc. .22 Magnum Mini-Revolver, Serial Number Z37225, submitted for testing **SATISFIED** the requirements of ANSI/SAAMI Z299.5-1990, using the "Safe Carrying" conditions defined by the manufacturer.

Thank you for the opportunity to conduct these tests. The revolvers will be held in our secure armory pending your disposition instructions. If we may be of any further service, please do not hesitate to contact us.

Very truly yours,

H.P.White Laboratory, Inc.

Lester W. Roane

LWR/lt
enclosures

(Magnum Drop Tests)

Drop Test Procedure

H.P. White Laboratory, Inc.
HPWLI Job No. 7342-01
(Sheet 1 of 3)
DATA RECORD

Date: 17 March 1997

-SAAMI Drop Test-
ANSI/SAAMI Z299.05-1990
(Pistols and Revolvers)

Gun Description: North American Arms, Inc. .22 Magnum

Procedure, Drop Test - Drop with full magazine, chambered primed case and in "safe carrying" condition from a height of 4 feet (measured from guns' center of gravity) onto a concrete surface with a 1 inch thick rubber mat (85 Durometer, Shore A). Testing of guns with variable trigger pull will be conducted with the trigger pull set at a minimum recommended by manufacturer (Note: This test does not apply to guns with a design trigger pull of less than 3 pounds.) The complete test **MAY** be conducted using a different gun for each drop of the test. The complete series of drops are to be conducted with the gun in its lightest and heaviest configurations, ie, catalogued accessories and fully loaded. Prior to the initial drop of this test, each gun will successfully fire 10 cartridges from the same lot of ammunition to be used in the drop testing. Subsequent to each drop which does not result in a discharge, the gun will be re-cocked (if necessary) and fired to demonstrate the suitability of the test cartridge's priming system.

Test	Gun (Serial Number)	Weight (lbs)	Trigger Pull (lbs)	Impact Orientation	Fire	No Fire
01	Z37225	.40	3.70	Barrel Vertical-Muzzle Down		X
02	Z37225	.40	3.70	Barrel Vertical-Muzzle Up		X
03	Z37225	.40	3.70	Barrel Horizontal-Bottom Up		X
04	Z37225	.40	3.70	Barrel Horizontal-Bottom Down		X
05	Z37225	.40	3.70	Barrel Horizontal-Left Up		X
06	Z37225	.40	3.70	Barrel Horizontal-Right Up		X

REMARKS- (a) Weight Fully Loaded - .45 pounds.

(Magnum Exposed Hammer Tests)

Exposed Hammer Drop Test Procedure

H.P. White Laboratory, Inc.
HPWLI Job No. 7342-01
(Sheet 2 of 3)
DATA RECORD

Date: 17 March 1997

-SAAMI Drop Test-
ANSI/SAAMI Z299.05-1990
(Pistols and Revolvers)

Gun Description: North American Arms, Inc. .22 Magnum

Procedure, Exposed Hammer Drop Test - Conduct either Procedure A or B. All six "drops" of either procedure are to be conducted using a single sample of the model of gun being evaluated. A second sample may be used to conduct the second (light or heavy configuration) series of six "drops".

A. Drop with full magazine (cylinder), primed case under the hammer in the "safe carrying" condition from a height of 3 feet (measured from gun's hammer spur) with the muzzle up to cause the hammer spur or exposed striker to be the initial point of impact with a mild steel block weighing a minimum of 50 pounds.

B. Mount gun in the condition described in A (muzzle down bearing on a mild steel block weighing a minimum of 50 pounds) and drop a mild steel weight equal to the weight of the lightest and heaviest configurations of the gun.

Test	Gun (Serial Number)	Weight (lbs)	Trigger Pull (lbs)	Impact Surface	Fire	No Fire
A/B-01	Z37225	.40	3.70	Hammer Spur/Striker		X
A/B-02	Z37225	.40	3.70	Hammer Spur/Striker		X
A/B-03	Z37225	.40	3.70	Hammer Spur/Striker		X
A/B-04	Z37225	.40	3.70	Hammer Spur/Striker		X
A/B-05	Z37225	.40	3.70	Hammer Spur/Striker		X
A/B-06	Z37225	.40	3.70	Hammer Spur/Striker		X

REMARKS- (a) Weight Fully Loaded - .45 pounds.

(Magnum Jar-Off Tests)

Jar-Off Test Procedure

H.P. White Laboratory, Inc.
HPWLI Job No. 7342-01
(Sheet 3 of 3)
DATA RECORD

Date: 17 March 1997

-SAAMI Drop Test-
ANSI/SAAMI Z299.05-1990
(Pistols and Revolvers)

Gun Description: North American Arms, Inc. .22 Magnum

Procedure, Jar-Off Test - Drop with a full magazine, chambered primed case, hammer cocked, safety in "fire" position from a height of 1 foot (measured from lowest feature of gun) onto a concrete surface with a 1 inch thick rubber mat (85 Durometer, Shore A). The gun will be caught after its initial impact so that it strikes the mat only once. Testing of guns with variable trigger pull will be conducted with the trigger pull set at the minimum recommended by manufacturer (Note: This test does not apply to guns with a design trigger pull of less than 3 pounds.) The complete test **MAY** be conducted using a different gun for each drop of the test. The complete set of drops are to be conducted with the gun at its lightest and heaviest configurations, ie, catalogued accessories and fully loaded. Prior to the initial drop for this test, each gun will successfully fire 10 cartridges from the same lot of ammunition to be used in the drop testing. Subsequent to each drop which does not result in a discharge, the gun will be re-cocked (if necessary) and fired to demonstrate the suitability of the test cartridge's priming system.

Test	Gun (Serial Number)	Weight (lbs)	Trigger Pull (lbs)	Impact Surface	Fire	No Fire
01	Z37225	.40	3.70	Barrel Vertical-Muzzle Down		X
02	Z37225	.40	3.70	Barrel Vertical-Muzzle Up		X
03	Z37225	.40	3.70	Barrel Horizontal-Bottom Up		X
04	Z37225	.40	3.70	Barrel Horizontal-Bottom Down		X
05	Z37225	.40	3.70	Barrel Horizontal-Left Up		X
06	Z37225	.40	3.70	Barrel Horizontal-Right Up		X

REMARKS- (a) Weight Fully Loaded - .45 pounds.

(Magnum Drop Test)

Drop Test per Massachusetts SB2276

H.P. White Laboratory, Inc.
3114 Scarboro Road
Street, Maryland 21154-1822
Telephone: (410) 838-6550
Facsimilie: (410) 838-2802

23 November 1998
(HPWLI 7735-01)

North American Arms, Inc.
2150 South 950 East
Provo, Utah 84606

Attention: Mr. Ken Friel

Dear Mr. Friel:

H.P. White laboratory, Inc. recently conducted Drop Testing of five North American Arms, Inc. Caliber .22 WMR Single Actio Revolver, Model NAA-22M using procedures specified in Section 19 of Massachusetts Senate Bill Number 2276. These handguns were received directly from North American Arms, Inc. on 30 October 1998 and 9 November 1998 via United Parcel Service.

The Massachusetts requirements are for each of five new handguns to be dropped onto "...a solid slab of concrete..." from a height of 1 meter from six positions, while in a ready-to-fire condition. SB2276 is not clear about whether the 1 meter drop height is to be measured from the gun's center of grvity, or from its lowest point. We took the more demanding approach and used the lowest point. further, the fifth position specified is "...on either side...". We interpreted that to mean "...on both sides...". Finally, it is virutally impossible to assure a direct impact "...on the exposed hammer..." when the gun is allowed to free-fall from 1 meter. Therefore, we placed the guns muzzle down on the concrete slab and dropped a solid steel cylinder, equal in weight to the fully loaded gun, from a height of 1 meter so that it impacted directly on the hammer. We consider this to be a somewhat more severe test than that outlined in SB2276, and it is repeatable.

Prior to Drop Testing, each gun was function fired with commercial ammunition. For each drop, the guns were fully loaded with live ammunition, except for the round in firing position. That one was an empty primed case. After testing the primed cases were fired in the test guns. Before each drop, the hammer was placed in the "full cock" position. Results are presented in Table I.

TABLE I. RESULTS (NAA-22M SINGLE ACTION REVOLVER)
(Massachusetts SB2276, Paragraph 19 Requirements)

Serial Number	Weight (lbs.)	Trigger Pull (lbs.)	Horizontal (a)	Horizontal (b)	Muzzle Up	Muzzle Down	Right Side	Left Side	Exposed Hammer
E026839	0.45	4.48	NF	NF	NF	NF	NF	NF	NF
E026915	0.45	4.48	NF	NF	NF	NF	NF	NF	NF
E026916	0.45	4.48	NF	NF	NF	NF	NF	NF	NF
E026914	0.45	4.23	NF	NF	NF	NF	NF	NF	NF
E268364	0.45	4.00	NF	NF	NF	NF	NF	NF	NF
NF = No Fire									
(a) = Right side up (normal firing position)									
(b) = Upside down									

As indicated by the information in Table I, the five NAA-22M revolvers submitted for testing **MET THE REQUIREMENTS** of Massachusetts SB2276, Paragraph 19.

Thank you for the opportunity to conduct these tests. Should you have any questions regarding this matter, or if we may be of any further service, please do not hesitate to contact us.

Very truly yours,

H.P. WHITE LABORATORY, INC.

Lester W. Roane

(.32 Guardian Drop Test)

Drop Test per Massachusetts SB2276

H.P. White Laboratory, Inc.
3114 Scarborough Road
Street, Maryland 21154-1822
Telephone: (410) 838-6550
Facsimilie: (410) 838-2802

15 January 1999
(HPWLI 7781-01)

North American Arms, Inc.
600 West Germantown Pike, Suite 400
Plymouth Meeting, Pennsylvania 19462-1046

Attention: Sandy Chisholm

Dear Mr. Chishom:

You recently requested Drop Testing of five North American Arms, Inc. Caliber .32 ACP Guardian Pistols using procedures specified in Section 19 of Massachusetts Senate Bill Number 2276. The handguns were received directly from North American Arms, Inc. on 11 January 1999 via United Parcel Service.

The Massachusetts requirements are for each of five new handguns to be dropped onto "...a solid slab of concrete..." from a height of 1 meter from six positions, while in a ready-to-fire condition. SB2276 is not clear about whether the 1 meter drop height is to be measured from the gun's center of gravity, or from its lowest point. We took the more demanding approach and used the lowest point. Further, the fifth position specified is "...on either side...". We interpreted that to mean "...on both sides...". Finally, it is virutally impossible to assure a direct impact "...on the exposed hammer..." when the gun is allowed to free-fall from 1 meter. Therefore, we placed the guns muzzle down on the concrete slab and dropped a solid steel cylinder, equal in weight to the fully loaded gun, from a height of 1 meter so that it impacted directly on the hammer. We consider this to be a somewhat more severe test than that outlined in SB2276, and it is repeatable.

Prior to Drop Testing, each gun was function fired with commercial ammunition. For each drop, the guns were fully loaded with live ammunition, except for the round in the chamber. That one was an empty primed case. After testing the primed cases were fired in the test guns. The Guardian Pistol is a double action once (DAO) firearm, so the hammer is "down" at all times and cannot be placed int a "full cock" position.

TABLE I. RESULTS (NAA-CALIBER .32 ACP GUARDIAN PISTOL)
(Massachusetts SB2276, Paragraph 19 Requirements)

Serial Number	Weight (lbs.)	Trigger Pull (lbs.)	Horizontal (a)	Horizontal (b)	Muzzle Up	Muzzle Down	Right Side	Left Side	Exposed Hammer
AB0469	0.98	14.02	NF	NF	NF	NF	NF	NF	NF
AB0470	0.98	13.77	NF	NF	NF	NF	NF	NF	NF
AB0471	0.98	13.91	NF	NF	NF	NF	NF	NF	NF
AB0538	0.98	14.05	NF	NF	NF	NF	NF	NF	NF
AB0539	0.98	13.97	NF	NF	NF	NF	NF	NF	NF
NF = No Fire									
(a) = Right side up (normal firing position)									
(b) = Upside down									

As indicated by the information in Table I, the five North American Arms Caliber .32 ACP Guardian Pistols submitted for testing **MET THE REQUIREMENTS** of Massachusetts SB2276, Paragraph 19.

Thank you for the opportunity to conduct these tests. Should you have any questions regarding this matter, or if we may be of any further service, please do not hesitate to contact us.

Very truly yours,

H.P. WHITE LABORATORY, INC.

Lester W. Roane

ANSI / SAAMI Testing - .32

H.P. White Laboratory, Inc.
3114 Scarboro Road
Street, Maryland 21154-1822
Telephone: (410) 838-6550
Facsimilie: (410) 838-2802

5 November 1997
(HPWLI 7342-02A)

North American Arms, Inc.
2150 S. 950 E.
Provo, Utah 84606

Attention: Mr. Ken Friel

Dear Mr. Friel:

Your letters of 22 October and 28 October 1997 requested Safety and Performance Testing of two Caliber .32 ACP Guardian pistols (Serial Number AA5037 and AA5041) received on 23 October 1997 via United Parcel Service. Both pistols appeared to be in new condition.

Prior to testing, each pistol was loaded with several magazines of Winchester 60.0 grain Silvertip Hollow Point ammunition (Lot Number 73SE70) and fired to confirm proper functioning. They fired without incident. Both pistols are double action only (DAO), with spurless hammers which rest below the rear surface of the slide. The barrels are approximately 2-1/4" long. The magazines hold six rounds. The magazine follower from Serial Number AA5041 caught on the magazine body and prevented loading of more than three rounds. The magazine was disassembled, and the malfunction was repaired. All testing was conducted on an indoor range at ambient conditions.

Pistol Serial Number AA5041 was tested using procedures specified in ANSI / SAAMI Z299.5-1990, VOLUNTARY INDUSTRY PERFORMANCE STANDARDS -CRITERIA FOR EVALUATION OF NEW FIREARMS DESIGNS UNDER CONDITIONS OF ABUSIVE MISHANDLING FOR THE USE OF COMMERCIAL MANUFACTURERS. Because the pistol is of DAO operation, and it has no external safety, the "safe carrying position" (Drop Test, Paragraph 5.0) is the same as the "maximum readiness" condition (Jar-Off Test, Paragraph 7.0). Table I presents a summary of information on the attached data records.

TABLE I. SUMMARY OF RESULTS (.32 Guardian Pistol)

Test	Paragraph (a)	Serial Number	Drop Height (in)	Trials	Fires	Pass/Fail
Drop	5.0	AA5041	48	6 (b)	0	PASS
Jar-Off	7.0	AA5041	12	6 (b)	0	PASS
(a) Reference paragraphs of ANSI/SAAMI Z299.5-1990.						
(b) Once in each of six cardinal orientations.						

Based on the data presented in Table I and the attached data records, the North American Arms, Inc. .32 ACP Guardian Pistol, Serial Number AA5041, submitted for testing **SATISFIED** the requirements of ANSI/SAAMI Z299.5-1990.

Pistol, Serial Number AA5037 was loaded and fired with a single round of high pressure definitive proof ammunition complying with requirements of ANSI/SAAMI Z299.3. Peak chamber pressure was approximately 23,200 CUP. There was no discernible damage and the pistol continued to function well. Because the hammer is spurless and rests below the slide, an Exposed Hammer Test (Z299.5, Paragraph 6.0) was not conducted. However, a primed cartridge case was loaded in the chamber and the rear of the hammer was repeatedly struck directly with a hammer, using a drift punch. There was no firing.

Pistol, Serial Number AA5041 was fired by hand from a rest by an experienced technician to obtain velocity (at 10') and dispersion (at 21') data. (Because of its small size, we were not able to satisfactorily mount the pistol in a fixed rest.) Five 5-shot groups were recorded, along with a single 5-shot group of the same ammunition fired from a fixed 4" SAAMI test barrel for reference. Table II presents a summary of information on the attached data records.

Condition	Group	Velocity (ft/sec)			Extreme Spread (in)
		Minimum	Maximum	Mean	
Hand-Held	A	771	828	804	2.100
Hand-Held	B	763	832	783	1.929
Hand-Held	C	753	809	781	1.954
Hand-Held	D	665	817	765	3.303
Hand-Held	E	765	834	796	1.602
Fixed SAAMI Test Barrel		883	946	918	0.338

Thank you for the opportunity to conduct these tests. The test pistols will be retained in our armory pending your disposition instructions. If we may be of any further service, please do not hesitate to contact us.

Very truly yours,

H.P. WHITE LABORATORY, INC.

Lester W. Roane

Group Dispersion Testing

H.P.White Laboratory, Inc.
3114 Scarboro Road
Street, Maryland 21154-1822
Telephone: (410) 838-6550
Facsimile: (410) 838-2802

13 July 1998
(HPWLI 7682-01A)

North American Arms, Inc.
2150 South 950 East
Provo, Utah 84606

Attention: Mr. Ken Friel

Dear Mr. Friel:

Your letter of 29 June 1998, and related telephone conversations, requested Group Dispersion Testing of seven NAA Handguns received on 1 July 1998 via United Parcel Service. You ultimately requested three groups for each handgun at each of three ranges (7 yards, 14 yards, and 21 yards), using commercial ammunition from our stock.

All testing was conducted on an indoor range at ambient conditions. The handguns were sequentially installed in a rigid firing mount. Paper targets were mounted at 7, 14, and 21 yards from the muzzle. Three 5-shot groups were fired from each handgun, and group size was measured using the method prescribed in Paragraph 16.01 of The Commonwealth of Massachusetts 940 CMR 16.00 HANDGUN SALES. When a handgun was capable of firing multiple cartridge types (.22 LR and .22 WMR) it was tested with .22 WMR ammunition. Table I provides a summary of the test results.

TABLE I. SUMMARY OF RESULTS (NAA 5-Shot Dispersion)

			Mean Extreme Spread (in)		
Model	Serial Number	Caliber	7.0 yards	14.0 yards	21.0 yards
NAA-22S	S0630	.22 Short (a)	6.08	13.48	15.35
NAA-22LLR	L012013	.22 LR (b)	3.23	5.98	8.21
NAA-22LR	L012039	.22 LR (b)	1.92	4.46	6.00
NAA-22MSC	E019131	.22 WMR (c)	2.19	4.40	6.75
NAA-22MC	E019153	.22 WMR (c)	1.12	2.23	3.54
NAA-BWC	R3042	.22 WMR (c)	1.75	3.58	4.85
NAA-32 Guardian	AA7385	.32 ACP (d)	1.75	4.25	5.65

- (a) Winchester 29 gr. Kopper Klad L/N ED33
- (b) Winchester 40 gr. Kopper Klad L/N EC71
- (c) Winchester 40.0 gr. JHP L/N ED51
- (d) Winchester 71.0 gr. FMJ L/N 32GF01 34 109

Thank you for the opportunity to conduct these tests. The handguns will be retained in our armory pending your disposition instructions. If we may be of any further service, please do not hesitate to contact us.

Very truly yours,

H.P.White Laboratory, Inc.

Lester W. Roane

LWR/lt
enclosures