

C6349119

MODEL 700™ M24

Model **SMS**™

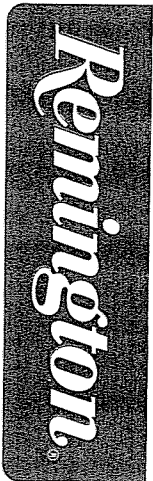
Action

Barrel Length

Capacity

Order No. **5716**

* Includes 1 in chamber.



Arms Services Repair & Estimate System

File Add Repair Estimate Repair Expedite Repair Inquiry Repair Tools CSR Tools Reports Table Maintenance System Maintenance Help

Repair Inquiry

Repair Number: **RE00133007**

Serial: C6349119 Model M24 SWS Center Fire
Caliber: 7.62 NATO Produced: 03/19/1990

Repairman:

Verify Repair

High Priority

Status:

Closed 8/21/2007 11:40:25 AM

Address Information

Customer:

Received From

Return To:

Received From

Name: CTRP 2/101 CAV

CTRP 2/101 CAV

Address 1: 27 MASTEN AVE

27 MASTEN AVE

Address 2: PO Box:

PO Box:

City: BUFFALO

BUFFALO

State: NY Zip Code: 14204

Country: US

State: NY Zip Code: 14204

Country: US

FFL:

Contact / Condition

Problems

Estimate

History / Status

Shipping / Billing

Contact Information

Phone: NN

Fax:

Email:

Comments:

Received Condition

Fair

Condition Notes:

CSR Notes:

Accessories Received

Code	Desc	Qty
A007	With Stud	3
A017	Scope Base	1
A026	Scope	1
A057	Fit and Rear Sgt Base	1
D000	SOFT CASE	1

Repair Search

Refresh

Close

nagletj

8/22/2007

7:52 AM

CAPS

NUM

INS

SCRL

start

Inbox - Micro...

Calendar - Mi...

FW: Restrict...

Arms Service...

7:52 AM

Deployment KIT

Serial Number: **C6349119**

Model: **M24 SWS**



RE00133007

CONFIDENTIAL-SUBJECT TO PROTECTIVE ORDER
KINZER V. REMINGTON

BARBER - M24 ~~0434901~~ 08201

SNIPER WEAPON SYSTEM - UNIQUE STATISTICAL INFORMATION

FIREARM SERIAL NUMBER / DATASET NAME: C6349119. __0

FILE DATE AND TIME: 09/06/2007 22:53

THE FOLLOWING DATA IS ALL REPORTED IN UNITS OF INCHES

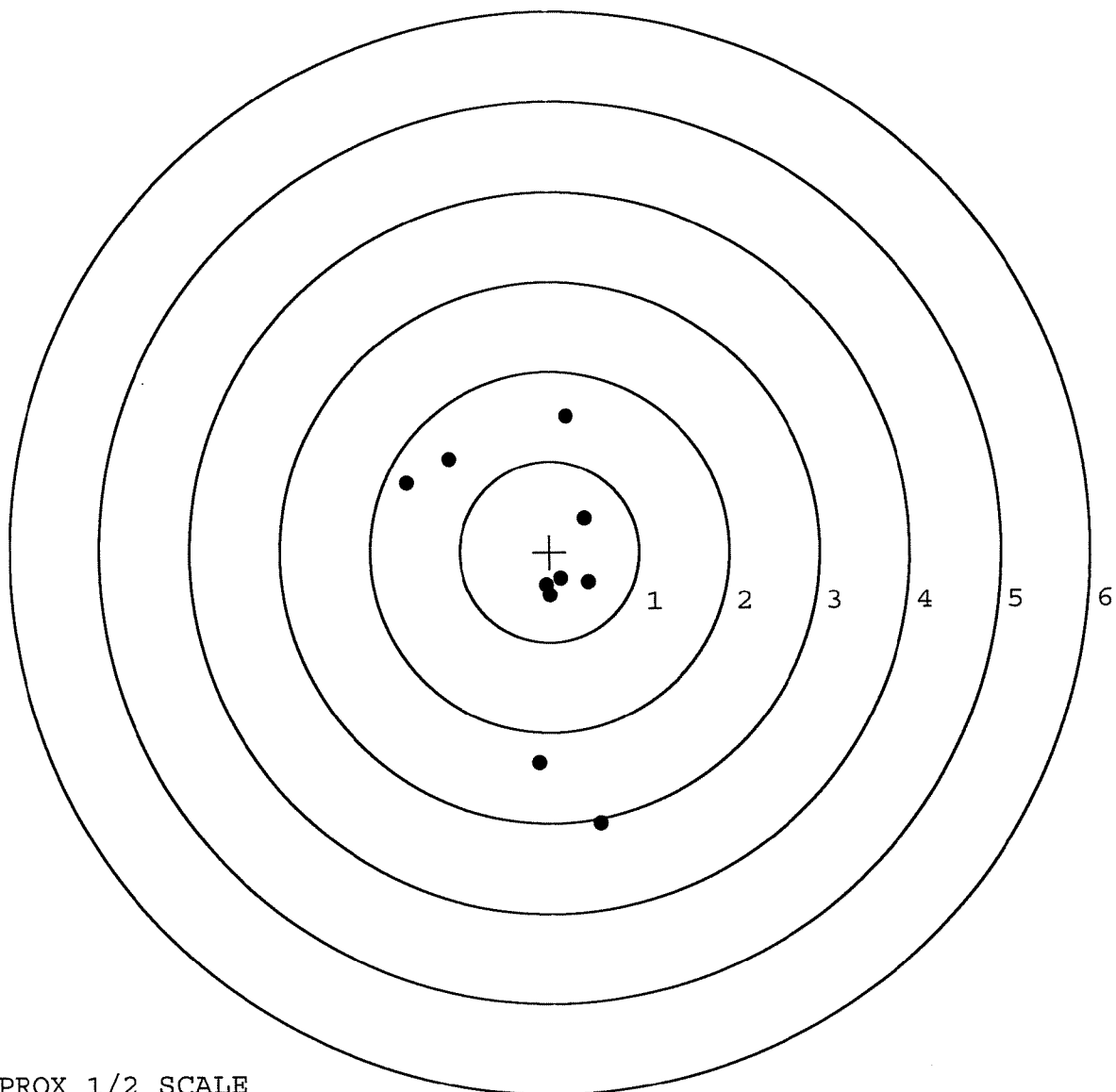
The Average X Centroid of the Five Target Set:	0.043
The Average Y Centroid of the Five Target Set:	-0.099
The Average Point of Impact of the Five Target Set:	0.108
The Average Mean Radius of the Five Target Set:	0.939
The Distance from POA to Centroid Target #1:	0.338
The Distance from Centroid Target #2 to Centroid Target #1:	0.287
The Distance from Centroid Target #3 to Centroid Target #1:	0.356
The Distance from Centroid Target #4 to Centroid Target #1:	0.478
The Distance from Centroid Target #5 to Centroid Target #1:	0.448

BARBER - M24 0108164

SERIAL NUMBER: C6349119. __0
TARGET NUMBER: 1
FILE DATE: 09/06/2007
FILE TIME: 22:53

X CENTROID: -0.119
Y CENTROID: -0.317
POA TO CENTROID: 0.338
HORZ SPREAD: 2.146
VERT SPREAD: 4.518
GROUP SPREAD: 4.532
MIN RADIUS: 0.092
MAX RADIUS: 2.777
MEAN RADIUS: 1.212
IN 1 IN DIAMETER: 3
IN 2 IN DIAMETER: 5
in 3 IN DIAMETER: 5

POINT#	X	Y
1:	-1.593	0.773
2:	-1.117	1.027
3:	0.196	1.506
4:	0.397	0.372
5:	-0.134	-2.346
6:	0.553	-3.012
7:	-0.004	-0.486
8:	-0.042	-0.367
9:	0.121	-0.300
10:	0.436	-0.337



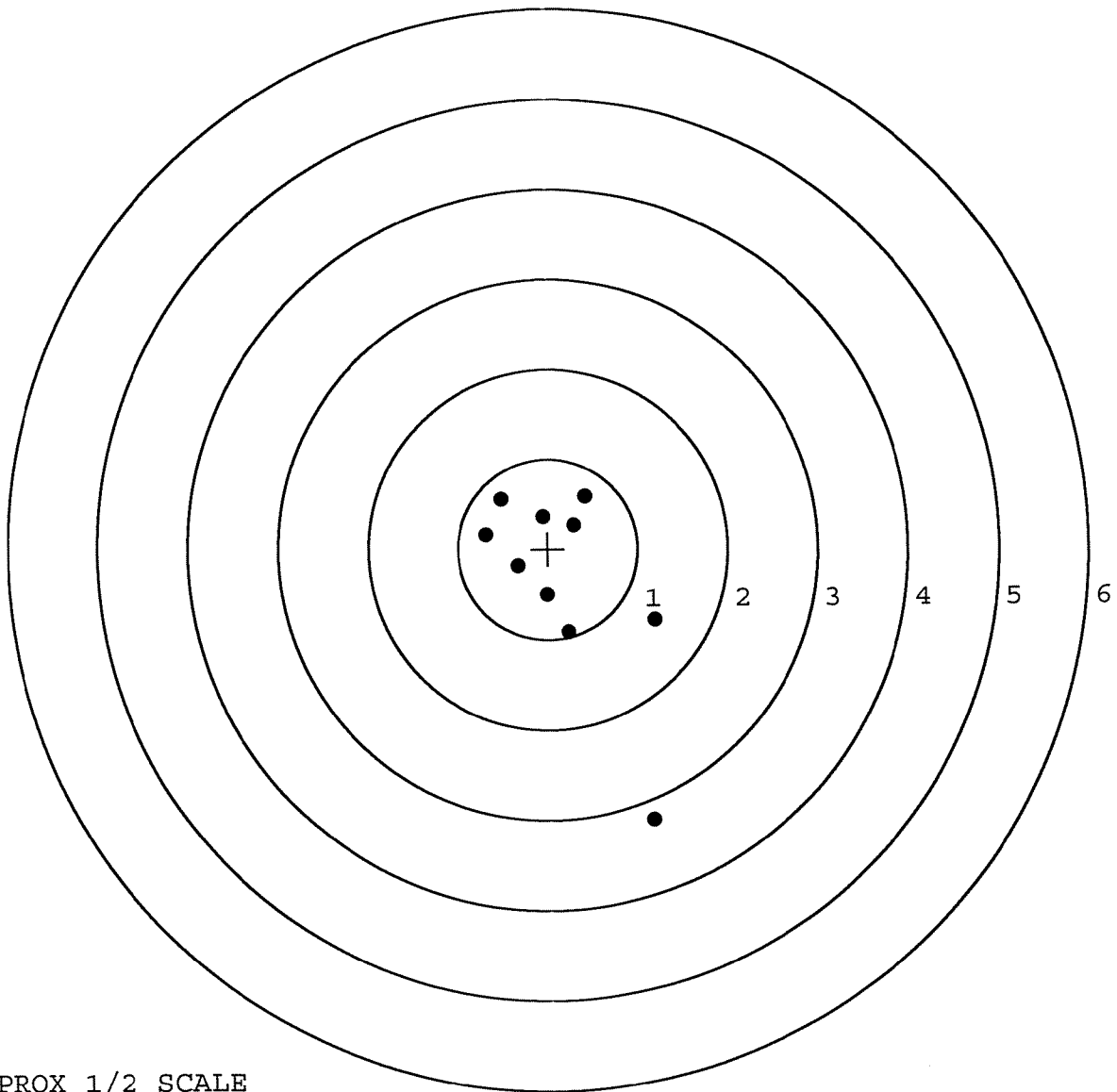
TARGET APPROX 1/2 SCALE

BARBER - M24 0108165

SERIAL NUMBER: C6349119. __0
TARGET NUMBER: 2
FILE DATE: 09/06/2007
FILE TIME: 22:53

X CENTROID: 0.167
Y CENTROID: -0.351
POA TO CENTROID: 0.389
HORZ SPREAD: 1.873
VERT SPREAD: 3.597
GROUP SPREAD: 3.942
MIN RADIUS: 0.242
MAX RADIUS: 2.840
MEAN RADIUS: 0.977
IN 1 IN DIAMETER: 1
IN 2 IN DIAMETER: 7
in 3 IN DIAMETER: 9

POINT#	X	Y
1:	-0.518	0.555
2:	-0.689	0.163
3:	-0.059	0.356
4:	0.296	0.263
5:	0.424	0.584
6:	-0.338	-0.193
7:	-0.019	-0.507
8:	0.229	-0.921
9:	1.184	-0.800
10:	1.157	-3.013



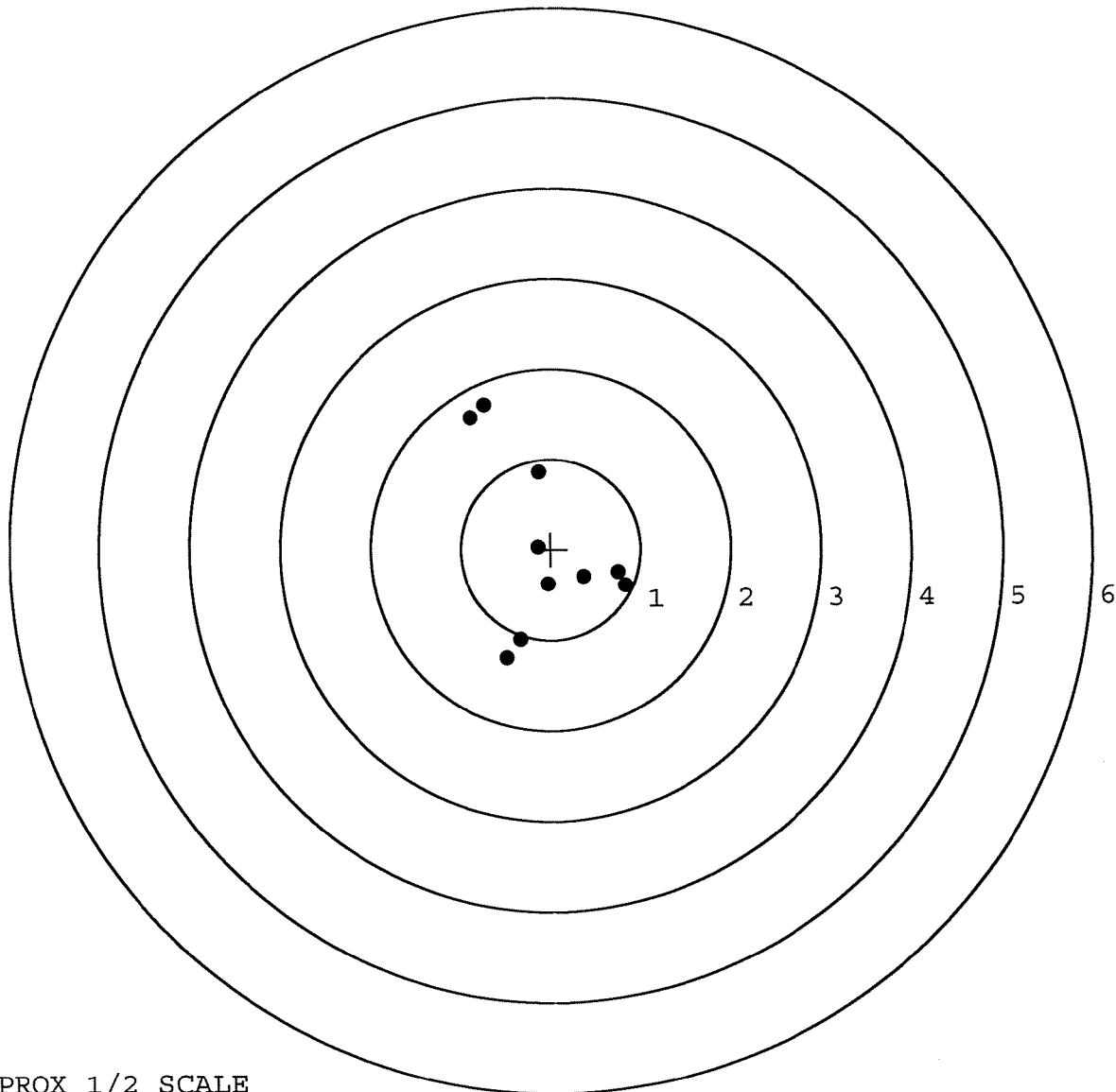
TARGET APPROX 1/2 SCALE

BARBER - M24 0108166

SERIAL NUMBER: C6349119. __0
TARGET NUMBER: 3
FILE DATE: 09/06/2007
FILE TIME: 22:53

X CENTROID: -0.082
Y CENTROID: 0.037
POA TO CENTROID: 0.090
HORZ SPREAD: 1.710
VERT SPREAD: 2.800
GROUP SPREAD: 2.810
MIN RADIUS: 0.065
MAX RADIUS: 1.691
MEAN RADIUS: 0.948
IN 1 IN DIAMETER: 2
IN 2 IN DIAMETER: 5
in 3 IN DIAMETER: 8

POINT#	X	Y
1:	-0.883	1.464
2:	-0.727	1.601
3:	-0.133	0.857
4:	-0.145	0.020
5:	-0.039	-0.392
6:	0.371	-0.310
7:	0.748	-0.262
8:	0.827	-0.410
9:	-0.345	-0.995
10:	-0.496	-1.199



TARGET APPROX 1/2 SCALE

BARBER - M24 0108167

SERIAL NUMBER: C6349119. __0

TARGET NUMBER: 4

FILE DATE: 09/06/2007

FILE TIME: 22:53

X CENTROID: 0.067

Y CENTROID: 0.123

POA TO CENTROID: 0.140

HORZ SPREAD: 1.417

VERT SPREAD: 2.315

GROUP SPREAD: 2.537

MIN RADIUS: 0.227

MAX RADIUS: 1.367

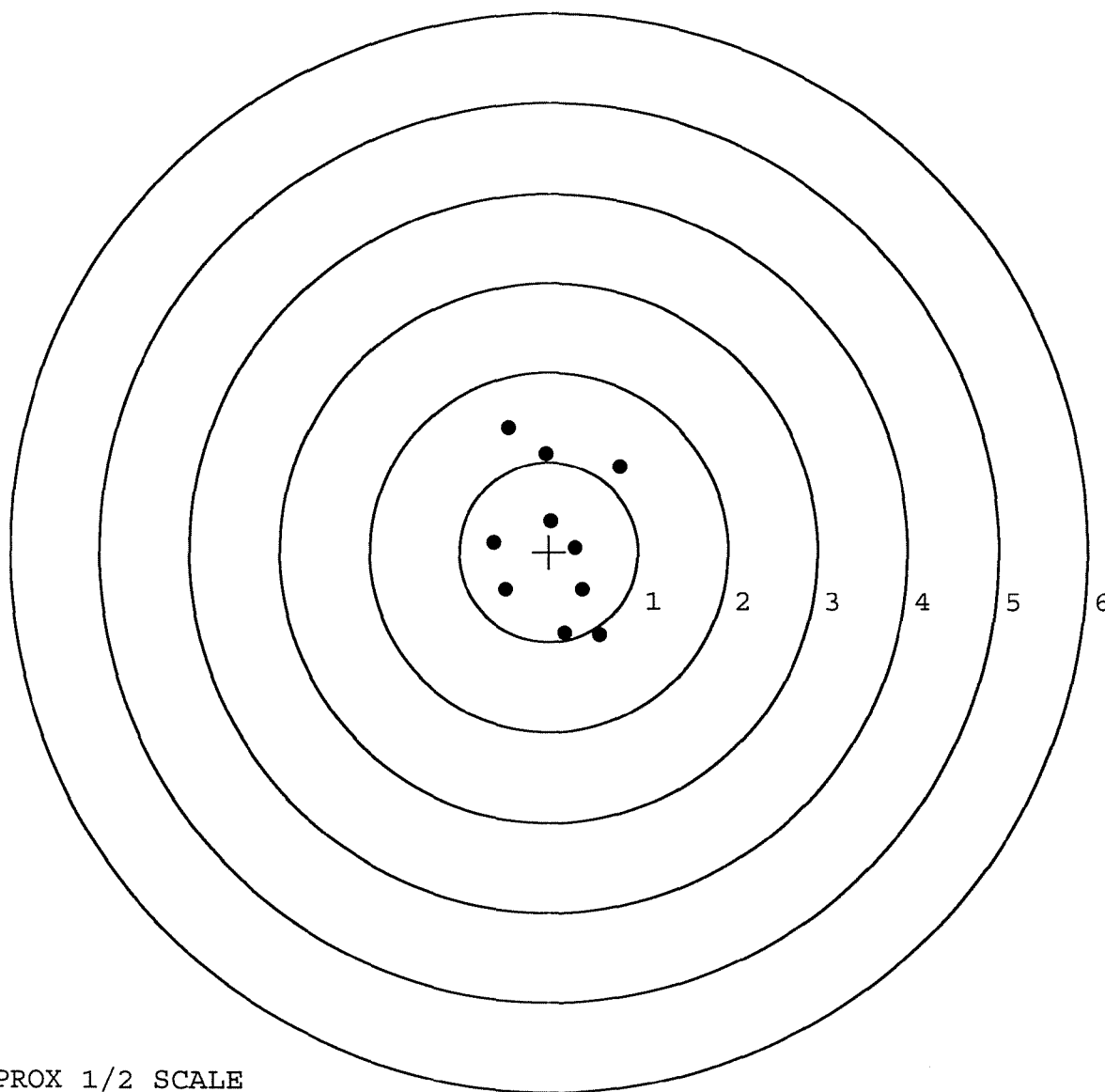
MEAN RADIUS: 0.821

IN 1 IN DIAMETER: 2

IN 2 IN DIAMETER: 6

in 3 IN DIAMETER: 10

POINT#	X	Y
1:	-0.457	1.386
2:	-0.034	1.087
3:	0.799	0.951
4:	0.025	0.346
5:	0.294	0.053
6:	-0.618	0.102
7:	-0.485	-0.425
8:	0.385	-0.425
9:	0.580	-0.929
10:	0.182	-0.912



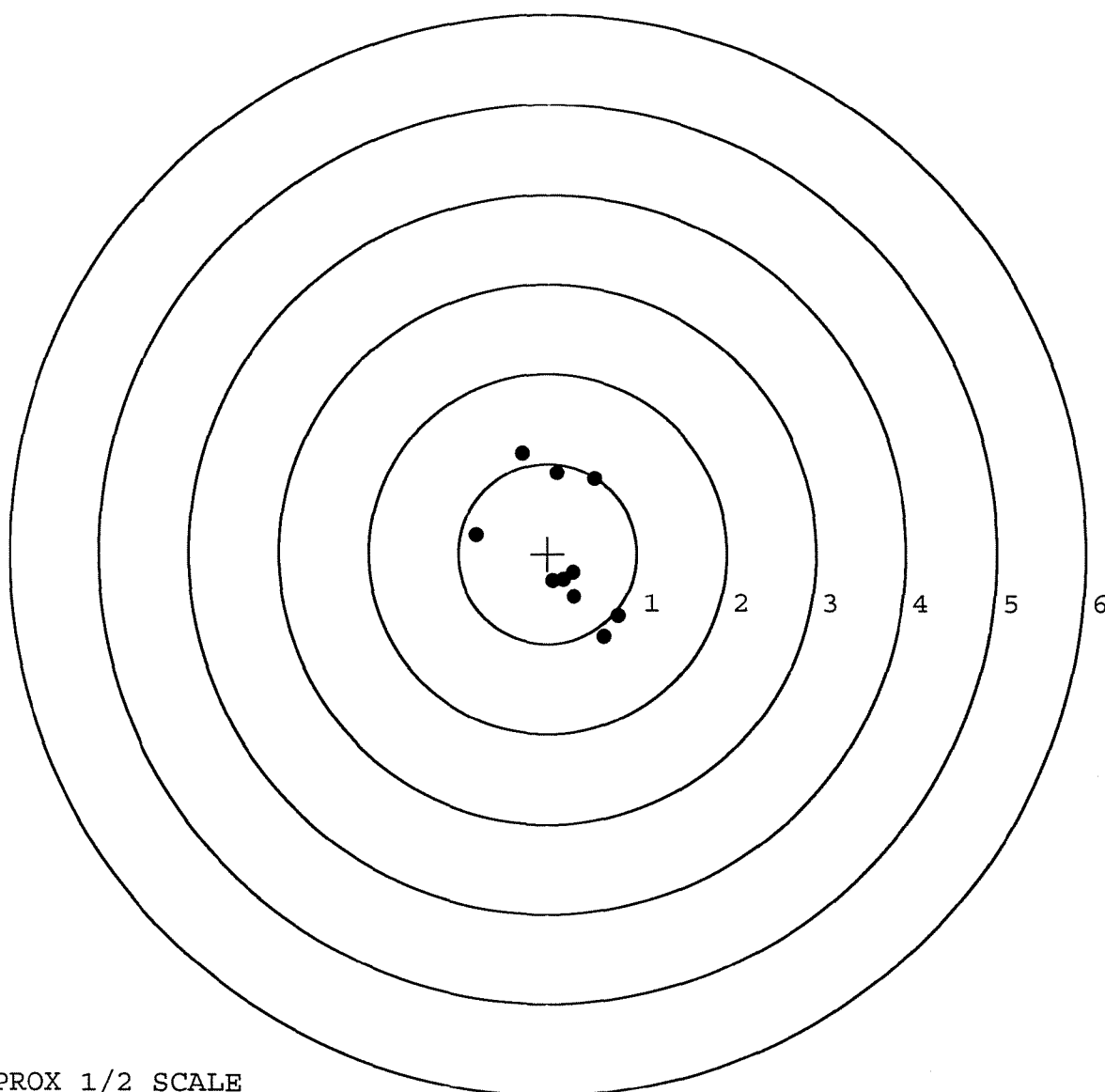
TARGET APPROX 1/2 SCALE

BARBER - M24 0108168

SERIAL NUMBER: C6349119. __0
TARGET NUMBER: 5
FILE DATE: 09/06/2007
FILE TIME: 22:53

POINT#	X	Y
1:	-0.281	1.112
2:	0.106	0.896
3:	0.530	0.831
4:	-0.795	0.213
5:	0.058	-0.306
6:	0.288	-0.210
7:	0.303	-0.482
8:	0.798	-0.694
9:	0.639	-0.924
10:	0.176	-0.287

X CENTROID: 0.182
Y CENTROID: 0.015
POA TO CENTROID: 0.183
HORZ SPREAD: 1.593
VERT SPREAD: 2.036
GROUP SPREAD: 2.234
MIN RADIUS: 0.249
MAX RADIUS: 1.191
MEAN RADIUS: 0.735
IN 1 IN DIAMETER: 3
IN 2 IN DIAMETER: 8
in 3 IN DIAMETER: 10

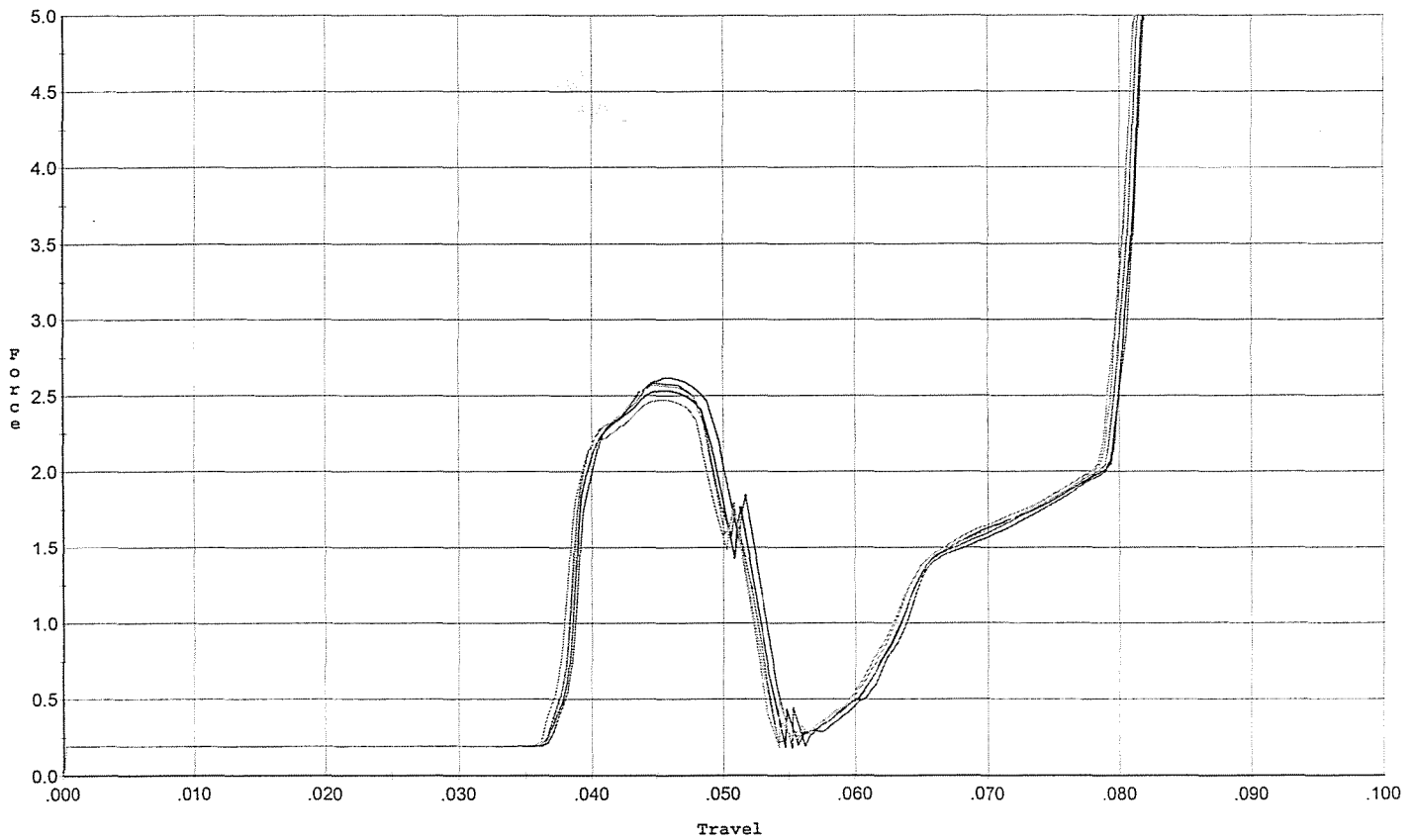


TARGET APPROX 1/2 SCALE

Trigger Profile [lbs,inch]

Profile: SWS
 GunType: Rifle
 Make: Remington
 Note: R. Putch 9/8/07

Model: M/24
 Serial No: Form #F005
 Trigger: 2.5 lbs. ini. +/- .50 lbs.



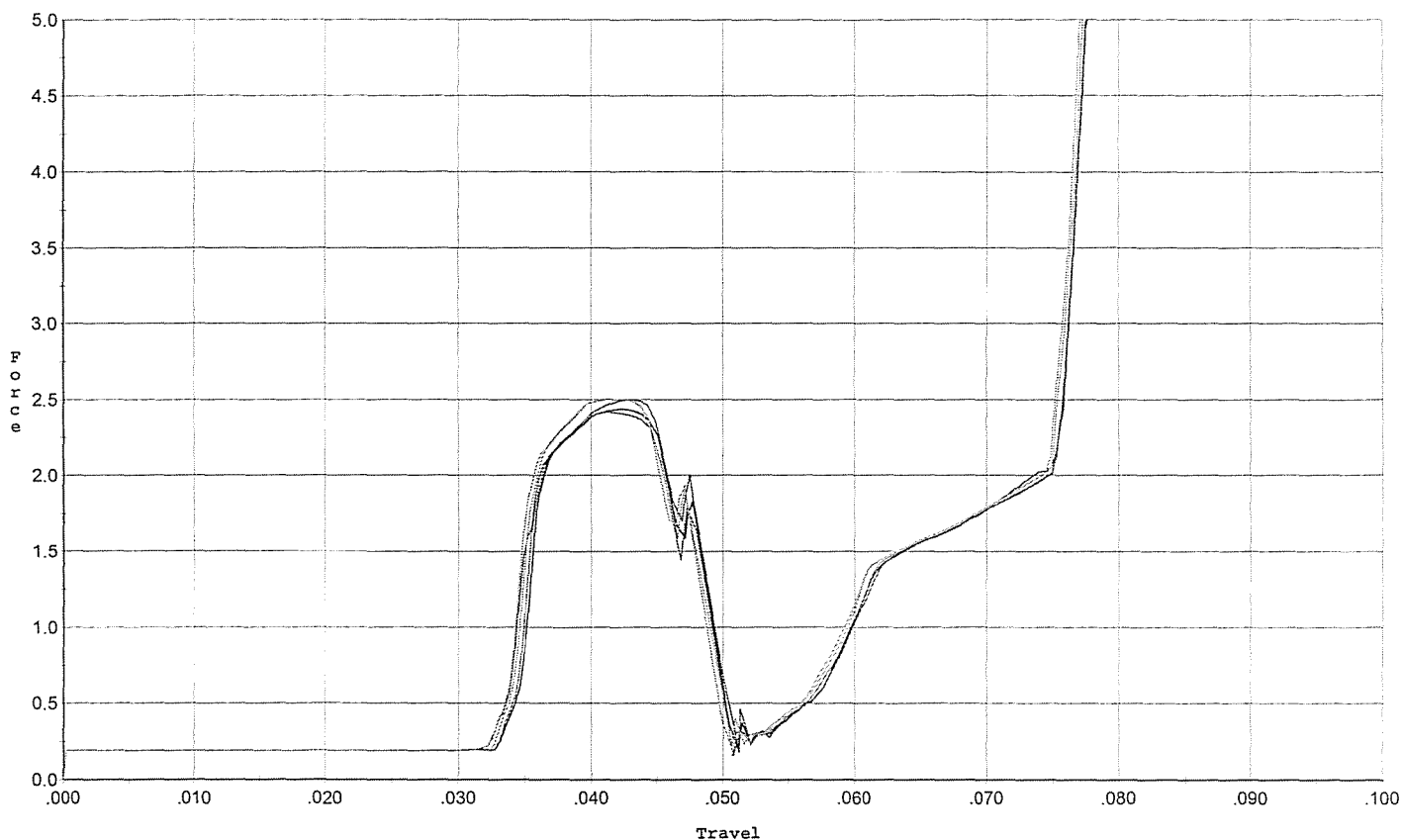
#	Peak Force	Travel To Actuate	Initial Take-up	Overtravel	Energy To Actuate	Lock Time	Action Type
1	2.620	0.052	0.037	0.037	0.038		Set Trigger
2	2.534	0.051	0.037	0.037	0.037		Set Trigger
3	2.582	0.052	0.037	0.037	0.038		Set Trigger
4	2.569	0.051	0.037	0.037	0.037		Set Trigger
5	2.474	0.051	0.036	0.037	0.037		Set Trigger

AVG 2.55

Trigger Profile [lbs,inch]

Profile: SWS
 GunType: Rifle
 Make: Remington
 Note: R. Putch 9/8/07

Model: M/24
 Serial No: Form #F005
 Trigger: 2.5 lbs. after 50 cycles +/- .50 lbs.



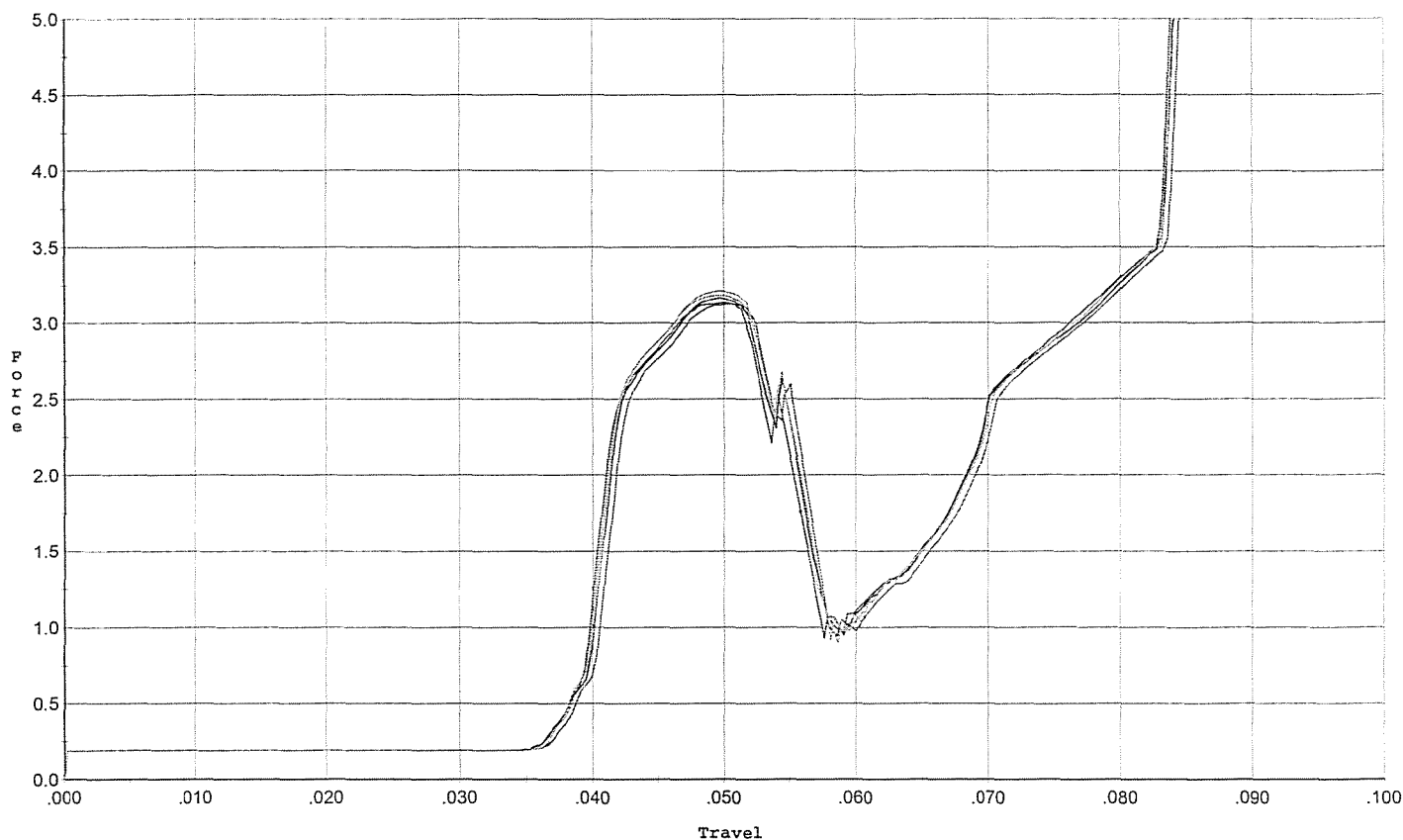
#	Peak Force	Travel To Actuate	Initial Take-up	Overtravel	Energy To Actuate	Lock Time	Action Type
1	2.500	0.047	0.033	0.035	0.037		Set Trigger
2	2.439	0.048	0.033	0.035	0.035		Set Trigger
3	2.420	0.048	0.033	0.035	0.036		Set Trigger
4	2.504	0.047	0.033	0.035	0.036		Set Trigger
5	2.504	0.049	0.033	0.035	0.037		Set Trigger

Avg 2.47

Trigger Profile [lbs,inch]

Profile: SWS
GunType: Rifle
Make: Remington
Note: R. Putsch 9/8/07

Model: M/24
Serial No: Form #F005
Trigger: 3.0 lbs. ini. +/- .75 lbs.



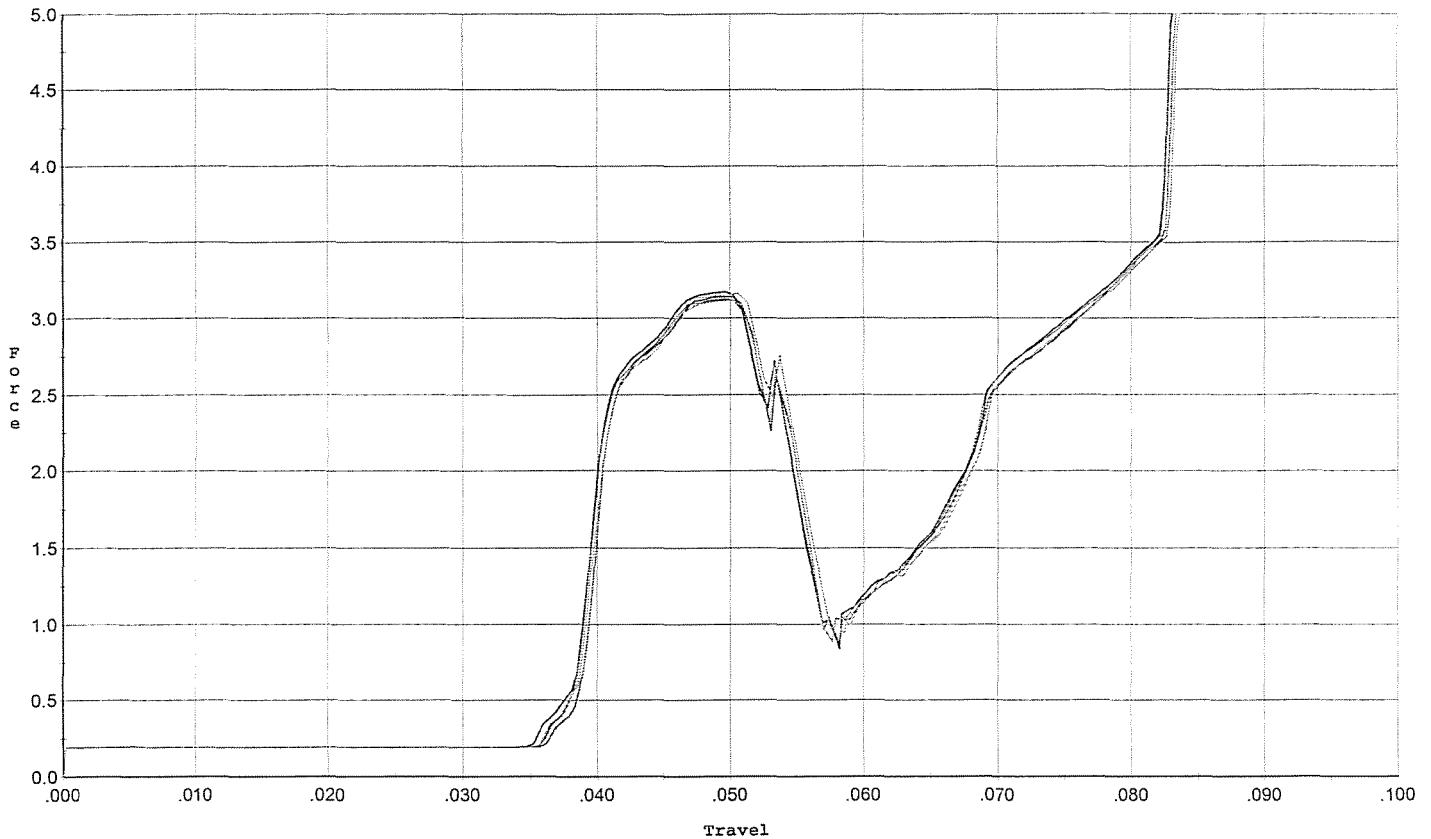
#	Peak Force	Travel To Actuate	Initial Take-up	Overtravel	Energy To Actuate	Lock Time	Action Type
1	3.130	0.056	0.038	0.035	0.052		Set Trigger
2	3.166	0.055	0.037	0.035	0.050		Set Trigger
3	3.123	0.055	0.038	0.035	0.050		Set Trigger
4	3.183	0.054	0.037	0.035	0.051		Set Trigger
5	3.212	0.054	0.037	0.035	0.051		Set Trigger

Avg 3.16

Trigger Profile [lbs,inch]

Profile SWS
GunType: Rifle
Make: Remington
Note: R. Putch 9/8/07

Model: M/24
Serial No: Form #F005
Trigger: 3.0 lbs. after 20 cycles +/- .75 lbs.



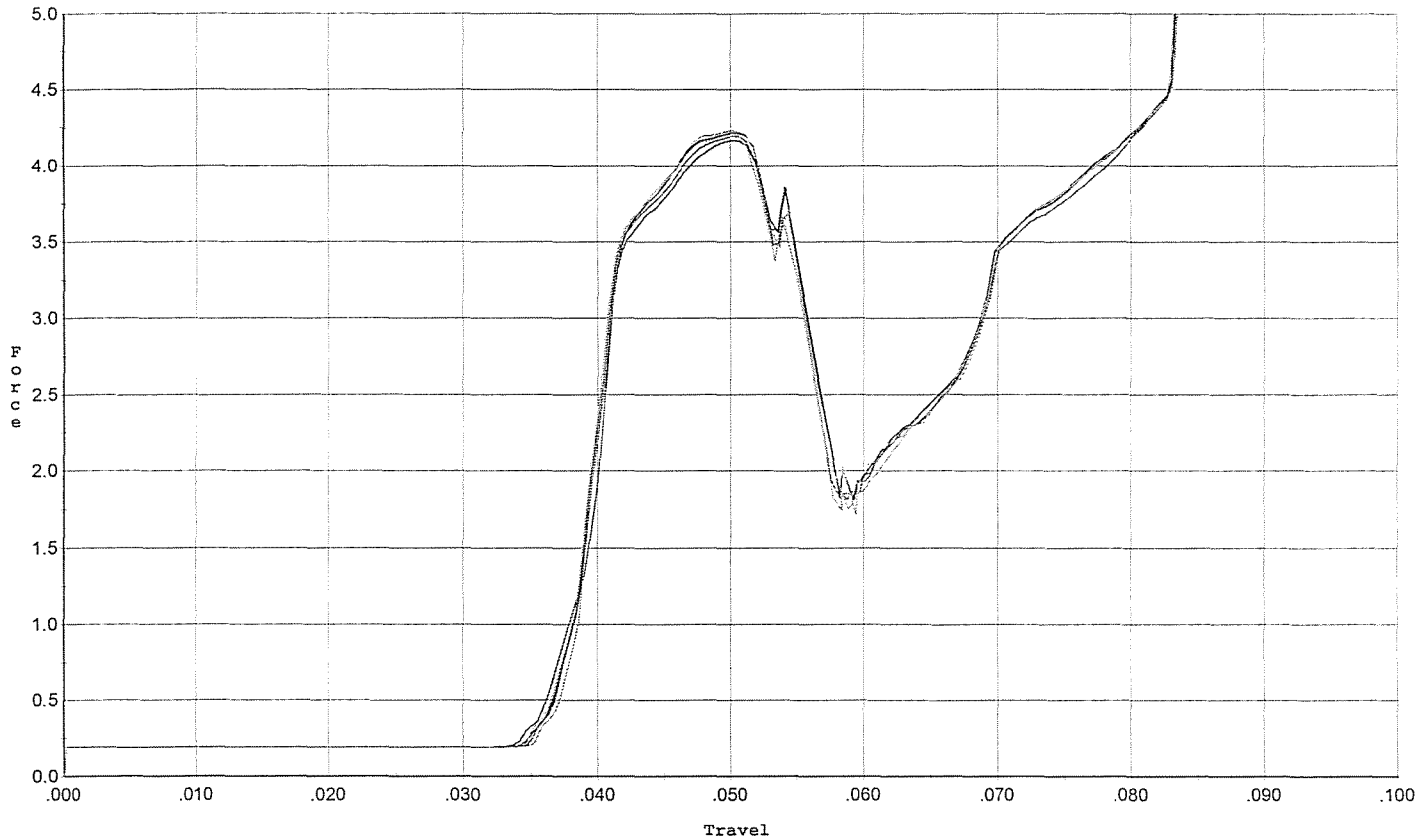
#	Peak Force	Travel To Actuate	Initial Take-up	Overtravel	Energy To Actuate	Lock Time	Action Type
1	3.143	0.055	0.037	0.035	0.051		Set Trigger
2	3.175	0.053	0.036	0.035	0.051		Set Trigger
3	3.126	0.053	0.037	0.035	0.050		Set Trigger
4	3.119	0.054	0.036	0.035	0.051		Set Trigger
5	3.161	0.054	0.036	0.035	0.051		Set Trigger

Avg 3.14

Trigger Profile [lbs,inch]

Profile SWS
GunType: Rifle
Make: Remington
Note: R. Putch 9/8/07

Model: M/24
Serial No: Form #F005
Trigger: 4.0 lbs. ini. +/- 1.0 lbs.



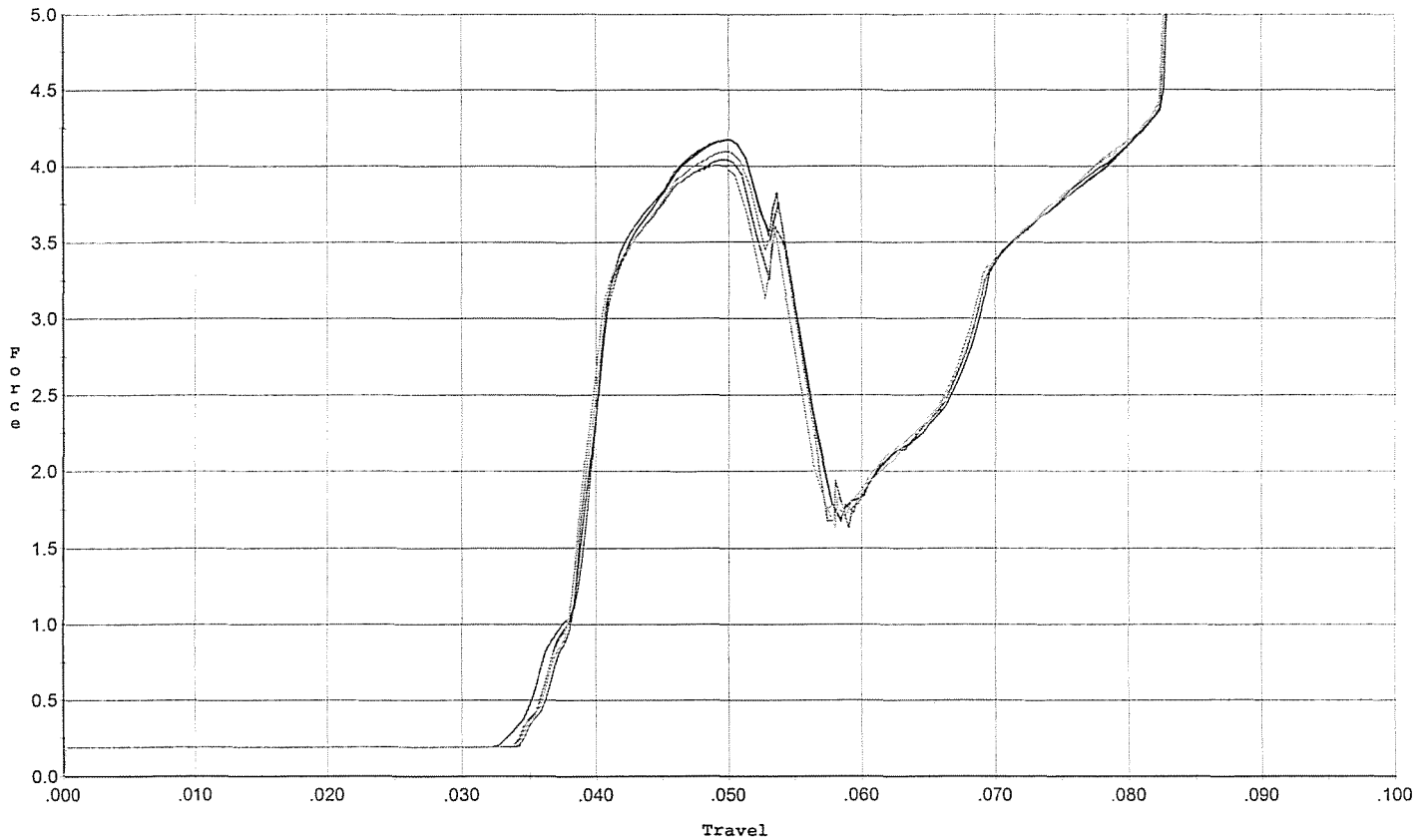
#	Peak Force	Travel To Actuate	Initial Take-up	Overtravel	Energy To Actuate	Lock Time	Action Type
1	4.167	0.054	0.035	0.033	0.069		Set Trigger
2	4.212	0.054	0.035	0.033	0.070		Set Trigger
3	4.198	0.054	0.036	0.033	0.070		Set Trigger
4	4.199	0.055	0.035	0.033	0.071		Set Trigger
5	4.231	0.054	0.036	0.033	0.070		Set Trigger

Avg 4.20

Trigger Profile [lbs,inch]

Profile SWS
GunType: Rifle
Make: Remington
Note: R. Putch 9/8/07

Model: M/24
Serial No: Form #F005
Trigger: 4.0 lbs. after 20 cycles +/- 1.0 lbs.



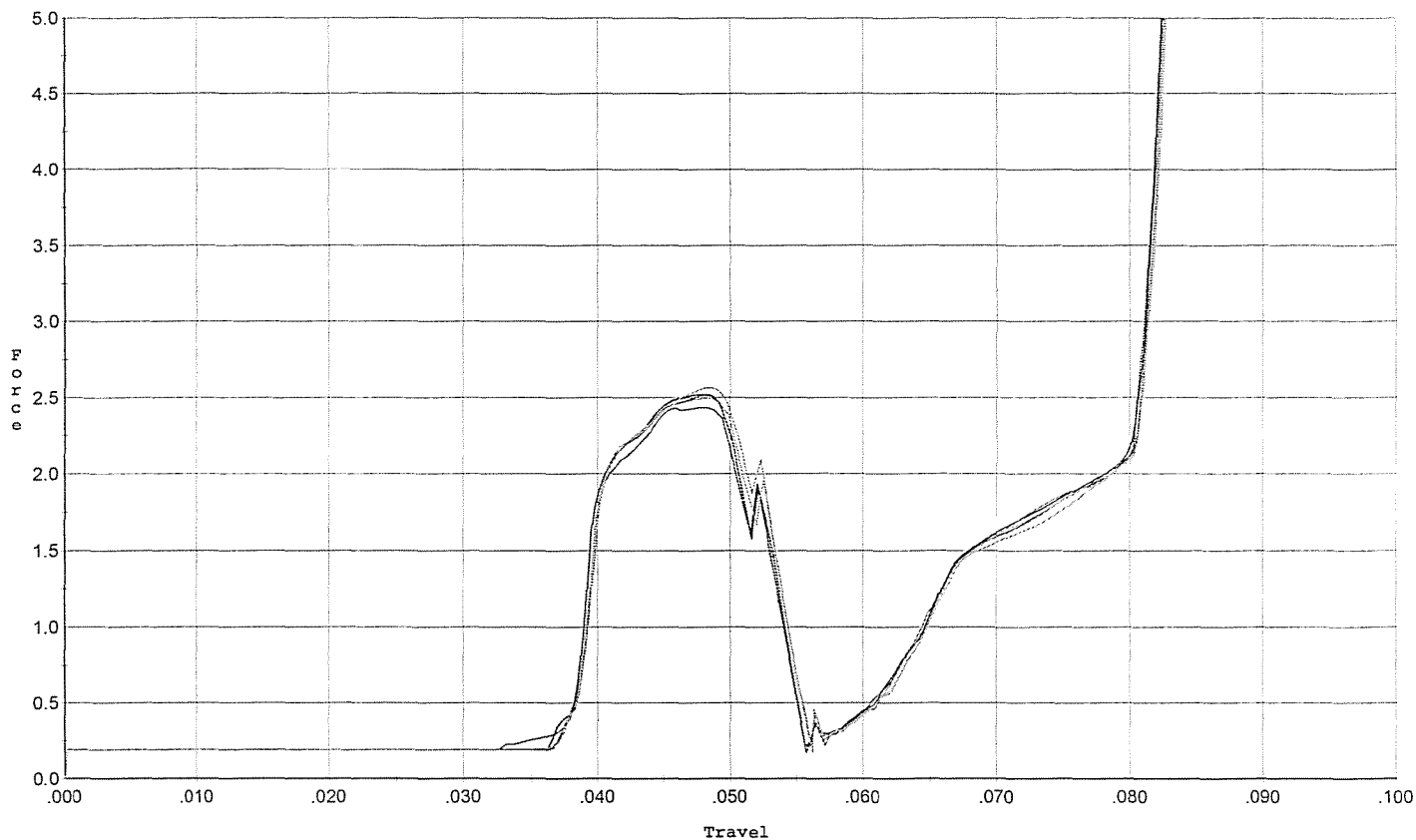
#	Peak Force	Travel To Actuate	Initial Take-up	Overtravel	Energy To Actuate	Lock Time	Action Type
1	4.174	0.054	0.035	0.033	0.069		Set Trigger
2	4.177	0.054	0.035	0.033	0.068		Set Trigger
3	4.040	0.054	0.035	0.033	0.068		Set Trigger
4	4.003	0.054	0.035	0.033	0.066		Set Trigger
5	4.093	0.054	0.035	0.033	0.068		Set Trigger

AVG 4.09

Trigger Profile [lbs,inch]

Profile SWS
 GunType: Rifle
 Make: Remington
 Note: R. Putch 9/8/07

Model: M/24
 Serial No: Form #F005
 Trigger: reset to 2.5 lbs. +/- .50 lbs. for final test



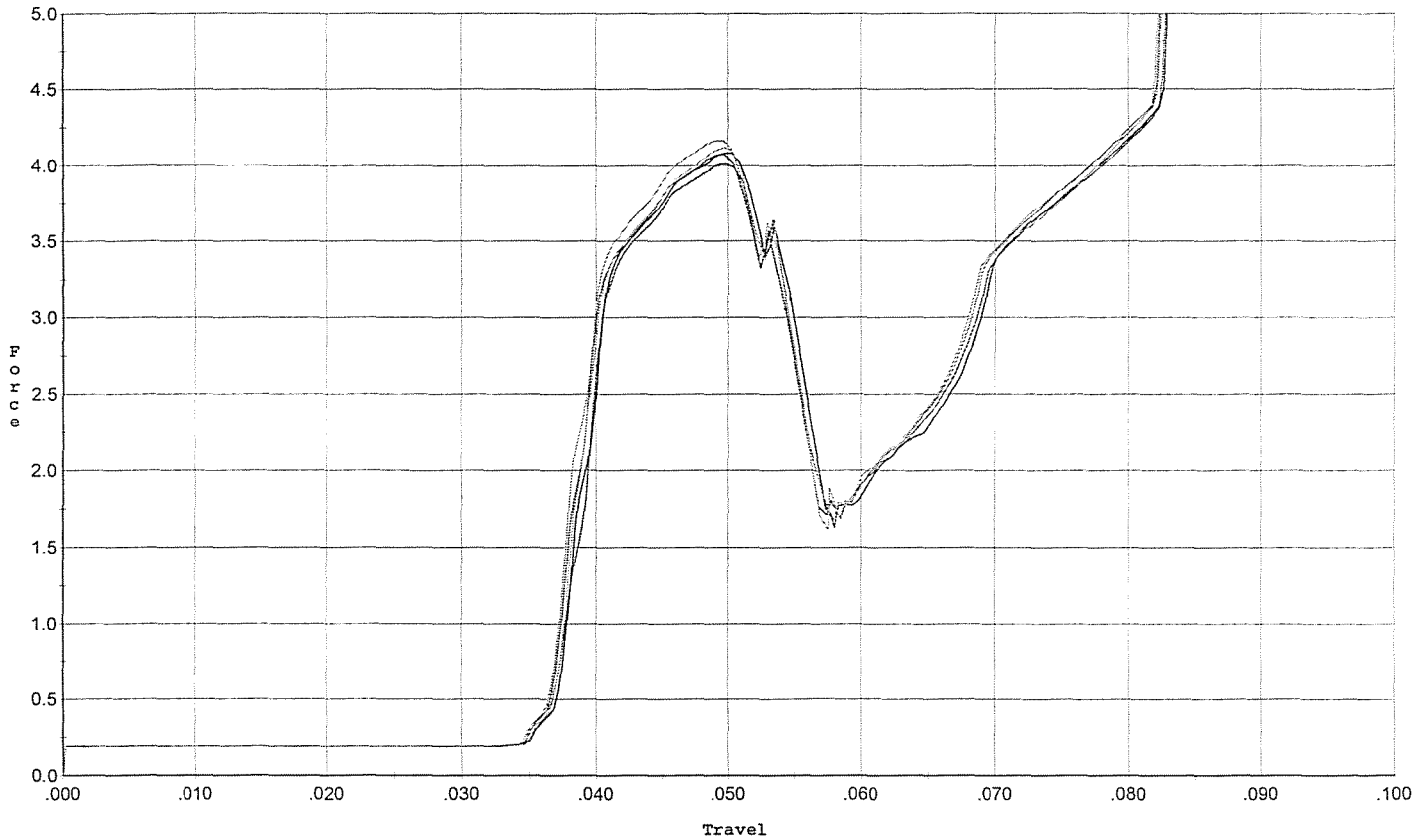
#	Peak Force	Travel To Actuate	Initial Take-up	Overtravel	Energy To Actuate	Lock Time	Action Type
1	2.436	0.054	0.038	0.037	0.039		Set Trigger
2	2.521	0.053	0.037	0.037	0.039		Set Trigger
3	2.515	0.053	0.037	0.037	0.039		Set Trigger
4	2.496	0.053	0.038	0.037	0.039		Set Trigger
5	2.566	0.052	0.037	0.037	0.039		Set Trigger

Avg 2.50

Trigger Profile [lbs,inch]

Profile SWS
 GunType: Rifle
 Make: Remington
 Note: R. Putch 9/8/07

Model: M/24
 Serial No: Form #F005
 Trigger: set to 4.0 lbs. +/- 1.0 lbs. for target & accuracy



#	Peak Force	Travel To Actuate	Initial Take-up	Overtravel	Energy To Actuate	Lock Time	Action Type
1	4.013	0.053	0.036	0.034	0.065		Set Trigger
2	4.077	0.055	0.036	0.033	0.069		Set Trigger
3	4.069	0.054	0.035	0.033	0.068		Set Trigger
4	4.115	0.054	0.036	0.033	0.067		Set Trigger
5	4.161	0.054	0.035	0.033	0.069		Set Trigger

Avg 4.08

R & E NUMBER 133007
 SERIAL NUMBER C6349119
 LOG-IN DATE 8-21-07

OPERATION #	OPERATION NAME	DATE	INITIAL
500	DIS-ASSEMBLE GUN	8-22-07	RTZ
505	RE-BARREL	8-23-07	RTZ
560	ASSEMBLE	8-23-07	RTZ
600	PROOF	8-23-07	non
605	CHECK HEADSPACE	8-23-07	non
610	DIS-ASSEMBLE GUN	8-25-07	RTZ
612	MAGNAFLUX	8-30-07	JB
510	DRILL AND TAP	8-27-07	TRW
615	ROLLMARK CALIBER	8-28-07	CW
618	ROTO-BLAST	8-30-07	LY
620	APPLY COATINGS	8/31/07	ZB
625	FINAL ASSEMBLY	9-6-07	RTZ
640	FUNCTION TEST AND	9/6/07	non
650	TARGET	9/6/07	non
	MALFUNCTION	CORRECTION	
	MALFUNCTION	CORRECTION	
	MALFUNCTION	CORRECTION	
	MALFUNCTION	CORRECTION	9-6-07 SD
670	FINAL INSPECTION		
	A) HEADSPACE	PASS FAIL	
	B) TRIGGER PULL	+/- .5 LBS MIN 2.50 LBS MAX 4.0 LBS	2.25 2.45 2.33 2.24 2.55 9-10-07 DA
680	F) SAFETY ON FORCE	2 LBS MIN 10 LBS MAX	6.0 6.0 6.0 9-10-07 FM
	G) SAFETY OFF FORCE	2 LBS MAX	2.0 2.0 2.0 9-10-07 FM
	I) FIRING PIN INDENT	.020	.024 .024 .024 9-10-07 FM
690	PACK		9-11-07 DA

Remington®  REG. U.S. PAT. & TM. OFF.

MODEL 700™ H24

MADE IN ILION, N.Y. U.S.A. Reg. U.S. Pat. & Tm. Off. Marca Registrada Marque Deposee.

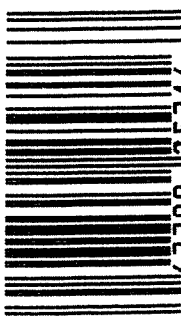
VERY IMPORTANT:
Instruction Book
enclosed to assure
safe use of this
firearm.

SERIAL NO.
C6349119

ORDER NO.
5716

Ø1


5716 C6349119


0 47700 25716 7

OP. #	OP. NAME	READINGS	DATE	INIT
575 & 580	Assemble Action and Stock	QUALITY AUDIT	10-9 89	Rw
600	Proof		10-9 89	Ac
607	Check Headspace		10-9 89	Rw
610	Dis-assemble Gun		10-9 89	Rw
612	NEW BARREL 10/30/89 Magnaflux Barrel Action	REJECT	10/13/89	KER
	Magnaflux Bolt		10/13/89	KER
615	Rollmark Caliber			
7	Drill and Tap Sight Holes			
618	Polish Barrel			
620	Apply Coatings (Barrel Action)			
	Apply Coating (Bolt)			
625	Final Assembly			
	A) Clean inside of Bolt Assembly			
	B) Inspect Rear Firing Pin Hole for Chamfer in Bolt Head			
	C) Inspect Ejector Hole for Chamfer			
	D) Oil Firing Pin Ass'y			
	E) Adjust Trigger Pull to Min Setting and Stake			

BARBER - M24 0108180

op. #	OP. NAME	READINGS	DATE	INIT
625 cont.	F) Safety On Force.			
	G) Safety Off Force			
	H) Trigger Pull Test & Retainability			
	I) Firing Pin Indent			
	J) Assemble Stock			
	K) Assemble Swivel Studs			
	L) Attach Front and Rear Sight Assemblies			
	M) Iron Sight Alignment			
	N) Detach Front & Rear Sights & place in numbered container			
	O) Attach Scope to Rifle			
	P) Detach & Attach Scope 20 Times			
640	Gallery Target & Test			
	A) Time			
	B) Malfunctions			
	C) Pierced Primers			
	D) Optical Clarity of Scope			
645	Inspect for Live Ammo			
655	Final Inspection			
	A) Headspace			
	B) Trigger Pull			
	C) Function			
660	Pack			

CONTRACT # DAAA21-87-C-0086

GUN SERIAL # C6349119

OP. #	OP. NAME	READINGS	DATE	INIT
575 & 580	Assemble Action and Stock	QUALITY AUDIT	11-2 89	RW
600	Proof		11-2 89	K
607	Check Headspace		11-2 89	RW
610	Dis-assemble Gun		11-2 89	RW
612	Magnaflux Barrel Action		11-9-89	KCR
	Magnaflux Bolt		11-9-89	KCR
615	Rollmark Caliber		11/9/89	GS
7	Drill and Tap Sight Holes		11 9 89	YB
618	Polish Barrel RB		11 9 89	BT
620	Apply Coatings (Barrel Action)		11-17-89	TJA
	Apply Coating (Bolt)			
625	Final Assembly			
	A) Clean inside of Bolt Assembly		1/8/90	RW
	B) Inspect Rear Firing Pin Hole for Chamfer in Bolt Head		1/8/90	RW
	C) Inspect Ejector Hole for Chamfer		1/8/90	RW
	D) Oil Firing Pin Ass'y		1/8/90	RW
	E) Adjust Trigger Pull to Min Setting and Stake		10/20/90	GS

BARBER - M24 0108182

op. #	OP. NAME	READINGS					DATE	INIT
625 cont.	F) Safety On Force	5	5	5			1-10-90	JS
	G) Safety Off Force	2	2	2			1-10-90	JS
	H) Trigger Pull Test & Retainability						10/11/90	JS
	I) Firing Pin Indent	.020	.020	.020			1-10-90	JS
	J) Assemble Stock						1/10/90	JS
	K) Assemble Swivel Studs						3/17/90	WB
	L) Attach Front and Rear Sight Assemblies						1-26-90	AC
	M) Iron Sight Alignment						1-26-90	JS
	N) Detach Front & Rear Sights & place in numbered container						1-26-90	AC
	O) Attach Scope to Rifle						3/1/90	WB
	P) Detach & Attach Scope 20 Times						3/1/90	WB
640	Gallery Target & Test						3-2-90	J.S TEMP.
	A) Time							
	B) Malfunctions							
	C) Pierced Primers							
	D) Optical Clarity of Scope							
645	Inspect for Live Ammo							
655	Final Inspection						3/13/90	WB
	A) Headspace							
	B) Trigger Pull	2.67	2.75	2.80	2.70	2.88	3/13/90	JS
	C) Function						3/13/90	WB
660	Pack						20 MAR 90	JS

11. AVERAGE PULL FORCE BETWEEN
INITIAL & CYCLE TESTS

2.50# + .50#

3.00# + .75#

4.00# + 1.00#

SERIAL NO. C6348119DATE 10 Jan 80TESTER JJS

	2.50# INITIAL	2.50# AFTER 50 CYCLES	FINAL TEST & TO RESET 2.50#		COMMENTS
PULL #1	201	224	218	267	MIN. SETTING, NO AVG. OF 5 READINGS ACCEPT- ABLE LESS THAN 2#
PULL #2	231	222	221	275	
PULL #3	207	224	218	280	
PULL #4	208	221	220	270	
PULL #5	207	220	223	288	
TOTAL	1055	1111	1100		
AVG.	211	222	220		

	3.00# INITIAL	3.00# AFTER 20 CYCLES		COMMENTS
PULL #1	3.02	3.02		
PULL #2	2.89	3.07		
PULL #3	3.06	2.92		
PULL #4	3.05	3.03		
PULL #5	3.09	3.02		
TOTAL	15.11	16.06		
AVG.	3.022	3.212		

	4.00# INITIAL	4.00# AFTER 20 CYCLES	MAX SETTING GREATER THAN 4#	RESET TO 4# FOR TARGET & ACCURACY
PULL #1	4.04	4.12		4.04
PULL #2	4.25	4.15		4.07
PULL #3	4.23	4.17		4.16
PULL #4	4.21	4.18		4.10
PULL #5	4.13	4.17		4.18
TOTAL	20.86	20.79		20.56
AVG.	4.172	4.158		4.112

CENTROIDAL DISTANCE CALCULATIONS
FOR RIFLE # C6349119
2 Mar 1990

CENTROIDAL DISTANCES

0 TO 1	1.02309
1 TO 2	1.31921
1 TO 3	1.176
1 TO 4	1.68403
1 TO 5	1.19056

$\frac{1}{5}$ (----POA
1

THE AVERAGE X-COORDINATE FOR THIS RIFLE IS: -.1948
THE AVERAGE Y-COORDINATE FOR THIS RIFLE IS: -.1486
THE RESULTING AVERAGE POI RADIUS FOR THIS RIFLE IS: .245000
THE AMR FOR THIS RIFLE IS: 1.045

2 Mar 1998

FILE:/PATTERNING/CENTERFIRE_PATT/C8345113

CENTERFIRE PATTERNS

1

POA

1 in circle

2 in circle

3 in circle

OF SHOTS= 10

IN CIR

1 in = 2

2 in = 4

3 in = 7

HS= 3.615

VS= 2.559

GS= 4.160

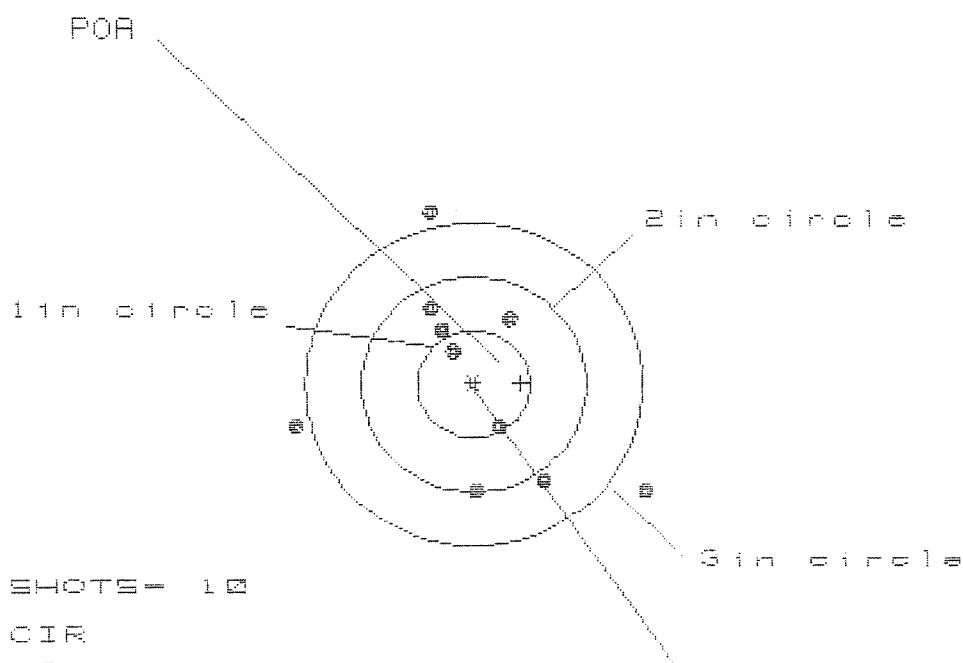
CENTROID #

PATTERN #	1	2	3
SHOTS (BEST OF)	10	9	8
MAXIMUM X	1.290	1.032	.808
MINIMUM X	-2.325	-1.793	-1.288
MAXIMUM Y	1.155	1.123	.963
MINIMUM Y	-1.404	-1.275	-1.150
CENTROID X	.639	.897	1.121
CENTROID Y	-.799	-.928	-.768
POA TO CENTROID in.	1.023	1.291	1.359
MIN RADIUS	.240	.268	.025
MEAN RADIUS	1.220	1.031	.805
MAX RADIUS	2.596	2.200	1.308
HORIZONTAL SPREAD	3.615	2.825	2.096
VERTICAL SPREAD	2.559	2.398	2.113
EXTREME SPREAD	4.160	3.189	2.397
NUMBER IN ONE INCH CIRCLE	= 2		
NUMBER IN TWO INCH CIRCLE	= 4		
NUMBER IN THREE INCH CIRCLE	= 7		

2 Mar 1995

FILE:/PATTERNING/CENTERFIRE_PATT/08349119

CENTERFIRE PATTERNS # 2



OF SHOTS= 10

IN CIR

1in = 2

2in = 6

3in = 7

HS= 3.056

VS= 2.652

GS= 3.229

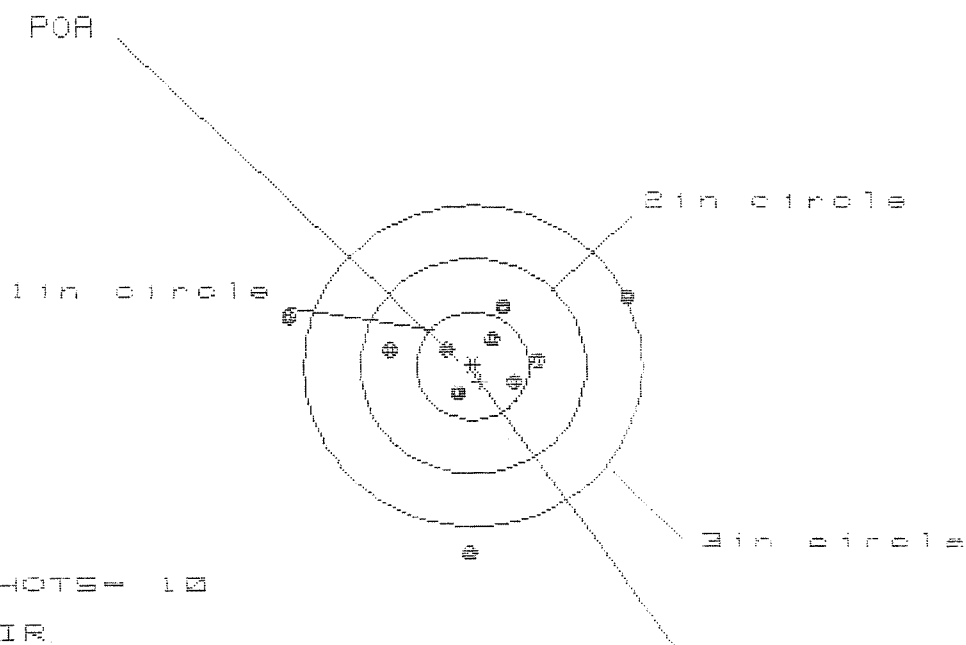
CENTROID #

PATTERN #	2	9	8
SHOTS (BEST OF)	10	9	8
MAXIMUM X	1.510	.753	.733
MINIMUM X	-1.556	-1.388	-1.409
MAXIMUM Y	1.648	1.537	.760
MINIMUM Y	-1.004	-1.096	-.904
CENTROID X	-.419	-.587	-.567
CENTROID Y	-.011	.100	-.092
POA TO CENTROID in.	.419	.596	.574
MIN RADIUS	.337	.158	.349
MEAN RADIUS	1.000	.882	.819
MAX RADIUS	1.813	1.545	1.451
HORIZONTAL SPREAD	3.066	2.141	2.141
VERTICAL SPREAD	2.652	2.633	1.664
EXTREME SPREAD	3.229	2.723	2.196
NUMBER IN ONE INCH CIRCLE =	2		
NUMBER IN TWO INCH CIRCLE =	6		
NUMBER IN THREE INCH CIRCLE =	7		

2 Mar 1998

FILE:/PATTERNING/CENTERFIRE_PATT/06349113

CENTERFIRE PATTERNS # 3

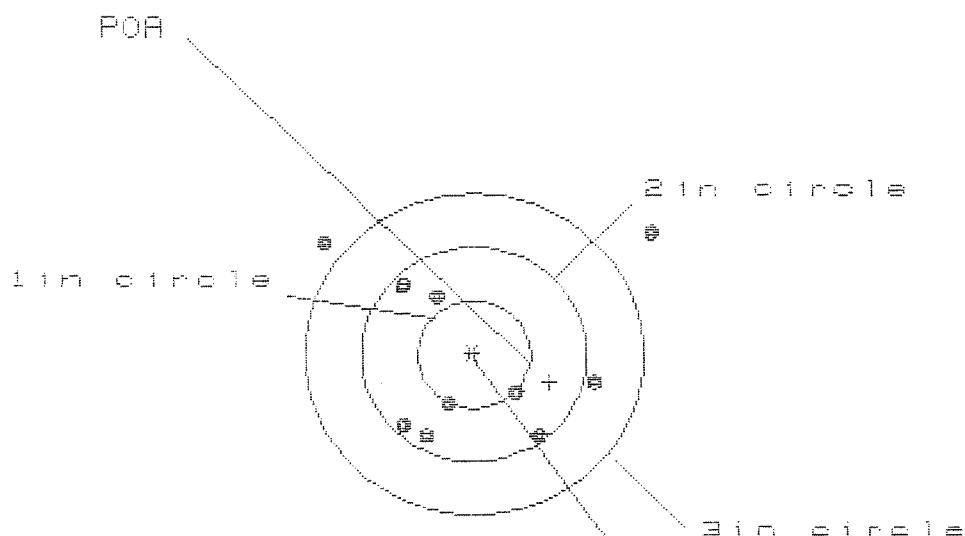


PATTERN #	3		
SHOTS (BEST OF)	10	9	8
MAXIMUM X	1.404	1.402	1.200
MINIMUM X	-1.618	-1.620	-1.901
MAXIMUM Y	.667	.469	.500
MINIMUM Y	-1.782	-.474	-.443
CENTROID X	-.065	-.063	.129
CENTROID Y	.143	.341	.310
POA TO CENTROID in.	.158	.347	.340
MIN RADIUS	.250	.118	.111
MEAN RADIUS	.814	.688	.555
MAX RADIUS	1.783	1.640	1.300
HORIZONTAL SPREAD	3.022	3.022	2.101
VERTICAL SPREAD	2.449	.943	.943
EXTREME SPREAD	3.030	3.030	2.170
NUMBER IN ONE INCH CIRCLE =		4	
NUMBER IN TWO INCH CIRCLE =		7	
NUMBER IN THREE INCH CIRCLE =		7	

2 Mar 1998

FILE:/PATTERNING/CENTERFIRE_PATT/08349113

CENTERFIRE PATTERNS # 4



OF SHOTS= 10

IN CIR

1in = 0

2in = 7

3in = 8

HS= 2.899

VS= 1.875

GS= 2.801

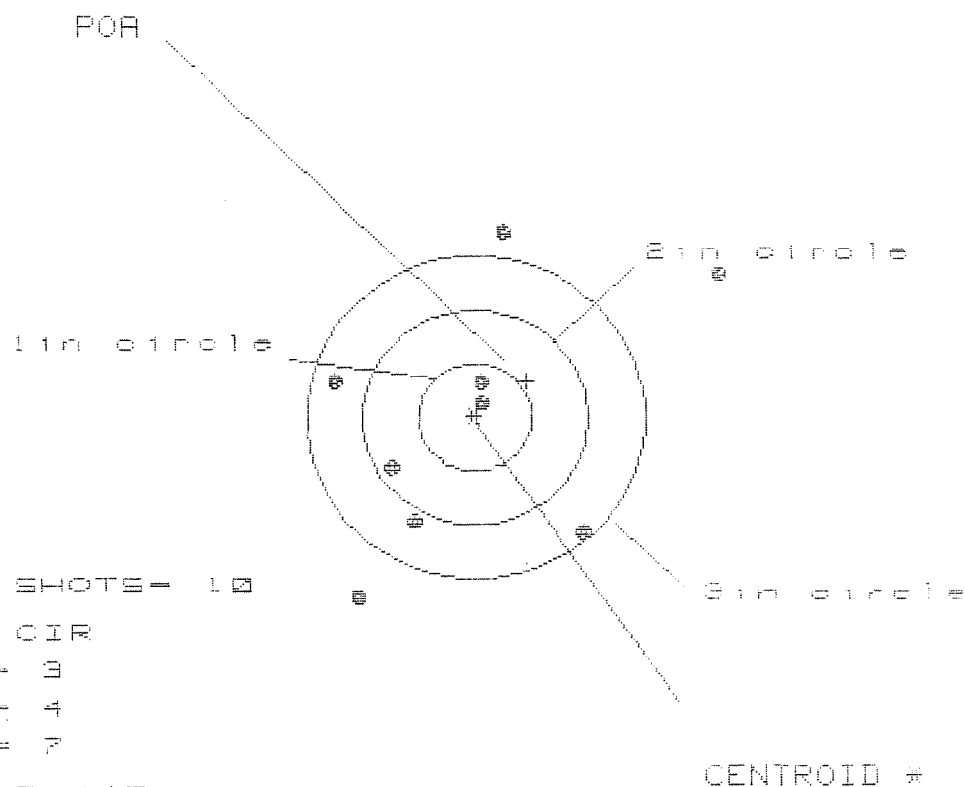
CENTROID *

PATTERN #	:	4		
SHOTS (BEST OF)	:	10	9	8
MAXIMUM X	:	1.579	1.271	1.128
MINIMUM X	:	-1.320	-1.145	-.509
MAXIMUM Y	:	1.117	1.139	.912
MINIMUM Y	:	-.758	-.634	-.491
CENTROID X	:	-.672	-.847	-.704
CENTROID Y	:	.258	.134	-.009
POA TO CENTROID in.	:	.719	.857	.704
MIN RADIUS	:	.542	.357	.315
MEAN RADIUS	:	1.005	.863	.740
MAX RADIUS	:	1.934	1.615	1.128
HORIZONTAL SPREAD	:	2.899	2.416	1.737
VERTICAL SPREAD	:	1.875	1.773	1.403
EXTREME SPREAD	:	2.901	2.732	1.919
NUMBER IN ONE INCH CIRCLE	=		0	
NUMBER IN TWO INCH CIRCLE	=		7	
NUMBER IN THREE INCH CIRCLE	=		8	

2 Mar 1998

FILE:/PATTERNING/CENTERFIRE_PATT/08349119

CENTERFIRE PATTERNS # 5



OF SHOTS = 10

IN CIR

1 in = 3

2 in = 4

3 in = 7

HS = 3.440

VS = 3.422

GS = 4.413

PATTERN #	5		
SHOTS (BEST OF)	10	9	8
MAXIMUM X	2.180	1.197	1.098
MINIMUM X	-1.260	-1.018	-1.117
MAXIMUM Y	1.709	1.854	1.659
MINIMUM Y	-1.713	-1.568	-1.100
CENTROID X	-.457	-.699	-.600
CENTROID Y	-.334	-.479	-.284
POA TO CENTROID in.	.566	.848	.663
MIN RADIUS	.210	.476	.278
MEAN RADIUS	1.187	1.041	.907
MAX RADIUS	2.543	1.921	1.706
HORIZONTAL SPREAD	3.440	2.215	2.215
VERTICAL SPREAD	3.422	3.422	2.759
EXTREME SPREAD	4.413	3.658	2.846
NUMBER IN ONE INCH CIRCLE =		3	
NUMBER IN TWO INCH CIRCLE =		4	
NUMBER IN THREE INCH CIRCLE =		7	