

C6225077

MODEL 700™ M24

Model **SWS**™

Action

Barrel Length

Capacity

Order No. **5715**

\* Includes 1 in chamber.

*Remington*

*Smead*®

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: **RE00084056** Serial: C8225077 Model M24 SWS Center Fire  
 Verify Repair: ☐ Caliber: 7.62 NATO Produced: 06/21/1989 Repairman:   
 Status: Closed 6/20/2004 11:00:22 AM

**Address Information**

Customer: ☒ Received From Return To: ☐ Received From

Name: **TRANSPORTATION OFFICE** **TRANSPORTATION OFFICE**

Address 1: **BLDG 330** **BLDG 330**

Address 2: **4085 CHILES AVE** PO Box:  **4085 CHILES AVE** PO Box:

City: **FORT CARSON** **FORT CARSON**

State: **CO** Zip Code: **80913** Country: **US** State: **CO** Zip Code: **80913** Country: **US**

FFL:

**Contact / Condition** Problems Estimate History / Status Shipping / Billing

Contact Information: Phone: **719 526 4211** Fax:  Email:  Comments:

Received Condition: **Good** Condition Notes:  CSR Notes:

Accessories Received:

| Code | Desc                | Qty |
|------|---------------------|-----|
| A007 | With Stud           | 3   |
| A016 | Scope Rings         | 2   |
| A017 | Scope Base          | 1   |
| A026 | Scope               | 1   |
| A042 | Adjustable Butt Pad | 1   |

**Repair Search** **Refresh** **Close**

magletj 8/23/2004 7:16 AM CAPS NUM INS SCRL

start Arms Services

Serial Number: **C6225077**  
 Model: **M24 SWS**  
  
**RE00084056**

SNIPER WEAPON SYSTEM - UNIQUE STATISTICAL INFORMATION

FIREARM SERIAL NUMBER / DATASET NAME: C6225077.\_\_\_0  
FILE DATE AND TIME: 09/13/2004 08:19

THE FOLLOWING DATA IS ALL REPORTED IN UNITS OF INCHES

|                                                             |       |
|-------------------------------------------------------------|-------|
| The Average X Centroid of the Five Target Set:              | 0.041 |
| The Average Y Centroid of the Five Target Set:              | 0.019 |
| The Average Point of Impact of the Five Target Set:         | 0.046 |
| The Average Mean Radius of the Five Target Set:             | 0.788 |
| The Distance from POA to Centroid Target #1:                | 0.186 |
| The Distance from Centroid Target #2 to Centroid Target #1: | 0.375 |
| The Distance from Centroid Target #3 to Centroid Target #1: | 0.033 |
| The Distance from Centroid Target #4 to Centroid Target #1: | 0.200 |
| The Distance from Centroid Target #5 to Centroid Target #1: | 0.228 |

SERIAL NUMBER: C6225077. \_\_0

TARGET NUMBER: 1

FILE DATE: 09/13/2004

FILE TIME: 08:19

| POINT# | X      | Y      |
|--------|--------|--------|
| 1:     | 0.327  | 1.025  |
| 2:     | -0.433 | 0.872  |
| 3:     | -0.582 | 1.539  |
| 4:     | -0.435 | 0.045  |
| 5:     | -0.136 | -0.196 |
| 6:     | -0.596 | -0.607 |
| 7:     | 0.540  | -0.124 |
| 8:     | 0.931  | -0.084 |
| 9:     | 0.813  | -0.275 |
| 10:    | 0.446  | -0.557 |

X CENTROID: 0.088

Y CENTROID: 0.164

POA TO CENTROID: 0.186

HORZ SPREAD: 1.527

VERT SPREAD: 2.146

GROUP SPREAD: 2.335

MIN RADIUS: 0.424

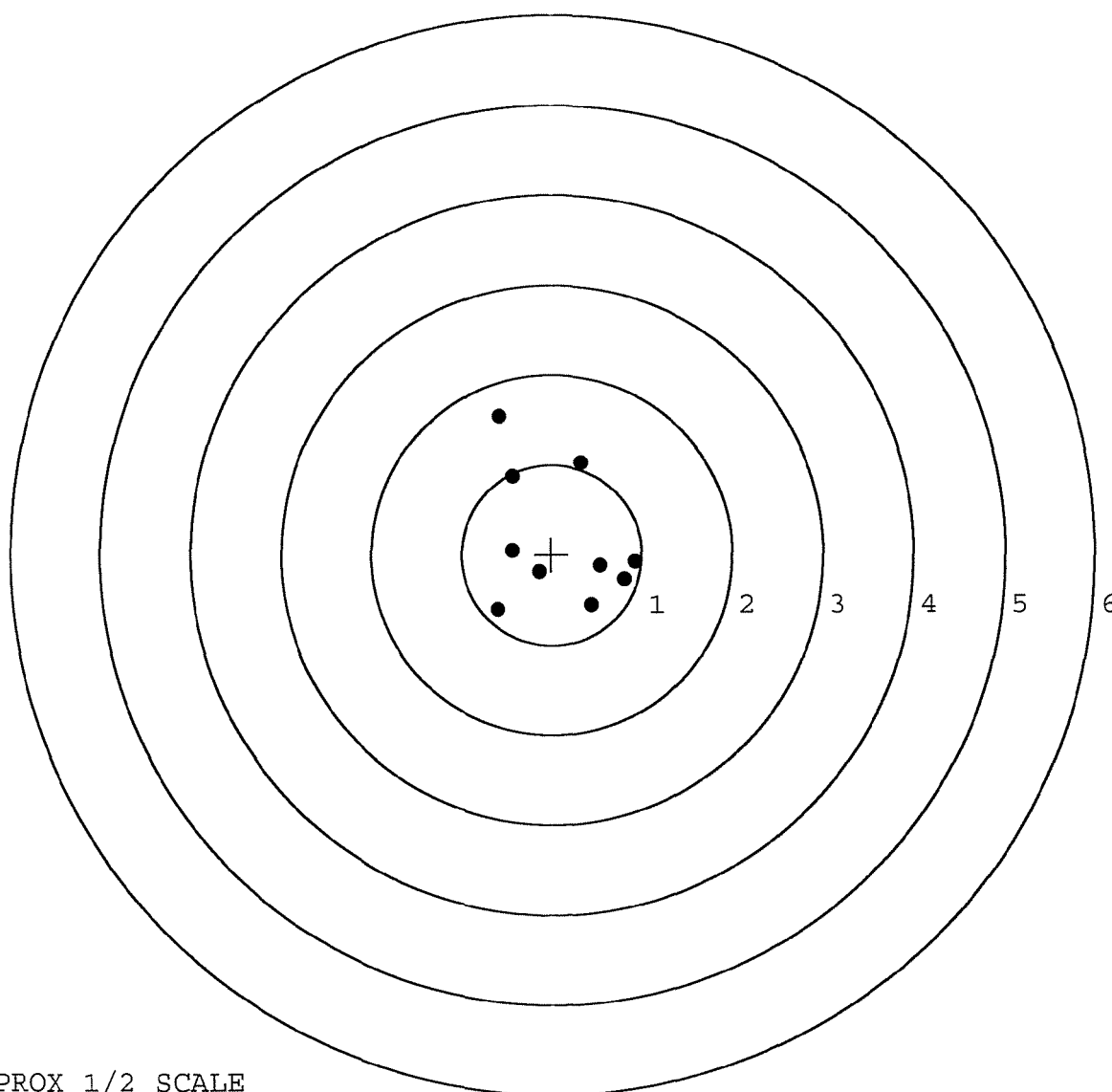
MAX RADIUS: 1.530

MEAN RADIUS: 0.836

# IN 1 IN DIAMETER: 1

# IN 2 IN DIAMETER: 8

# in 3 IN DIAMETER: 9

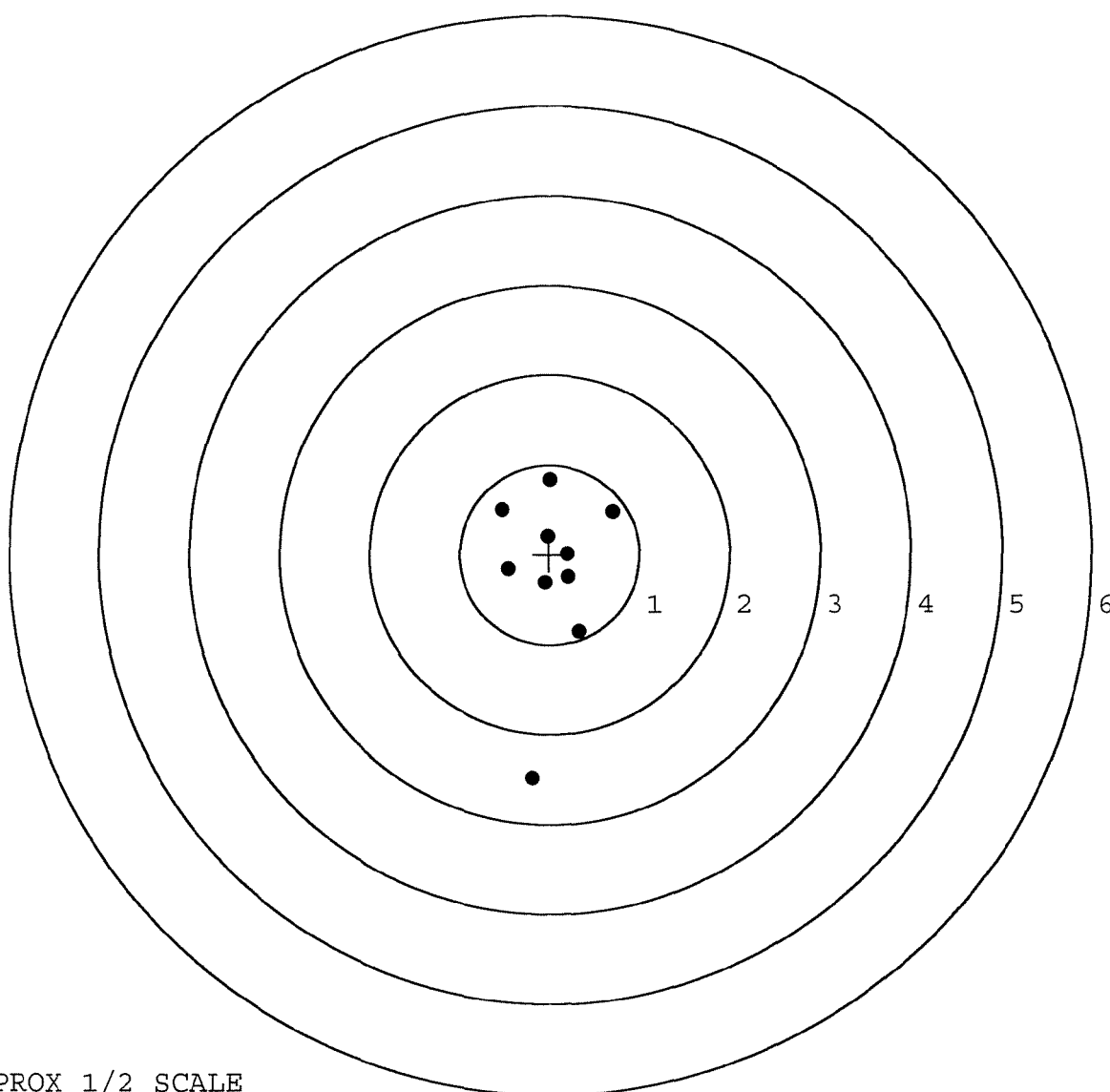


TARGET APPROX 1/2 SCALE

SERIAL NUMBER: C6225077. \_\_0  
TARGET NUMBER: 2  
FILE DATE: 09/13/2004  
FILE TIME: 08:19

| POINT# | X      | Y      |
|--------|--------|--------|
| 1:     | -0.193 | -2.495 |
| 2:     | 0.332  | -0.859 |
| 3:     | 0.701  | 0.480  |
| 4:     | 0.007  | 0.837  |
| 5:     | -0.532 | 0.502  |
| 6:     | -0.460 | -0.161 |
| 7:     | -0.019 | 0.205  |
| 8:     | 0.200  | 0.011  |
| 9:     | 0.207  | -0.252 |
| 10:    | -0.049 | -0.316 |

X CENTROID: 0.019  
Y CENTROID: -0.205  
POA TO CENTROID: 0.206  
HORZ SPREAD: 1.233  
VERT SPREAD: 3.332  
GROUP SPREAD: 3.338  
MIN RADIUS: 0.131  
MAX RADIUS: 2.300  
MEAN RADIUS: 0.743  
# IN 1 IN DIAMETER: 5  
# IN 2 IN DIAMETER: 8  
# in 3 IN DIAMETER: 9

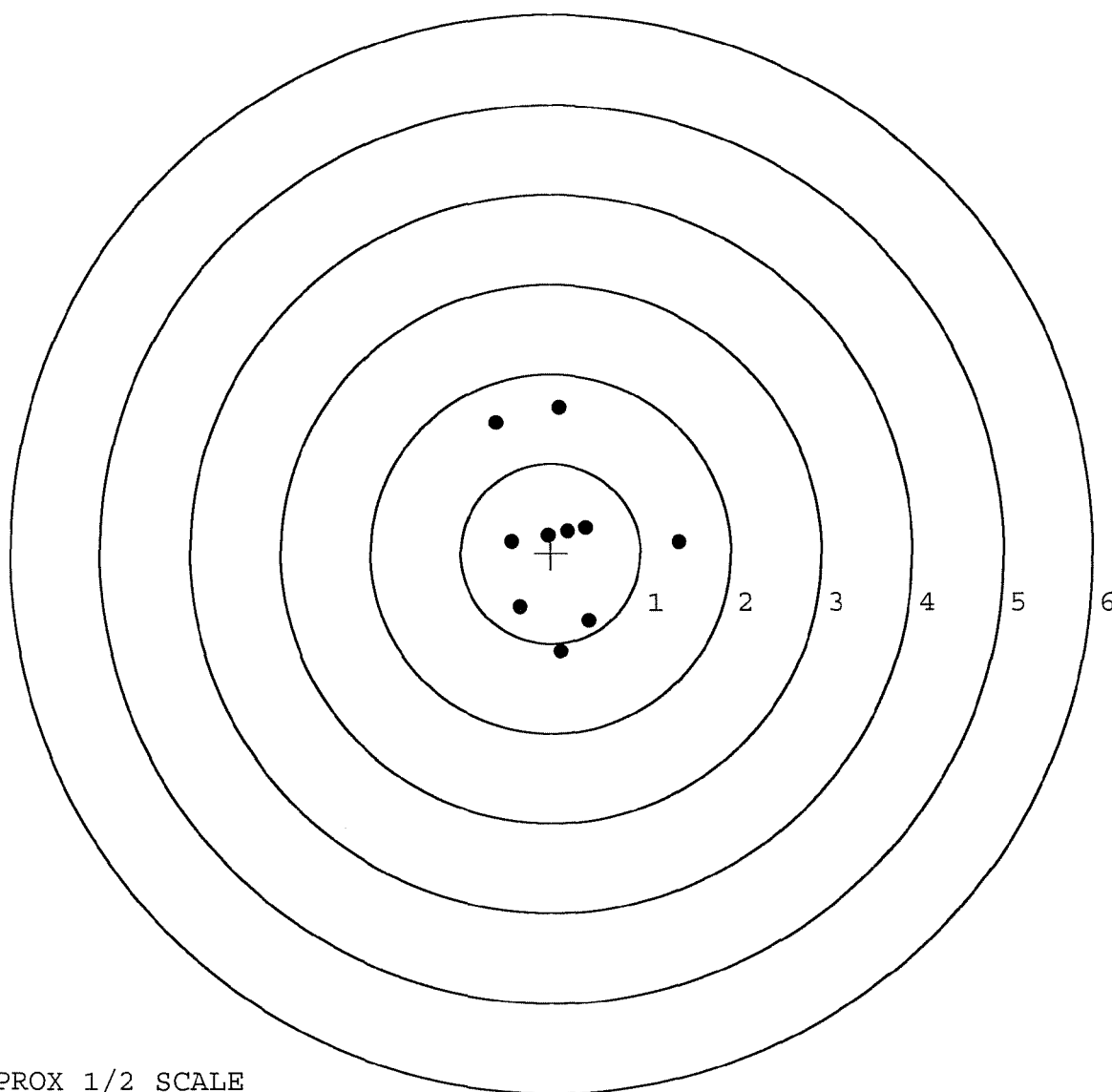


TARGET APPROX 1/2 SCALE

SERIAL NUMBER: C6225077. \_\_0  
TARGET NUMBER: 3  
FILE DATE: 09/13/2004  
FILE TIME: 08:19

| POINT# | X      | Y      |
|--------|--------|--------|
| 1:     | 1.421  | 0.133  |
| 2:     | 0.423  | -0.748 |
| 3:     | 0.112  | -1.096 |
| 4:     | -0.343 | -0.601 |
| 5:     | 0.098  | 1.624  |
| 6:     | -0.611 | 1.458  |
| 7:     | -0.437 | 0.128  |
| 8:     | -0.032 | 0.196  |
| 9:     | 0.187  | 0.246  |
| 10:    | 0.388  | 0.293  |

X CENTROID: 0.121  
Y CENTROID: 0.163  
POA TO CENTROID: 0.203  
HORZ SPREAD: 2.032  
VERT SPREAD: 2.720  
GROUP SPREAD: 2.654  
MIN RADIUS: 0.106  
MAX RADIUS: 1.487  
MEAN RADIUS: 0.848  
# IN 1 IN DIAMETER: 3  
# IN 2 IN DIAMETER: 6  
# in 3 IN DIAMETER: 10



TARGET APPROX 1/2 SCALE

SERIAL NUMBER: C6225077. \_\_0

TARGET NUMBER: 4

FILE DATE: 09/13/2004

FILE TIME: 08:19

| POINT# | X      | Y      |
|--------|--------|--------|
| 1:     | 0.493  | -1.309 |
| 2:     | 0.260  | 0.044  |
| 3:     | -0.502 | -0.753 |
| 4:     | -0.729 | 0.229  |
| 5:     | -0.357 | 0.736  |
| 6:     | 0.262  | 0.863  |
| 7:     | 0.625  | 1.725  |
| 8:     | 0.237  | -0.461 |
| 9:     | 0.124  | -0.603 |
| 10:    | 0.155  | -0.805 |

X CENTROID: 0.057

Y CENTROID: -0.033

POA TO CENTROID: 0.066

HORZ SPREAD: 1.354

VERT SPREAD: 3.034

GROUP SPREAD: 3.037

MIN RADIUS: 0.217

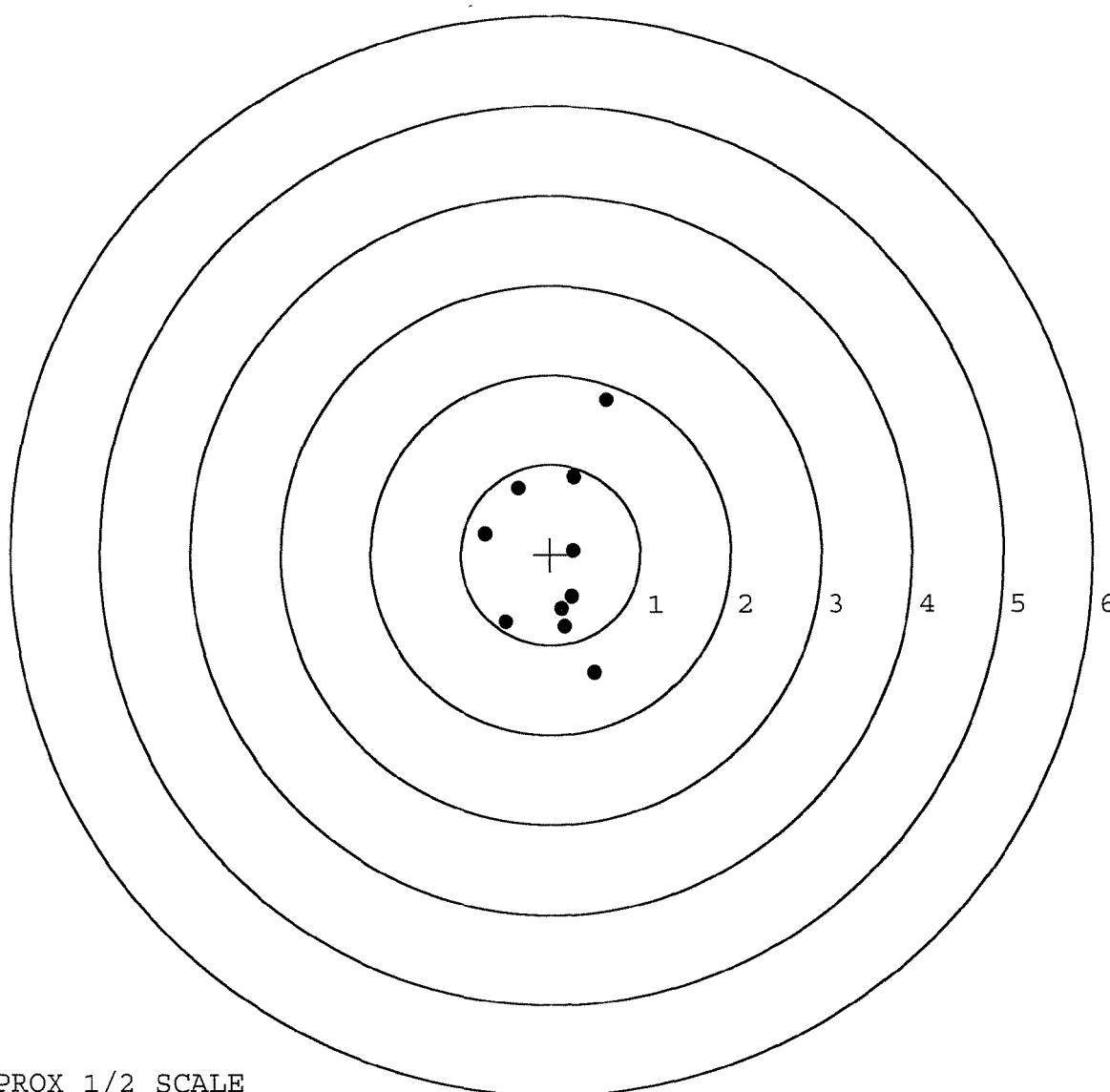
MAX RADIUS: 1.848

MEAN RADIUS: 0.876

# IN 1 IN DIAMETER: 2

# IN 2 IN DIAMETER: 8

# in 3 IN DIAMETER: 9

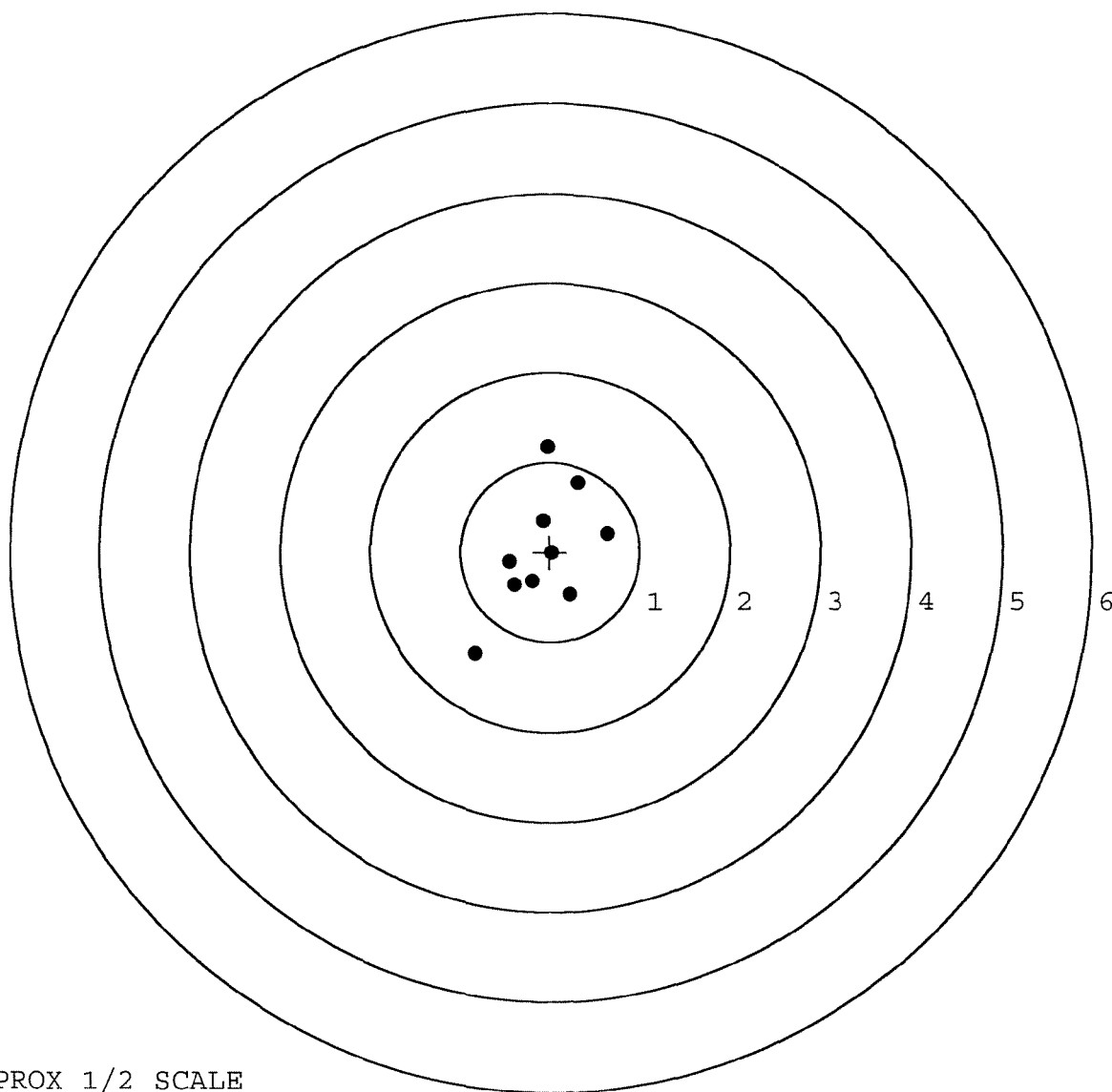


TARGET APPROX 1/2 SCALE

SERIAL NUMBER: C6225077. 0  
TARGET NUMBER: 5  
FILE DATE: 09/13/2004  
FILE TIME: 08:19

| POINT# | X      | Y      |
|--------|--------|--------|
| 1:     | -0.827 | -1.137 |
| 2:     | -0.022 | 1.170  |
| 3:     | 0.314  | 0.777  |
| 4:     | -0.074 | 0.347  |
| 5:     | 0.634  | 0.208  |
| 6:     | 0.226  | -0.479 |
| 7:     | 0.020  | -0.011 |
| 8:     | -0.199 | -0.331 |
| 9:     | -0.395 | -0.367 |
| 10:    | -0.453 | -0.113 |

X CENTROID: -0.078  
Y CENTROID: 0.006  
POA TO CENTROID: 0.078  
HORZ SPREAD: 1.461  
VERT SPREAD: 2.307  
GROUP SPREAD: 2.443  
MIN RADIUS: 0.099  
MAX RADIUS: 1.367  
MEAN RADIUS: 0.639  
# IN 1 IN DIAMETER: 5  
# IN 2 IN DIAMETER: 8  
# in 3 IN DIAMETER: 10



TARGET APPROX 1/2 SCALE

**M-24 INSPECTION CHECKLIST**  
**CONTRACT #: DAAE-20-02-D-0127**

|                     |                                    |           |         |
|---------------------|------------------------------------|-----------|---------|
| R & E NUMBER        | 84036                              |           |         |
| SERIAL NUMBER       | C622 3077                          |           |         |
| LOG-IN DATE         | 8-20-04                            |           |         |
| INSPECT AND VERIFY: |                                    |           |         |
| OPERATION #         | OPERATION NAME                     | DATE      | INITIAL |
| 550                 | DIS-ASSEMBLE GUN                   | 8-26-04   | RTL     |
| 560 A               | RE-BARREL                          | 8-26-04   | RTL     |
| B                   | DRILL AND TAP                      | 9-1-04    | TRW     |
| 575                 | ASSEMBLE <b>MAGNA-FLUX</b>         | 8-26-04   | RTL     |
| 600                 | PROOF <b>INSPECTED</b>             | 8-30-04   | RTL     |
| 605                 | CHECK HEADSPACE <b>SEP 02 2004</b> | 8-30-04   | RTL     |
| 610                 | DIS-ASSEMBLE GUN                   | 8-31-04   | RTL     |
| 612                 | <b>MAGNAFLUX</b> <b>OPERATOR</b>   |           |         |
| 615                 | ROLLMARK CALIBER                   | 9/3/04    | LB      |
| 618                 | ROTO-BLAST                         | 9-3-04    | LB      |
| 620                 | APPLY COATINGS                     | 9/7/04    | HP      |
| 625 A               | FINAL ASSEMBLY                     | 9-8-04    | PW      |
| B                   | TRIGGER PULL TEST                  |           |         |
| C                   | SAFETY "ON" FORCE                  |           |         |
| D                   | SAFETY "OFF" FORCE                 |           |         |
| E                   | FIRING PIN INDENT                  |           |         |
| 640                 | TARGET                             | 9-13-04   | TRW     |
| 655                 | FINAL INSPECT                      | 9-14-04   | RTL     |
| 660                 | PACK                               | 10-5-04   | RA      |
|                     |                                    | SHIP DATE |         |
| QAR INSPECTION DATE |                                    |           |         |

CONFIDENTIAL-SUBJECT TO PROTECTIVE ORDER  
KINZER V. REMINGTON

M2400048430

|                                                                                                     |  |                                            |                                                                                           |
|-----------------------------------------------------------------------------------------------------|--|--------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Remington</b> ®                                                                                  |  | <b>DUPONT</b><br>REG. U.S. PAT. & TM. OFF. | VERY IMPORTANT:<br>Instruction Book<br>enclosed to assure<br>safe use of this<br>firearm. |
| <b>MODEL 700™ H24</b>                                                                               |  | <b>SERIAL NO.</b><br>C6225077              | <b>ORDER NO.</b><br><b>5716</b>                                                           |
| MADE IN ILION, N.Y. U.S.A. Reg. U.S. Pat & Tm. Off, Marca Registrada Marque Deposee.                |  | 01                                         |                                                                                           |
| <br>5716 C6225077 |  |                                            |                                                                                           |



CONTRACT # DAAA21-87-C-0086

GUN SERIAL # C6225077

| OP. #     | OP. NAME                                                 | READINGS | DATE    | INIT |
|-----------|----------------------------------------------------------|----------|---------|------|
| 575 & 580 | Assemble Action and Stock                                | 4 12 89  | 4/12/89 | RW   |
| 600       | Proof                                                    | 4 12 89  | 4/12/89 | RW   |
| 607       | Check Headspace                                          | 4 12 89  | 4/12/89 | RW   |
| 610       | Dis-assemble Gun                                         | 12 89    | 4/12/89 | RW   |
| 612       | Magnaflux Barrel Action                                  |          | 4/13/89 | KCR  |
|           | Magnaflux Bolt                                           |          | 4/14/89 | KCR  |
| 615       | Rollmark Caliber                                         |          |         |      |
| 617       | Drill and Tap Sight Holes                                | 4 14 89  | 4/14/89 | WB   |
| 618       | Polish Barrel RB                                         | 4 14 89  | 4/14/89 | BT   |
| 620       | Apply Coatings (Barrel Action)                           |          | 4-19-89 | TJA  |
|           | Apply Coating (Bolt)                                     |          |         |      |
| 625       | Final Assembly                                           |          |         |      |
|           | A) Clean inside of Bolt Assembly                         |          | 5/4/89  | RW   |
|           | B) Inspect Rear Firing Pin Hole for Chamfer in Bolt Head |          | 5/4/89  | RW   |
|           | C) Inspect Ejector Hole for Chamfer                      |          | 5/4/89  | RW   |
|           | D) Oil Firing Pin Ass'y                                  |          | 5/4/89  | RW   |
|           | E) Adjust Trigger Pull to Min Setting and Stake          |          | 5/9/89  | WB   |

CONTRACT # DAAA21-87-C-0086

GUN SERIAL # C6225077

| OP. #     | OP. NAME                                                 | READINGS                     | DATE    | INIT |
|-----------|----------------------------------------------------------|------------------------------|---------|------|
| 575 & 580 | Assemble Action and Stock                                | <div>QUALITY<br/>AUDIT</div> | 4 12 89 | RW   |
| 600       | Proof                                                    |                              | 4 12 89 | RW   |
| 607       | Check Headspace                                          |                              | 4 12 89 | RW   |
| 610       | Dis-assemble Gun                                         |                              | 12 89   | RW   |
| 612       | Magnaflux Barrel Action                                  |                              | 4/13/89 | KCR  |
|           | Magnaflux Bolt                                           |                              | 4/14/89 | KCR  |
| 615       | Rollmark Caliber                                         |                              |         |      |
| 617       | Drill and Tap Sight Holes                                |                              | 4 14 89 | YB   |
| 618       | Polish Barrel RB                                         |                              | 4 14 89 | BT   |
| 620       | Apply Coatings (Barrel Action)                           |                              | 4-19-89 | TJA  |
|           | Apply Coating (Bolt)                                     |                              |         |      |
| 625       | Final Assembly                                           |                              |         |      |
|           | A) Clean inside of Bolt Assembly                         |                              | 5/4/89  | RW   |
|           | B) Inspect Rear Firing Pin Hole for Chamfer in Bolt Head |                              | 5/4/89  | RW   |
|           | C) Inspect Ejector Hole for Chamfer                      |                              | 5/4/89  | RW   |
|           | D) Oil Firing Pin Ass'y                                  |                              | 5/4/89  | RW   |
|           | E) Adjust Trigger Pull to Min Setting and Stake          |                              | 5/9/89  | WB   |

| op. #        | OP. NAME                                                    | READINGS |      |      | DATE       | INIT |
|--------------|-------------------------------------------------------------|----------|------|------|------------|------|
| 625<br>cont. | F) Safety On Force                                          | 6        | 6    | 6    | 5/9/89     | guy  |
|              | G) Safety Off Force                                         | 3        | 3    | 3    | 5/9/89     | guy  |
|              | H) Trigger Pull Test & Retainability                        |          |      |      | 5/9/89     | WAB  |
|              | I) Firing Pin Indent                                        | .020     | .020 | .020 | 5/9/89     | guy  |
|              | J) Assemble Stock                                           |          |      |      | 5/10/89    | RW   |
|              | K) Assemble Swivel Studs                                    |          |      |      | 15 May 89  | guy  |
|              | L) Attach Front and Rear Sight Assemblies                   |          |      |      | 5/10/89    | RW   |
|              | M) Iron Sight Alignment                                     |          |      |      | 5/10/89    | RW   |
|              | N) Detach Front & Rear Sights & place in numbered container |          |      |      | 5/10/89    | RW   |
|              | O) Attach Scope to Rifle                                    |          |      |      | 5/10/89    | guy  |
|              | P) Detach & Attach Scope 20 Times                           |          |      |      | 5/10/89    | guy  |
| 640          | Gallery Target & Test                                       | 71 R     | 70 L |      | 5/11/89    | DH   |
|              | A) Time                                                     |          |      |      | 5/11/89    | DH   |
|              | B) Malfunctions                                             |          |      |      | 5/11/89    | DH   |
|              | C) Pierced Primers                                          |          |      |      | 5/11/89    | DH   |
|              | D) Optical Clarity of Scope                                 |          |      |      | 5/11/89    | DH   |
| 645          | Inspect for Live Ammo                                       |          |      |      | 5/11/89    | DH   |
| 655          | Final Inspection                                            |          |      |      |            |      |
|              | A) Headspace                                                |          |      |      | 15 May 89  | guy  |
|              | B) Trigger Pull                                             | 2.51     | 2.78 | 2.62 | 15 May 89  | guy  |
|              | C) Function                                                 |          |      |      | 15 May 89  | guy  |
| 660          | Pack                                                        |          |      |      | 27 June 89 | guy  |

SWS TRIGGER PULL TEST

AVERAGE PULL FORCE BETWEEN  
INITIAL & CYCLE TESTS

2.50# + .50#

3.00# + .75#

4.00# + 1.00#

SERIAL NO. 5077

DATE 3/26/90

TESTER WLB

|         | 2.50#<br>INITIAL | 2.50# AFTER<br>50 CYCLES | FINAL TEST &<br>TO RESET 2.50# | COMMENTS                                                               |
|---------|------------------|--------------------------|--------------------------------|------------------------------------------------------------------------|
| PULL #1 | 2.30             | 2.27                     | 2.18                           | MIN. SETTING,<br>NO AVG. OF 5<br>READINGS ACCEPT-<br>ABLE LESS THAN 2# |
| PULL #2 | 2.30             | 2.29                     | 2.07                           |                                                                        |
| PULL #3 | 2.31             | 2.31                     | 2.20                           |                                                                        |
| PULL #4 | 2.24             | 2.33                     | 2.12                           |                                                                        |
| PULL #5 | 2.22             | 2.24                     | 2.17                           |                                                                        |
| TOTAL   | 11.37            | 11.44                    | 10.74                          |                                                                        |
| AVG.    | 2.27             | 2.29                     | 2.15                           |                                                                        |

|         | 3.00#<br>INITIAL | 3.00# AFTER<br>20 CYCLES | COMMENTS |
|---------|------------------|--------------------------|----------|
| PULL #1 | 3.39             | 3.18                     |          |
| PULL #2 | 3.28             | 3.15                     |          |
| PULL #3 | 3.22             | 3.29                     |          |
| PULL #4 | 3.36             | 3.20                     |          |
| PULL #5 | 3.17             | 3.24                     |          |
| TOTAL   | 16.42            | 16.06                    |          |
| AVG.    | 3.28             | 3.21                     |          |

|         | 4.00#<br>INITIAL | 4.00# AFTER<br>20 CYCLES | MAX SETTING<br>GREATER THAN 4# | RESET TO 4# FOR<br>TARGET & ACCURACY |
|---------|------------------|--------------------------|--------------------------------|--------------------------------------|
| PULL #1 | 4.19             | 4.10                     |                                |                                      |
| PULL #2 | 4.02             | 4.12                     |                                |                                      |
| PULL #3 | 4.04             | 3.98                     |                                |                                      |
| PULL #4 | 4.04             | 4.08                     |                                |                                      |
| PULL #5 | 4.15             | 4.00                     |                                |                                      |
| TOTAL   | 20.44            | 20.28                    |                                |                                      |
| AVG.    | 4.09             | 4.06                     |                                |                                      |

CENTROIDAL DISTANCE CALCULATIONS  
FOR RIFLE # 06225077  
15 May 1989

CENTROIDAL DISTANCES

|      |   |         |
|------|---|---------|
| Ø TO | 1 | .553249 |
| 1 TO | 2 | .963627 |
| 1 TO | 3 | .494405 |
| 1 TO | 4 | .82128  |
| 1 TO | 5 | .785194 |

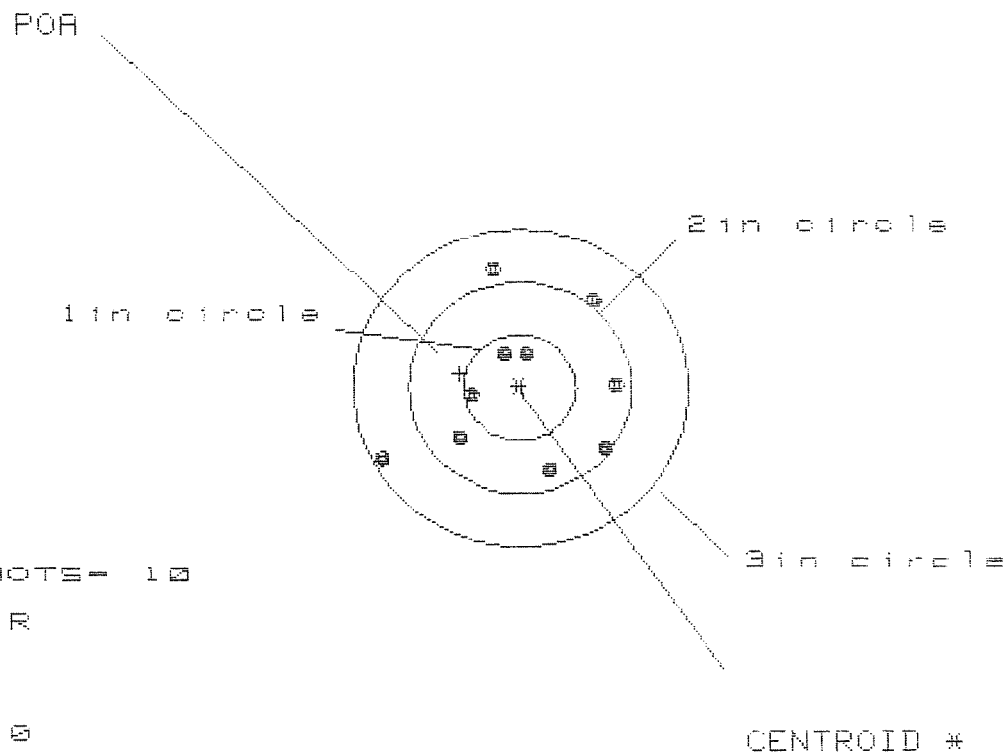
$\frac{25}{4}$  1 <----POA

THE AVERAGE X-COORDINATE FOR THIS RIFLE IS: -.048  
THE AVERAGE Y-COORDINATE FOR THIS RIFLE IS: -.0444  
THE RESULTING AVERAGE POI RADIUS FOR THIS RIFLE IS: .0653862  
THE AMR FOR THIS RIFLE IS: .9578

11 May 1989

FILE:/PATTERNING/CENTERFIRE\_PATT/08225077

# CENTERFIRE PATTERNS # 1



# OF SHOTS= 10

# IN CIR

1in = 3

2in = 7

3in = 10

HS= 2.133

VS= 1.854

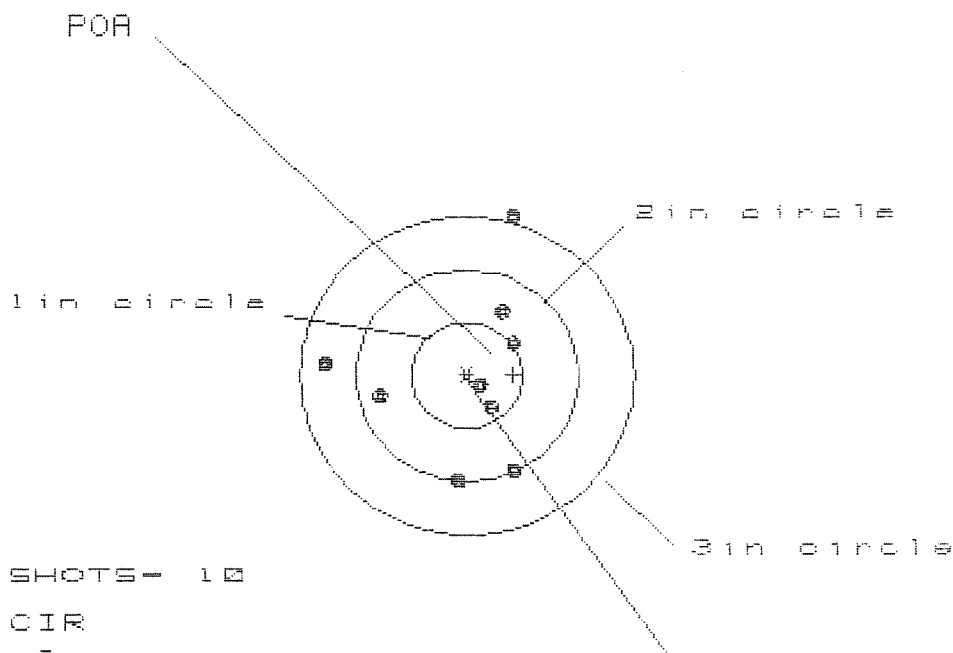
GS= 2.402

|                             |   |        |       |       |
|-----------------------------|---|--------|-------|-------|
| PATTERN #                   | : | 1      |       |       |
| SHOTS (BEST OF)             | : | 10     | 9     | 8     |
| MAXIMUM X                   | : | .847   | .704  | .662  |
| MINIMUM X                   | : | -1.286 | -.653 | -.695 |
| MAXIMUM Y                   | : | 1.099  | 1.029 | .874  |
| MINIMUM Y                   | : | -.755  | -.825 | -.696 |
| CENTROID X                  | : | .538   | .681  | .723  |
| CENTROID Y                  | : | -.129  | -.059 | -.188 |
| FOR TO CENTROID in.         | : | .553   | .683  | .747  |
| MIN RADIUS                  | : | .304   | .218  | .353  |
| MEAN RADIUS                 | : | .792   | .714  | .672  |
| MAX RADIUS                  | : | 1.431  | 1.085 | .982  |
| HORIZONTAL SPREAD           | : | 2.133  | 1.357 | 1.357 |
| VERTICAL SPREAD             | : | 1.854  | 1.854 | 1.570 |
| EXTREME SPREAD              | : | 2.402  | 1.963 | 1.710 |
| NUMBER IN ONE INCH CIRCLE   | = |        | 3     |       |
| NUMBER IN TWO INCH CIRCLE   | = |        | 7     |       |
| NUMBER IN THREE INCH CIRCLE | = |        | 10    |       |

11 May 1989

FILE:/PATTERNING/CENTERFIRE\_PATT/06225077

# CENTERFIRE PATTERNS # 2



# OF SHOTS- 10

# IN CIR

1 in = 3

2 in = 7

3 in = 9

HS= 1.763

VS= 2.529

GS= 2.588

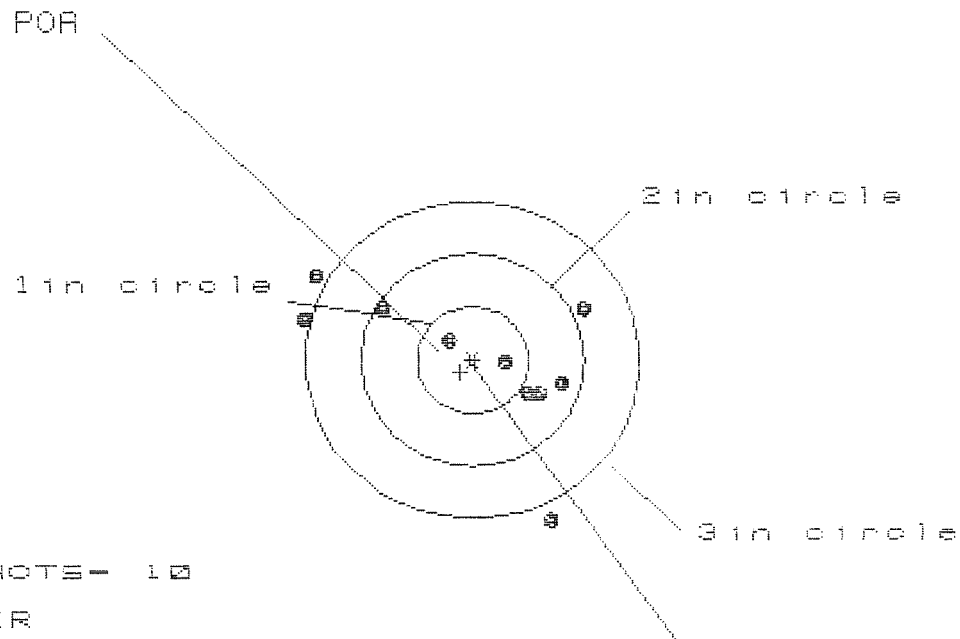
CENTROID #

| PATTERN #                   | : | 2      |        |       |
|-----------------------------|---|--------|--------|-------|
| SHOTS (BEST OF)             | : | 10     | 9      | 8     |
| MAXIMUM X                   | : | .465   | .515   | .359  |
| MINIMUM X                   | : | -1.298 | -1.248 | -.887 |
| MAXIMUM Y                   | : | 1.508  | .741   | .773  |
| MINIMUM Y                   | : | -1.022 | -.854  | -.822 |
| CENTROID X                  | : | -.418  | -.468  | -.312 |
| CENTROID Y                  | : | -.008  | -.176  | -.208 |
| POA TO CENTROID in.         | : | .418   | .500   | .375  |
| MIN RADIUS                  | : | .152   | .229   | .150  |
| MEAN RADIUS                 | : | .760   | .670   | .549  |
| MAX RADIUS                  | : | 1.573  | 1.274  | .898  |
| HORIZONTAL SPREAD           | : | 1.763  | 1.763  | 1.246 |
| VERTICAL SPREAD             | : | 2.529  | 1.595  | 1.595 |
| EXTREME SPREAD              | : | 2.588  | 1.950  | 1.639 |
| NUMBER IN ONE INCH CIRCLE   | = |        | 3      |       |
| NUMBER IN TWO INCH CIRCLE   | = |        | 7      |       |
| NUMBER IN THREE INCH CIRCLE | = |        | 9      |       |

11 May 1989

FILE:/PATTERNING/CENTERFIRE\_PATT/08225077

# CENTERFIRE PATTERNS # 3



# OF SHOTS- 10

# IN CIR

1in = 2

2in = 6

3in = 7

HS= 2.505

VS= 2.307

GS= 3.106

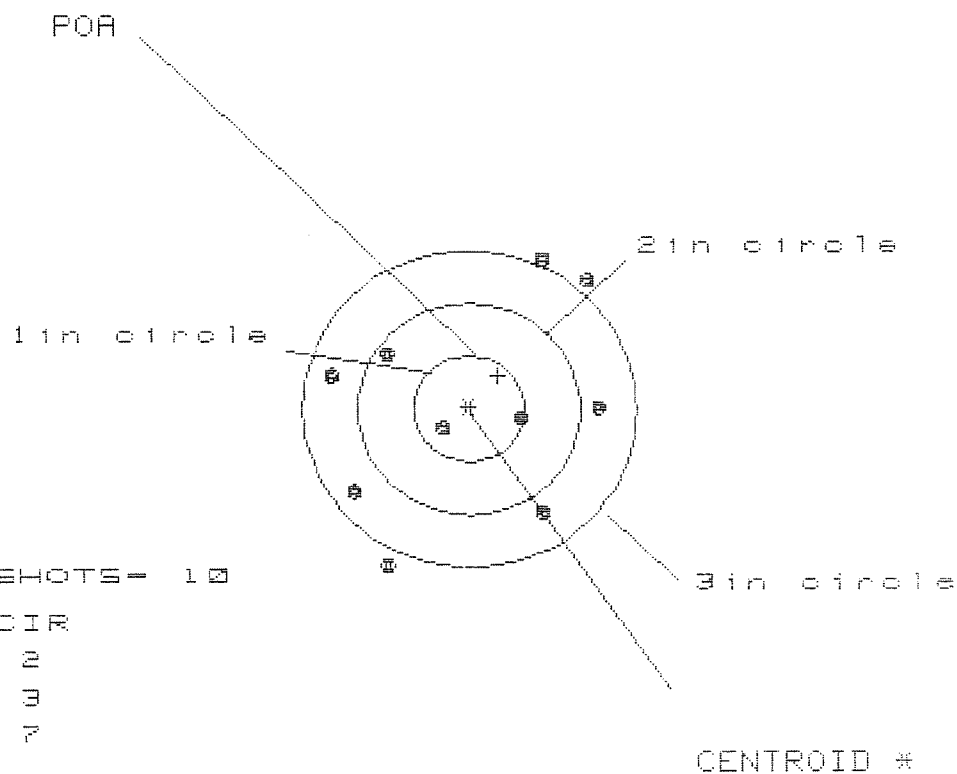
CENTROID #

| PATTERN #                   | : | 3      |        |        |
|-----------------------------|---|--------|--------|--------|
| SHOTS (BEST OF)             | : | 10     | 9      | 8      |
| MAXIMUM X                   | : | 1.016  | 1.093  | .931   |
| MINIMUM X                   | : | -1.489 | -1.412 | -1.574 |
| MAXIMUM Y                   | : | .762   | .590   | .412   |
| MINIMUM Y                   | : | -1.545 | -.495  | -.421  |
| CENTROID X                  | : | .108   | .030   | .192   |
| CENTROID Y                  | : | .115   | .287   | .213   |
| POA TO CENTROID in.         | : | .157   | .288   | .287   |
| MIN RADIUS                  | : | .289   | .144   | .286   |
| MEAN RADIUS                 | : | .953   | .873   | .766   |
| MAX RADIUS                  | : | 1.696  | 1.430  | 1.603  |
| HORIZONTAL SPREAD           | : | 2.505  | 2.505  | 2.505  |
| VERTICAL SPREAD             | : | 2.307  | 1.085  | .833   |
| EXTREME SPREAD              | : | 3.106  | 2.507  | 2.507  |
| NUMBER IN ONE INCH CIRCLE   | = |        | 2      |        |
| NUMBER IN TWO INCH CIRCLE   | = |        | 6      |        |
| NUMBER IN THREE INCH CIRCLE | = |        | 7      |        |

11 May 1989

FILE:/PATTERNING/CENTERFIRE\_PATT/08225077

# CENTERFIRE PATTERNS # 4



# OF SHOTS- 10

# IN CIR

1 in = 2

2 in = 3

3 in = 7

HS= 2.361

VS= 2.910

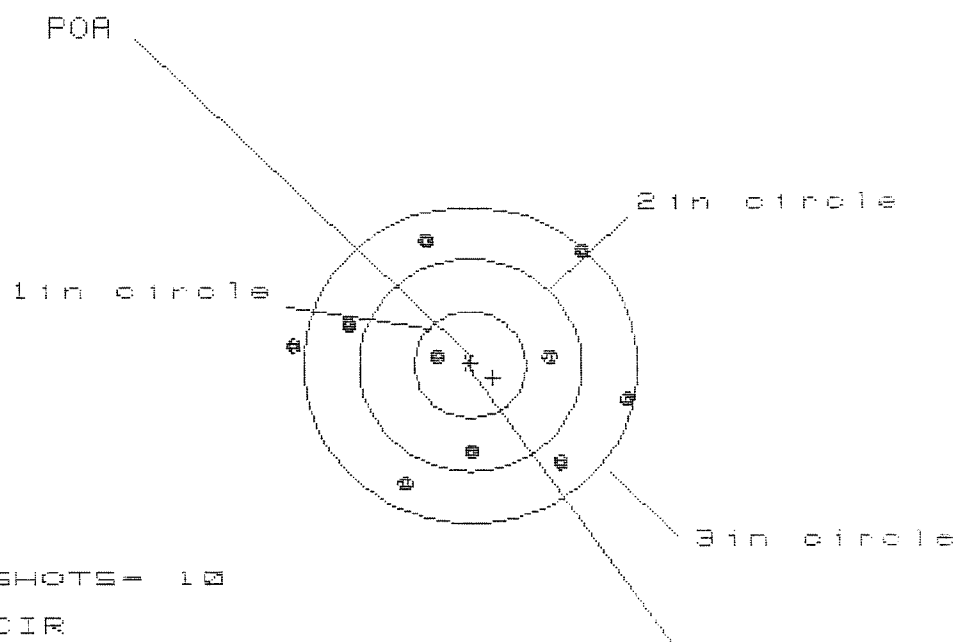
GS= 3.256

|                               |   |        |        |        |
|-------------------------------|---|--------|--------|--------|
| PATTERN #                     | : | 4      |        |        |
| SHOTS (BEST OF)               | : | 10     | 9      | 8      |
| MAXIMUM X                     | : | 1.145  | 1.061  | 1.139  |
| MINIMUM X                     | : | -1.216 | -1.300 | -1.222 |
| MAXIMUM Y                     | : | 1.441  | 1.277  | 1.166  |
| MINIMUM Y                     | : | -1.469 | -1.133 | -.973  |
| CENTROID X                    | : | -.261  | -.177  | -.255  |
| CENTROID Y                    | : | -.319  | -.155  | -.315  |
| POA TO CENTROID in.           | : | .412   | .236   | .405   |
| MIN RADIUS                    | : | .314   | .475   | .321   |
| MEAN RADIUS                   | : | 1.145  | 1.092  | 1.025  |
| MAX RADIUS                    | : | 1.652  | 1.483  | 1.569  |
| HORIZONTAL SPREAD             | : | 2.361  | 2.361  | 2.361  |
| VERTICAL SPREAD               | : | 2.910  | 2.410  | 2.139  |
| EXTREME SPREAD                | : | 3.256  | 2.875  | 2.875  |
| NUMBER IN ONE INCH CIRCLE =   |   |        | 2      |        |
| NUMBER IN TWO INCH CIRCLE =   |   |        | 3      |        |
| NUMBER IN THREE INCH CIRCLE = |   |        | 7      |        |

11 May 1989

FILE:/PATTERNING/CENTERFIRE\_PATT/C8225077

# CENTERFIRE PATTERNS # 5



# OF SHOTS= 10

# IN CIR

1in = 1

2in = 3

3in = 6

HS= 3.021

VS= 2.349

GS= 3.063

CENTROID #

| PATTERN #                     | 5      |
|-------------------------------|--------|
| SHOTS (BEST OF)               | 10     |
| MAXIMUM X                     | 1.409  |
| MINIMUM X                     | -1.612 |
| MAXIMUM Y                     | 1.202  |
| MINIMUM Y                     | -1.147 |
| CENTROID X                    | -.207  |
| CENTROID Y                    | .119   |
| POA TO CENTROID in.           | .239   |
| MIN RADIUS                    | .306   |
| MEAN RADIUS                   | 1.139  |
| MAX RADIUS                    | 1.627  |
| HORIZONTAL SPREAD             | 3.021  |
| VERTICAL SPREAD               | 2.349  |
| EXTREME SPREAD                | 3.063  |
| NUMBER IN ONE INCH CIRCLE =   | 1      |
| NUMBER IN TWO INCH CIRCLE =   | 3      |
| NUMBER IN THREE INCH CIRCLE = | 6      |