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Distribution: C. B. Workman
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P. Nasypany

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RESEARCH TEST and MEASUREMENT REPORT - Report No. 822011

M/700 ADL RESTYLE .222 CALIBER COMPARISON TEST - (USING CURRENT PRODUCTION
CAST MAGAZINE FOLLOWER, PRE-1974 STAMPED MAGAZINE FOLLOWER AND DESIGN NO. 2
STAMPED NO-BIND FOLLOWER VS. CURRENT PRODUCTION SPRING UNALTERED AND
ALTERED.)

Prepared by: J. Baggetta

Date Prepared: 1-26-83

Reviewed and Cleared By:

J.H. Hendricks, / P.E. Nycholska,
Foreman-Test Lab / Foreman-Measurement Lab

[Signature]
Signature

1-26-83
Date

C.E. Ritchie,
Sr. Supervisor - Testing,
Meas. & Mech. Analysis Lab

Signature

Date

TEST & MEASUREMENT LAB REPORT

REPORT NUMBER: 822911
REPORT TITLE: M/700 ADL Restyle .222 Caliber Comparison Test -(Using the Current Production Cast Magazine Follower, Pre-1974 Stamped Magazine Follower & Design No. 2 Stamped No-Bind Follower Vs. Current Production Spring Unaltered and Altered.)
MODEL(S): M/700 ADL
GAUGE OR CALIBER: .222
DATE: 10-18-82
WORK ORDER NO.: C-1803-000
PART NAME: Follower
DESIGNER/ENGINEER: P. Nasypany

TEST TYPE:

1. PHOTO LAB
2. STRENGTH TEST - NO. OF GUNS TESTED _____
3. FUNCTION TEST - NO. OF GUNS TESTED 5
4. ACCURACY TEST - NO. OF GUNS TESTED _____
5. MEASUREMENTS - TYPE: _____
6. ENVIRONMENTAL TEST
7. AMMUNITION TESTING & EVALUATION - TYPE: _____
8. VISUAL EVALUATION - _____ OUT OF _____ GUN SAMPLE
9. ENDURANCE - NO. OF GUNS TESTED: 5

NO. OF ROUNDS PER GUN: 126

TOTAL ROUNDS FIRED IN TEST: 3780

AMMO TYPE: MAGS _____; TARGET: _____

RIM FIRE _____ CENTER FIRE X
6 Different Conditions

February 17, 1983

TO: R. NIGHTINGALE

FROM: J. BAGGETTA

REPORT TITLE: M/700 ADL RESTYLE .222 CALIBER COMPARISON TEST - (USING THE CURRENT PRODUCTION CAST MAGAZINE FOLLOWER PRE-1974 STAMPED MAGAZINE FOLLOWER AND DESIGN NO. 2 STAMPED NO-BIND FOLLOWER VS. CURRENT PRODUCTION SPRING BOTH UNALTERED AND ALTERED.)

ABSTRACT

A request was received from P. Nasypany, Current Firearm Design, to Field Function Test 5 M/700 ADL Restyle rifles with the following Followers: Current Production, Pre-1974 Stamped Follower and Design No. 2 Stamped No-Bind Follower and the following Magazine Spring: Current Production Altered and Unaltered.

SCOPE OF TEST

To evaluate and compare the results of the following Follower/Spring combinations:

- 1.) Current Production Cast Magazine Follower/Current Production Spring (Unaltered)
- 2.) Current Production Cast Magazine Follower/Current Production Spring (Altered)
- 3.) Pre-1974 Stamped Magazine Follower/Current Production Spring (Unaltered)
- 4.) Pre-1974 Stamped Magazine Follower/Current Production Spring (Altered)
- 5.) Design No. 2 Stamped No-Bind Follower/Current Production Spring (Unaltered)
- 6.) Design No. 2 Stamped No-Bind Follower/Current Production Spring (Altered)

TEST RESULTS

- 1.) The following Followers were used with the Current Production Spring altered by final assembly:
 - Five (5) Pre-1974 Followers were fired a total of 630 rounds (126 rounds each) experiencing 30 malfunctions for an overall malfunction rate of 4.8%.
 - Five (5) current production Cast Followers were fired 630 rounds (126 rounds each) experiencing 8 malfunctions for an overall malfunction rate of 1.3%.
 - Five Design No. 2 Stamped No-Bind Followers were fired 630 rounds (126 rounds each) experiencing 12 malfunctions for an overall malfunction rate of 1.9%.
2. The following Followers were used with the current production Spring unaltered:
 - Five(5) Pre-1974 Followers were fired a total of 630 rounds (126 rounds each) experiencing 26 malfunctions for an overall malfunction rate of 4.1%.
 - Five (5) current production Cast Followers were fired 630 rounds (126 rounds each) experiencing 14 malfunctions for an overall malfunction rate of 2.2%.
 - Five Design No. 2 Stamped No-Bind Followers were fired 630 rounds (126 rounds each) experiencing 10 malfunctions for an overall malfunction rate of 1.6%.

REPORT TEXTA. Field Function – Current Production Spring Altered by final assembly

- o Pre-1974 Stamped Follower – 30 Follower related malfunctions (Refer to Appendix "A" Data Sheet No. 1.
- o Current Production Cast Follower – 8 Follower related malfunctions (Refer to Appendix "A" Data Sheet No. 2.
- o Design No. 2 Stamped No-Bind Follower – 12 Follower related malfunctions (Refer to Appendix "A" Data Sheet No. 3.

B. Field Function – Current Production Spring Not Altered

- o Pre-1974 Stamped Follower – 26 Follower related malfunctions (Refer to Appendix "A" Data Sheet No. 4.
- o Current Production Cast Follower – 14 Follower related malfunctions (Refer to Appendix "A" Data Sheet No. 5.
- o Design No. 2 Stamped No-Bind Follower – 10 Follower related malfunctions (Refer to Appendix "A" Data Sheet No. 6.

TEST PROCEDURE

Prior to testing, the Followers were assembled into the M/700 .222 caliber rifles. There were two test conditions; First, was Current Production Spring unaltered and second, was Current Production Spring altered by final assembly.

A. Field Function

The Field Function Test was run at the Ilion Fish & Game Club Rifle Range. It was a one page Field Function Test. Five men were used incorporating the round robin system. Each man went to the line with eighteen rounds of each ammo. type firing 6 rounds at a time, Slow, Medium and Fast feed rate. The rifles were cooled every 18 rounds (able to hold barrel in hand).

B. Ammunition

Ammunition used in the Field Function Test:

- o Remington – 50 gr. Pointed Soft Point
- o Remington – 50 gr. Hollow Point
- o Remington – 55 gr. Metal Case
- o Federal – 50 gr. Soft Point
- o Federal – 55 gr. Metal Case Boat Tail
- o Winchester – 50 gr. Pointed Soft Point
- o Winchester – 55 gr. Metal Case

TEST PROCEDURE - cont'd.

C. Test Rifles

Rifles used in the Field Function Test:

M/700 ADL .222 Caliber

B6327452

B6327692

B6359016

B6359240

B6360429

APPENDIX "A"
DATA SHEETS

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FIRE CYCLE TEST - CENTIFUGUE		REPORT NO. 1	PAGE NO.
DATE	TIME	UNITS	OFFICIAL NO.
TEST TYPE: SHOTGUN SHEET PER - RIFLE - ARD TYPE - SHOOTER		TTL. RND. FIRED	
TEST TYPE: SHOTGUN SHEET PER - RIFLE - ARD TYPE - SHOOTER		TTL. MALFUNCTIONS	
TEST TYPE: SHOTGUN SHEET PER - RIFLE - ARD TYPE - SHOOTER		MALFUNCTION RATE	
SUGGESTION	1. 6. 2. 0. 5. 2	1	36
	1. 6. 2. 0. 5. 2	1	36
	1. 6. 2. 0. 5. 2	1	36
	1. 6. 2. 0. 5. 2	1	36
	1. 6. 2. 0. 5. 2	1	36
TOTAL (OTH MAL.)		1	36

FIELD CYCLE TEST - CENTERFIRE

TRAIL NO.

REMARKS NO. 1

DATE: 6-5

MODEL: 700 A-1

CHARGE: 222

PREVIOUS
NUMBER

ORIGIN NO.

TEST TYPE: SUMMARY SHEETS PER - RIFLE - AGO TYPE - SHOOTER

TTL. RIG. FIRED:

TTL. MALFUNCTIONS:

MALFUNCTION RATE:

COMPANY CHECK BY	SHEET NO.	DATE	TIME	FED	FROM	HALL	1st		2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st	32nd	33rd	34th	35th	36th	37th	38th	39th	40th	41st	42nd	43rd	44th	45th	46th	47th	48th	49th	50th	51st	52nd	53rd	54th	55th	56th	57th	58th	59th	60th	61st	62nd	63rd	64th	65th	66th	67th	68th	69th	70th	71st	72nd	73rd	74th	75th	76th	77th	78th	79th	80th	81st	82nd	83rd	84th	85th	86th	87th	88th	89th	90th	91st	92nd	93rd	94th	95th	96th	97th	98th	99th	100th	101st	102nd	103rd	104th	105th	106th	107th	108th	109th	110th	111st	112nd	113rd	114th	115th	116th	117th	118th	119th	120th	121st	122nd	123rd	124th	125th	126th	127th	128th	129th	130th	131st	132nd	133rd	134th	135th	136th	137th	138th	139th	140th	141st	142nd	143rd	144th	145th	146th	147th	148th	149th	150th	151st	152nd	153rd	154th	155th	156th	157th	158th	159th	160th	161st	162nd	163rd	164th	165th	166th	167th	168th	169th	170th	171st	172nd	173rd	174th	175th	176th	177th	178th	179th	180th	181st	182nd	183rd	184th	185th	186th	187th	188th	189th	190th	191st	192nd	193rd	194th	195th	196th	197th	198th	199th	200th	201st	202nd	203rd	204th	205th	206th	207th	208th	209th	210th	211st	212nd	213rd	214th	215th	216th	217th	218th	219th	220th	221st	222nd	223rd	224th	225th	226th	227th	228th	229th	230th	231st	232nd	233rd	234th	235th	236th	237th	238th	239th	240th	241st	242nd	243rd	244th	245th	246th	247th	248th	249th	250th	251st	252nd	253rd	254th	255th	256th	257th	258th	259th	260th	261st	262nd	263rd	264th	265th	266th	267th	268th	269th	270th	271st	272nd	273rd	274th	275th	276th	277th	278th	279th	280th	281st	282nd	283rd	284th	285th	286th	287th	288th	289th	290th	291st	292nd	293rd	294th	295th	296th	297th	298th	299th	300th	301st	302nd	303rd	304th	305th	306th	307th	308th	309th	310th	311st	312nd	313rd	314th	315th	316th	317th	318th	319th	320th	321st	322nd	323rd	324th	325th	326th	327th	328th	329th	330th	331st	332nd	333rd	334th	335th	336th	337th	338th	339th	340th	341st	342nd	343rd	344th	345th	346th	347th	348th	349th	350th	351st	352nd	353rd	354th	355th	356th	357th	358th	359th	360th	361st	362nd	363rd	364th	365th	366th	367th	368th	369th	370th	371st	372nd	373rd	374th	375th	376th	377th	378th	379th	380th	381st	382nd	383rd	384th	385th	386th	387th	388th	389th	390th	391st	392nd	393rd	394th	395th	396th	397th	398th	399th	400th	401st	402nd	403rd	404th	405th	406th	407th	408th	409th	410th	411st	412nd	413rd	414th	415th	416th	417th	418th	419th	420th	421st	422nd	423rd	424th	425th	426th	427th	428th	429th	430th	431st	432nd	433rd	434th	435th	436th	437th	438th	439th	440th	441st	442nd	443rd	444th	445th	446th	447th	448th	449th	450th	451st	452nd	453rd	454th	455th	456th	457th	458th	459th	460th	461st	462nd	463rd	464th	465th	466th	467th	468th	469th	470th	471st	472nd	473rd	474th	475th	476th	477th	478th	479th	480th	481st	482nd	483rd	484th	485th	486th	487th	488th	489th	490th	491st	492nd	493rd	494th	495th	496th	497th	498th	499th	500th	501st	502nd	503rd	504th	505th	506th	507th	508th	509th	510th	511st	512nd	513rd	514th	515th	516th	517th	518th	519th	520th	521st	522nd	523rd	524th	525th	526th	527th	528th	529th	530th	531st	532nd	533rd	534th	535th	536th	537th	538th	539th	540th	541st	542nd	543rd	544th	545th	546th	547th	548th	549th	550th	551st	552nd	553rd	554th	555th	556th	557th	558th	559th	560th	561st	562nd	563rd	564th	565th	566th	567th	568th	569th	570th	571st	572nd	573rd	574th	575th	576th	577th	578th	579th	580th	581st	582nd	583rd	584th	585th	586th	587th	588th	589th	590th	591st	592nd	593rd	594th	595th	596th	597th	598th	599th	600th	601st	602nd	603rd	604th	605th	606th	607th	608th	609th	610th	611st	612nd	613rd	614th	615th	616th	617th	618th	619th	620th	621st	622nd	623rd	624th	625th	626th	627th	628th	629th	630th	631st	632nd	633rd	634th	635th	636th	637th	638th	639th	640th	641st	642nd	643rd	644th	645th	646th	647th	648th	649th	650th	651st	652nd	653rd	654th	655th	656th	657th	658th	659th	660th	661st	662nd	663rd	664th	665th	666th	667th	668th	669th	670th	671st	672nd	673rd	674th	675th	676th	677th	678th	679th	680th	681st	682nd	683rd	684th	685th	686th	687th	688th	689th	690th	691st	692nd	693rd	694th	695th	696th	697th	698th	699th	700th	701st	702nd	703rd	704th	705th	706th	707th	708th	709th	710th	711st	712nd	713rd	714th	715th	716th	717th	718th	719th	720th	721st	722nd	723rd	724th	725th	726th	727th	728th	729th	730th	731st	732nd	733rd	734th	735th	736th	737th	738th	739th	740th	741st	742nd	743rd	744th	745th	746th	747th	748th	749th	750th	751st	752nd	753rd	754th	755th	756th	757th	758th	759th	760th	761st	762nd	763rd	764th	765th	766th	767th	768th	769th	770th	771st	772nd	773rd	774th	775th	776th	777th	778th	779th	780th	781st	782nd	783rd	784th	785th	786th	787th	788th	789th	790th	791st	792nd	793rd	794th	795th	796th	797th	798th	799th	800th	801st	802nd	803rd	804th	805th	806th	807th	808th	809th	810th	811st	812nd	813rd	814th	815th	816th	817th	818th	819th	820th	821st	822nd	823rd	824th	825th	826th	827th	828th	829th	830th	831st	832nd	833rd	834th	835th	836th	837th	838th	839th	840th	841st	842nd	843rd	844th	845th	846th	847th	848th	849th	850th	851st	852nd	853rd	854th	855th	856th	857th	858th	859th	860th	861st	862nd	863rd	864th	865th	866th	867th	868th	869th	870th	871st	872nd	873rd	874th	875th	876th	877th	878th	879th	880th	881st	882nd	883rd	884th	885th	886th	887th	888th	889th	890th	891st	892nd	893rd	894th	895th	896th	897th	898th	899th	900th	901st	902nd	903rd	904th	905th	906th	907th	908th	909th	910th	911st	912nd	913rd	914th	915th	916th	917th	918th	919th	920th	921st	922nd	923rd	924th	925th	926th	927th	928th	929th	930th	931st	932nd	933rd	934th	935th	936th	937th	938th	939th	940th	941st	942nd	943rd	944th	945th	946th	947th	948th	949th	950th	951st	952nd	953rd	954th	955th	956th	957th	958th	959th	960th	961st	962nd	963rd	964th	965th	966th	967th	968th	969th	970th	971st	972nd	973rd	974th	975th	976th	977th	978th	979th	980th	981st	982nd	983rd	984th	985th	986th	987th	988th	989th	990th	991st	992nd	993rd	994th	995th	996th	997th	998th	999th	1000th	1001st	1002nd	1003rd	1004th	1005th	1006th	1007th	1008th	1009th	1010th	1011st	1012nd	1013rd	1014th	1015th	1016th	1017th	1018th	1019th	1020th	1021st	1022nd	1023rd	1024th	1025th	1026th	1027th	1028th	1029th	1030th	1031st	1032nd
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[illegible]

PAGE 110.

REF ID: A10

TTL. RM. FINEB;
TTL. MALFUNCTION
MALFUNCTION RATE;

HALF-UNIT VOLUME

Time, (1911.)

100