

*July 14 1941
21720*

SUPPLEMENTAL **DESCRIPTION OF MANUFACTURE**



Hood

ITEM: GUN, BROWNING MACHINE, CALIBER .30, M1919A6

VOLUME 1 OF 1

CONTENTS: GENERAL MANUFACTURING DATA

Note: This publication, when used with Description of Manufacture prepared for Gun, Browning Machine, Cal..30, M1919A4, will give complete manufacturing data on both the M1919A4 and M1919A6 Guns.

DATE 1 NOVEMBER 1945

HEAT TREATMENT & FINAL FINISH

FINISH TYPE II CLASS A ORB

PHYSICAL PROPERTIES

YP		RED		SCL
TS	X	BR	X	X
EI-2	X	ROCK	X	X

JUNE 1, 1939

REVISONS

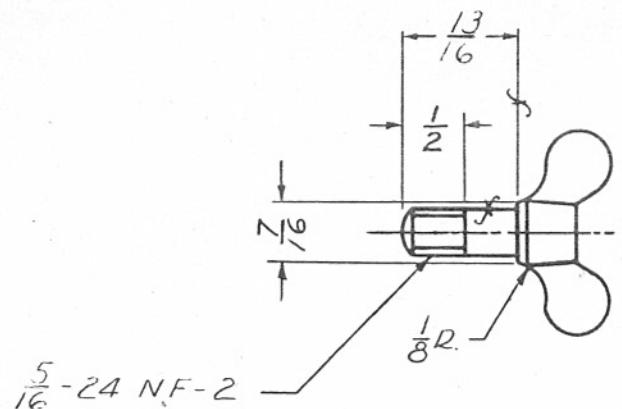
1² 10-12-432² 12-20-433³ 6-1-44

ORG PERTAINS TO

51-102 30BAR-M18 A2

D1312239 BIPOD, ASSEMBLY

51-125 30BMG-M19A6



5/16-24 NF-2

SCREW, THUMB
STEEL - $\frac{5}{16}$ COMMERCIAL BLANK

A152774-2

TOLERANCE $\pm .01$ ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED. SCALE $\frac{1}{1}$

REF SA 12037

A152774

DETMAN	TRACED	LUG DETMAN
C.J.R.	X C.F.T.	C.J.T.

CHECKER	S.A.	CHIEF DETMAN
L.V.G.	X 00	X S.A.

SUBMITTED:-

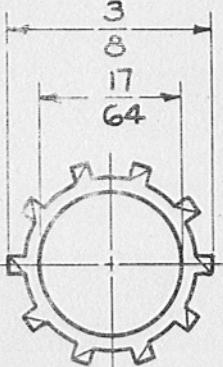
30/44 *Mallay Sulan*
MAJOR ORO DEPT USA

APPROVED BY ORDER OF THE
CHIEF OF ORDNANCE

G.W.D. *LTC COL ORO DEPT USA*

ORDNANCE DEPT USA

A7110440

HEAT TREATMENT & FINAL FINISH		PHYSICAL PROPERTIES						JANUARY 31, 1944	
		Y. P.		RED.		SCL.		REVISIONS	
		T. S.	X	BR.	X		X	1 3-4-44	
		EL. 2		ROCK					
 WASHER, LOCK <u>.022 STEEL-COMMERCIAL</u> SHAKEPROOF EXTERNAL TOOTH LOCK WASHER NO. 1114-05 OR EQUAL									
DRG. PERTAINS TO 51-83 30 CAL. BMG. M1919A4(FXO) 51-84 30 CAL. BMG. M1919A4(FLEX) 51-125 30 CAL. BMG. M1919A6 B144235 SIGHT BRACKET ASSEMBLY									
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL ± — FRACTIONAL ± — ANGULAR ± —									
DRAFTSMAN	TRACER	L'D G DRAFTSMAN							
<i>W.B.26</i>	<i>W.B.26</i>	<i>A.M.R.</i>							
CHECKED	O.D.	CHIEF DRAFTSMAN							
<i>Hug.</i>	<i>O.D.</i>								
SUBMITTED:									
<i>KMRoe</i>									
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE:									
<i>Geo. L. Kean</i> CAPT. ORD. DEPT. U. S. A.									
ORDNANCE DEPT., U. S. A.									
SCALE $\frac{4}{1}$	A	7110440							

MADE AT ROCK ISLAND ARSENAL

A 7123315

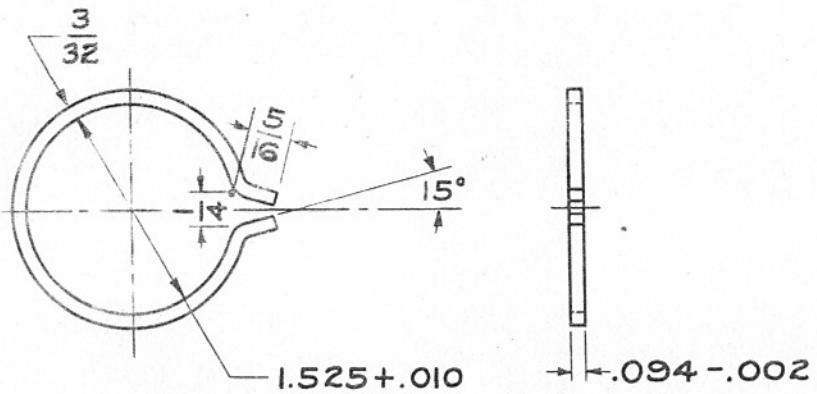
MAY 25, 1945

HEAT TREATMENT & FINAL FINISH		PHYSICAL PROPERTIES				REVISIONS		
Y. P.		RED		SCL				
T. S.		BR						
EL 2		PAR						
		51-84 .30 BMG-M19A4(FLEX)						
		51-114 .30BMG-M1919A5(FXD)						
		51-125 .30BMG-M1919A6					DRG. FERTAINS TO	
			C9801	COVER, ASSEMBLY				
			C9814	COVER, W/O REAR				
				SIGHT FIXED BASEASSY.				
			51-10	.30 BMG-M17A1(WC)				
			51-83	.30BMG-M19A4(FXD)				
			DO	INSCRIBE PART NO. DO NOT				
			TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL .005 FRACTIONAL $\frac{1}{64}$ ANGULAR 5°					
			DRAFTSMAN <i>W.O.F.</i>	INSPECTOR <i>W.O.F.</i>	L.G. DRAFTSMAN <i>W.O.F.</i>			
			CHIEF <i>Kay</i>		CHIEF DRAFTSMAN <i>Kay</i>			
			SUBMITTED. <i>A.H.Roe</i>					
			APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>Werton J. Crook</i> COL. 20 OCT. U.S.A.					
			ORDNANCE DEPT., U. S. A.					
SUPERSEDES A24604 WITH CHANGE 5-25-45		SCALE $\frac{4}{A}$	7123315					

MADE AT ROCK ISLAND ARSENAL

A 7162161

HEAT TREATMENT & FINAL FINISH		PHYSICAL PROPERTIES				MAY 25, 1945	
HEAT TREAT FINISH TYPE II CLASS B		Y. P.	✓	RED.	✓	SCL.	✓
		T. S.	✓	BR.	✓		
		EL 2		ROCK	C44-48		
REVISIONS							
DRG. PERTAINS TO 51-125 CAL. .30 B.M.G. MI919A6							
DO INSCRIBE PART NO. DO NOT							
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL ± FRACTIONAL ± $\frac{1}{64}$ ANGULAR ± 2°							
DRAFTSMAN M.C.	TRACER M.C.	L'DG DRAFTSMAN <i>Roe</i>					
CHECKER W.B.H.	O.O.						CHIEF DRAFTSMAN
SUBMITTED: <i>A. M. Roe</i>							
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE: <i>W. L. Crook</i> ORD. DEPT., U. S. A.							
ORDNANCE DEPT., U. S. A.							
SUPERSEDES A238235 WITH CHANGE 5-25-45				SCALE $\frac{1}{1}$	A	7162161	
MADE AT ROCK ISLAND ARSENAL							

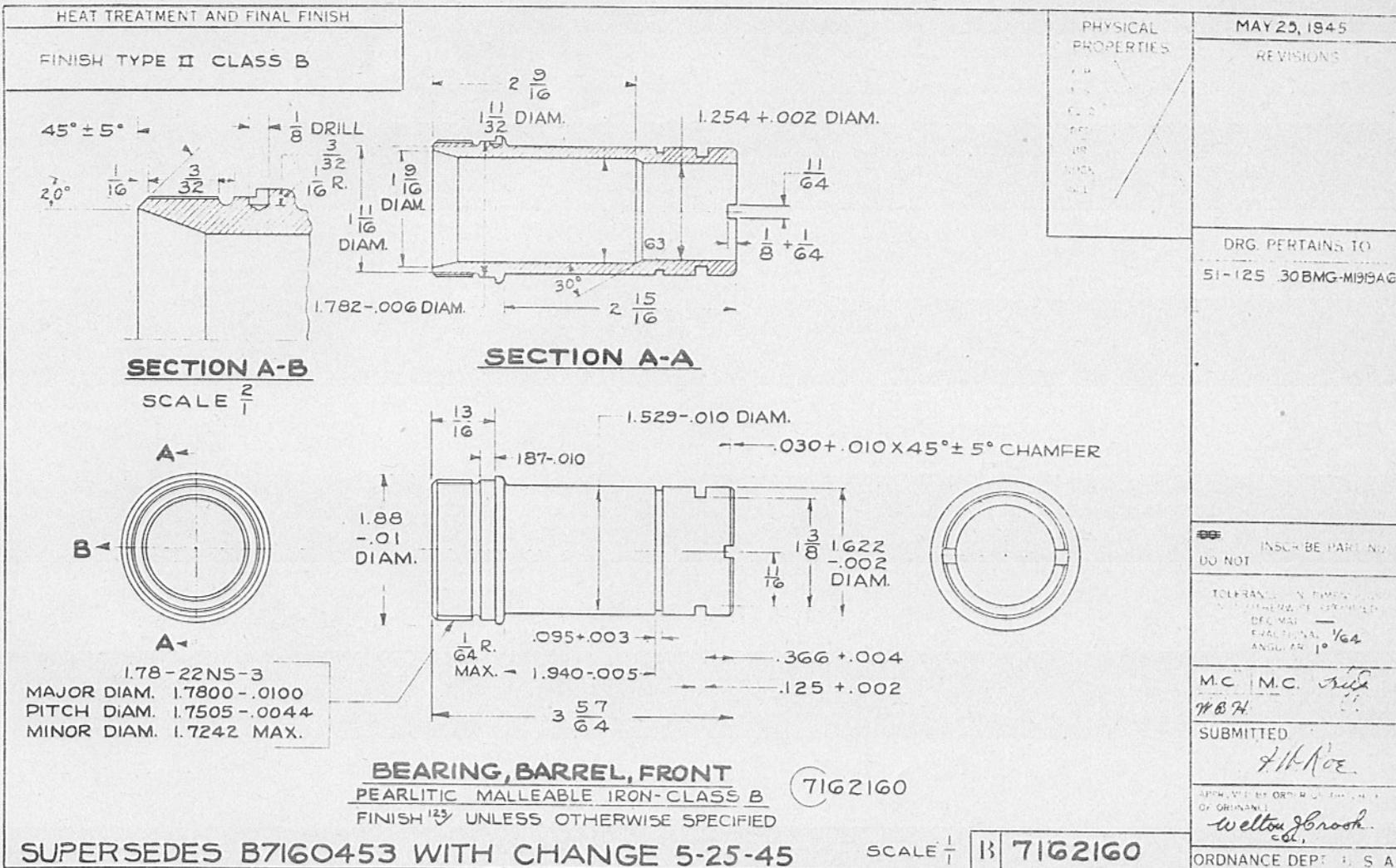


RING, LOCK
SPRING STEEL WD 1060
FINISH 63

(7162161)

SCALE $\frac{1}{1}$ A 7162161

MADE AT ROCK ISLAND ARSENAL



SUPersedes Old Tracing BCBX5 Under Revision Date of 2-10-45

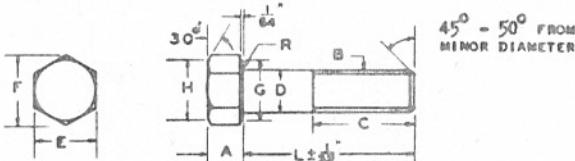
SCREW, CAP, HEX. HD, NF-2 (AUTOMOTIVE HEX. HEAD BOLT)

BCBX5

ORDNANCE LIMITED STANDARD (ORDNANCE DESIGN)

H34 APPROVED 2-17-31

DATE



NOMINAL DIAMETER	1/4	5/16	3/8	1/2	3/4	1
B THREADS PER INCH	28	24	24	20	16	14
D BODY DIAMETER	.2500	.3125	.3750	.5000	.7500	.0000
D MIN.	.2460	.3085	.3710	.4960	.7450	.9950
E HEAD WIDTH	7/16	1/2	9/16	3/4	1	5/16
E MAX.	.4375	.5000	.5625	.7500	1.0000	.3125
E MIN.	.428	.489	.551	.736	.983	.292
F WIDTH ACROSS CORNERS	.488	.551	.628	.840	1.121	1.473
A THICKNESS	3/16	15/64	9/32	3/8	9/16	3/4
A MAX.	.194	.242	.279	.386	.577	.768
A MIN.	.181	.227	.273	.364	.548	.732
C FULL THREAD LENGTH	15/16	1-1/16	1-3/16	1-7/16	1-15/16	2-1/16
C MIN.	5/8	7/8	1	1-1/4	1-3/4	2-1/4
R RADIUS	1/64	1/64	1/64	1/64	1/32	1/32
* UNTHREADED LENGTH	1/16	1/16	1/16	1/16	3/32	3/32
L LENGTH	ORDNANCE PART NUMBER, PLAIN FINISH					
3/8	216251					
1/2	216253	216282	216311	216340		
5/8	218394	216284	218357			
1					216373	
1-1/8	427310		426600			
2-3/4						216408
2-7/8		218330				216410
3						
3-1/8	216266					
3-1/4			216325			216412
3-1/2	216268	216297	216326			216413
3-3/4			216327			216414
4			216328			
4-1/4		216300		216358		
4-1/2	216272		216330	216359		
4-3/4			216331	216360		
5			216332	216361	216390	
5-1/4	216274	216303	216333		216391	
5-1/2			216334	216363	216392	216421
5-3/4	216276	216305	216335	216364		
6				216365	216394	
6-1/4				216366		
L LENGTH	ORDNANCE PART NUMBER, CADMIUM OR ZINC PLATED					
3/8	216252					
1/2	213975	213996				
5/8	213976	213901				
1-1/8		216289	213919			
1-7/8		216291	216318	216347		
L LENGTH	ORDNANCE PART NUMBER, LEAD COATED					
1/2		225307				
2-7/8			426400			
1-1/4			427706	544261		
7/8						
L LENGTH	ORDNANCE PART NUMBER, PHOSPHATE COATED					
5/8	426346					

FOR ADDITIONAL LENGTHS SEE DRAWINGS BCBX1.1, BCBX1.2, BCBX6, BCBX6.1, BCBX5.1, BCBX2.1. DIMENSIONS IN INCHES.
MATERIAL: CARBON STEEL - MIN. YIELD STRENGTH - 60,000 P.S.I.

EXAMPLE FOR ORDERING: SCREW, CAP, HEX, HEAD, STEEL, (PLAIN FINISH), 3/4" - 16NF-2 X 1", DRG. BCBX5,
ORD. PART NO. 216373.

TOLERANCES

MINIMUM BODY DIAMETER: MINUS .004" ON SIZES 1/4" TO 1/2" INCL., MINUS .005" ON SIZES ABOVE 1/2"

MINIMUM FULL THREAD LENGTH = 2D + 1/4"; MAX. = MIN. + 3/16".

*MAXIMUM UNTHREADED LENGTH = 1-1/2 X PITCH TO NEAREST 1/32" FOR CAP SCREWS TOO SHORT TO ALLOW FORMULA THREAD LENGTH.

DIAMETER OF WASHER FACE G = E MAX. - .01; DIAMETER OF TOP CIRCLE H = E MAX. - .05

SUPERSEDES OLD TRACING BEAXI UNDER REVISION DATE OF 5-6-44

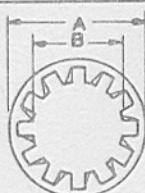
WASHER, LOCK, "TOOTH" TYPE INTERNAL TOOTH

BEAXI

ORDNANCE STANDARD (COMMERCIAL)

H&H APPROVED 5-11-33 DATE

NOTE: EITHER TYPE A OR TYPE B IS ACCEPTABLE.



TYPE A



TYPE B

SIZE, NOMINAL	#2	#3	#4	#5	#6	#8
A OUTSIDE DIAMETER	.200 MAX. MIN.	.232 .215 MAX. MIN.	.270 .255 MAX. MIN.	.280 .245 MAX. MIN.	.295 .275 MAX. MIN.	.340 .325 MAX. MIN.
B INSIDE DIAMETER	.095 MAX. MIN.	.109 .102 MAX. MIN.	.123 .115 MAX. MIN.	.136 .120 MAX. MIN.	.150 .141 MAX. MIN.	.176 .168 MAX. MIN.
C THICKNESS	.015 MAX. MIN.	.019 .012 MAX. MIN.	.019 .015 MAX. MIN.	.021 .017 MAX. MIN.	.021 .017 MAX. MIN.	.023 .018 MAX. MIN.

MATERIAL AND FINISH

ORDNANCE PART NUMBER

STEEL PLAIN	190638	178835	116042	180156	115543	115544
STEEL CADMIUM OR ZINC PLATED	188131	179162	138522	147755	138526	138530
STEEL NICKEL PLATED	180088	180135	118937	180184	118924	118925
STEEL CHROMIUM PLATED	180049	180133	138523	180182	138527	138531
STEEL PHOSPHATE COATED	180090	180154	138524	180186	138528	138166
PHOSPHOR BRONZE PLAIN	221117	228809	228810	228821	190669	190670
PHOSPHOR BRONZE TINNED	424227	424219	424220	424221	219891	228843

SIZE, NOMINAL

#10

#12

#14 & 1/4

5/16

3/8

A OUTSIDE DIAMETER	.381 MAX. MIN.	.410 .394 MAX. MIN.	.478 .460 MAX. MIN.	.610 .594 MAX. MIN.	.692 .670 MAX. MIN.	
B INSIDE DIAMETER	.204 MAX. MIN.	.231 .221 MAX. MIN.	.267 .256 MAX. MIN.	.332 .320 MAX. MIN.	.398 .384 MAX. MIN.	
C THICKNESS	.025 MAX. MIN.	.025 .020 MAX. MIN.	.028 .023 MAX. MIN.	.034 .028 MAX. MIN.	.040 .032 MAX. MIN.	

MATERIAL AND FINISH

ORDNANCE PART NUMBER

STEEL PLAIN	115545	115546	115547	115548	115549	
STEEL CADMIUM OR ZINC PLATED	121801	125774	120423	138538	138542	
STEEL NICKEL PLATED	118926	118927	118928	118929	118930	
STEEL CHROMIUM PLATED	138533	125775	138536	138539	138543	
STEEL PHOSPHATE COATED	138534	138181	138167	138540	138544	
PHOSPHOR BRONZE PLAIN	190672	228832	228834	190676	228847	
PHOSPHOR BRONZE TINNED	424222	424223	424224	424225	424226	

MATERIAL:

STEEL - SAE 1050 OR 1066 HEAT TREATED, ROCKWELL HARDNESS C40-C50 OR EQUIVALENT.

PHOSPHOR BRONZE - SPECIFICATION QQ-B-746.

NOTE: FOR SPECIFICATIONS SEE DRG. BEAX1.

EXAMPLE FOR ORDERING: WASHER, LOCK, TOOTH TYPE, STEEL, 3/8", (PLAIN), DRG. BEAX1, ORD. PART NO. 115549.

DIMENSIONS IN INCHES

REVISION ④ 5-6-44 ⑥ 10-3-44

WASHER, PLAIN

BEBXI

(S.A.E. STANDARD)

ORDNANCE STANDARD (COMMERCIAL.)

Holt
APPROVED

6/15/37
DATE



TRACING BEBXI UNDER REVISION DATE OF	DIAMETER		THICKNESS	ORDNANCE PART NUMBER FOR THE FINISH SPECIFIED							
	NOMINAL SIZE	INSIDE	OUTSIDE	STEEL ((CARBON))				STEEL STAIN- LESS PLAIN	BRASS PLAIN		
		- A -	- B -	- C - $\pm .010$	PLAIN FINISH	CADMIUM OR ZINC	PHOS- PHATE				
#2 (.186)	3/32	1/4	1/32	221415					221429	221417	221419
#4 (.112)	1/8	5/16	1/32	221416					221430	221418	221424
#6 (.138)	5/32	3/8	3/64	103337	131014	118674	112470	221431	113818	116101	
#8 (.164)	3/16	7/16	3/64	114986	131015	118675	116076	14-8099	116089	114985	
#10 (.190)	7/32	1/2	1/16	103338	120391	118676	112471	221432	116090	113893	
#12 (.216)	1/4	9/16	1/16	147577	147579	147582	147578	221433	147583	147586	
1/4	9/32	5/8	1/16	103339	120392	118773	112472	178474	116091	116102	
5/16	11/32	11/16	1/16	103340	120393	118774	112473	221435	116092	115308	
3/8	13/32	13/16	1/16	103341	120394	118775	112474	187372	116093	116103	
7/16	15/32	15/16	1/16	103342	120395	118776	112475	221436	116094	116104	
1/2	17/32	1-1/16	3/32	103343	120396	118777	112476	221437	116095	116105	
9/16	19/32	1-3/16	3/32	103344	121458	118778	112477	221439	116096	116106	
5/8	21/32	1-5/16	3/32	103345	131016	118779	112478	221440	116097	116107	
11/16	23/32	1-3/8	3/32	147587	147589	147592	147588	221441	147593	147596	
3/4	13/16	1-1/2	1/8	103346	131017	118780	112479	221442	116098	116108	
7/8	15/16	1-3/4	1/8	103347	131018	118781	112480	221443	116099	116109	
1	1-1/16	2	1/8	103348	131019	118782	112481	221444	116100	116110	
1-1/8	1-3/16	2-1/4	1/8	172798	172810			221445	172834	221425	
1-1/4	1-5/16	2-1/2	5/32	172799	172811			221446	172838	221426	
1-3/8	1-7/16	2-3/4	2/32	172806	172812			221447	172839	221427	
1-1/2	1-9/16	3	5/32	172807	172821			221448	172855	221428	

MATERIALS: COMMERCIAL, AS ORDERED.

DIMENSIONS IN INCHES.

NOTE: WASHERS SHALL BE FLAT AND FREE FROM BURRS.

EXAMPLE FOR ORDERING: WASHER, PLAIN, STEEL, 1/4" (PLAIN FINISH), DRG. BCBX1, ORD. PART NO. 103339.

REFERENCE: S.A.E. HANDBOOK-1942.

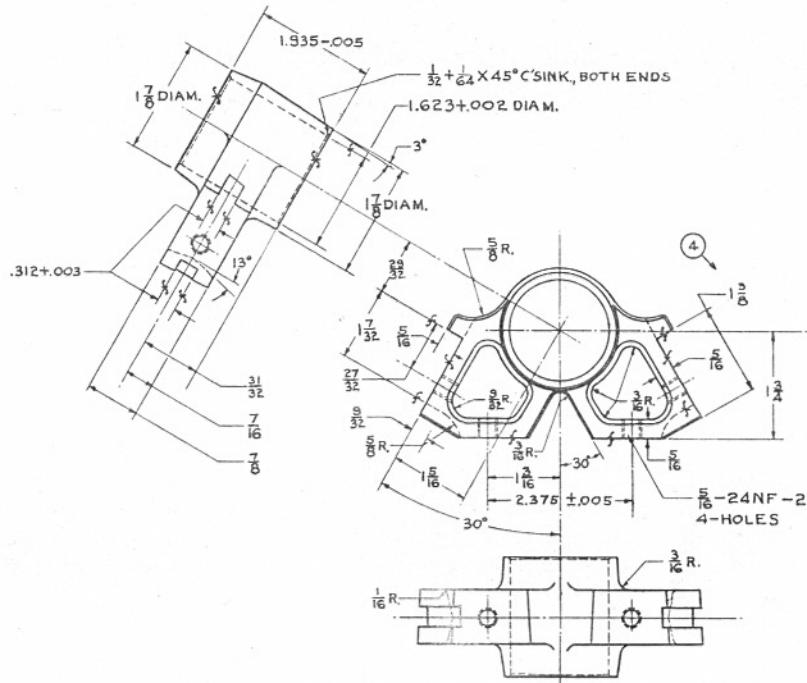
HEAT TREATMENT AND FINAL FINISH

PHOSPHATE BLACK

PHYSICAL PROPERTIES		OCTOBER 6, 1942
		REVISIONS
Y. P.		3 7-22-43
T. S.		4 8-31-43
EL. 2		
RED		
BR.		
ROCK.		
SCL		

DRG. PERTAINS TO

SI-125 30 BMG M1942



HEAD, BIPOD
PEARLITIC MALLEABLE IRON-CLASS 2

C121092

SUPERSEDES OLD YELLUM C121092 UNDER REVISION DATE OF 7-22-43

SCALE 1

C121092

TOLERANCE ON DIMENSION IS
NOT OTHERWISE SPECIFIED
DECIMAL = —
FRACTIONAL = 1/64
ANGULAR = ± 1°MADE IN U.S.A.
H.E.M. I.M.D. *H.H.P.*Chief Draftsman
*H.H.P.*SUBMITTED
*J.H.R.*APPROVED BY ORDER OF THE CHIEF
OF ORDNANCE
Gen. G. K. Keay
CHIEF, ORDNANCE DEPT., U.S.A.

ORDNANCE DEPT., U.S.A.

MADE AT ROCK ISLAND ARSENAL

HEAT TREATMENT AND FINAL FINISH



SECTION B-B

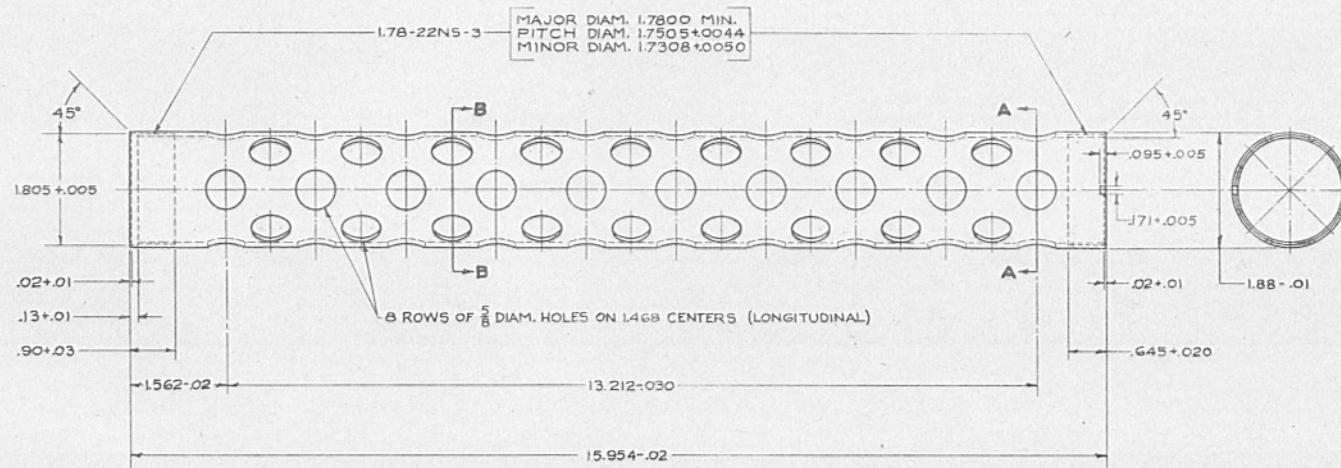
- .083 (NO. 14 B.W. GAGE)

SECTION A-A

PHYSICAL PROPERTIES	
Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	
SCL.	

MARCH 21, 1944
REVISIONS

DRG. PERTAINS TO
0714037 CASING, ASS'Y.
51-125 .30BMG, M19A6



JACKET, BARREL

7160455

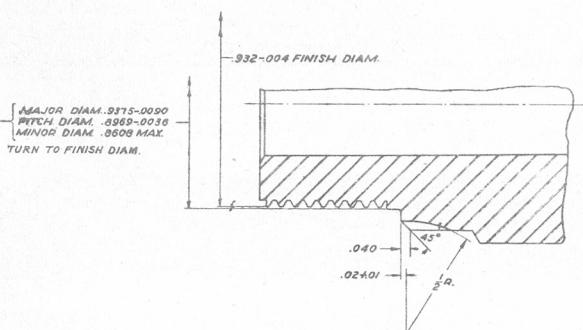
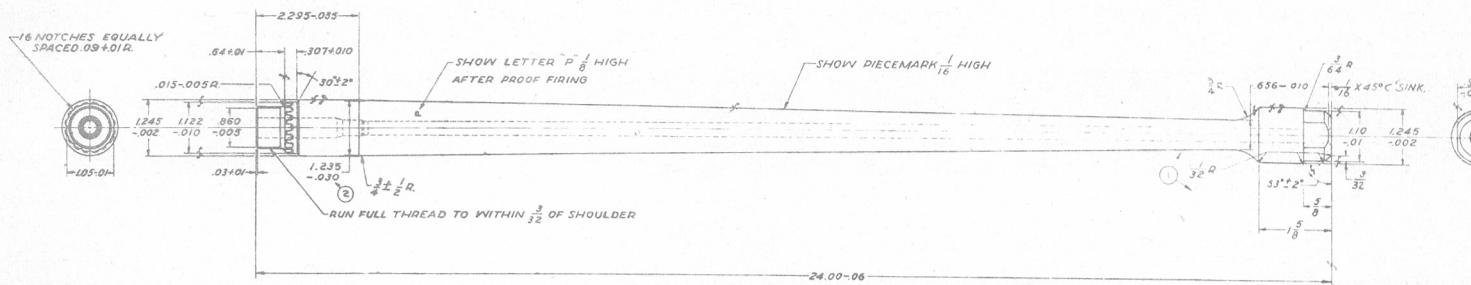
SEAMLESS OR ELECTRIC RESISTANCE WELDED STEEL TUBING - WD1035

SUPERSEDES OLD TRACING C93962 UNDER REVISION DATE OF MARCH 21, 1944

SCALE 1 C 7160455

TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED	
DECIMAL 12	
FRACTIONAL - <i>1/4</i>	
ANGULAR 15°	
DRAWN BY	TRACED BY
<i>W.E. 28</i>	<i>J.H.</i>
CHECKED	APR 15
<i>W.E.</i>	<i>J.H.</i>
SUBMITTED:	
<i>A.H. Roe</i>	
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE: <i>General Signature</i> COL. AND DEPT. U. S. A.	
ORDNANCE DEPT., U. S. A.	

HEAT TREATMENT & FINAL FINISH
TO MEET PHYSICALS AND HARDNESS
OF U.S.A. SPEC 57-107-28 (A-5-40)
PHOSPHATE BLACK (EXCEPT BORE)



NOTE:
FOR CHAMBER AND RIFLING
SEE DRG. C64321

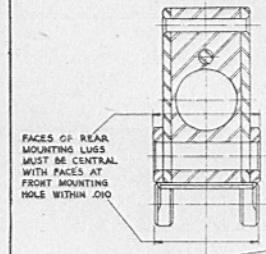
BARREL
STEEL WD 4150 (MODIFIED) D54559

JULY 22, 1943		CLASS	DIVISION	DRAWING	FILE
REVISIONS					
1'	9-17-43				
2'	6-14-44				
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL 2. OF EXCEPTIONS ANGLES $\pm 10^\circ$ RADII $\pm 1/16$					
DRG. PERTAINS TO	51-123	CAL. 10			
		BMG			
		M/191946			
SUBMITTED: <i>H. Roe</i>					
APPROVED BY CHIEF OF THE BUREAU <i>John L. Shaffer</i>					
ORDNANCE DEPT., U.S.A.					

SCALE 1/2

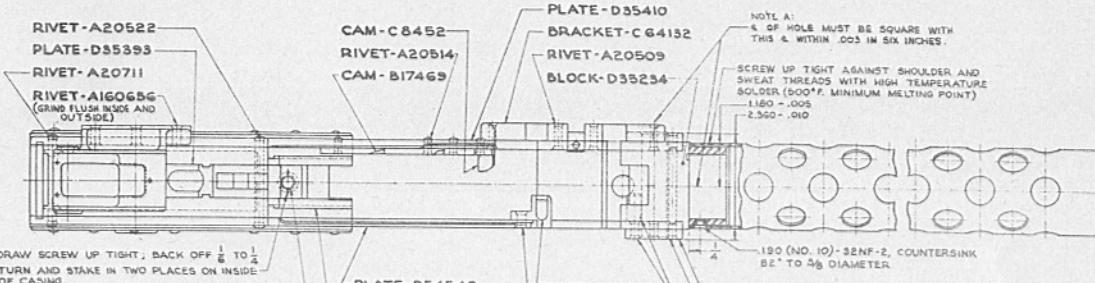
D54559

HEAT TREATMENT AND FINAL FINISH			
FINISH TYPE II - CLASS D			
LIST OF COMPONENTS			
LINE NUMBER	DRAWING NUMBER OR PIECE MARK	NAME OF COMPONENT	NO. REQUIRED PER UNIT ASSEMBLY
1	2	3	4
1	D7114037	CASING ASSEMBLY	* (1)
2		COMPOSED OF:-	
3	G4865	1-BASE, REAR SIGHT	*
4	B147083	1-BLOCK, TRUNNION, ASSEMBLY	*
5	C64153	1-CAM, LOCK, BREACH	*
6	C7160455	1-JACKET, BARREL	*
7	D35392	1-PLATE, BOTTOM	*
8	C64222	1-PLATE, SIDE, L.H., ASSEMBLY	*
9	C94516	1-PLATE, SIDE, R.H., ASSEMBLY	*
10	D35393	1-PLATE, TOP	*
11	A152737	16-RIVET, BOTTOM, PLATE	
12	A20600	2-RIVET, SIDE PLATE, LARGE	
13	A20601	1-RIVET, SIDE PLATE, SMALL	
14	A160656	3-RIVET, SIGHT BRACKET	
15	A20522	1-RIVET, TOP PLATE, LONG	
16	A20711	2-RIVET, TOP PLATE, SHORT	
17	A20527	1-SCREW, BREACH LOCK CAM	
18	BCLXI.1AB	1-SCREW, MACH., FL. HD. NO. 10-32 X 1/4	

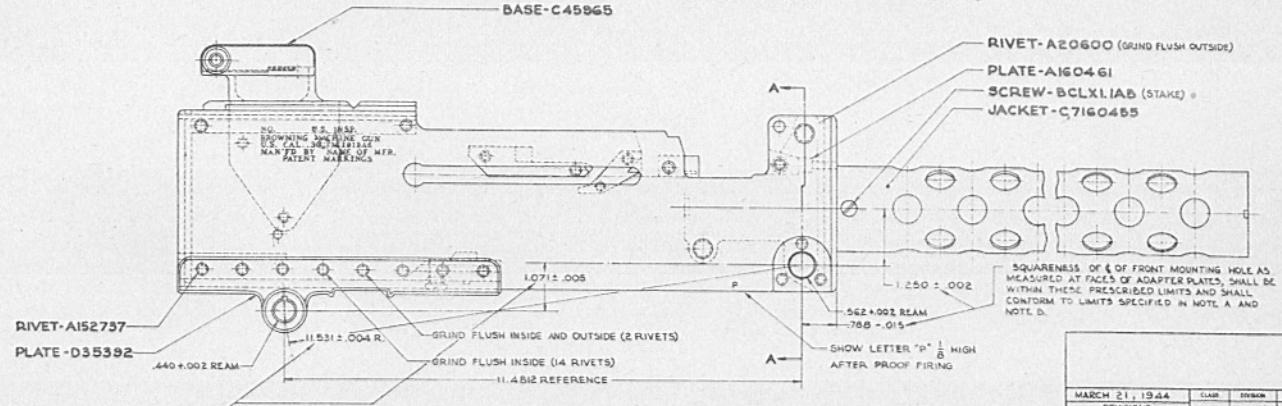


SECTION A-A

SUPERSEDES OLD TRACING D54505 UNDER REVISION DATE OF 3-21-44



DRAW SCREW UP TIGHT, BACK OFF $\frac{1}{8}$ TO $\frac{1}{4}$ TURN AND STAKE IN TWO PLACES ON INSIDE OF CASING.



MARCH 21, 1944
REVISIONS
1 10-5-44
2 9-4-45

TOLERANCE OR DIMENSIONS NOT OTHERWISE SPECIFIED	
DECIMAL 3 - 1.184	
FACTOR 2 - 1.184	
ANGULAR 3 - 2°	
NOTES	MEYER MEYER 646
DRG. PERTAINS TO	51-125 50 B.M.O. M1919 AB
SUBMITTED	J.H. Rose
EXAMINED	
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE	
E.S. LINDNER ORDNANCE DEPT., U.S.A.	

0 1 2 3 4 5 6 7 8 9 10 11 INCHES

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ORDNANCE DEPT., U.S.A.