

INDEX  
PART I

U.S. BOMBS

PAGE NO.

A. ARMY BOMBS

1. Mark Series

General Purpose Bombs	
100 lb. Mk I M IV.....	11
300 lb. Mk I M II.....	11
600 lb. Mk I M II.....	13
1100 lb. Mk III M I.....	13
2000 lb. Mk I M III.....	15
2000 lb. Mk I M IV.....	15
2000 lb. Mk I M V.....	15

2. M Series

General Purpose Bombs	
100 lb. M 30.....	17
300 lb. M 31.....	19
600 lb. M 32.....	21
1100 lb. M 33.....	23
2000 lb. M 34.....	25

Armor Piercing Bombs	
600 lb. M 62.....	27
800 lb. M 61.....	27
900 lb. M 60.....	29
1000 lb. M 52.....	29

Fragmentation Bombs	
30 lb. M 5.....	30

Chemical Bombs	
Introduction.....	31
30 lb. M 46 A2.....	33
100 lb. M 47 A1.....	33
115 lb. M 70.....	35
10 lb. M 67.....	37
6 lb. M 69.....	37

Photoflash Bombs and Signals	
Photo 23 lb. M 23 A1.....	39
Photo 50 lb. M 46.....	39
Signal Cluster Flare.....	41

B. NAVY BOMBS

Fragmentation Bombs	
30 lb. Mk V Mod 1.....	45
30 lb. Mk V Mod 2.....	45
30 lb. Mk V Mod 3.....	45

General Purpose Bombs	
100 lb. Mk I Mods 2 & 3.....	47
100 lb. Mk IV Mods 1 & 4.....	47
500 lb. Mk III Mod 1.....	49
500 lb. Mk IX.....	49
500 lb. Mk XII Mods 1 & 2.....	49
1000 lb. Mk XIII Mods 1 & 2.....	51
1000 lb. Mk V.....	51
1000 lb. Mk IX.....	51

B. NAVY BOMBS (CONT'D)

PAGE NO.

Flares	
Mk 4.....	52
Mk 5.....	53
Mk 6.....	53

Incendiary Bombs	
100 lb. Mk I.....	57
100 lb. Mk XXVIII.....	57

Drift Signal	
3 lb.....	59

Aircraft Mines	
1000 lb. Mk XIII.....	61
1600 lb. Mk XII Mod 1.....	61

Anti-Aircraft Bombs	
3 lb. Type C (Mk XXXII).....	63
5 lb. Mk XXXIV.....	63

Practice Bombs	
3 lb. Mk III, IV, & V Mod 1.....	65
3 lb. Mk XXIII.....	65
15 lb. Mk XIX Mod 1.....	65
100 lb. Mk VII.....	67
100 lb. Mk XV.....	67
500 lb. Mk V.....	69
500 lb. Mk XI.....	69
500 lb. Mk XXI.....	69
1000 lb. Mk VII.....	71
1000 lb. Mk XXII.....	71

Depth Bombs	
Introduction.....	73
650 lb. Mk 29.....	75
650 lb. Mk 37.....	75
650 lb. Mk 38.....	77
700 lb. Mk 49.....	77
(See AN Bombs for other Depth Bombs)	

Gas Bombs	
Mk 42.....	79

A.S. Projector Charges	
65 lb. A.S. Projector Bomb-Mk 5 & 7....	81
65 lb. A.S. Projector Bomb-Mk 6 & 8....	83

C. ARMY- NAVY AND ARMY - NAVY (G.P.) BOMBS

Fragmentation Bombs	
20 lb. AN M 40.....	87
20 lb. AN M 41.....	87

Incendiary Bombs	
2 lb. AN M 52.....	89
4 lb. AN M 54.....	91
4 lb. AN M 54X.....	91
4 lb. AN M 50 A1.....	91
4 lb. AN M 50 A1X.....	91

## C. ARMY-NAVY AND ARMY-NAVY (G.P.) BOMBS

PAGE NO.

## H.E. Demolition Bombs

100 lb. AN M 30.....	93
250 lb. AN M 57.....	95
500 lb. AN M 43.....	97
500 lb. AN M 64.....	97
1000 lb. AN M 44.....	99
1000 lb. AN M 65.....	99
2000 lb. AN M 66.....	101
2000 lb. AN M 34.....	101
4000 lb. AN M 56.....	103

## Semi-Armor Piercing Bombs

500 lb. AN M 58.....	105
1000 lb. AN M 59.....	105

## Armor- Piercing Bombs

1000 lb. AN Mk 33.....	107
1600 lb. AN Mk 1.....	109

## Depth Bombs

Introduction.....	111
325 lb. AN Mk 17-2.....	113
350 lb. AN Mk 44.....	113
325 lb. AN Mk 41.....	115
350 lb. AN Mk 47.....	115
(See Navy Depth Bombs For Others)	

## FLARES

AN M 26.....	117
--------------	-----

## PART II

## U.S. BOMB FUZES

TYPE

PAGE NO.

## A. ARMY FUZES

M 100 Series (Introduction).....	119
M 100.....	tail.....121
AN M 100 A1.....	tail.....121
AN M 100 A2.....	tail.....121
M 101.....	tail.....121
AN M 101 A1.....	tail.....121
AN M 101 A2.....	tail.....121
M 102.....	tail.....121
AN M 102 A1.....	tail.....121
AN M 102 A2.....	tail.....121
M 14 Primer Detonator.....	123
M 103.....	nose.....125
AN M 103.....	nose.....125
M 104.....	nose.....127
M 105.....	nose.....129
M 106.....	tail.....131

## A. ARMY FUZES (CONT'D) TYPE PAGE NO.

M 106 A1.....	tail.....	131
M 106 A2.....	tail.....	131
M 108.....	nose.....	133
M 109.....	nose.....	127
M 110.....	nose.....	135
AN M 110 A1.....	nose.....	135
M 111.....	nose.....	137
AN M 111 A1.....	nose.....	137
AN M 111 A2.....	nose.....	137
M 112.....	tail.....	139
M 113.....	tail.....	139
M 114.....	tail.....	139
M 115.....	tail.....	141
M 116.....	tail.....	141
M 117.....	tail.....	141
M 16 Primer Detonator.....		143
M 120.....	nose.....	145
M 123.....	tail.....	147
M 124.....	tail.....	147
M 125.....	tail.....	147
M 126.....	nose.....	148

## B. NAVY FUZES

Mk 131.....	nose.....	151
Mk 135.....	nose.....	153
Mk 136.....	nose.....	151
Mk 137.....	nose.....	155
Mk 139.....	nose.....	157
Mk 140.....	nose.....	159
Mk 19 Daisy Cutter.....	nose.....	163
AN Mk 219.....	nose.....	161
Mk 221.....	nose.....	164
Mk 223.....	tail.....	167
AN Mk 224.....	Hydrostatic.....	169
Mk 227.....	nose.....	171
AN Mk 228.....	tail.....	173
Mk 229.....	Hydrostatic.....	175
AN Mk 230.....	Hydrostatic.....	175
Mk 232.....	nose.....	177
Mk 233.....	nose.....	179
Mk 234.....	Hydrostatic.....	181
LDT-1.....	tail.....	183
ADN-1.....	nose.....	185

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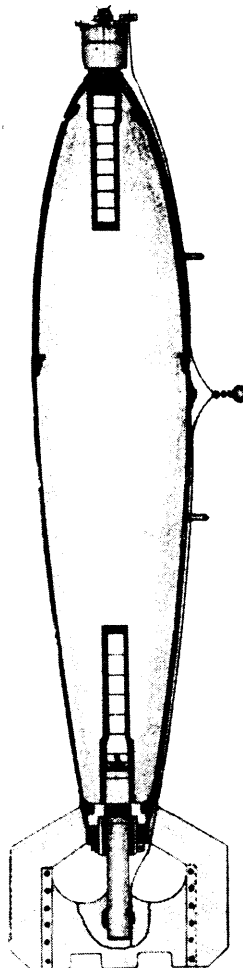
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PART I

SECTION A

ARMY BOMBS

BOMB DATA		COPY NO. _____
NATIONALITY: U.S. ARMY		FILE NO.: 1154.B1
SIZE: 100 lb. Mk. I M IV		INFORMATION DATE: Sept. 1943
300 lb. Mk. I M II		TYPE: Army Demolition - H.E. (Mark Series)
TARGET: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.	FUZES: NOSE: M 105 TAIL: M 106	



100 lb. Mk. I M IV

OBSOLETE



300 lb. Mk. I M II

BOMB DATA		COPY NO. _____
NATIONALITY: U.S. ARMY		FILE NO.: 1154.B1
SIZE: 100 lb. Mk. I M IV		INFORMATION DATE: September 1943
300 lb. Mk. I M II		TYPE: Army Demolition - H.E. (Mark Series)
TARGET: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.	FUZES: NOSE: M 105 TAIL: M 106	
DATA	100 lb. Mk. I M IV	300 lb. Mk. I M II
1 OVERALL LENGTH	47.2 inches	51.2 inches
2 LENGTH OF BODY	39.5 inches	40.6 inches
3 DIAMETER OF BODY	7.9 inches	12.2 inches
4 THICKNESS OF WALL	0.16 inch	0.12 inch
5 MATERIAL OF WALL	Steel	Steel
6 CONSTRUCTION OF BODY	This bomb is formed from three cast steel sections of the body welded together. The body is streamlined by tapering each section towards the rear of the bomb.	
7 TYPE OF SUSPENSION	These bombs are always held horizontally.	
8 CONSTRUCTION OF SUSPENSION LUG	The Mark Series bombs have two eyebolts welded to body along longitudinal axis of the bomb. The eyebolts are formed from bar steel, shaped in the form of a U and then welded to the bomb body.	
9 COLOR & MARKINGS ON BOMB AND TAIL	While these bombs are no longer manufactured they still may be found in the field. Prior to March 11, 1942 these bombs would have been painted yellow all over with black manufacturer's markings but since that date they will be painted olive-drab with a one inch yellow band around the nose and extreme rear of the bomb and a 1/4 inch band around the center of gravity.	
10 LENGTH OF TAIL	8.5 inches	12.0 inches
11 WIDTH OF TAIL	11.0 inches	15.0 inches
12 MATERIAL OF TAIL	Sheet steel.	Sheet steel.
13 CONSTRUCTION OF TAIL	This type of tail consists of the following parts: 1) A cast steel sleeve secured to the body of the bomb by a fin locking nut; 2) Four fins or vanes; 3) Internal box-type struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.	
14 WEIGHT OF TAIL	2.6 lbs.	6.1 lbs.
15 TYPE OF FILLING	Cast T.N.T.	Cast T.N.T.
16 WEIGHT OF FILLING	65.0 lbs.	148.0 lbs.
17 TOTAL WEIGHT OF BOMB	119.4 lbs.	285.9 lbs.
18 CHARGE / WEIGHT RATIO	54.5 %	52.0 %

JOBS DATA NATIONALITY: U.S. ARMY		COPY NO. _____ FILE NO.: 1156.B1
SIZE: 600 lb. Mk. I M II 1100 lb. Mk. III M I		INFORMATION DATE: September 1943 TYPE: Army Demolition - H.E. (Mark Series)
TARGET: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.		FUZES: NCSE: M 105 TAIL: M 106
<div style="text-align: center;"> <p><u>OBSOLETE</u></p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <span>1100 lb.</span> <span>600 lb.</span> </div> </div>		

2638

BOMB DATA		COPY NO. _____	
NATIONALITY: U.S. ARMY		FILE NO.: 1156.B1	
SIZE:		INFORMATION DATE: September 1943	
600 lb. Mk. I M II		TYPE: Army Demolition - H.E.	
1100 lb. Mk. III M I		(Mark Series)	
TARGET:	Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.		
		NOSE: M 105 FUZES: TAIL: M 106	
	DATA	600 lb. Mk. I M II	1100 lb. Mk. III M I
1	OVERALL LENGTH	63.0 inches	68.5 inches
2	LENGTH OF BODY	52.2 inches	61.6 inches
3	DIAMETER OF BODY	16.53 inches	20.8 inches
4	THICKNESS OF WALL	0.2 inch	0.15 inch
5	MATERIAL OF WALL	Steel	Steel
6	CONSTRUCTION OF BODY	This bomb is formed from three cast steel sections of the body welded together. The body is streamlined by tapering each section towards the rear of the bomb.	
7	TYPE OF SUSPENSION	These bombs are always held <u>horizontally</u> .	
8	CONSTRUCTION OF SUSPENSION LUG	The Mark Series bombs have two eyebolts welded to body along longitudinal axis of the bomb. The eyebolts are formed from bar steel, shaped in the form of a U and then welded to the bomb body.	
9	COLOR & MARKINGS ON BOMB AND TAIL	While these bombs are no longer manufactured they still may be found in the field. Prior to March 11, 1942 these bombs would have been painted yellow all over with black manufacturer's markings but since that date they will be painted olive-drab with a one inch yellow band around the nose and extreme rear of the bomb and a 1/4 inch band around the center of gravity.	
10	LENGTH OF TAIL	14.0 inches	33.5 inches
11	WIDTH OF TAIL	20.5 inches	28.5 inches
12	MATERIAL OF TAIL	Sheet steel.	Sheet steel.
13	CONSTRUCTION OF TAIL	A cast steel sleeve secured to the body of the bomb by a fin locking nut; four fins or vanes; internal box-type struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.	
		Four vanes with bar struts. The cone of the tail is only 4.5 inches from rear of vanes and vanes extend along body of bomb and are attached to body by screws.	
14	WEIGHT OF TAIL	5.0 lbs.	55.0 lbs.
15	TYPE OF FILLING	Cast T.N.T.	Cast T.N.T.
16	WEIGHT OF FILLING	355.0 lbs.	650.0 lbs.
17	TOTAL WEIGHT OF BOMB	611.0 lbs.	1175.0 lbs.
18	CHARGE / WEIGHT RATIO	58.0 %	



COPY NO. \_\_\_\_\_  
FILE NO.: 1156.B2

BOMB DATA		INFORMATION DATE: September 1943	
NATIONALITY: U.S. ARMY		TYPE: Army Demolition - H.E. (Mark Series)	
SIZE: 2000 lb. Mk. I M III 2000 lb. Mk. I M IV 2000 lb. Mk. I M V			
TARGET: General Bombardment.		NOSE: M 105 FUZES: TAIL: M 106 M 106 Long	

COPY NO. 2638  
FILE NO.: 1156.B2

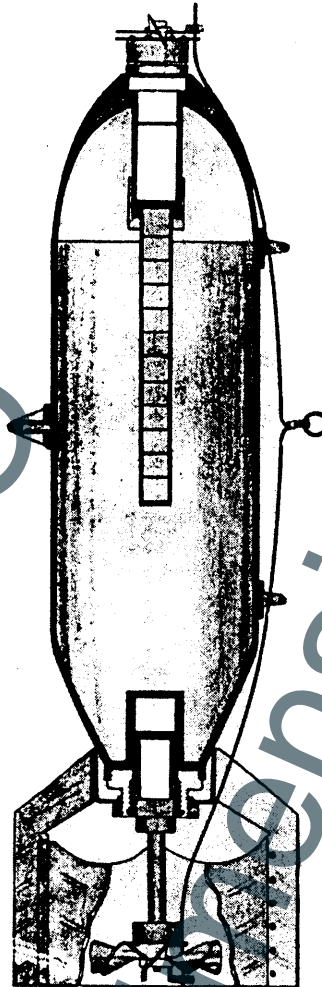
BOMB DATA		INFORMATION DATE: September 1943	
NATIONALITY: U.S. ARMY		TYPE: Army Demolition - H.E. (Mark Series)	
SIZE: 2000 lb. Mk. I M III 2000 lb. Mk. I M IV 2000 lb. Mk. I M V			
TARGET: General Bombardment.		NOSE: M 105 FUZES: TAIL: M 106 Long M 106	
	DATA	2000 lb. Mk. I, M III and M IV	2000 lb. M V
1	OVERALL LENGTH	135.8 inches	135.8 inches
2	LENGTH OF BODY	97.0 inches	97.0 inches
3	DIAMETER OF BODY	18.5 inches	18.5 inches
4	THICKNESS OF WALL	0.50 inch	0.50 inch
5	MATERIAL OF WALL	Steel	Steel
6	CONSTRUCTION OF BODY	Models III and IV of this bomb are formed from seamless steel tubing to which the cast steel nose is rivetted and rear of the bomb is not tapered. Model III has a flat base plate welded to body. Model IV has a dome-shaped base plate which screws into rear of bomb case. Model V is formed from seamless steel tubing, the nose being swaged to necessary contour. The base plate on this bomb is same as for Model IV.	
7	TYPE OF SUSPENSION	These bombs are always held <u>horizontally</u> .	
8	CONSTRUCTION OF SUSPENSION LUG	The 2000 lb. Mk. Series bombs have two eyebolts on plates which are secured to body by means of cap screws.	
9	COLOR & MARKINGS ON BOMB AND TAIL	While this bomb is no longer manufactured it may still be found in the field. Prior to March 11, 1942 these bombs would have been painted yellow all over with black manufacturer's markings but since that date they will be painted olive-drab with a one inch yellow band around the nose and extreme rear of the bomb and a 1/4 inch band around the center of gravity.	
10	LENGTH OF TAIL	49.2 inches	49.2 inches
11	WIDTH OF TAIL	26.1 inches	26.1 inches
12	MATERIAL OF TAIL	Sheet steel with cast steel tail cone.	
13	CONSTRUCTION OF TAIL	The tail for these bombs consists of a tail cone to which four vanes are rivetted, the vanes being rivetted together beyond the tail cone. Two sets of external bar struts reinforce the vanes. The cone is secured to a flange on the base plate of the bomb.	
14	WEIGHT OF TAIL	140.0 lbs.	140.0 lbs.
15	TYPE OF FILLING	Cast T.N.T.	Cast T.N.T.
16	WEIGHT OF FILLING	960.0 lbs.	960.0 lbs.
17	TOTAL WEIGHT OF BOMB	1920.0 lbs.	1830.0 lbs.
18	CHARGE / WEIGHT RATIO	50.0 %	52.4 %



## BOMB DATA

FILE NO. COPY NO.

NATIONALITY: U.S. Army	INFORMATION DATE: Sept. 1943
DESIGNATION: 100 lb. M-30	TYPE: G.P. H.E. Bombs (M Series)
TARGETS: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.	



BOMB DATA		FILE NO.	COPY NO.	BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army		INFORMATION DATE: Sept. 1943		NATIONALITY: U.S. Army		INFORMATION DATE: Sept. 1943	
DESIGNATION: 100 lb. M-30		TYPE: G.P. H.E. Bombs (M Series)		DESIGNATION: 100 lb. M-30		TYPE: G.P.H.E. (M Series)	
TARGETS: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.				9. COLOR & MARKINGS ON BOMB AND TAIL (Cont'd)		extreme rear of the bomb and a 1/4 inch band around the center of gravity.	
FUZES				10. LENGTH OF TAIL		9.75 inches	
REGULAR MISSIONS				11. WIDTH OF TAIL		11.0 inches	
Nose:		AN-M 103, M-103		12. MATERIAL OF TAIL		Sheet Steel.	
Tail:		AN-M 100A2, AN-M 100A1, M-100		13. CONSTRUCTION OF TAIL		This type of tail consists of the following parts; 1) a cast steel sleeve secured to the body of the bomb by a fin locking nut; 2) four fins or vanes; 3) Internal box-type struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.	
SPECIAL MISSIONS				14. WEIGHT OF TAIL		3.5 lbs.	
Tail:		M-112 - (Masthead bombing from land base only) AN-M 115 (Masthead bombing from carrier or land base). M-123 - (Long time delay fuze against land targets).		15. TYPE OF FILLING		A 50/50 Amatol filling with T.N.T. surrounds around the nose and tail booster sleeve to prevent exudation from Amatol during storage. Recently these bombs have been filled with 100% T.N.T. which will be stenciled on the bomb. This bomb contains only one built-in M 104 auxiliary booster (nose) which contains tetryl. The M-102 adapter booster (tetryl) is built in the base plug and receives the tail fuze.	
Nose:		Where the three above fuzes are used in the tail, the shipping plug should be left in the nose until a nose fuze is developed and supplied to be used on these special missions.					
DATA		100 lb. M- 30 Bomb					
1. OVERALL LENGTH		36.0 inches		16. WEIGHT OF FILLING		50/50 Amatol	T.N.T.
2. LENGTH OF BODY		30.0 inches		17. TOTAL WEIGHT		53.3 lbs.	56.6 lbs.
3. DIAMETER OF BODY		8.2 inches		18. CHARGE/WEIGHT RATIO		98.1 lbs.	100.0 lbs.
4. THICKNESS OF WALL		0.16 inches				54.6%	56.6%
5. MATERIAL OF WALL		Steel					
6. CONSTRUCTION OF BODY		These bombs may be made by any one of the following methods: 1) From seamless steel tubing in which the nose of the bomb is formed by swaging and the tail by drawing to the necessary diameter; 2) or the case may be forged in one piece; 3) or the bomb may be formed from cast sections welded together. These bombs have male base filling plates.					
7. TYPE OF SUSPENSION		These bombs are always held horizontally.					
8. CONSTRUCTION OF SUSPENSION LUG		The M Series bombs have two eyebolts welded to body along longitudinal axis of the bomb. The eyebolts are formed from bar steel, shaped in the form of a U and then welded to the bomb body.					
9. COLOR & MARKINGS ON BOMB AND TAIL		Prior to March, 11 1942 these bombs would have been painted yellow all over with black manufacturer's markings; but since that date they will be painted olive-drab with a 1 inch yellow band around the nose and					

BOMB DATA

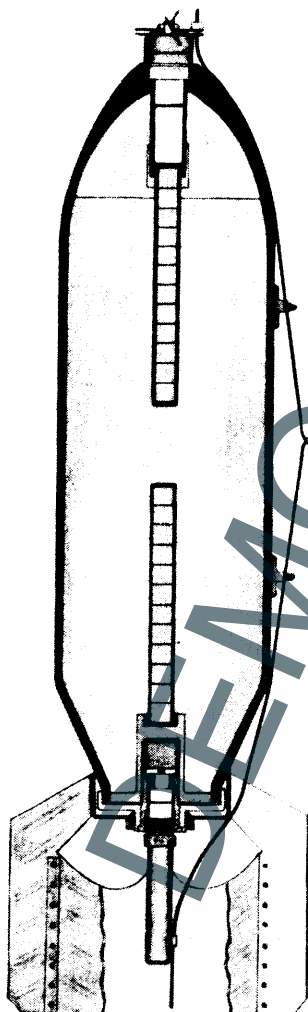
FILE NO. COPY NO.

NATIONALITY: U.S. Army

INFORMATION DATE: September 1943

SIZE: 300 lb. M 31

TYPE: G.P. H.E. Bombs (M Series)



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BOMB DATA		FILE NO.	COPY NO.	BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army		INFORMATION DATE: September 1943		NATIONALITY: U.S. Army		INFORMATION DATE: September 1943	
SIZE: 300 lb. M 31		TYPE: G.P. H.E. Bombs (M Series)		SIZE: 300 lb. M 31		TYPE: G.P.H.E. Bombs (M Series)	
TARGET:		Ammunition dumps, railway engines and cars, all types of construction except skyscrapers and airplanes on ground.		9. COLOR & MARKINGS		ON BOMB AND TAIL. Prior to March 11 1942 these bombs would have been painted yellow all over with black manufacturer's markings but since that date they will be painted olive-drab with a one inch yellow band around the nose and extreme rear of the bomb and a 1/4 inch band around the center of gravity.	
		<u>FUZES</u>		10. LENGTH OF TAIL		12.1"	
<u>REGULAR MISSIONS</u>				11. WIDTH OF TAIL		14.9"	
Nose:		AN-M 103, M-103		12. MATERIAL OF TAIL		Sheet Steel	
Tail:		AN-M 100A2, AN-M 100A1, M 100		13. CONSTRUCTION OF TAIL		This type of tail consists of the following parts: 1) a cast steel sleeve secured to the body of the bomb by a fin locking nut; 2) four fins or vanes; 3) internal box-type struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.	
<u>SPECIAL MISSIONS</u>				14. WEIGHT OF TAIL		6.0 lbs.	
(1) <u>Masthead bombing:</u>				15. TYPE OF FILLING		(1) A 50/50 Amatol filling with TNT surrounds the nose and tail booster sleeve to prevent exudation from Amatol during storage. (2) 100% TNT filling. This bomb contains two built-in M-104 auxiliary boosters (one in the nose and one in tail) - which contains tetryl. The M-102 Adapter booster (tetryl) is built in the base plug and receives the tail fuze.	
Nose:		Shipping plug until nose fuze is developed and supplied specifically for masthead bombing.					
Tail:		M-112 (Land based planes only) AN-M 115 (Carrier based or land based planes)					
(2) <u>Longtime delay fuze:</u>							
Nose:		Shipping plug unless specifically provided with suitable fuzes.					
Tail:		M - 123					
<u>DATA</u>		<u>300# - M-31</u>					
1. OVERALL LENGTH		48.6"					
2. LENGTH OF BODY		40.2"		16. WEIGHT OF FILLING		50/50 Amatol 135.5 lbs.	
3. DIAMETER OF BODY		10.9"		17. TOTAL WEIGHT OF BOMB		263.0 lbs. 270.0 lbs.	
4. THICKNESS OF WALL		0.27"		18. CHARGE/WEIGHT RATIO		51.5% 53.3%	
5. MATERIAL OF WALL		Steel					
6. CONSTRUCTION OF BODY		These bombs may be made by any one of the following methods: 1) from seamless steel tubing in which the nose of the bomb is formed by swaging and the tail by drawing to the necessary diameter; 2) or the case may be forged in one piece; 3) or the bomb may be formed from cast sections and welded together. These bombs have male base filling plugs					
7. TYPE OF SUSPENSION		These bombs are always held horizontally					
8. CONSTRUCTION OF SUSPENSION LUG		The M Series bombs have two eyebolts welded to body along longitudinal axis of the bomb. The eyebolts are formed from bar steel, shaped in the form of a U and then welded to the bomb body.					

BOMB DATA

COPY NO.  
FILE NO.

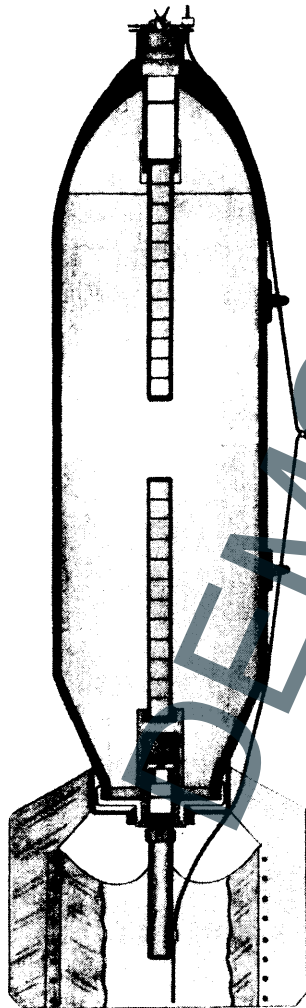
NATIONALITY: U.S. Army

INFORMATION DATE Sept. 1943

DESIGNATION: 600 lb. M-32

TYPE: Demolition H.E. (M-series)

TARGET: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.

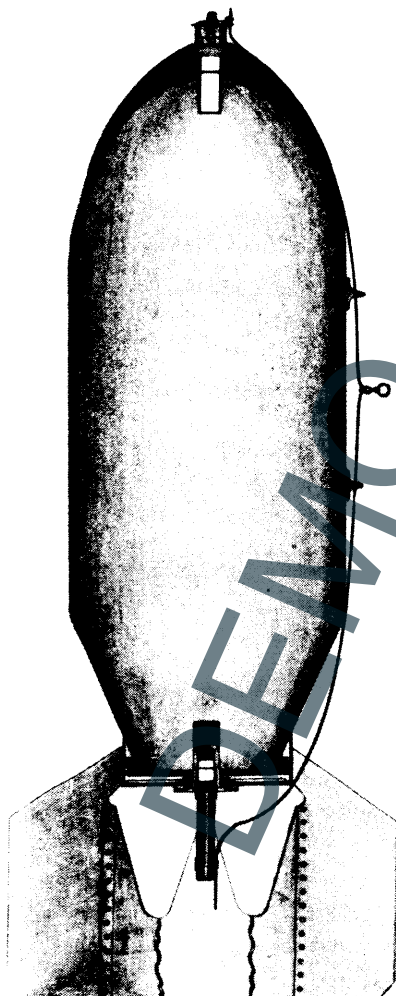


BOMB DATA		FILE NO.	COPY NO.	BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army		INFORMATION DATE Sept. 1943		NATIONALITY: U.S. Army		INFORMATION DATE Sept. 1943	
DESIGNATION: 600 lb. M-32		TYPE: Demolition H.E. ( M - series)		DESIGNATION: 600 lb. M-32		TYPE Demolition H.E. (M - series)	
TARGET: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and air-planes on ground.				8. CONSTRUCTION OF SUSPENSION LUG (Cont'd).		U and then welded to the bomb body.	
FUZES				9. COLOR AND MARKINGS ON BOMB AND TAIL		Prior to March 11, 1942 these bombs would have been painted yellow all over with black manufacturer's markings; but since that date they will be painted olive-drab with a 1 inch yellow band around the nose and extreme rear of the bomb and a 1/4 inch band around the center of gravity.	
REGULAR MISSIONS				10. LENGTH OF TAIL		13.9 "	
Nose.		AN-M-103, M-103		11. WIDTH OF TAIL		20.4 "	
Tail.		AN-M-101A2, AN-M-101A1, M-101		12. MATERIAL OF TAIL		Sheet Steel.	
SPECIAL MISSIONS				13. CONSTRUCTION OF TAIL		This type of tail consists of the following parts: 1) a cast steel sleeve secured to the body of the bomb by a fin locking nut; 2) four fins or vanes; 3) internal box-type struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.	
(1) Masthead bombing:				14. WEIGHT OF TAIL		12.6 lbs.	
Nose		Shipping plug until provided with nose fuze specifically for masthead bombing.		15. TYPE OF FILLING		1) 50-50 Amatol filling with T.N.T. surrounds around the nose and tail booster sleeve to prevent oxidation from Amatol during storage. 2) 100% T.N.T. filling. This bomb contains two built-in M-104 auxiliary boosters (one in the nose and one in the tail) which contain tetryl. The M-102 Adapter booster (tetryl) is built in the base plug and receives the tail fuze.	
Tail		M-113 (Land base planes only) AN-M-116 (Carrier based or land based planes)		16. WEIGHT OF FILLING		319.3 lbs.	
Long delay time fuze:				17. TOTAL WEIGHT		586.5 lbs.	
Nose		Shipping plug until provided with fuze specifically for this purpose.		18. CHARGE/WEIGHT RATIO		54.4 %	
Tail		M-124		19. REMARKS		This bomb is now obsolete.	
DATA		600 lb. M-32					
1. OVERALL LENGTH		59.5 "					
2. LENGTH OF BODY		49.5 "					
3. DIAMETER OF BODY		15.0 "					
4. THICKNESS OF WALL		0.35 "					
5. MATERIAL OF WALL		Steel.					
6. CONSTRUCTION OF BODY.		These bombs may be made by any one of the following methods: 1) from seamless steel tubing in which the nose of the bomb is formed by swaging and the tail by drawing to the necessary diameter; 2) or the case may be forged in one piece; 3) or the bomb may be formed from cast sections welded together. These bombs have male base filling plates.					
7. TYPE OF SUSPENSION		These bombs are always held horizontally.					
8. CONSTRUCTION OF SUSPENSION LUG.		The M series bombs have two eyebolts welded to body along longitudinal axis of the bomb. The eyebolts are formed from bar steel, shaped in the form of a					

BOMB DATA

FILE NO. COPY NO.

NATIONALITY: U.S. Army	INFORMATION DATE: Sept. 1943
SIZE: 1100 lbs. M-33	TYPE: Demolition H.E. (M - series)
TARGETS: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.	



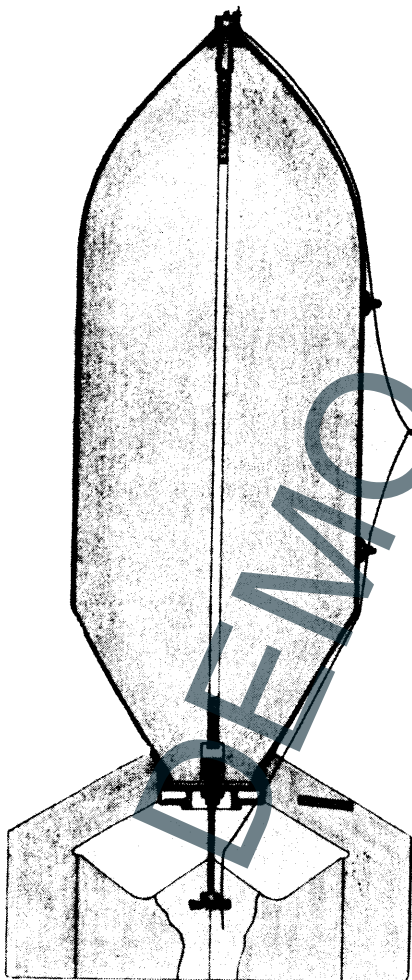


BOMB DATA		FILE NO.	COPY NO.	BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army		INFORMATION DATE: Sept. 1943		NATIONALITY: U.S. Army		INFORMATION DATE: Sept. 1943	
SIZE: 1100 lbs. M-33		TYPE: Demolition H.E. (M-series)		SIZE: 1100 lb. M-33		TYPE: Demolition H.E. (M-series)	
TARGETS: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.				9. COLOR & MARKINGS ON BOMB AND TAIL Prior to March 11, 1942 these bombs would have been painted yellow overall with black manufacturer's markings but since that date they will be painted olive-drab with a 1 inch yellow band around the nose and the extreme rear of the bomb and a 1/4 inch band around the center of gravity.			
FUZZES				10. LENGTH OF TAIL 18.5 "			
REGULAR MISSIONS:		AN-M-103, M-103		11. WIDTH OF TAIL 27.0 "			
Nose.		AN-M-102A2, AN-M-102A1, M-102		12. MATERIAL OF TAIL Sheet Steel.			
Tail.				13. CONSTRUCTION OF TAIL This type of tail consists of the following parts: 1) a cast steel sleeve secured to the body of the bomb by a fin locking nut; 2) four fins or vanes; 3) internal box-like struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.			
SPECIAL MISSIONS:				14. WEIGHT OF TAIL 22.5 lbs.			
(1) Masthead Bombing.				15. TYPE OF FILLING 1) A 50-50 Amatol filling with T.N.T. surrounds around the nose and tail booster sleeve to prevent exudation from Amatol during storage. 2) 100% T.N.T. filling. This bomb contains two built-in M-104 auxiliary boosters (not shown on drawing) (one in nose and one in tail) which contain tetryl. The M-102 adapter booster (tetryl) is built in the base plug and receives the tail fuse.			
Nose.		Shipping plug until provided with nose fuse specifically for masthead bombing.					
Tail.		M-114 (Land based planes only) AN-M-117 (Carrier or land based planes.)					
(2) Long delay time.							
Nose:		Shipping plug until provided nose fuse specifically for this purpose.					
Tail:		M-125.					
DATA		1100 lb. M-33					
1. OVERALL LENGTH		68.7 "					
2. LENGTH OF BODY		54.7 "					
3. DIAMETER OF BODY		19.6 "					
4. THICKNESS OF WALL		0.45 "					
5. MATERIAL OF WALL		Steel.					
6. CONSTRUCTION OF BODY		These bombs may be made by any one of the following methods: 1) From seamless steel tubing in which the nose of the bomb is formed by swaging and the tail by drawing to the necessary diameter; 2) Or the case may be forged in one piece 3) or the bomb may be formed from cast sections welded together. These bombs have male base filling plates.					
7. TYPE OF SUSPENSION		These bombs are always held horizontally.					
8. CONSTRUCTION OF SUSPENSION LUG		The M series bombs have two eyebolts welded to body along longitudinal axis of the bomb. The eyebolts are formed from bar steel, shaped in the form of a U and then welded to the bomb body.					
				16. WEIGHT OF FILLING 50-50 Amatol T.N.T. 588.0 lbs. 618.0 lbs.			
				17. TOTAL WEIGHT OF BOMB. 1083.4 lbs. 1113.4 lbs.			
				18. CHARGE/WEIGHT RATIO 54.4 % 55.5%			
				19. REMARKS This bomb is now obsolete.			

## BOMB DATA

COPY NO.  
FILE NO.

NATIONALITY: U.S. Army	INFORMATION DATE: Sept. 1943
SIZE: 2000 lb. M-54	TYPE: Demolition H.E. (M - series)
TARGETS: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.	



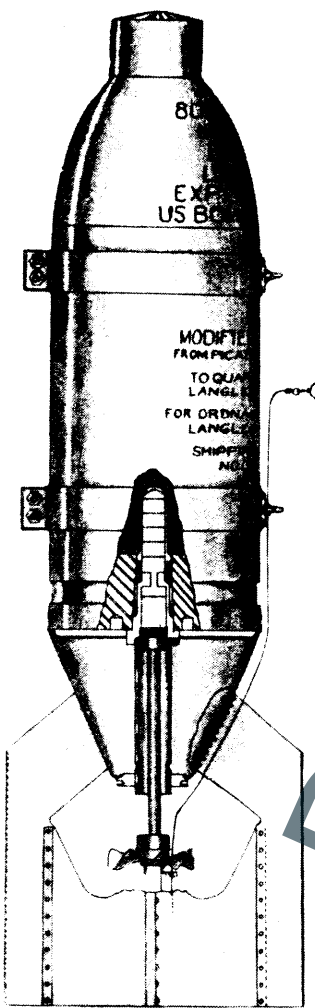
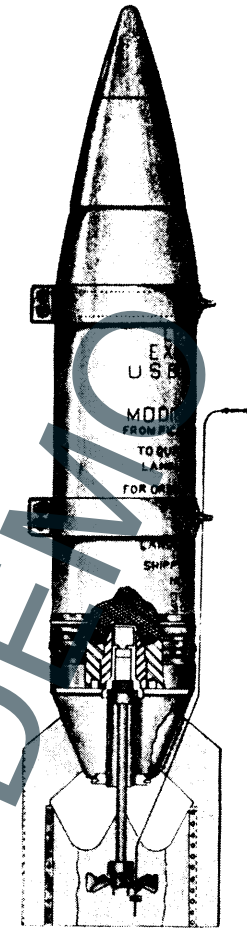
BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army		INFORMATION DATE: Sept. 1943	
SIZE: 2000 lb. M-34		TYPE: Demolition H.E. (M - series)	
TARGETS: Ammunition dumps, railway engines and cars, all types of construction except skyscrapers, and airplanes on ground.			
FUSES			
REGULAR MISSIONS			
Nose.		AN-M-103, M-103	
Tail.		AN-M-102A2, AN-M-102A1, M-102	
SPECIAL MISSIONS:			
	(1) Masthead bombing.		
	Nose:	Shipping plug until provided with nose fuse specifically for masthead bombing.	
	Tail:	M-114 (Land based planes only) AN-M-117 (Carrier and land based planes.)	
	(2) Long delay time.		
	Nose.	Shipping plug until provided with nose fuse specifically for this purpose.	
	Tail.	M-125.	
DATA		2000 lb. M-34	
1. OVERALL LENGTH		90.4 "	
2. LENGTH OF BODY		70.0 "	
3. DIAMETER OF BODY		23.5 "	
4. THICKNESS OF WALL		0.5 "	
5. MATERIAL OF WALL		Steel.	
6. CONSTRUCTION OF BODY.		These bombs may be made by any one of the following methods: 1) From seamless steel tubing in which the nose of the bomb is formed by swaging and the tail by drawing to the necessary diameter; 2) or the case may be forged in one piece 3) or the bomb may be formed from cast sections welded together. These bombs have male base filling plugs.	
7. TYPE OF SUSPENSION		These bombs are always held horizontally.	
8. CONSTRUCTION OF SUSPENSION LUGS		The M series bombs have two eyebolts welded to body along longitudinal axis of the bomb. The eyebolts are formed from bar steel, shaped in the form of a U and then welded to the bomb body.	

BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army		INFORMATION DATE: Sept. 1943	
SIZE: 2000 lb. M-34		TYPE: Demolition H.E. (M-series).	
9. COLOR & MARKINGS ON BOMB AND TAIL		Prior to March 11, 1942 these bombs would have been painted yellow all over with black manufacturer's markings but since that date they will be painted olive-drab with a 1 inch yellow band around the nose and the extreme rear of the bomb and a 1/4 inch band around the center of gravity.	
10. LENGTH OF TAIL		25.7 "	
11. WIDTH OF TAIL		31.6 "	
12. MATERIAL OF TAIL		Sheet Steel.	
13. CONSTRUCTION OF TAIL		This type of tail consists of the following parts: 1) a cast steel sleeve secured to the body of the bomb by a fin locking nut; 2) four fins or vanes; 3) internal box-like struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.	
14. WEIGHT OF TAIL		38.6 lbs.	
15. TYPE OF FILLING		1) A 50-50 Amatol filling with T.N.T. surrounds around the nose and tail booster sleeve to prevent exudation from Amatol during storage. 2) 100% T.N.T. filling. This bomb contains two built-in M-104 auxiliary boosters (not shown on drawing) (one in nose and one in tail) which contain tetryl. The M-102 adapter booster (tetryl) is built in the base plug and receives the tail fuse.	
		50-50 Amatol	T.N.T.
16. WEIGHT OF FILLING.		1061.0 lbs.	1061.0 lbs.
17. TOTAL WEIGHT OF BOMB		2013.4 lbs.	2023.4 lbs.
18. CHARGE/WEIGHT RATIO		52.8%	52.5%

COPY NO. \_\_\_\_\_

BOMB DATA FILE NO.: 1175.C1

NATIONALITY: U.S. ARMY	INFORMATION DATE: September 1943
SIZE: 800 lb. M 62	TYPE: A.P. - H.E.
SIZE: 800 lb. M 61	
TARGET: Armored naval seacraft, reinforced concrete and heavy steel construction, etc.	FUZE (Tail): M 102 AN-M 102A1 AN M 102A2

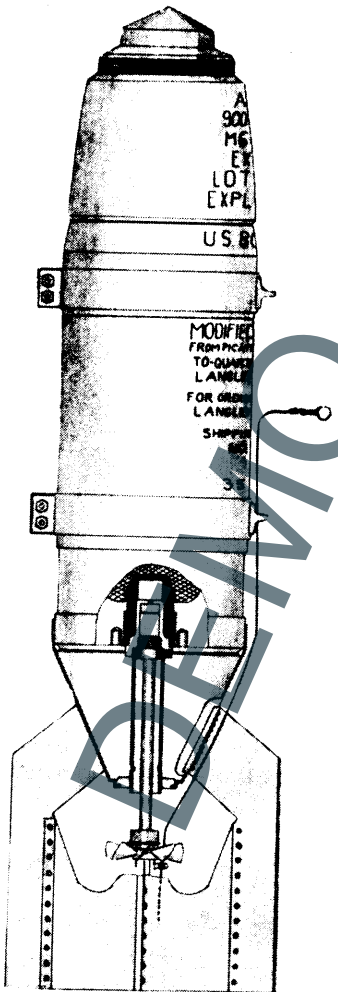
800 lb. M 61
600 lb. M 62

COPY NO. \_\_\_\_\_

BOMB DATA FILE NO.: 1175.C1

NATIONALITY: U.S. ARMY	INFORMATION DATE: September 1943
SIZE: 600 lb. M 62	TYPE: A.P. - H.E.
SIZE: 800 lb. M 61	
TARGET: Armored naval seacraft, reinforced concrete and heavy steel construction, etc.	FUZES (Tail): M 102 AN-M 102A1 AN M 102A2

DATA	600 lb. M 62	800 lb. M 61
1 OVERALL LENGTH	62.06 inches	58.72 inches
2 LENGTH OF BODY	46.2 inches	13.4 inches
3 DIAMETER OF BODY	10.0 inches	11.6 inches
4 THICKNESS OF WALL		
5 MATERIAL OF WALL	Steel	Steel
6 CONSTRUCTION OF BODY	These bombs are converted seacoast artillery shells from which the rotating bands may have been removed. The cases are single-piece steel forgings. M 62 and modifications differ only slightly in external dimensions and are all equipped with a nose cap for streamlining.	
7 TYPE OF SUSPENSION	These bombs are always held <u>horizontally</u> .	
8 CONSTRUCTION OF SUSPENSION LUG	Two eyebolts, U-shaped, are welded to plates which are then welded or rivetted to suspension bands. The bands are secured to the case by tightening bolts on under side of bomb.	
9 COLOR & MARKINGS ON BOMB AND TAIL	Prior to March 11, 1942 these bombs would have been painted yellow all over with black manufacturer's markings but since that date they will be painted olive-drab with a 1 inch yellow band around the nose and extreme rear of the bomb and a 1/4 inch band around the center of gravity.	
10 LENGTH OF TAIL	17.8 inches	21.0 inches
11 WIDTH OF TAIL	13.8 inches	18.5 inches
12 MATERIAL OF TAIL	Sheet steel.	Sheet steel.
13 CONSTRUCTION OF TAIL	This type of tail consists of the following parts: 1) A truncated tail cone which is slide fit over bomb base and is secured by a locking nut at top of fuze body; 2) Four fins or vanes; 3) Internal box-type struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.	
14 WEIGHT OF TAIL	1512.0 lbs.	22.4 lbs.
15 TYPE OF FILLING	Explosive D.	Explosive D.
16 WEIGHT OF FILLING	33.61 lbs.	32.68 lbs.
17 TOTAL WEIGHT OF BOMB	576.0 lbs.	787.28 lbs.
18 CHARGE / WEIGHT RATIO	9.3 %	3.8 %

BOMB DATA		COPY NO. _____	
NATIONALITY: U.S. ARMY		FILE NO.: 1175.G2	
SIZE: 900 lb. M 60 1000 lb. M 52		INFORMATION DATE: September 1943	
TARGET: Armored naval seacraft, re- inforced concrete and heavy steel construction, etc.		TYPE: A.P.-H.E.  FUZE (Tail): M 102 AN-M 102A1 AN M 102A2	
 <p>           A            900            M6            EX            LOT            EXPL            U.S. ARMY            MODIFIED            FROM M60            TO 6000            LBS            FOR 6000            LBS            SHIPPED            3-1-44         </p>			

2638

BOMB DATA

COPY NO.

FILE NO.: 1175.C2

NATIONALITY: U.S. ARMY		INFORMATION DATE: September 1943	
SIZE: 900 lb. M 60 1000 lb. M 52		TYPE: A.P.-H.E.	
TARGET: Armored naval seacraft, reinforced concrete and heavy steel construction, etc.		FUZES (Tail): M 102 AN-M 102A1 AN M 102A2	
	DATA	900 lb. M 60	1000 lb. M 52
1	OVERALL LENGTH	61.72 inches	70.9 inches
2	LENGTH OF BODY	40.72 inches	50.5 inches
3	DIAMETER OF BODY	11.5 inches	11.9 inches
4	THICKNESS OF WALL		2.3 inches
5	MATERIAL OF WALL	Steel	Steel
6	CONSTRUCTION OF BODY	These bombs are converted seacoast artillery shells from which the rotating bands may have been removed. The cases are single-piece steel forgings.	
7	TYPE OF SUSPENSION	These bombs are always held horizontally.	
8	CONSTRUCTION OF SUSPENSION LUG	Two eyebolts, U-shaped, are welded to plates which are then welded or rivetted to suspension bands. The bands are secured to the case by tightening bolts on under side of bomb.	
9	COLOR & MARKINGS ON BOMB AND TAIL	Prior to March 11, 1942 these bombs would have been painted yellow all over with black manufacturer's markings but since that date they will be painted olive-drab with a 1 inch yellow band around the nose and extreme rear of the bomb and a 1/4 inch band around the center of gravity.	
10	LENGTH OF TAIL	24.5 inches	
11	WIDTH OF TAIL		16.6 inches
12	MATERIAL OF TAIL	Sheet steel.	Sheet steel.
13	CONSTRUCTION OF TAIL	This type of tail consists of the following parts: 1) A truncated tail cone which is slide fit over bomb base and is secured by a locking nut at top of fuze body; 2) Four fins or vanes; 3) Internal box-type struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.	
14	WEIGHT OF TAIL	22.4 lbs.	21.0 lbs.
15	TYPE OF FILLING	Explosive D.	Explosive D.
16	WEIGHT OF FILLING		58.35 lbs.
17	TOTAL WEIGHT OF BOMB		1077.0 lbs.
18	CHARGE / WEIGHT RATIO		5.4 %



BOMB DATA		FILE NO.	COPY NO.	BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army		INFORMATION DATE: September 1943		NATIONALITY: U.S. Army		INFORMATION DATE: September 1943	
SIZE: 30 lb. M 5 High Level		TYPE: Fragmentation (anti-Personnel)		SIZE: 30 lb. M-5 High Level		TYPE: Fragmentation (Anti-personnel)	
TARGET: Personnel, motor convoys, airplanes on the ground, etc., For M-5 used against ground targets by airplanes flying at low altitudes.							
		FUZES		17. TOTAL WEIGHT OF BOMB		29.5 lbs.	
NOSE:		For M-5 - Mk XIV		18. CHARGE/WEIGHT RATIO			
DATA		30 lb. M-2		19. REMARKS: For an illustration which resembles this bomb, refer to the illustration of the AN-M 41 fragmentation bomb. These two bombs are almost identical.			
1. OVERALL LENGTH		25.5" (with fuze)					
2. LENGTH OF BODY		13.05"					
3. DIAMETER OF BODY		4.2"					
4. THICKNESS OF WALL		0.6"					
5. MATERIAL OF WALL		Tube - Steel Wrapping - Cast steel					
6. CONSTRUCTION OF BODY		The 30 lb. M-5 bomb is constructed the same as the AN M 40 and AN M 41 fragmentation bombs except that the outside wrapping is replaced by rings cut from cast steel pipe. This is an obsolete bomb.					
7. TYPE OF SUSPENSION		These bombs may be carried horizontally, vertically, or in a cluster adapter.					
8. CONSTRUCTION OF SUSPENSION LUG		For individual suspension of these bombs a U shaped eyebolt made of steel is welded to bomb at center of gravity. The M-5 has an eyebolt welded to rear of tail for vertical suspension. The cluster adapter is made of sheet metal and does not use eyebolts or bombs for suspension.					
9. COLOR & MARKINGS ON BOMB AND TAIL		Prior to March 11 1942 these bombs would have been painted yellow all over with black manufacturer's markings but since that date they will be painted olive-drab with a 1 inch yellow band around the nose and a 1/4 inch band around the center of gravity.					
10. LENGTH OF TAIL		—					
11. WIDTH OF TAIL		6.5"					
12. MATERIAL OF TAIL		Sheet steel and cast iron.					
13. CONSTRUCTION OF TAIL		Four rectangular sheet steel vanes welded to a length of 1 inch cast iron pipe which screws into the base filling plug.					
14. WEIGHT OF TAIL		—					
15. TYPE OF FILLING		T.N.T.					
16. WEIGHT OF FILLING		4.66 lbs					



### U. S. GAS BOMB IDENTIFICATION

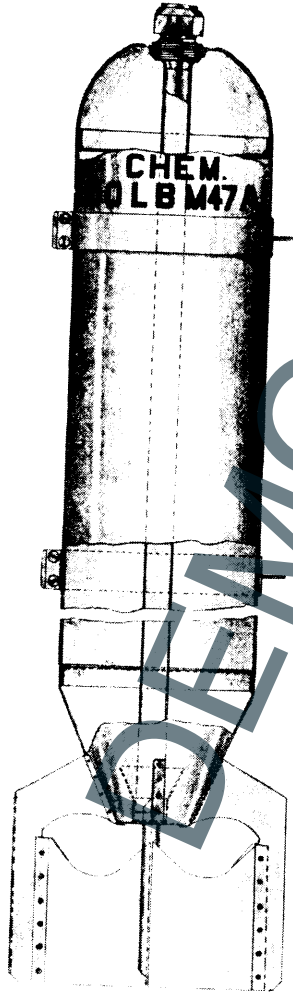
1. Color: US. Army and Navy Gas bombs are painted Blue or bluish grey over-all.
2. Markings: The bombs have colored bands slightly Forward of the center of gravity which indicate the filling and its persistency. A single band indicates that the agent is non-persistent; two bands, that it is persistent. The color scheme is as follows:

Green.....Casualty agent; usually  
                  a vesicant  
Red.....Harassing agent; usually  
                  a tear gas  
Yellow.....Screening  
Purple.....Incendiary

3. U.S. Projectiles use the same system of marking as described above for the bombs.
4. Information giving the Mark number, weight, lot number, and so forth will usually be painted on the bomb. Letter designations of the different gases may also be present and are as follows:

ES	.....	Mustard Gas
M-1	.....	Lewisite
ED	.....	Ethylchlorarsine
PS	.....	Chlorpforin
DF	.....	Diphosgene
CG	.....	Phosgene
CN	.....	Chloracetophenone
CA	.....	Brombenzylcyanide
DM	.....	Adamsite
HC	.....	HC Mixture
FS	.....	Sulphur Trioxide
FM	.....	Titanium Tetrachloride
DA	.....	Diphenylchlorarsine
WP	.....	White Phosphorus
TH	.....	Thermite
CL	.....	Chlorine
AC	.....	Hydrocyanic Acid

ECIE DATA		COPY NO.
NATIONALITY: U.S. ARMY		FILE NO.: 1172,01
SIZE: 30 lb. M46A2		INFORMATION DATE: September 1943
100 lb. M47A1 & A2		TYPE: Smoke Bomb (incendiary & smoke)
TARGET: Personnel, or for screening troop movements or operations (using smoke filling).		FUZES: (Nose): M 108 M-126 or M-126A1 in the M-47A1 & A2.



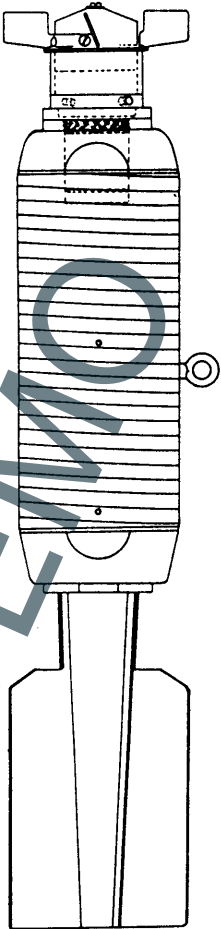
PART I

SECTION B

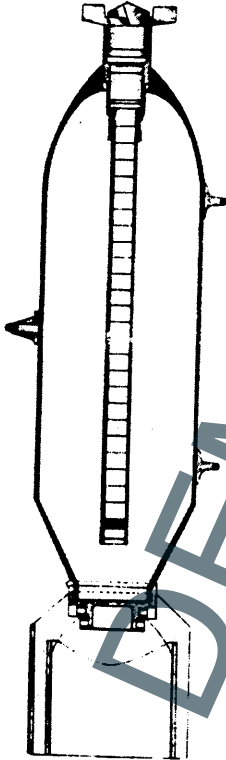
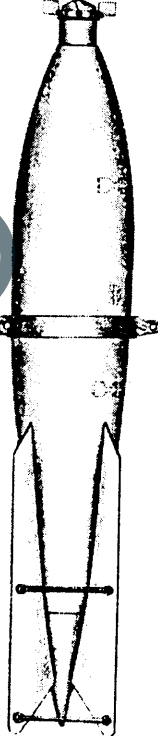
NAVY BOMBS

DEMO

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BOMB DATA		COPY NO. _____	
NATIONALITY: U.S. NAVY		FILE NO.: 1112.A1	
SIZE: 30 lb. Mk. V Mod. 1 30 lb. Mk. V Mod. 2 30 lb. Mk. V Mod. 3		INFORMATION DATE: Sept. 1943  TYPE: Fragmentation - H.E.	
TARGETS: Personnel, motor convoys, airplanes on the ground, etc.		FUZES: Mk. V Mod. 1 - Mk. 14 Army Nose Fuze Mk. V Mod. 2 - Mk. XIX Navy Nose Fuze Mk. V Mod. 3 - Mk. XIX Navy Nose Fuze	
			

BOMB DATA		COPY NO. 2638
NATIONALITY: U.S. NAVY		FILE NO.: 1112.A1
INFORMATION DATE: Sept. 1943		
SIZE:	30 lb. Mk. V Mod. 1 30 lb. Mk. V Mod. 2 30 lb. Mk. V Mod. 3	TYPE: Fragmentation - H.E.
TARGETS:	Personnel, motor convoys, airplanes on the ground, etc.	Mk. V Mod. 1 - Mk. 14 Army Nose Fuze FUZES: Mk. V Mod. 2 - Mk. XIX Navy Nose Fuze Mk. V Mod. 3 - Mk. XIX Navy Nose Fuze
DATA	30 lb. Mk. V Mod. 1, 2 & 3	
1 OVERALL LENGTH	22.2 inches	
2 LENGTH OF BODY	12.8 inches	
3 DIAMETER OF BODY	4.2 inches	
4 THICKNESS OF WALL	0.57 inch	
5 MATERIAL OF WALL	Steel	
6 CONSTRUCTION OF BODY	Cast steel nose and tail piece threaded onto tubular steel body. The only difference in construction is that in the Mk. V Mod. 1 and 2, 23 rings cut from seamless tubing are fitted around the tubular body, while on the Mk. V Mod. 3 a steel wire is helically wound left-handed. The adjacent surfaces of wire are parallel.	
7 TYPE OF SUSPENSION	These bombs are suspended horizontally.	
8 CONSTRUCTION OF SUSPENSION LUG	A single eyebolt is screwed into a ring at center of the body.	
9 COLOR & MARKINGS ON BOMB AND TAIL	Painted yellow or may be painted grey with yellow disc on body.	
10 LENGTH OF TAIL	7.0 inches (without cone)	
11 WIDTH OF TAIL	6.5 inches	
12 MATERIAL OF TAIL	Sheet steel.	
13 CONSTRUCTION OF TAIL	Four vanes welded to tail cone. The tail cone is secured to base plug by a single bolt.	
14 WEIGHT OF TAIL	2.5 lbs.	
15 TYPE OF FILLING	Cast T.N.T.	
16 WEIGHT OF FILLING	4.5 lbs.	
17 TOTAL WEIGHT OF BOMB	33.4 lbs.	
18 CHARGE /WEIGHT RATIO	13.0 %	

BOMB DATA		COPY NO. _____
NATIONALITY: U.S. NAVY		FILE NO.: 1152.A1
SIZE: 100 lb. Mark I Mods. 2&3 100 lb. Mark IV Mods. 1&4		INFORMATION DATE: September 1943
TARGET: Ammunition dumps, airplanes, railway tracks, engines and cars, all types construction, except modern seacraft and battleships.		TYPE: G.P.-H.E. Bombs
		FUZES: Mark 19 U.S. Navy fuze.
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Mark IV</p> </div> <div style="text-align: center;">  <p>Mark I</p> </div> </div>		

## BOMB DATA

COPY NO.

2638

FILE NO.: 1152.A1

NATIONALITY: U.S. NAVY		INFORMATION DATE: September 1943.	
SIZE: 100 lb. Mark I Mods. 2&3		TYPE: G.P.-H.E. Bombs	
100 lb. Mark IV Mods. 1&4			
TARGET: Ammunition dumps, airplanes, railway tracks, engines and cars, all types construction, except modern seacraft and battleships.		FUZES: Mark 19 U.S. Navy fuse.	
	DATA	100 lb. Mark I Models 2 & 3	107 lb. Mark IV Models 1 & 4
1	OVERALL LENGTH	46.6 inches - Model 2 45.8 inches - Model 3	36.2 inches
2	LENGTH OF BODY		28.0 inches
3	DIAMETER OF BODY	7.9 inches	8.0 inches
4	THICKNESS OF WALL		0.175 inch
5	MATERIAL OF WALL	Sheet Steel	Steel
6	CONSTRUCTION OF BODY	Two steel castings welded together.	Single piece steel forging.
7	TYPE OF SUSPENSION	Horizontal	Horizontal
8	CONSTRUCTION OF SUSPENSION LUG	Two lugs welded to bomb body. May have single lug or trunnions on a band around the body.	Two lugs welded on body 14 inches apart; a single lug is welded on opposite side, 180 degrees removed from the two lugs.
9	COLOR & MARKINGS	Grey body with 11 inch yellow disc between lugs or may be painted yellow all over.	Blue grey with 1 inch yellow band around fuse opening or may be painted all over.
10	LENGTH OF TAIL	21.0 inches	9.1 inches
11	WIDTH OF TAIL	9.8 inches	11.0 inches
12	MATERIAL OF TAIL	Sheet Steel	Sheet Steel
13	CONSTRUCTION OF TAIL	Four vanes which pass down over the body are welded to a tail cone. The vanes are fastened to body of the bomb by screws and are braced by two sets of bar struts rivetted to vanes.	Four vanes welded to a sleeve which is secured to bomb body with a locking nut. Box type internal struts are welded to the vanes.
14	WEIGHT OF TAIL		
15	TYPE OF FILLING	T.N.T.	T.N.T.
16	WEIGHT OF FILLING	65 lbs.	55 lbs.
17	TOTAL WEIGHT OF BOMB	116 lbs.	120 lbs. - Model 1 105 lbs. - Model 4
18	CHARGE / WEIGHT RATIO	56 %	46 %
19	REMARKS	The Mark IV Model 1 & 4 are the regular service bombs being used with both Mark I Model 2 & 3 being obsolete; however some of these latter bombs are in storage and may be used.	



**BOMB DATA**

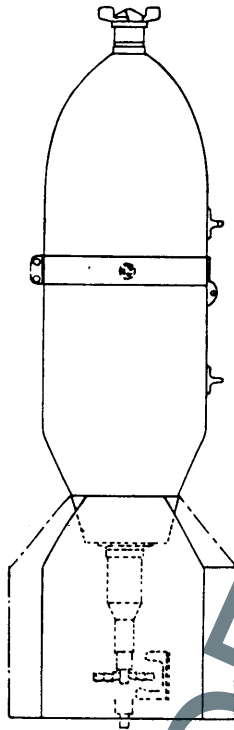
**COPY NO.**  
**FILE NO. 1154.A1**

**NATIONALITY:** U.S. Navy

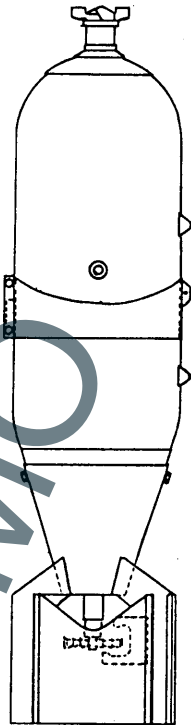
**INFORMATION DATE** Sept. 1943

**SIZE:** 500 lb. Mk XII Mod. 2

**TYPE:** General purpose demolition.

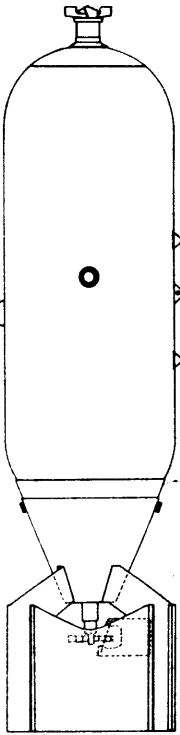
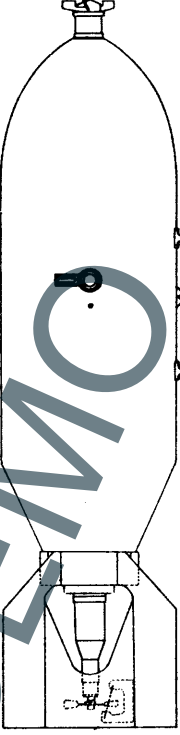


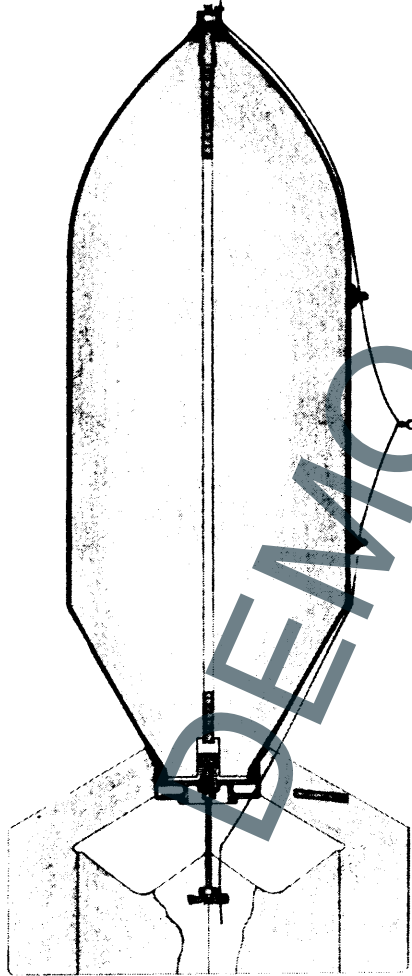
Mark XII Mod. 2



Mark IX


BOMB DATA		COPY NO. FILE NO. 1154.A1		BOMB DATA		COPY NO. FILE NO. 1154.A1	
NATIONALITY: U.S. Navy		INFORMATION DATE Sept. 1945		NATIONALITY: U.S. Navy		INFORMATION DATE Sept. 1945	
SIZE: 500 lb. Mk XII Mod. 2		TYPE: General purpose demolition.		SIZE: 500 lb. Mk XII Mod 2.		TYPE: General purpose demolition.	
TARGET: Troops and airplanes on the ground, bivouac areas, merchant ships and other lightly armored vessels. To dig craters in air fields, use Mk 221 fuze - short delay.				15. WEIGHT OF FILLING		266.0 lbs.	
<p align="center"><b>FUZES</b></p> <p>NOSE: Mk 219 instantaneous fuze: This bomb is shipped with one granular T.N.T. auxiliary booster in the nose. When the Mk 219 fuze is used it is necessary to insert one more of these auxiliary boosters; then screw the Mk 19 adapter into the fuze cavity and then insert the fuze. (The Mk XIII and Mk XVII, mod 2 fuzes are now obsolete but could be used in an emergency if available.)</p> <p>Mk 221 (.01 second delay) fuze: When this fuze is used, it is merely necessary to insert it in the bomb. It is not necessary to rig it as the Mk 219.</p> <p>TAIL: Mk 223 (.08 second delay) Mk IV Mod. 1 or Mk XXIV are obsolete but were previously used in the tail.</p>				16. TOTAL WEIGHT OF BOMB		505.0 lbs.	
				17. CHARGE/WEIGHT RATIO		50.0 %	
				18. REMARKS:		<p>The Mk XII - mod 2 is the most commonly used 500 lb. Navy bomb. There are three other 500 lbs. bombs which are now obsolete to wit:</p> <p>500 lb. Mk III Mod 1; 500 lb. Mk XII mod 3; 500 lb. Mk IX. These obsolete bombs are similar to the Mk XII - 2 except they had a higher loading factor and in some instances the trunnion lugs for dive bombers were welded to the body instead of using the trunnion bands. The Mk XII - 2 is no longer in manufacture. It is being replaced by AN bombs.</p>	
DATA		Mk XII - Mod 2					
1. OVERALL LENGTH		59.5 "					
2. LENGTH OF BODY		42.6 "					
3. DIAMETER OF BODY		14.0 "					
4. THICKNESS OF WALL		0.36 "					
5. MATERIAL OF WALL		Steel.					
6. CONSTRUCTION OF WALL.		One piece of steel, drawn or forged.					
7. SUSPENSION:		This bomb is built with the usual three suspension lugs. To suspend the bomb from a dive bomber the suspension band may be attached. The band has two lugs which protrude at 180 degrees apart.					
8. COLOR & MARKINGS ON BOMB AND TAIL		This bomb painted grey with yellow disc, 11 inches in diameter, between suspension lugs; may also be painted old color of yellow overall.					
9. LENGTH OF TAIL		20 "					
10. WIDTH OF TAIL		19.4 "					
11. MATERIAL OF TAIL		Sheet metal.					
12. CONSTRUCTION OF TAIL		Four vanes welded to cone which is attached to body by a nut which surrounds the fuze. Box type struts.					
13. WEIGHT OF TAIL		16.3 lbs.					
14. TYPE OF FILLING		Filled with T.N.T.					

BOMB DATA		COPY NO. FILE NO. 1155.A1
NATIONALITY: U.S. Navy	INFORMATION DATE: Sept. 1943	
SIZE: 1000 lb. Mk XIII Mod.2	TYPE: General purpose bomb.	
TARGET: Troops and airplanes on the ground, bivouac areas, merchant ships and lightly armored vessels. To dig craters in airfields, use the Mk221 fuze-short delay.		
<div><p>Mark V &amp; IX</p></div> <div><p>Mark XIII</p></div>		

BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army-Navy		INFORMATION DATE: Sept. 1943	
SIZE: 4000 lb. AN-M-56		TYPE: G.P.-H.E. (AN-M-Series)	
TARGETS: Residential areas and light constructed buildings in rather heavily populated areas.			
			

BOMB DATA		FILE NO.	COPY NO.	BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army-Navy		INFORMATION DATE: Sept. 1943		NATIONALITY: U.S. Army-Navy		INFORMATION DATE: Sept. 1943	
SIZE: 4000 lb. AN-M-56		TYPE: G.P.-H.E. (AN-M-Series)		SIZE: 4000 lb. AN-M-56		TYPE: G.P.-H.E. (AN-M Series)	
TARGETS: Residential areas and light constructed buildings in rather heavily populated areas.				13. CONSTRUCTION OF TAIL (cont'd)		four pieces are welded together and to the sleeve.	
FUZES				14. WEIGHT OF TAIL		95.0 lbs.	
Nose. AN-M-103, M-103, instantaneous always.				15. TYPE OF FILLING		1) A 50-50 Amatol filling with T.N.T. surrounds around the nose and tail booster sleeve to prevent exudation from the Amatol during storage. 2) Recently 100% T.N.T. is being used. The M-111 auxiliary booster (tetryl) is built in the bomb and extends from the fuse pocket in the nose to the tail fuse pocket. The M-102 adapter booster (tetryl) is built in the tail fuse pocket.	
Tail. AN-M-102A2, 102A1, M-102 (Non-delay action)							
DATA		4000 lb. AN-M-56				50-50 Amatol T.N.T.	
1. OVERALL LENGTH		117.25 "		16. WEIGHT OF FILLING		3240.6 lbs. 3362.0 lbs.	
2. LENGTH OF BODY		94.9 "		17. TOTAL WEIGHT OF BOMB.		4087.0 lbs. 4204.0 lbs.	
3. DIAMETER OF BODY		54.0 "		18. CHARGE/WEIGHT RATIO		79.3% 79.9%	
4. THICKNESS OF WALL		0.37 "					
5. MATERIAL OF WALL		Steel.					
6. CONSTRUCTION OF BODY.		AN bombs are constructed the same as the M series, i.e. by 1) use of seamless steel tubing, 2) by forging, or 3) by casting. The AN series use a male-type filling base plug whereas the M series use a female-type cap.					
7. TYPE OF SUSPENSION.		These bombs are always held horizontally.					
8. CONSTRUCTION OF SUSPENSION LUG.		The AN bombs have two eyebolts welded to body along longitudinal axis of the bomb. They also have a third eyebolt welded to body at center of gravity and 180 degrees removed from other eyebolts. The eyebolts are formed from bar steel shaped in the form of a U and then welded to the bomb body. The 1000 lb. AN bombs may also have trunnions on a band.					
9. COLOR AND MARKINGS ON BOMB & TAIL.		Prior to March 11, 1942 these bombs would have been painted yellow all over with black manufacturer's markings but since that date they will be painted olive-drab with a 1 inch yellow band around the nose and extreme rear of bomb and a 1/4 inch band around the center of gravity.					
10. LENGTH OF TAIL		28.0 "					
11. WIDTH OF TAIL		47.6 "					
12. MATERIAL OF TAIL		Sheet steel.					
13. CONSTRUCTION OF TAIL.		This type of tail consists of the following parts: 1) A cast steel sleeve secured to the body by a fin locking nut; 2) four fins or vanes; 3) internal box-like struts; One vane and one strut are pressed from one piece of metal and the					

BOMB DATA		COPY NO. _____
NATIONALITY: U.S. ARMY-NAVY		FILE NO.: 1165.D1
INFORMATION DATE: Sept. 1943		
SIZE:	500 lb. AN-M 58 1000 lb. AN-M 59	TYPE: S.A.P. - H.E.
TARGET:	Naval seacraft, reinforced concrete or steel construction.	FUZES (Tail): 500 lb. - AN-M 101A1 1000 lb. - AN-M 102A1

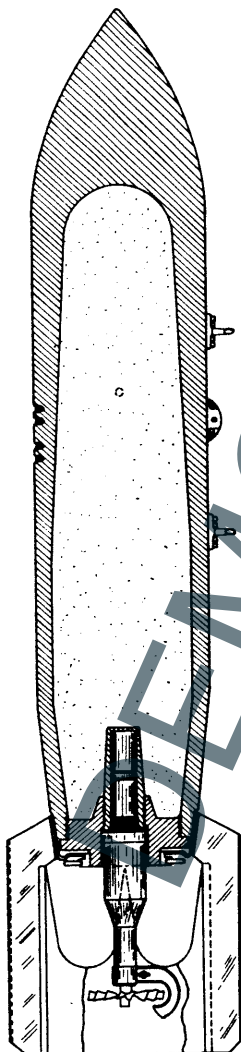


BOMB DATA		FILE NO.	BOMB DATA		FILE NO.
NATIONALITY: U.S. Army-Navy		INFORMATION DATE: Sept. 1943	NATIONALITY: U.S. Army-Navy		INFORMATION DATE: Sept. 1943
SIZE: 500 lb. AN-M-58 1000 lb. AN-M-59		TYPE: S.A.P. - H.E.	SIZE: 500 lb. AN-M-58 1000 lb. AN-M-59		TYPE: S.A.P. - H.E.
TARGET: Naval aircraft, reinforced concrete, or steel construction.					
FUZES					
TAIL:		500 lb. AN-M-101A1 AN-M-101A2  1000 lb. AN-M-102A1 AN-M-102A2			
DATA		500 lb. AN-M-58    1000 lb. AN-M-59			
1. OVERALL LENGTH	57.8 "		69.3 "		
2. LENGTH OF BODY	46.8 "		57.3 "		
3. DIAMETER OF BODY	11.8 "		15.1 "		
4. THICKNESS OF WALL	0.75"		1.0 "		
5. MATERIAL OF WALL	Steel		Steel.		
6. CONSTRUCTION OF BODY	An bombs are constructed the same as the M series, i.e. by 1) use of seamless steel tubing, 2) by forging, or 3) by casting. The AN series use a male-type filling base plug, whereas the M series use a female-type cap.				
7. TYPE OF SUSPENSION	These bombs are always held horizontal.				
8. CONSTRUCTION OF SUSPENSION LUG.	The AN series bombs have two eyebolts welded to body along longitudinal axis of the bomb. They also have a third eyebolt welded to the body at center of gravity and 180 degrees removed from other eyebolts. The eyebolts are formed from bar steel shaped in the form of a U and then welded to the bomb body. The 500 lb. AN bombs may also have trunnions on a band.				
9. COLOR & MARKINGS ON BOMB & TAIL.	Prior to March 11, 1942 these bombs would have been painted yellow overall with black manufacturer's markings but since that date they will be painted olive-drab with a 1 inch yellow band around the nose and extreme rear of the bomb and a 1/4 inch band around the center of the bomb.				
	500 lb. AN-M-58		1000 lb. AN-M-59		
10. LENGTH OF TAIL	15.05 inches.		16.8 inches.		
11. WIDTH OF TAIL	16.18 "		20.7 "		
12. MATERIAL OF TAIL	Sheet steel		Sheet steel.		
13. CONSTRUCTION OF TAIL			This type of tail consists of the following parts: 1) a cast steel sleeve secured to the body of the bomb by a fin locking nut; 2) four fins or vanes; 3) internal box-type struts. One vane and one strut are pressed from one piece of metal and the four pieces are welded together and to the sleeve.		
			500 lb. AN-M-58    1000 lb. AN-M-59		
14. WEIGHT OF TAIL			11.4 lbs.    17.0 lbs.		
15. TYPE OF FILLING			Two types of fillings are used in the demolition bombs; 1) a 50-50 Amatol filling with T.N.T. surrounds around the nose and tail booster sleeve to prevent exudation from Amatol during storage; 2) a T.N.T. filling.		
			50-50 Amatol    T.N.T.		
16. WEIGHT OF FILLING.			500 lb. AN-M-58    154.0 lbs.    160.0 lbs. 1000 lb. AN-M-59    307.5 lbs.    318.0 lbs.		
17. TOTAL WEIGHT OF BOMB.			500 lb. AN-M-58    466.5 lbs.    471.5 lbs. 1000 lb. AN-M-59    971.0 lbs.    991.0 lbs.		
18. CHARGE/WEIGHT RATIO			500 lb. AN-M-58    33.0%    34.0% 1000 lb. AN-M-59    31.7%    32.0%		
19. REMARKS:			In an emergency if there are no fragmentation or G.P. bombs available, an AN-M-103 fuse (with instantaneous functioning time) can be inserted in the nose of these bombs along with an AN-M-101A2 (in 500 lb. bomb) or AN-M-102A2 (in 1000 lb. bomb) fuse in the tail with a non-delay primer detonator to give fragmentation effect.		

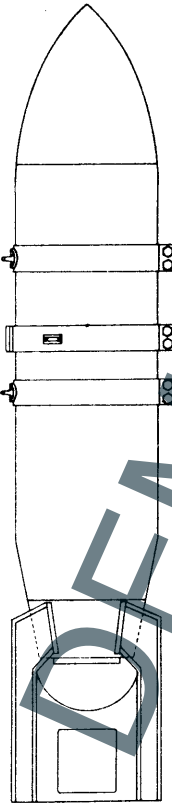


2638

BOMB DATA	FILE NO.	COPY NO.
NATIONALITY: U.S. Army-Navy	INFORMATION DATE: Sept. 1943	
SIZE: AN-Mk 33, 1000 lb. A.P.	TYPE: Armor Piercing.	
TARGET: Armored ships and heavy fortifications	FUZE: AN-Mk-228 Tail fuze.	



BOMB DATA		FILE NO.		COPY NO.	
NATIONALITY: U.S. Army-Navy			INFORMATION DATE: Sept. 1943		
SIZE: AN-Mk 33, 1000 lb. A.P.			TYPE: Armor Piercing.		
TARGET: Armored ships and heavy fortifications			FUZE: AN-Mk-228 Tail fuze.		
DATA					
1. OVERALL LENGTH.			73 "		
2. LENGTH OF BODY			58 "		
3. DIAMETER OF BODY			12 "		
4. THICKNESS OF WALL					
5. MATERIAL OF WALL			Steel.		
6. CONSTRUCTION OF BODY			One piece forged steel.		
7. TYPE OF SUSPENSION			Horizontal. Adapted for use by either U.S. Army or Navy or British planes.		
8. CONSTRUCTION OF SUSPENSION LUG			Two lugs 14" apart for U.S. One lug on opposite side and removable trunnions for use by British.		
9. COLOR AND MARKINGS OF BOMB AND TAIL			Olive drab overall.		
10. LENGTH OF TAIL			17"		
11. WIDTH OF TAIL			16"		
12. MATERIAL OF TAIL			Sheet steel.		
13. CONSTRUCTION OF TAIL			Four fins welded to tail cone which is held on body by lock nuts. The fins are supported by box type struts.		
14. WEIGHT OF TAIL			13 lbs.		
15. TYPE OF FILLING			Explosive D.		
16. WEIGHT OF FILLING			140 lbs. Explosive D.		
17. TOTAL WEIGHT OF CASE			868 lbs.		
18. CHARGE/WEIGHT RATIO			14.1% Explosive D.		
19. REMARKS: Armor piercing quality:					
1. Horizontal bombing. 2. Dive Bombing (60 degree dive, 300 knots true air speed.					
Alt. of release		Armor penetra- tion.		Alt. of release Armor penetra- tion.	
6000 feet		3.4 inches		2000 feet	
8000 "		4.2 "		3000 "	
10000 "		4.9 "		4000 "	
12000 "		5.5 "		5000 "	
14000 "		6.1 "		6000 "	
				3.1 inches	
				3.5 "	
				3.8 "	
				4.2 "	
				4.5 "	

BOMB DATA		COPY NO. _____
NATIONALITY: U.S. Army-Navy		FILE NO.: 1176.A1
SIZE: 1600 lb. AN-Mk 1	INFORMATION DATE: Sept. 1943	
TYPE: A.P. - H.E.		
TARGET:	Mk. XXVIII FUZES: TAIL: or AN-Mk. XXVIII	
		

BOMB DATA		COPY NO.	BOMB DATA		COPY NO.
FILE NO.			FILE NO.		
NATIONALITY: U.S. Army - Navy.		INFORMATION DATE: Sept. 1943	NATIONALITY: U.S. Army-Navy		INFORMATION DATE: Sept. 1943
SIZE: 1600 lb. AN-Mk I		TYPE: Armor piercing.	SIZE: 1600 lb. AN-Mk I		TYPE: Armor piercing.
<b>TARGET:</b> This bomb is used against heavy armor plate such as cruisers and battleships. This may also be used against heavy reinforced concrete structures.			<b>ARMOR PENETRATION AS FOLLOWS</b>		
<b>FUZES:</b> Mk 219 or AN-Mk 219 -- these have a short delay of .08 (plus or minus .01) seconds. The short delay is to allow the bomb to penetrate the armor before detonation.			<b>1. Horizontal bombing (cont'd).</b>		
			Altitude of release      Armor penetration. 14000 feet                      7.2 inches.		
			<b>2. Dive bombing (60 degree dive 300 knots true air speed.)</b>		
			Altitude of release      Armor penetration		
			2000 Feet.                      3.7 inches. 3000 "                          4.1 " 4000 "                          4.5 " 5000 "                          4.8 " 6000 "                          5.0 "		
DATA		1600 lb. AN-Mk I			
1. OVERALL LENGTH	83.5 "				
2. LENGTH OF BODY	69.5 "				
3. DIAMETER OF BODY	14.0 "				
4. THICKNESS OF WALL	1.3 "				
5. MATERIAL OF WALL	Steel.				
6. CONSTRUCTION OF BODY	Machined A.P. projectile forging.				
7. SUSPENSION	There are two bands around the bomb with suspension lugs on them. These bands are properly spaced so that the lugs may be used for suspension in ordinary bomb racks. If used on the dive bomber, then the trunion band may be placed on bomb.				
8. COLOR AND MARKINGS ON BOMB AND TAIL.	Grey with eleven inch yellow disc just aft of rear suspension lug. May be painted yellow all over.				
9. LENGTH OF TAIL	20.5 " (approx)				
10. WIDTH OF TAIL	20.6 "				
11. MATERIAL OF TAIL	Sheet steel.				
12. CONSTRUCTION OF TAIL	Four vanes welded to tail cone, interior box-type struts. Cone secured to body by tail lock nut.				
13. TYPE OF FILLING	Explosive D.				
14. WEIGHT OF FILLING	215 lbs.				
15. TOTAL WEIGHT OF BOMB	1605 lbs.				
16. CHARGE/WEIGHT RATIO	13%				
17. REMARKS: The manufacture of this bomb is continued.					
<b>ARMOR PENETRATION AS FOLLOWS</b>					
<b>1. Horizontal bombing.</b>					
Altitude of release      Armor penetration.					
6000 feet.                      4.0 inches. 8000 "                          5.0 " 10000 "                        5.8 " 12000 "                        6.5 "					

## DEPTH BOMBS

## INTRODUCTION

The depth bomb was originally designed with the round nose. In actual usage, it was found that the underwater trajectory of this bomb was not satisfactory, consequently the flat nose attachment was developed. The flat nose attachment is in the shape of a bucket and fits down under the nose of the bomb. The vacant spaces are then filled with plaster of paris. When this attachment is filled, the weights of the bombs increase from the 325 lb. bombs by 44 lbs. and the 650 lb. bombs by 72 lbs.

At the outset the flat nose attachments were manufactured separately and sent out to be placed on the depth bombs already in the field. At about the same time the depth bombs were being manufactured with the attachment on them. Subsequently the depth bomb was redesigned so that the actual bomb case was flat thereby eliminating the necessity of the attachment.

The new design with the flat nose is designated as the AN Mark 41, AN Mark 47, Mark 38, and Mark 49.

Some of the round nose depth bombs are still being manufactured and a small supply kept on hand at the Navy ammunition depots. However, the large majority of depth bombs will either have flat nose attachments or will be built with the flat nose.

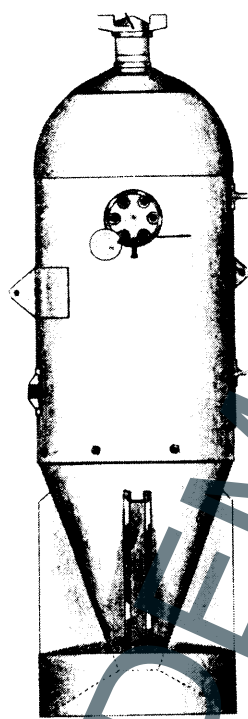
Due to the air currents around the flat nose of the bomb, the nose fuses have difficulty in arming. The AN M 103 will not arm on the flat nose. The AN Mark 219 will arm with difficulty at 2500 feet. The AN-M 103 is now being designed with wider arming vanes and a pitch of 30 degrees. This new design of the fuse will permit it to arm on the flat nose.

The depth bombs are primarily filled with T.N.T., however, the 350 lb. AN-Mark 47 and 700 lb. Mark 49 are filled with Torpex. It is believed that Torpex gives greater force of blast in detonation.

DEPTH BOMB DATA

COPY NO.

FILE NO.

NATIONALITY: U.S. Navy		INFORMATION DATE Sept. 1945
SIZE:	325 lb. AN-MK 17-2 350 lb. AN-MK 44	TYPE: Depth Bomb
TARGET: Submarine or light surface vessels		
		

DEPTH BOMB DATA		COPY NO.	DEPTH BOMB DATA		COPY NO.
FILE NO.		FILE NO.	FILE NO.		FILE NO.
NATIONALITY: U.S. Navy		INFORMATION DATE Sept. 1945	NATIONALITY: U.S. Navy		INFORMATION DATE: Sept. 1943
SIZE: 385 lb. AN-MK 17-2 350 lb. AN-MK 44		TYPE: Depth Bomb	SIZE: 325 lb. AN-MK 17-2 350 lb. AN-MK 44		TYPE: Depth Bomb
TARGET: Submarine or light surface vessels			TARGET: Submarine or light surface vessels.		
FUZES: AN-Mark 219 - When used an auxiliary booster must be inserted first and the MK-19 Adapter ring used to fit fuse in bomb. Note: This fuse will not arm under 2500 ft. if flat nose attachment is on bomb. Instantaneous action. MK-21 Auxiliary booster not necessary - fuse will not arm on flat nose under 2500 ft. AN-M 103 Will not arm at all on flat nose due to air current. Arming vanes on fuse being modified so it will arm. MK-221 Short delay.			14. WEIGHT OF FILLING 243 lbs. 270 lbs.		
			15. TOTAL WEIGHT OF BOMB 345 lbs. 349 lbs.		
			16. CHARGE/WEIGHT RATIO 70% 77%		
ATHWARTSHIP: AN-MK 224 (Hydrostatic fuse)			17. REMARKS		
DATA	AN-MK 17-2 & AN-MK 44		CONVERTING 300 lb.--- Mark III DEPTH 300 lb.--- Mark VI CHARGES 600 lb.--- Mark VII 300 lb.--- Mk II, Mod 2		
1. OVERALL LENGTH	52.5 inches		The above depth charges can be converted for aircraft carrying and releasing by the use of the so-called "Flight Adapter". The Flight Adapter (made of steel and weighing about 33 lbs) has a box-tail structure which acts as a stabilizer during the fall of the depth charge, preventing end-over-end pitching. The Flight Adapter also allows the depth charge to be suspended from either a single bomb or a multiple-unit bomb rack.		
2. LENGTH OF BODY	31.1 "		NOTE: The AN MK 44 is no longer in production.		
3. DIAMETER OF BODY	15.0 "				
4. THICKNESS OF WALL	.06 "				
5. MATERIAL OF WALL	Sheet Steel				
6. CONSTRUCTION OF BODY	These depth bombs are made with the round nose which is welded to a cylindrical steel tube. There is a strengthening disc around the nose and a steel strip along the suspension lugs to reinforce the body. The transverse fuse pocket is 11.9 inches aft of nose. In order to prevent ricochet and improve underwater trajectory a flat nose attachment is made for these depth bombs. These attachments are in the shape of a bucket which fits down over the nose and is filled with plaster of paris. See fuses above for difficulty of arming with attachment.				
7. SUSPENSION	Two lugs on one side and a suspension bracket on the opposite side 180 degrees removed. Trunion bands are used when suspended from dive bombers.				
8. COLOR AND MARKINGS ON BOMB AND TAIL	Gray with eleven inch yellow disc just aft of rear suspension lug. May be painted yellow all over.				
9. LENGTH OF TAIL	20.2 inches				
10. WIDTH OF TAIL	20.6 "				
11. MATERIAL OF TAIL	Sheet Steel				
12. CONSTRUCTION OF TAIL	Four vanes welded to tail cone, interior box-type struts. Cone secured to body by tail lock nut.				
13. TYPE OF FILLING	AN-MK 17-2 T.N.T. AN-MK 44 TORPEX				

2638

BOMB DATA

FILE NO. COPY NO.

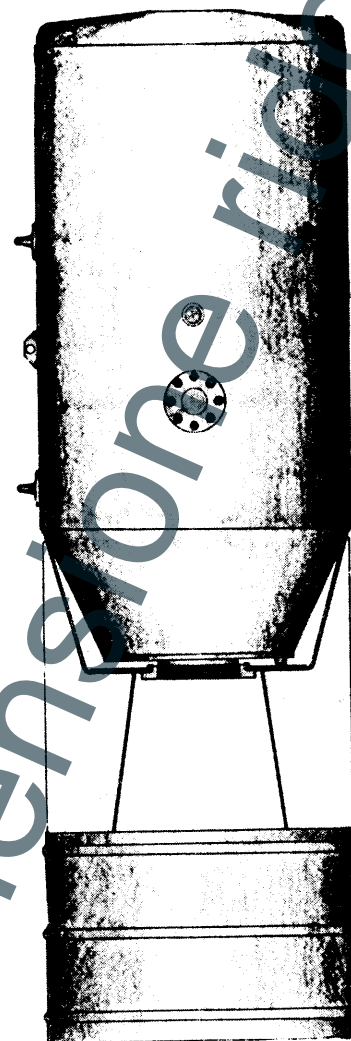
NATIONALITY: U.S. Army-Navy

INFORMATION DATE: Sept. 1943

SIZE: 325 lb. AN-Mk- 41  
350 lb. AN-Mk- 47

TYPE: Aircraft Depth Bomb.

TARGET: Submarines and other ships.



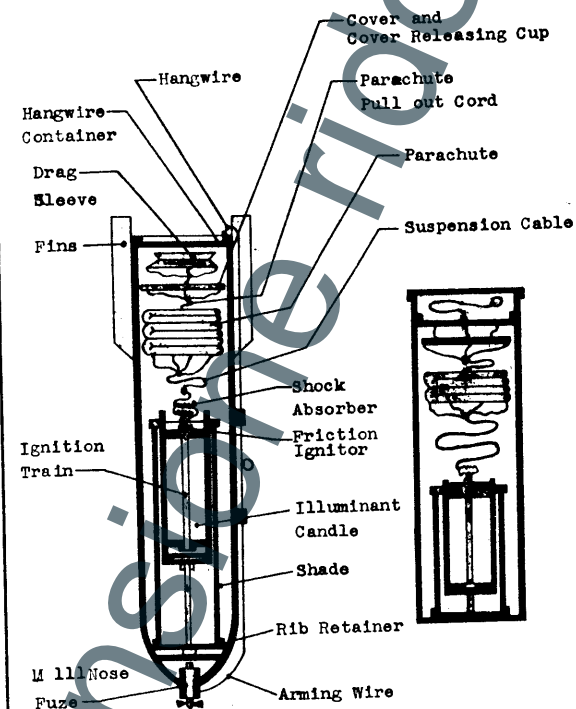
BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army-Navy		INFORMATION DATE: Sept. 1943	
SIZE: 325 lb. AN-Mk- 41 350 lb. AN-Mk- 47		TYPE: Aircraft Depth Bomb.	
TARGET: Submarines and other ships.			
		FUZES	
NOSE:		<p>AN-Mk 219 instantaneous - Insert one Navy auxiliary booster and use Mk 19 adapter ring. This fuse will not arm on flat nose under 2500 feet.</p> <p>AN-M-103 - Selective delay or instantaneous. Fuse will not arm - do not use until modified AN-M-103 is supplied with the wider arming vanes.</p> <p>Mk-221 Delay - arms with difficulty as does the AN-Mk-219.</p>	
AFTWARTSHIP:		AN-Mk-224 or AN-Mk-234 (Hydrostatic fuses.)	
DATA			
1. OVERALL LENGTH (without fuse)		49.87 "	
2. LENGTH OF BODY		27.775 "	
3. DIAMETER OF BODY		14.875 "	
4. THICKNESS OF WALL		0.06 "	
5. MATERIAL OF WALL		Sheet steel.	
6. CONSTRUCTION OF BODY.		<p>The nose is flat with a slight taper from the walls to the nose. A transverse fuse pocket tube is welded into place 15" aft of the nose. A stiffener strip is welded to the body under all suspension lugs. The bomb body is in three pieces, the sides being tubular, with nose and tail covers attached. The flat nose is built in this depth bomb and is not an attachment as in the case of the AN-Mk-17-2 and AN-Mk-44.</p>	
7. TYPE OF SUSPENSION		Horizontal.	
8. CONSTRUCTION OF SUSPENSION LUG.		<p>Two lugs 14" apart, hoisting lug between them. One other lug 180 degrees removed from above lugs, located at the center of gravity. Trunnion bands may be used for dive bombers.</p>	
9. COLOR & MARKINGS ON BOMB AND TAIL		Olive drab overall.	
10. LENGTH OF TAIL		24.60 "	
11. WIDTH OF TAIL		15.375"	

BOMB DATA		FILE NO.	COPY NO.
NATIONALITY: U.S. Army-Navy		INFORMATION DATE: Sept. 1943	
SIZE: 325 lb. AN- Mk-41 350 lb. AN-Mk-47		TYPE: Aircraft depth bomb.	
12. MATERIAL OF TAIL	Sheet steel.		
13. CONSTRUCTION OF TAIL	Conical tail assembly held to body by rivets or screws. Four tail fins spot welded to cone supported by a drum type strut.		
	AN-Mk-41	AN-Mk-47	
14. TYPE OF FILLING	T.N.T.	Torpex.	
15. WEIGHT OF FILLING	227 lbs.	252 lbs.	
16. TOTAL WEIGHT OF BOMB.	325# (approx)	350# (approx.)	
17. CHARGE/WEIGHT RATIO.	69%	72%	
18. REMARKS.	Nose piece is flat to improve under-water trajectory. Torpex is employed in order to obtain stronger mining effect.		



638

BOMB DATA NATIONALITY: U.S. ARMY SIZE: 44.0 lb. M 24 52.5 lb. M 26		COPY NO. _____ FILE NO.: 1142.G2 INFORMATION DATE: Sept. 1943
TARGET: Used for flare in night bombing or may be used as a marker.		TYPE: Flare (night bombing) FUZES: 52.5 lb. - Nose fuze M 111



FLARE DATA <span style="float: right;">COPY NO.</span>		FLARE DATA <span style="float: right;">COPY NO.</span>																	
NATIONALITY: U.S. Army-Navy	FILE NO.	NATIONALITY: U.S. Army-Navy	FILE NO.																
DESIGNATION: 53 lb. AN-M 26	INFORMATION DATE: Sept 1943.	DESIGNATION: 53 lb. AN-M 26	INFORMATION DATE: Sept. 1943																
CLASSIFICATION: Aircraft parachute flare for night bombardment.		CLASSIFICATION: Aircraft parachute flare for night bombardment.																	
<p>USE: High altitude night bombardment. The M 111 time fuze is used with this flare and can be set to function at 3,000 feet, when released from any altitude between 5,000 and 25,000 feet. A table showing the time required for a flare to fall from any altitude in the above range to an altitude of 3,000 feet and the dropping angle to be used with various plane speeds will be found in technical data appended.</p>		<p>4. When the time set on the periphery of the fuze has elapsed, a small charge of black powder explodes and pushes out the cover releasing cup. The four retaining pins which engage the groove in the case are retracted by the retaining pin springs. This releases the detachable cover to which the sleeve shrouds are attached and allows the drag sleeve and cover assembly to separate from the flare</p>																	
<table border="1"> <thead> <tr> <th colspan="2">DATA</th> </tr> </thead> <tbody> <tr> <td>BURNING TIME</td> <td>3 to 3.5 minutes</td> </tr> <tr> <td>RATE OF FALL AFTER IGNITION</td> <td>700 ft. min. (approx)</td> </tr> <tr> <td>INTENSITY Standard illuminant Substitute illuminant</td> <td>800,000 candlepower 575,000 candlepower</td> </tr> <tr> <td>COLOR</td> <td></td> </tr> <tr> <td>WEIGHT AS DROPPED</td> <td>53 lbs</td> </tr> <tr> <td>LENGTH OVERALL</td> <td>50 inches</td> </tr> <tr> <td>DIAMETER OF FLARE CASE</td> <td>8 inches</td> </tr> </tbody> </table>		DATA		BURNING TIME	3 to 3.5 minutes	RATE OF FALL AFTER IGNITION	700 ft. min. (approx)	INTENSITY Standard illuminant Substitute illuminant	800,000 candlepower 575,000 candlepower	COLOR		WEIGHT AS DROPPED	53 lbs	LENGTH OVERALL	50 inches	DIAMETER OF FLARE CASE	8 inches	<p>5. The cover assembly is fastened to the parachute by the parachute pull-out cord. The pull out cord and the expanding gases from the exploded black powder force the parachute, glass cloth shade, and illuminant from the case which falls free. As the parachute leaves the case, the parachute pull-out cord is broken by the stress applied by the drag sleeve. The sleeve falls away from the suspended flare, as does the flare case.</p>	
DATA																			
BURNING TIME	3 to 3.5 minutes																		
RATE OF FALL AFTER IGNITION	700 ft. min. (approx)																		
INTENSITY Standard illuminant Substitute illuminant	800,000 candlepower 575,000 candlepower																		
COLOR																			
WEIGHT AS DROPPED	53 lbs																		
LENGTH OVERALL	50 inches																		
DIAMETER OF FLARE CASE	8 inches																		
<p>MOUNTING ON AIRCRAFT:</p> <p>This flare is dropped only from bomb racks and bomb shackles. If the rack or shackle to be used has only one hook, the flare should be suspended by the after lug which is above the center of gravity of the flare. Any bomb rack or shackle in general service except the Mark 35 bomb rack, will give satisfactory results. It would be advisable to test the release hooks for release with such light weight objects.</p>		<p>6. The shock caused by the opening of the parachute is taken up by the shock absorber. This is composed of two lengths of copper tubing which have been slipped over the suspension cable and then coiled around an arbor about three-quarters of an inch in diameter. The shock is absorbed by straightening the copper tubing.</p>																	
<p>FUNCTIONING:</p> <p>The flare may be released safe or armed. If released safe it may function on impact. If released armed, it functions in the following manner:</p> <ol style="list-style-type: none"> <li>1. The movement of the flare downward withdraws the arming wire from the fuze, allowing the vane to rotate and arm the fuze. Withdrawing the arming wire also allows the arming pin to be ejected. This starts the time mechanism.</li> <li>2. When the flare has dropped the length of the hangwire, the latter breaks the seal wire and pulls out the hangwire container which drops free. Meanwhile, the tear wire, which is attached to the hangwire near its end, pulls out the tear wire cord which, in turn pulls out the drag sleeve and its shroud. A short length of cord attached to the shroud removes the detachable cover lock of the cover releasing cup.</li> <li>3. When the flare has dropped the combined length of the hangwire, tear wire, tear wire cord, sleeve and shrouds, the tear wire breaks allowing the flare to drop. It is stabilized in flight by its fins and the sleeve. The arming vane arms the fuze in about 6 seconds from the time of release.</li> </ol>		<p>7. As the suspension cable straightens, the ignition wires are pulled through the ignition mixture. This starts the ignition train composed of the igniter, the delay element, the quickmatch, which runs down through the center of the candle, the first fire composition and the illuminant candle. The delay element burns for about 6 seconds to assure the complete opening of the parachute before the candle ignites. As the candle ignites the gases generated force off the rib retainer allowing the rib springs to open the shade. Full ignition is reached in about 8 seconds.</p>																	

2 6 3 8

## PART II

### U.S. BOMB FUZES

#### SECTION A ARMY FUZES

DEMO  
dimensione ridotta

M-100 SERIES TAIL FUZES

The following four pages contain a diagram and information on the M-100 Series of Bomb Fuzes. These fuzes are the most commonly used tail fuzes. Since the operation of all of the fuzes in this series is essentially the same, they have been discussed under one heading. The following fuzes are discussed:

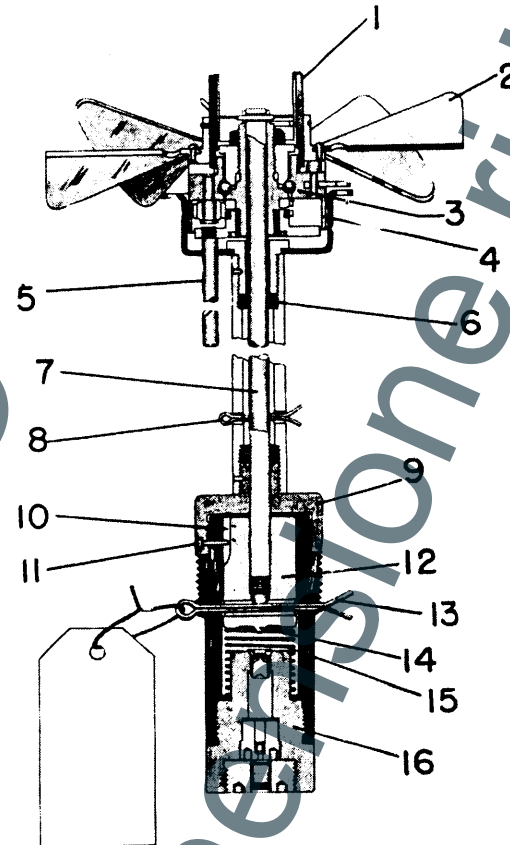
M-100  
AN M-100A1  
AN M-100A2  
M-101  
AN M-101A1  
AN M-101A2  
M-102  
AN M-102A1  
AN M-102A2

It will be noted that the M-100, M-101, and M-102 fuzes are the same except for the length of the impeller shafts. The length of the shaft varies to fit the different sizes of the bombs. The same holds true in the A1 and A2 series of these fuzes. The other minor differences in the A1 and A2 series are discussed in the data.

FOZE DATA

COPY NO.  
FILE NO. 5111.51

NATIONALITY: U.S. Army.	INFORMATION DATE: Sept. 1945
DESIGNATION: M-100, M-101, M-102	TYPE OF MISSILE: H.E. Bombs.
CLASSIFICATION: Mech. Impact, tail fuze.	MARKINGS: M-100, M-101, M-102.

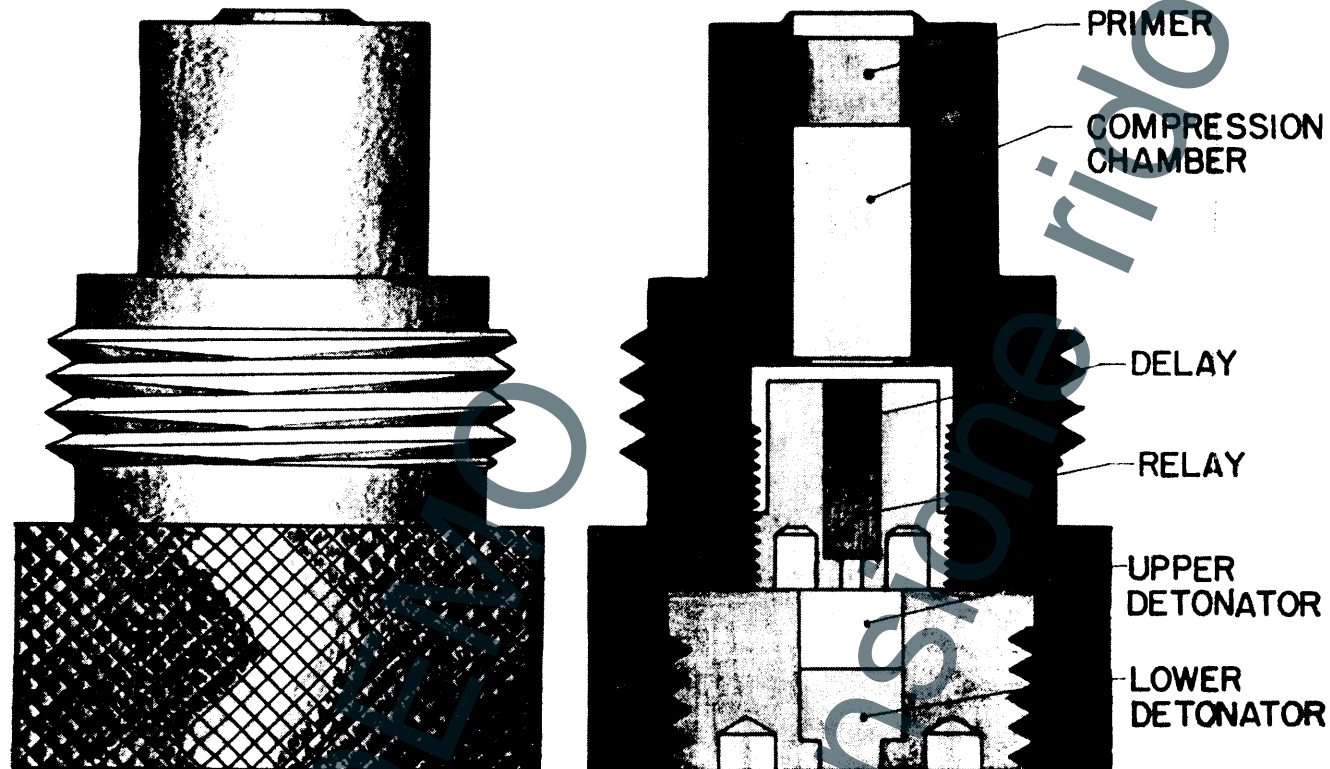


FUZE DATA		COPY NO. FILE NO. 2111.B1		FUZE DATA		COPY NO. FILE NO. 2111.B1		FUZE DATA		COPY NO. FILE NO. 2111.B1	
NATIONALITY: U.S. Army.		INFORMATION DATE: Sept. 1943		NATIONALITY: U.S. Army.		INFORMATION DATE: Sept. 1943		NATIONALITY: U.S. Army.		INFORMATION DATE: Sept. 1943	
DESIGNATION: M-100, M-101, M-102		TYPE OF MISSILE: H.E. Bombs.		DESIGNATION: M-100, M-101 M-102.		TYPE OF MISSILE: H.E. bombs.		DESIGNATION: M-100, M-101 M-102		TYPE OF MISSILE: H.E. bombs.	
CLASSIFICATION: Mech. Impact, tail fuze.		MARKINGS: M-100, M-101, M-102.		7. OPERATION (cont'd)		gear assembly will fly off. On impact, the striker which is held up now only by a creep spring (15), will be driven into the primer-detonator by inertia.		AN-M-100A2 AN-M-101A2 AN-M-102A2		BOMBS USED This series same as M-100 series with the following exceptions: Can be used in 4000 lb. AN-M-56 bomb.	
DATA		M-100		M-101		M-102		Same as AN-M-100-A1 series except:			
1. COLOR		Unpainted		Unpainted		Unpainted		1. Reduced number of threads from 24 single to 16 double threads which reduce number of revolutions necessary to arm, from 720 to 150-170.			
2. OVERALL LENGTH (less booster)		10 inches.		12 inches.		16 inches.		2. Reduced number of vanes from eight to four.			
3. OVERALL WIDTH								3. Changed shape of vanes, making them narrower and increasing their pitch.			
Body. Vanes.		2.3 " 5.0"		2.3 " 5.0 "		2.3 " 5.0 "		REMARKS:			
4. MATERIAL OF CONSTRUCTION		The fuzes are made of cadmium plated steel with brass striker block, brass primer-detonator holder and several small brass parts.		10. COMPONENTS OF EXPLOSIVE TRAIN		Primer, delay, relay and detonator contained in brass housing in base of fuze.		Do not try to pre-arm this fuze. This fuze, as received in the field is suitable for horizontal, glide, or dive bombing but not for skip bombing.			
5. DIFFERENCES.		These fuzes are identical except for the variations in the length of arming stem cases.		11. ARMING AND FUNCTIONING TIME.		These fuzes are armed after 720 revolutions of the vanes. Have .10 second delay.		SAFETY PRECAUTIONS WITH THESE SERIES.			
6. PARTS.				12. INDICATION OF ARMING.		Fuze is armed when gear carrier stop protrudes less than one inch below the vane cup.		1. Do not take gear assembly down in the field.			
1. Vane Locking Nut.		10. Keyway.		13. PRE-ARMING FOR DIVE BOMBING.		Either (a) rotate the vanes 350 revolutions or (b) remove arming stem after inserting safety pin through striker block, drill hole in arming stem .4 inch below present hole and insert cotter in this hole. This method safer than (a) above. State on tag on fuze indicates - Pre-armed. Some of these are pre-armed at the factory.		2. Insert safety pin in striker before removing stem.			
2. Arming Vanes.		11. Key.		AN-M-100A1 AN-M-101A1 AN-M-102A1		BOMBS USED IN: Same as M-100 series except an M-102A1 can be used in 4000 lb. AN-M-56 bomb.		3. Remove primer detonator only when changing delay. This applies only to A1 and A2 series. The primer-detonator cannot be changed on the M-100 series.			
3. Gear Reduction system. (Idler, movable, and stationary gears)		12. Striker Block.		Same as M-100, M-101, M-102 except:		This series incorporates the M-14 Primer-detonator which has four functioning times (non-delay, .025 second, .01 second, .10 second) rather than a fixed delay of .10 seconds as the M-100 series. The delay is stenciled on the base of the M-14 primer-detonator. In addition the base of the non delay is painted white or unpainted, the base of the .01 second delay is painted one-eighth black, and the base of the .10 second is painted all black. The base of the .025 sec. is painted 1/2 black.		4. Do not try to unarm fuze by rotating vanes in reverse direction.			
4. Vane Cap.		13. Safety Pin or shipping wire.		Preaming this series:		Rotate the Vanes 350 revolutions; or Remove arming stem, after inserting safety pin through the striker block. Drill hole in arming stem .4 inch below present hole and insert cotter in this hole. This method is safer than above. Some are pre-armed this way at the factory. All A1 fuzes are pre-armed at the factory. State on tag on fuze if it is pre-armed.					
5. Gear Carrier stop.		14. Striker.									
6. Bushing.		15. Creep Spring.									
7. Arming Stem.		16. Primer Detonator. (staked in fuze.)									
8. Shipping Wire.											
9. Fuze body.											
7. OPERATION.		When the bomb is dropped, the arming wire is withdrawn, freeing the vanes (2) which then rotate. This caused the idler gear to walk around the moveable (top) gear and the stationary gear (bottom). Due to the fact that the moveable gear has 30 teeth and the stationary gear 29 teeth, the moveable gear must begin rotating one tooth in relation to the stationary gear per rotation of the vanes. The stationary gear is held fixed by the carrier stop (5). A collar, integral with the moveable gear, is fixed to the arming stem (7) by a cotter pin. Therefore, the arming stem will also rotate in a clockwise direction. Since the arming stem is left-hand threaded, it will unscrew from the striker block (12) and the fuze body (9). After 720 revolutions of the vanes, the arming stem will be unscrewed from the striker block (12) and after approximately 1200 revolutions, it will be unscrewed from the body. At this point, the arming stem, vanes, and									

2638

# M-14 PRIMER DETONATOR

The M-14 Primer Detonator is used in the AN-M 100A1, AN-M 101A1, AN-M 102A1, AN-M 100A2, AN-M 101A2, AN-M 102A2. It cannot be used in any other fuzes, and it is the only primer detonator that can be used in the above listed fuzes. The M-14 Primer Detonator can be distinguished from the M-16 Primer Detonator by having the last 9/16 inch of its body at the base knurled all around.



**M-14 PRIMER DETONATOR**

The M-14 Primer Detonator is used in the AN-M 100A1, AN-M 101A1, AN-M 102A1, AN-M 100A2, AN-M 101A2, AN-M 102A2. It cannot be used in any other fuzes, and it is the only primer detonator that can be used in the above listed fuzes. The M-14 Primer Detonator can be distinguished from the M-16 Primer Detonator by having the last 9/16 inch of its body at the base knurled all around.

**COMPONENTS OF EXPLOSIVE TRAIN:**

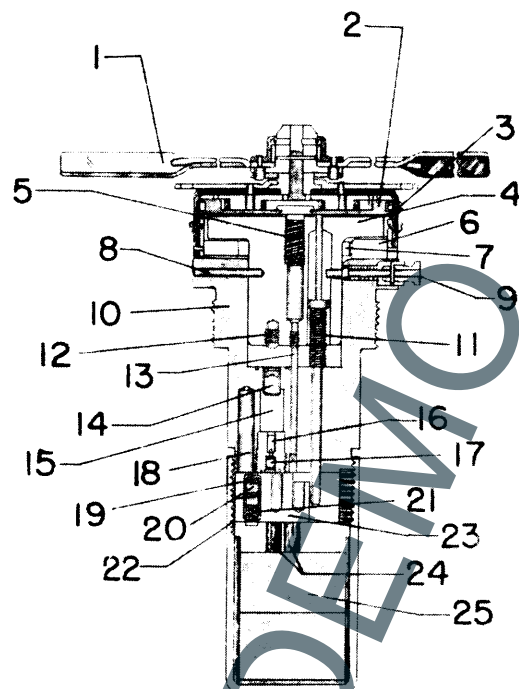
Primer  
Compression Chamber  
Delay  
Relay  
Upper Detonator  
Lower Detonator

**DELAYS:** The M-14 primer detonator has four optional delays as follows and each can be distinguished by the delay being stenciled on the base and by the following painting on base:

Non-delay	-	No paint or white
.01 seconds	-	1/8 of base black
.025 seconds	-	1/4 of base black
0.1 second	-	All of base black



FUZE DATA		COPY NO.
		FILE NO. 2111.B2
NATIONALITY: U.S. Army-Navy	INFORMATION DATE: Sept. 1943	
DESIGNATION: AN-M 103 M 103	BOMBS USED IN: All G.P. H.E. bombs of the M series.	



FUZE DATA		FUZE DATA		FUZE DATA	
COPY NO. FILE NO. 2111.B2		COPY NO. FILE NO. 2111.B2		COPY NO. FILE NO. 2111.B2	
NATIONALITY: U.S. Army-Navy	INFORMATION DATE: Sept. 1943	NATIONALITY: U.S. Army-Navy	INFORMATION DATE: Sept. 1943	NATIONALITY: U.S. Army-Navy	INFORMATION DATE: Sept. 1943
DESIGNATION: AN-M 103 M 103	BOMBS USED IN: All G.P. H.E. bombs of the M series.	DESIGNATION: M-103. AN-M 103	BOMBS USED IN: All G.P. H.E. M series bomb	DESIGNATION: M-103. AN-M 103	BOMBS USED IN: All G.P. H.E. M-series bombs.
CLASSIFICATION: Mech. impact, nose fuze.	MARKINGS: Nose bomb fuze M-103. These markings appear on the vanes and flanges of the fuze. In addition the following typical marks will appear: P.A. 9-38, LOT 1234-5.	11. PREARMING FOR DIVE BOMBING.	Rotate arming vanes 250 revolutions in a clockwise direction or rotate arming vanes until 1/8 inch of the safety discs are exposed, whichever occurs first.	12. OPERATION. (cont'd).	firing train. (Delay or instantaneous functioning depending on position of setting pin).
DATA		12. OPERATION.	This fuze is selective short delay or instantaneous functioning time, such selections may be made after the fused bomb is in the plane. By in- serting the setting pin (8) prevents the arming stem from rising too high by engaging the shoulder on the arm- ing stem. In this position, the arming stem extends down far enough to catch the spring loaded detonator slider on the first step and line up the delay firing train. A spring loaded detent locks the slider in this position. Instantaneous action is accomplished by rotating the setting pin 90 degrees and inserting it in the shallow slot. This permits the arming stem to rise until its shoulder rests against the top of the cavity. This frees the detonator slider (22) to move over under its spring pressure until the firing train is lined up under the instantaneous striker (12). In this position the detonator slider is locked by a spring loaded detent.	13. REMARKS.	This fuze is not suitable for dive bombing unless it is pre-armed. It should never be used for masthead bombing.  The AN-M-103, a modification of the M-103, is suitable for dive-bombing.  Differences between M-103 and the AN-M-103.  1. Changed number of threads on arming screw from 15 single to 6 1/2 double. 2. Changed vane construction, smaller and stronger vanes. 3. Has loose fitting lug through fuze body in striker to prevent striker from pulling out on low angle impact. 4. Contains screw threaded in cup that rides around groove in in- ternal or lower gear. 5. AN-M-103, arming time. Instantaneous 330 revolutions. Delay 220 revolutions. 6. Note! Do not pre-arm this fuze. This fuze is suitable for dive bombing - but not for masthead bombing.
1. COLOR	Unpainted metal.		When the bomb is released from the plane, the arming wire is withdrawn, permitting the arming vanes (1) to rotate. As the rotation of the arm- ing vanes is transmitted through the gear reduction system (2) (gear re- duction equals 65 revolutions of the vanes to 1 turn of spindle) the arm- ing screw (5) is unscrewed from the striker block assembly (4), thus causing the vane cup to rise. When the vane cup has risen sufficiently, the safety discs (6) are forced to fly out of fuze by a steel spring (7) As the vane cup rises, the arming stem (11) rises until its shoulder rests on the setting pin (9) (delay) or until it rests on the top of the cavity (instantaneous). This action does not take place until the base plate of the internal or lower gear has risen sufficiently to permit this, since the top of the arming stem is held down by this base plate. The vanes may continue rotating until the vanes, vane cup gear reduction system and arming screw fly off. At this stage, the striker block assembly is held in the fuze body by a shear wire (8) and the setting pin (9). On impact the striker block assembly (4) is driven down, shearing the shear wire (8) and the setting pin (9), and forcing the striker (13) into the		
2. OVERALL LENGTH	7.0 inches (with booster)				
3. OVERALL WIDTH	2.7 inches (body) 6.0 inches (vanes)				
4. MATERIAL OF CONSTRUCTION	All parts are cadmium- plated steel or brass.				
5. PARTS.					
1. Arming vanes.	13. Instantaneous striker.				
2. Gear reduction system	14. Primer.				
3. Vane cup screw (not on M-103 but is on AN-M-103)	15. Compression chamber.				
4. Strikerblock assembly	16. Delay.				
5. Arming screw.	17. Relay.				
6. Safety discs.	18. Compression cavity.				
7. Steel spring.	19. Primer.				
8. Shear wire.	20. Upper detonator.				
9. Setting pin.	21. Lower detonator.				
10. Fuze body.	22. Detonator slider springs.				
11. Arming stem.	23. Detonator slider.				
12. Delay striker.	24. Closing cup charges.				
	25. Booster (tetryl).				
6. POSITION AND METHOD OF FIXING IN BOMB.	The fuze is screwed into the nose fuze pocket, using the external threads on the fuze body.				
7. EXPLOSIVE TRAINS.	For instantaneous action - primer, upper detonator, lower detonator, closing cup charges and booster.  For short delay - primer, compression chamber, delay, relay, primer, upper detonator, lower detonator, closing cup charges and booster.				
8. FUZES LIKELY TO BE FOUND WITH.	M-100, M-101, M-102, AN-M-100A1, AN-M-101A1, AN-M-102A1, AN-M-100A2, AN-M-101A2, AN-M-102A2 and M-106.				
9. ARMING TIME.	Instantaneous: 350 revolutions of the vanes, or 2241 feet of air travel.  Delay: 525 revolutions of the vanes or 1494 feet of air travel.				
10. FUNCTIONING TIME	Instantaneous. Delay - .10 second.				

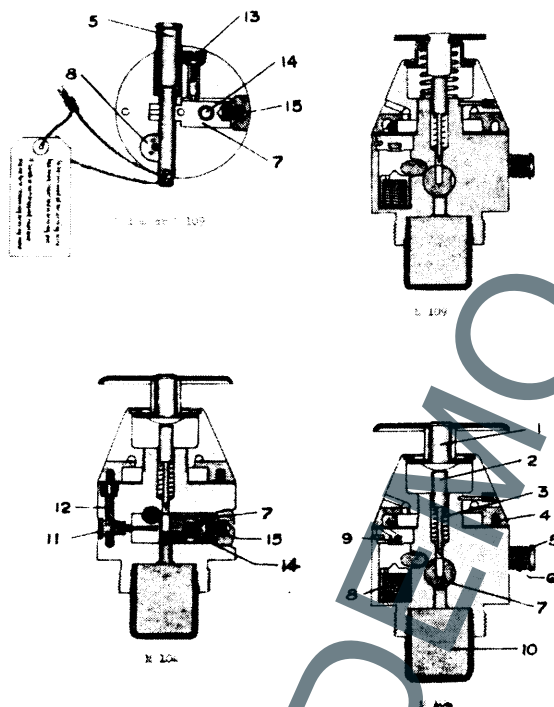
FUZE DATA

COPY NO.  
FILE NO. 2111.B3

NATIONALITY: U.S. Army

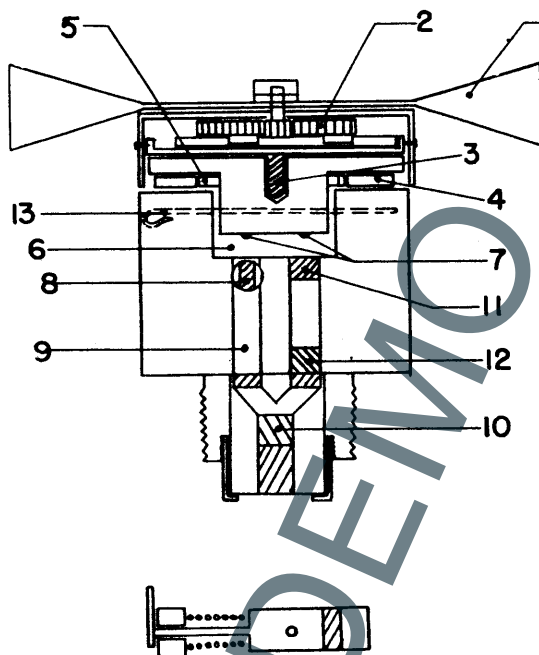
INFORMATION DATE: Sept. 1943.

DESIGNATION: M-104, M-109

TYPE OF MISSILE: Fragmentation  
(anti-personnel) Bombs.CLASSIFICATION: Mechanical  
Nose Impact.PRINCIPAL MARKING: NOSE BOMB  
FUZE M-104 or M-109

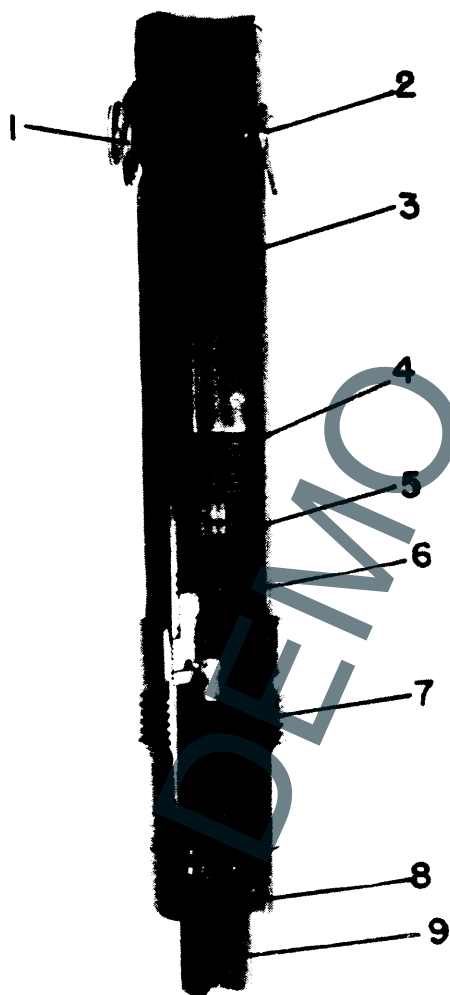
FUZE DATA		FUZE DATA	
COPY NO. FILE NO. 2111.B3		COPY NO. FILE NO. 2111.B3	
NATIONALITY: U.S. Army	INFORMATION DATE: Sept. 1943.	NATIONALITY: U.S. Army	INFORMATION DATE: Sept. 1943.
DESIGNATION: M-104, M-109	TYPE OF MISSILE: Fragmentation (anti-personnel) Bombs.	DESIGNATION: M-104, M-109	TYPE OF MISSILE: Fragmentation (anti-personnel) Bombs.
CLASSIFICATION: Mechanical Nose Impact.	PRINCIPAL MARKING: NOSE BOMB FUZE M-104 or M-109	CLASSIFICATION: Mechanical	PRINCIPAL MARKING: NOSE BOMB FUZE M-104 or M-109
MARKINGS: NOSE BOMB FUZE M-104 or M-109. Typical subsidiary markings: LOT 521-2 Manufacturers mark: P.A. Picatinny Arsenal: 8 A0 Month and year: all of these markings appear on top of striker head.		9. COMPONENTS OF EXPLOSIVE TRAIN In the arming assembly- the primer cap fires the delay powder train in copper housing. The timing train: The primer cap: The upper detonator in fuze body beneath the primer: Lower detonator in cup screwed into base of fuze.	
BOMBS USED IN: M-104 used in the 23 lb. M-40 Fragmentation Bomb. M-109 Used in the 20 lb. M-41 Fragmentation Bomb.		10. ARMING TIME	2.5 seconds after arming pin is removed.
DATA	M-104 and M-109	11. OPERATION The M-104 is used in the 23 lb Bomb which has a parachute attachment. When the parachute opens it removes the split pin; and the arming pin (5) (spring loaded) springs out and falls away. The withdrawal of the arming pin releases the spring loaded arming striker (8) which goes forward in its channel striking a primer pellet (9). The flash of the primer pellet sets off the black powder train (4) which burns in an arc 326 degrees where it ignites a small pellet of black powder (12). The explosion blows out the delayed arming disc (11) which in turn releases the spring loaded slider (7) to move over under the detonation striker (2). Then upon impact the striker (1) head is forced down pressing the striker into the small primer cap in the slider which initiates the detonation. The M-109 is used in a bomb without the parachute and thus the split pin is removed from the arming pin when it is released from the plane. The striker head is smaller too, so that wind pressure will not detonate the bomb before impact.	
1. COLOR	Unpainted aluminum		
2. OVERALL LENGTH	4.4 inches (including booster cup)		
3. OVERALL WIDTH	2.2 inches		
4. MATERIAL OF CONSTRUCTION	Aluminum alloy body, cadmium-plated striker and striker head, brass delay train cup.		
5. PARTS	(1) Mushroom striker head (10) Booster (2) Striker (11) Delayed arming disc (3) Creep spring (12) Delayed arming Blow-out (loose black powder) (4) Black powder train (13) Spring loaded detent (5) Arming pin (14) Firing train-primer (6) Arming spring pin (15) Detonator- lower (7) Spring loaded detonator slider (8) Spring loaded arming striker (9) Primer (to set off B.P. train)	12. SAFETY FEATURES If the delayed arming disc (brass colored) is not in place, the fuze is armed, so leave it alone. The M-104, with its mushroom striker head is a semi-always acting fuze and is very sensitive to touch at any angle.	
6. DESCRIPTION The M-104 and M-109 are alike in construction and operation except that the M-109 has a stronger spring beneath the striker head, and the striker head disc is not as large as the M-104. The base of the fuze is threaded externally to screw into the bomb and internally to receive the lower detonator cup. The arming pin is spring loaded and passes through the fuze horizontally, being held in position by a split pin. The spring loaded arming striker is held back by the arming pin. The arming striker is set in a vertical channel with a primer cap at one end which enters into the black powder ring. The black powder ring is housed in the brass disc located between the upper cap and the body proper. The detonating striker rests on a creep spring in a vertical channel in the center of the fuze body. The striker head is free to move in the upper cap of the body. A horizontal loaded slider containing primer cap rides in a horizontal shaft extending the width of the fuze body. In an unarmed position the slider is held from beneath by a delayed arming disc crimped in position at one end of shaft.		NOTE The M-104 is being replaced by the M-120 and the M-109 has been replaced by the M-110, and now by the AN-M 110a1.	
7. POSITION AND METHOD OF FIXING IN BOMB	Screws into nose of bomb.		
8. FUZES LIKELY TO BE FOUND WITH	Alone		

FUZE DATA		COPY NO. _____
NATIONALITY: U.S. Army		File NO: 2111.R4
DESIGNATION		INFORMATION DATE September 1943
M 105	PRINCIPAL MARKING	MOSE BOMB FUZE M 105
	CLASSIFICATION	Mechanical Impact Nose Fuze
	TYPE OF MISSILE	H. E. Bombs



FUZE DATA		COPY NO. _____ FILE NO: 2111.B4	FUZE DATA		COPY NO. _____ FILE NO: 2111.B4
NATIONALITY: U.S. Army		INFORMATION DATE: September 1943	NATIONALITY: U.S. Army		INFORMATION DATE: September 1943
DESIGNATION	PRINCIPAL MARKING	NOSE BOMB FUZE M 105	DESIGNATION	PRINCIPAL MARKING	NOSE BOMB FUZE M 105
M 105	CLASSIFICATION	Mechanical Impact Nose Fuze	M 105	CLASSIFICATION	Mechanical Impact Nose Fuze
	TYPE OF MISSILE	H. E. Bombs		TYPE OF MISSILE	H.E. Bombs
<b>MARKINGS:</b> NOSE BOMB FUZE M 105 Appears on the body and the vanes. Deep Slot Delay; Shallow Slot Inst. appears on fuze body around setting pin. Subsidiary markings: P.A. 11-39, LOT 1989-1.		<b>BOMBS USED IN:</b> Only the modified mark series bombs.	<b>9 COMPONENTS OF EXPLOSIVE TRAIN</b> No. 4 primer caps are used to initiate both trains of explosive. The delay channel and detonator assembly are as follows: delay train of 0.32 grains of black powder, the relay charge of 1.47 grains of lead aside.		
<b>DATA</b> M 105			<b>10 OPERATION:</b> Upon being released from the plane, the vanes (1) are free to rotate. After 720 rotations of the vanes, the arming screw (3) is withdrawn from the striker block (6) and the cap and arming vanes fall free of the fuze. The safety discs (4) fall away and the fuze is armed. Upon impact, the striker block (6) is forced down cutting the shear wire (13) and bringing the striker points in contact with the firing assembly. If the fuze is set for instantaneous action, then the flash from the cap sets off the detonator and detonates the bomb before the delay can function. But if the fuze is set for delay action, then the striker point over the instantaneous channel merely contacts the empty recess with no effect; and the delay cap is fired setting off the delay and relay element, the detonator, and the bomb filler.		
<b>1 COLOR</b> Unpainted metal			<b>11 REMARKS</b> This fuze is obsolete, and will not fit in any bombs, but modified mark series.		
<b>2. OVERALL LENGTH</b> 4.3 inches					
<b>3 OVERALL WIDTH</b> Body 2.7 inches Arming Vanes 10.0 inches					
<b>4 MATERIAL OF CONSTRUCTION</b> The body, striker assembly, and safety discs are of cadmium plated steel. Gear train and arming vane hub is of brass. The detonator cup may be of brass or plated steel.					
<b>5 PARTS:</b> 1. Arming Vanes 2. Gear Reduction System 3. Arming Screw or Spindle 4. Safety Discs 5. Steel Spring 6. Striker Block Assembly		7. Strikers (2) 8. Setting Pin and Slide 9. Instantaneous Channel 10. Detonators 11. Primer (delay) 12. Delay 13. Shear Wire			
<b>6 DESCRIPTION</b> The upper assembly of the fuze includes the 2 vanes and a train of reduction gears (2). The reduction gears are set to the threaded arming spindle (3) which screws into the top of the striker block (6). A cap fits down around the striker block. A series of safety discs (4) are inserted between the striker block shoulder and the fuze body. There are 2 striker points (7) at the base of the striker block. A brass shear wire (13) passes through the fuze body and the striker block. The fuze body has a hollow recess in the upper portion to receive the striker block. At the bottom of this recess and directly beneath the 2 strikers are 2 channels which lead to the detonator. The delay channel contains a cap with a delay and relay element; the instantaneous channel contains a cap only which is attached to the setting pin (8). The setting pin protrudes on the outside, and if turned to instantaneous, then the cap is directly beneath the striker; but if set for delay, then the cap is turned away from the striker leaving only a hollow channel booster. The base of the fuze body is threaded internally to receive the detonator cup and externally to screw into the bomb.					
<b>7 POSITION AND METHOD OF FIXING IN BOMB</b> The fuze screws into the nose of the bomb hand tight.					
<b>8 FUZES LIKELY TO BE FOUND WITH</b> M 106, M 100, M 101, AN-M100A1, AN-M101A1, M 102, AN-M102A2, AN-M100A2, AN-M101A2, AN-M102A2.					

<div style="display: flex; justify-content: space-between;"> <div> <b>FUZE DATA</b>  <div style="background-color: black; width: 100px; height: 15px; margin: 5px 0;"></div> </div> <div> <b>COPY NO.</b>  <b>FILE NO. 2111.B5</b> </div> </div>	
<b>NATIONALITY:</b> U.S. Army	<b>INFORMATION DATE:</b> Sept. 1943
<b>DESIGNATION:</b> M-106, M-106 LONG, M-106A1, M-106A2	<b>TYPE OF MISSILE:</b> G.P.H.E. Bombs.
<b>CLASSIFICATION:</b> Mechanical Impact Tail Fuze (with Pyrotechnic delay)	<b>PRINCIPAL MARKING:</b> Tail Bomb fuze M-106 or M-106 Long.





FUZE DATA		FUZE DATA	
COPY NO. 2111-B5		COPY NO. 2111-B5	
NATIONALITY: U.S. Army	INFORMATION DATE: Sept. 1943	NATIONALITY: U.S. Army	INFORMATION DATE: Sept. 1943
DESIGNATION: M-106, M-106 LONG, M-106A1, M-106A2	TYPE OF MISSILE: G.P.H.E. Bombs.	DESIGNATION: M-106, M-106 LONG, M-106A1, M-106A2	TYPE OF MISSILE: G.P.H.E. Bombs.
CLASSIFICATION: Mechanical Impact Tail Fuze (with Pyrotechnic delay)	PRINCIPAL MARKING: Tail Bomb fuze M-106 or M-106 LONG.	CLASSIFICATION: Mechanical Impact Tail Fuze (with Pyrotechnic delay)	PRINCIPAL MARKING: Tail Bomb fuze M-106 or M-106 LONG
MARKINGS: Tail Bomb fuze M-106, Tail Bomb Fuze M-106 LONG (on top closing plug of fuze) Typical subsidiary markings: P.A. 9-39, LOT 1234-5.		10. ARMING AND FUNCTIONING These fuzes arm instantaneously on removing of the arming pin but have delay of 45 seconds (may be as long as 60 seconds but could be varied considerably) in functioning after impact due to the safety fuze.	
BOMBS USED IN: All standard G.P.H.E. Bombs of the Mark and M Series M-106 LONG used in Mark Series 2000 lb. G.P.H.E.		11. OPERATION On withdrawing of the arming pin when the bomb is released the fuze is armed. On impact the striker block 'sets forward' overcoming the creep spring and detonating the cap. The cap ignites the black powder pellet which fires the safety fuze. When the safety has burned its entire length the second black powder pellet which is in the detonator is fired in turn igniting the remainder of the detonator.	
DATA	M-106 and M-106 LONG	M 106A1 - Reduced functioning time from 45-60 seconds to 8-11 seconds.	
1. COLOR	The fuzes are unpainted cadmium-plated steel.	M 106A2 - Reduced to functioning 3-5 seconds.	
2. OVERALL LENGTH (less booster)	M-106 (Regular) 9.4 inches M-106 (Long) 31.3 inches	12. REMARKS This fuze is dangerous to handle if the arming pin is out because it has a heavy striker and a weak creep spring. <u>Never use this fuze for horizontal, glide or dive bombing if there are any fuzes of the M-100 series present.</u> <u>Never use this fuze for skip or masthead bombing if there are any fuzes of the M-112 or AN-M 115 series present.</u> Use the M-106 fuze for skip bombing, if there are no M-112 through M-117 present, rather than using one of the M-100 series.	
3. OVERALL WIDTH	1.6 inches		
4. MATERIAL OF CONSTRUCTION	Cadmium-plated steel except percussion cap housing which is brass.		
5. PARTS	(1) Arming pin spring (6) Primer (2) Arming pin (7) Safety fuze or delay train (3) Striker block (8) Upper detonator (4) Creep spring (9) Lower detonator (5) Striker		
6. DESCRIPTION	These fuzes consist of a hollow steel striker block holder closed at the upper end by a threaded plug. This holder contains the striker block which is of steel with two grooves for air-pressure release. Both the holder and the striker block have a 1/2 inch hole drilled through near the top to receive the spring-loaded arming pin. A brass fitting housing the percussion primer is threaded into the base of the holder. Between the striker block and percussion cap is a steel creep spring. The brass fitting is externally threaded to receive a steel sleeve into which is placed a length of safety fuze with aluminum collars at top and bottom to correctly position the fuze. The sleeve is externally threaded to screw into the bomb. A steel bushing is screwed into the sleeve and the detonator cap is secured to the bushing by a collar.		
7. POSITION AND METHOD OF FIXING IN BOMB	The fuze is screwed into the base plate of the bomb, hand-tight and extends up through the center of the tail assembly.		
8. FUZES LIKELY TO BE FOUND WITH	Normally used with M-103 or M-105 Nose fuze.		
9. COMPONENTS OF EXPLOSIVE TRAIN	The percussion primer is a No. 26 cap. The primer of the safety fuze is black powder. The safety fuze is pyrotechnic mixture. The detonator is in three parts: Black powder pellet; lead azide pellet; and a tetryl pellet. The booster is the M-104 auxiliary booster of tetryl in a bakelite case.		

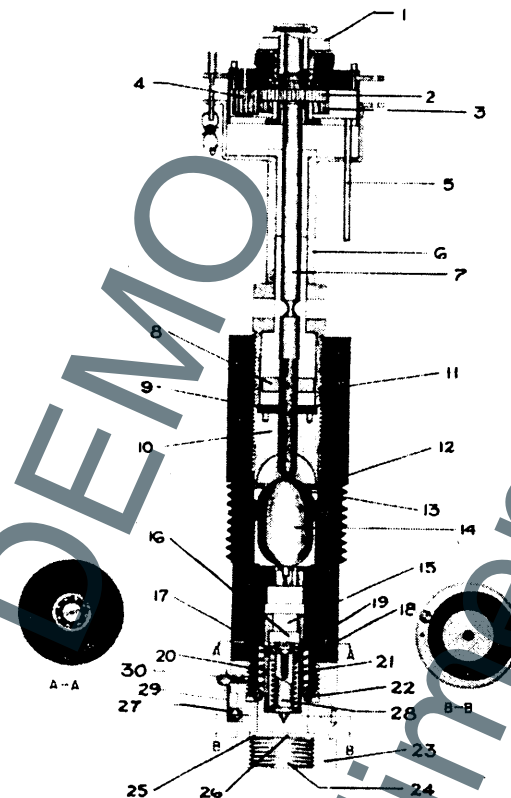




COPY NO.

FUZE DATA: [REDACTED]		FILE NO:
NATIONALITY: U.S. Army		INFORMATION DATE: Sept. 1943
DESIGNATION PRINCIPAL MARKING		M-123, M-124, M-125
M-123 M-124 M-125	CLASSIFICATION	Time, tail fuze
	TYPE OF MISSILE	H.E. Bombs
<b>MARKINGS:</b> M-123, M-124, or M-125. Appears on vanes and may be stamped on body. The delay and lot number are stamped on body.		<b>BOMBS USED IN:</b> M-123-AN-M 30, M31, AN-M57 M-124-AN-M 43, M32, AN-M64 AN-M 58, AN-M58 A1 M-125-AN-M 44, M44, M33, AN-M65, AN-M 34, AN-M 66, AN-M 59.

CONFIDENTIAL



FUZE DATA			FILE NO:			FUZE DATA			FILE NO:			FUZE DATA			FILE NO:					
NATIONALITY: U.S. Army			INFORMATION DATE: Sept. 1943			NATIONALITY: U.S. Army			INFORMATION DATE: Sept 1943			NATIONALITY: U.S. Army			INFORMATION DATE: Sept 1943					
DESIGNATION PRINCIPAL MARKING			M-123, M-124, M-125			DESIGNATION PRINCIPAL MARKING			M-123, M-124, M-125			DESIGNATION PRINCIPAL MARKING			M-123, M-124, M-125					
M-123	CLASSIFICATION		Time, tail fuze			M-123	CLASSIFICATION		Time, tail fuze.			M-123	CLASSIFICATION		Time, Tail fuze.					
M-124	TYPE OF MISSILE		H.E. Bombs			M-124	TYPE OF MISSILE		H.E. Bombs			M-124	TYPE OF MISSILE		H.E. Bombs					
M-125																				
MARKINGS: M-123, M-124, or M-125. Appears on vanes and may be stamped on body. The delay and lot number are stamped on body.			BOMBS USED IN: M-123-AN-M 30, M31, AN-M57 M-124-AN-M 43, M32, AN-M64 AN-M 58, AN-M58 A1 M-125-AN-M 44, M44, M33, AN-M65, AN-M 34, AN-M 66, AN-M 59.			DATA						11 SPECIAL PRECAUTIONS: (CON'T) e. The adapter booster (the part of the bomb into which the fuze is screwed) should be staked to the tail plug (this plug closes the end of the bomb) and the tail plug should be staked to the bomb case. This operation should be performed before the fuze is installed.								
DATA						6 INSTALLATION: (CON'T) d. Remove the cotter pin and insert arming wire. Remove safety pin after arming wire is inserted. e. Install vanes and secure with the locking nut. Place two Palmstock clips over the end of the arming wire. f. The fuze should not be installed an appreciably long time before takeoff especially if the temperature exceeds 120 degrees F.														
1. COLOR						7 FUZES LIKELY TO BE FOUND WITH			None. The T 30 nose anti-disturbance fuze is in the process of development for use with these fuzes.											
2 OVERALL LENGTH			M-123 - 9.6 in., M-124 - 11.6 in., M-125 - 15.6 in.			8 COMPONENTS OF EXPLOSIVE TRAIN			Primer-lead azide; Upper-lower detonator-tetryl.											
3 OVERALL WIDTH						9 ARMING AND FUNCTIONING TIME			These fuzes arm after 150-170 revolutions of the arming vane. Functioning time is determined by the concentration of the acetone solution and the use of extra celluloid discs.											
4 MATERIAL OF CONSTRUCTION			Zinc plated and dichromate coated steel.			10 OPERATION:			The stem case (6) and gear system of this fuze is identical with that of the AN-M 100 A2 fuze except that the arming stem (6) has a right hand thread so that it will screw down instead of out. The rotation of the vanes causes the arming stem (6) to screw down on and break a glass ampoule (14) filled with acetone. The acetone leaks into some cotton waste (15), then to a celluloid disc (16) (this disc is present only in fuzes with a delay of more than 12 hours), and then to a celluloid ring (17) which holds a spring loaded firing pin (28). When the celluloid ring (17) has been softened by the acetone the firing pin locking balls (19) are freed and the firing pin (28) is driven by its spring (21) into the primer-detonator (24). If the enemy attempts to withdraw the fuze the anti-withdrawal locking ball (27) will ride into the shallow part of its groove and jam against the wall of the adapter booster. This will cause the lower fuze body (23) to remain locked in the bomb while the rest of the fuze is withdrawn. A separation of 3/64 of an inch between the upper fuze body (11) and the lower fuze body (23) will free the spring loaded firing pin sleeve (20) which will drive the firing pin (28) into the primer detonator (24).											
5 DESCRIPTION:			The M-123, M-124, M-125 tail fuzes are designed for any of the Army-Navy standard general purpose and semi-armor piercing bombs. They are time fuzes which operate in 1, 3, 6, 12, 24, 36, 72, and 144 hours and are designed to render airfields, dock and industrial installations inoperative for these periods of time. The fuzes differ only in length of the arming stem cases. The fuze body is composed of three pieces - the stem case (6), upper fuze body (11), and lower fuze body (23). The stem case (6), which is threaded and staked to the upper fuze body (11), contains the gear assembly and the arming stem (7). The upper fuze body (11) contains cotton waste (15) and the acetone filled glass ampoule (14) which is broken by the arming stem (7) as it screws down in arming. The lower fuze body (23) contains the striker assembly and the M-19 primer-detonator (24). The striker assembly consists of a spring loaded firing pin (28) which is held cocked by locking balls (19) bearing against a celluloid ring (17). The rest of the striker assembly consists of a firing pin sleeve (20) which is held spring loaded by locking balls (22) bearing against a flange on the lower fuze body (23). The bottom of the lower fuze body (23) is internally threaded to receive the M-19 primer-detonator (24).						11 SPECIAL PRECAUTIONS:			a. Never attempt to withdraw the fuze during or after installation in the bomb. b. If bombs with this fuze is not dropped they must be jettisoned over enemy territory or in the sea. They cannot be considered safe even if dropped unarmed. c. The fuzes should not be subjected exceeding 120°F. In each shipping box there are 2 vials containing powder which solidify at higher temperatures. Follow directions in the shipping box in regard to the use and the disposition of these fuzes if higher temperatures are experienced. d. In assembling the primer detonator care should be taken to avoid damage to the anti-withdrawal locking ball and its groove.								
6 INSTALLATION:			a. Make sure that the upper fuze body (11) and the lower fuze body (23) are screwed together well, hand tight. Insert holder closing disc (aluminum) (26), holder sealing washer (lead) (25), and the M 19 primer detonator (24) in the base of the fuze. Tighten these parts with a wrench making sure that the anti-withdrawal locking ball (27) or its groove is not damaged. b. Remove thumb screw (30) and ball clip (29). The anti-withdrawal locking ball (27) should move freely in its groove. At this point do not attempt to unscrew the upper fuze body (11) from the lower fuze body (23) as it will detonate. c. Screw fuze into the bomb by hand. Do not under any circumstances attempt to withdraw the fuze during or after it has been installed. Separation of the upper fuze body (11) from the lower fuze body (23) by as much as 3/64 of an inch will cause it to detonate.																	

FILE NO. COPY NO.

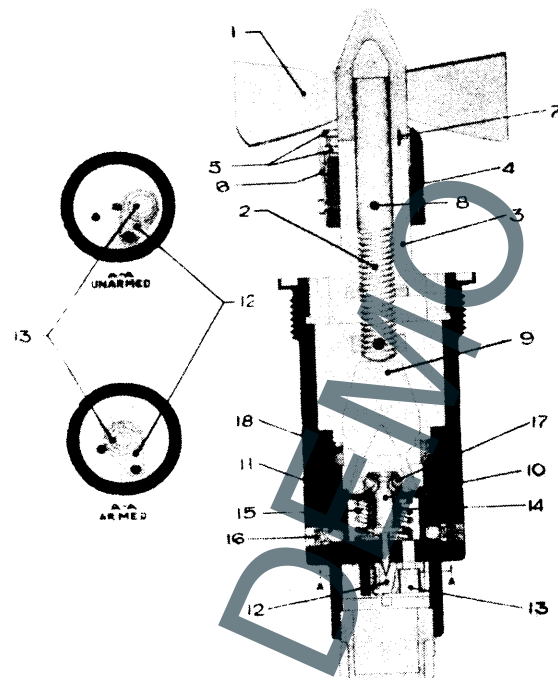
FUZE DATA	
NATIONALITY: U.S. Army	INFORMATION DATE: Sept. 1943.
DESIGNATION: M 126	PRINCIPAL MARKING: Nose Bomb Fuze M-126
CLASSIFICATION: Mechanical Impact Nose Fuze.	
BOMBS USED IN: M-70 Gas Bomb H.S. loaded only. By removing the adapter ring from the fuze pocket of the M-47A1 gas bomb, this fuze can be used.	
<u>DATA</u>	<u>M 126</u>
1. COLOR	Unpainted aluminum
2. OVERALL LENGTH	3.5" (with booster housing)
3. OVERALL WIDTH	1.7" Fuze Body 3.6" Arming Vanes
4. MATERIAL OF CONSTRUCTION	Steel safety blocks, striker, and primer detonator housing; Aluminum body.
5. REMARKS: This fuze is identical with the M-110 series of fuzes in both construction and operation. The only difference is that the booster is eliminated from the M-126. Instead of the booster a steel cylinder, the same dimensions as the booster, is screwed into the base of the fuze body. This steel cylinder contains an enlarged firing train consisting of primer, upper detonator, lower detonator, which is seated against the tetryl burster of the chemical bombs.	
NOTE:	For description and operation see the M-110.

# PART II

## SECTION B

### NAVY FUZES

FUZE DATA		COPY NO.
		FILE NO. 2111.AN 4
NATIONALITY: U.S. Navy	INFORMATION DATE: Sept. 1943	
DESIGNATION: Mk 131 Mk 136	TYPE OF MISSILE: Mk 36 used in hedgehog rockets. Mk 31 used in mousetrap rockets.	
CLASSIFICATION: Water Arming, Impact Firing.	PRINCIPAL MARKINGS: USN Mk 31 or USN Mk 36 stamped on fuze shoulder.	



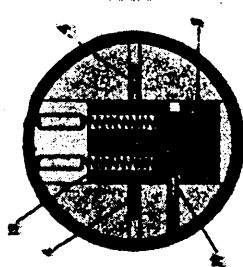
FUZE DATA		COPY NO. FILE NO. 2111.AN 4	FUZE DATA		COPY NO. FILE NO. 2111.AN 4
NATIONALITY: U.S. Navy	INFORMATION DATE: Sept. 1943		NATIONALITY: U.S. Navy	INFORMATION DATE: Sept 1943	
DESIGNATION: Mk 131 Mk 136	TYPE OF MISSILE: Mk 36 used in hedgehog rockets. Mk 31 used in mousetrap rockets.		DESIGNATION: Mk 131 Mk 136	TYPE OF MISSILE: Mk 36 used in hedgehog rockets. Mk 31 used in mousetrap rockets.	
CLASSIFICATION: Water Arming, Impact Firing.	PRINCIPAL MARKINGS: USN Mk 31 or USN Mk 36 stamped on fuze shoulder.		CLASSIFICATION: Water Arming, Impact Firing.	PRINCIPAL MARKINGS: USN Mk 31 or USN Mk 36 stamped on fuze shoulder.	
BOMBS USED IN: Mk 31-1 in Mk 5 & 7 A.S. Projectile chg. for Mk 20, 21, 22 Projectors. Mk 36 in A.S. Projectiles Mk 10 for Mk 6 & 8 Projector charge.			DESCRIPTION (Cont'd) is grooved. This groove fits opposite three round holes in the firing pin sleeve throat. The throat of the inertia piece is also grooved at the point where it fits down over the throat of the sleeve. The three above mentioned parts are held together by means of retaining balls (17) which fit into the holes in the firing pin sleeve and the grooves of the firing pin and inertia piece. A retaining ring (18) on a shoulder in the fuze body stops the forward motion of the firing mechanism, permitting the fuze to arm.		
DATA			7. POSITION AND METHOD OF FIXING IN BOMB Screws into fuze adapter in nose of bomb. Five right-hand threads.		
1. COLOR	Unpainted Mk 31-1 has red painted on nose of vane hub.		8 FUZES LIKELY TO Propelling charge of rocket is ignited BE FOUND WITH by an electric squib primer.		
2. OVERALL LENGTH	7.695" (including booster cup)		9 COMPONENTS OF EXPLOSIVE TRAIN The lead azide primer detonator is located in a spring loaded shutter. A booster lead in (tetryl) and tetryl booster complete the train.		
3. OVERALL WIDTH	Vanes Body	3.125" 2.25"	10. ARMING TIME 6-7 revolutions of vanes in the water. This runs in 10 to 15 feet of water travel.		
4. MATERIAL OF CONSTRUCTION	Steel.		11. OPERATION The safety pin is removed before loading the rocket on the projector. When the missile is fired, the setback collar moves back (breaking the shear wire of the Mark 136) thus releasing the locking pins from their slot. When the missile strikes the water, the force of the impact upon the vanes causes a torque sufficient to shear the vertical pin holding the throat and vane cap. The vanes are free to rotate and raise the spindle. As the spindle rises, the spring raises the firing pin sleeve and the inertia piece, allowing the detents to spring out as soon as the carrier skirt rises sufficiently. This movement also raises the firing pin clear of the shutter and allows the shutter over against the stop pin aligning the detonator with the firing pin. The movement of the sleeve is stopped when it comes to bear against the retaining ring in the fuze body. The spindle continues to rise, however, and is raised well clear of the inertia piece. The fuze is now armed. On impact inertia carries the inertia piece forward, thus clearing the (3) retaining balls, thereby allowing the balls to jump out, releasing the cocked firing pin which is forced into the detonator.		
5. PARTS	(1) Arming vanes (10) Firing pin (2) Spindle (11) Firing pin sleeve (3) Fuze neck (12) Spring loaded shutter (4) Setback collar (13) Detonator (5) Locking pins (14) Inner spring (6) Leaf spring (15) Outer spring (7) Vertical shear wire (16) Spring loaded detents (8) Safety pin (17) Retaining balls (9) Inertia piece (18) Retaining ring		12. REMARKS The detents in the fuze body which spring out under the skirt of the striker carrier are provided in order to allow the spindle to be screwed back down from the armed position without danger of forcing the striker into the detonator. In view of the fact that the inertia piece may be insecurely lodged over the striker spindle, this procedure is not recommended on any rocket which has once been fired.		
6. DESCRIPTION The two fuzes are identical except that the Mk 136 has a shear wire through the setback collar. The curved vanes (1) key into a threaded spindle (2) which threads into the neck of the fuze (3). When unarmed, the vanes are held immovable by a setback collar (4) which is slotted to accommodate locking pins (5) in the vane cap and the fuze neck. A leaf spring (6) fits over the collar slots and holds the collar up so the slot will hold the pins. In addition, there is a vertical shear wire (7) from the neck into the vane cap. A safety pin (8) passes through the collar, neck and spindle, the neck is threaded, cemented and staked into the fuze body. The arming spindle (2) in the unarmed position, extends into the upper part of the fuze body, and bears against the top of an inertia piece (9). The firing pin (10) is housed in a firing pin sleeve (11) in the lower part of the fuze body, and in the unarmed position, the sleeve (11) bears against the floor of the fuze body cavity, the firing pin (10) protruding through a guide hole into the shutter cavity, and holding the spring loaded shutter (12) which carries the detonator (13) from springing into position. The firing pin sleeve is a cylindrical cup with a throat at its upper end. The lower portion of the sleeve fits flush against the side of the fuze body. In the space between the firing pin and its sleeve, two compressed springs are housed. One spring (14) bears on the sleeve and thrusts downward against a flange on the firing pin. The outer spring (15) bears on the floor of the fuze body, thrusting upward against the firing pin sleeve. The skirt of the firing pin sleeve holds back four spring loaded detents (16) which are lodged in the side of the fuze body. The upper end of the firing pin					



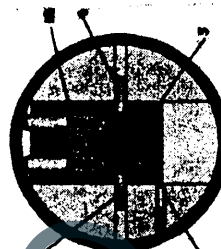
## FUZE DATA

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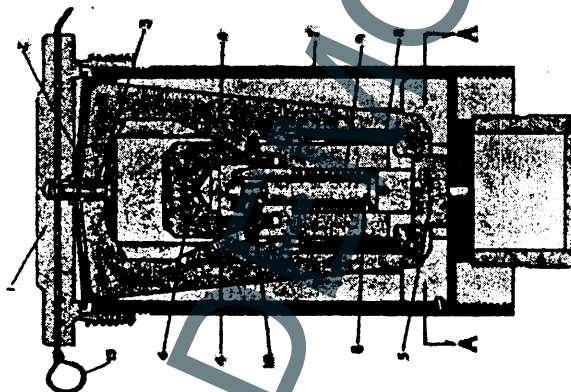
NATIONALITY: U.S. Navy.	INFORMATION DATE: Sept. 1943
DESIGNATION: Mk-135 H.I.R.	TYPE OF MISSILE: AS pro- jector
	Mk 20, 21 & 22.
CLASSIFICATION: Hydrostatic arming, im- pact firing, rocket fuse.	PRINCIPAL MARKING: RF Mk-135



SECTION A-A, ARMED POSITION



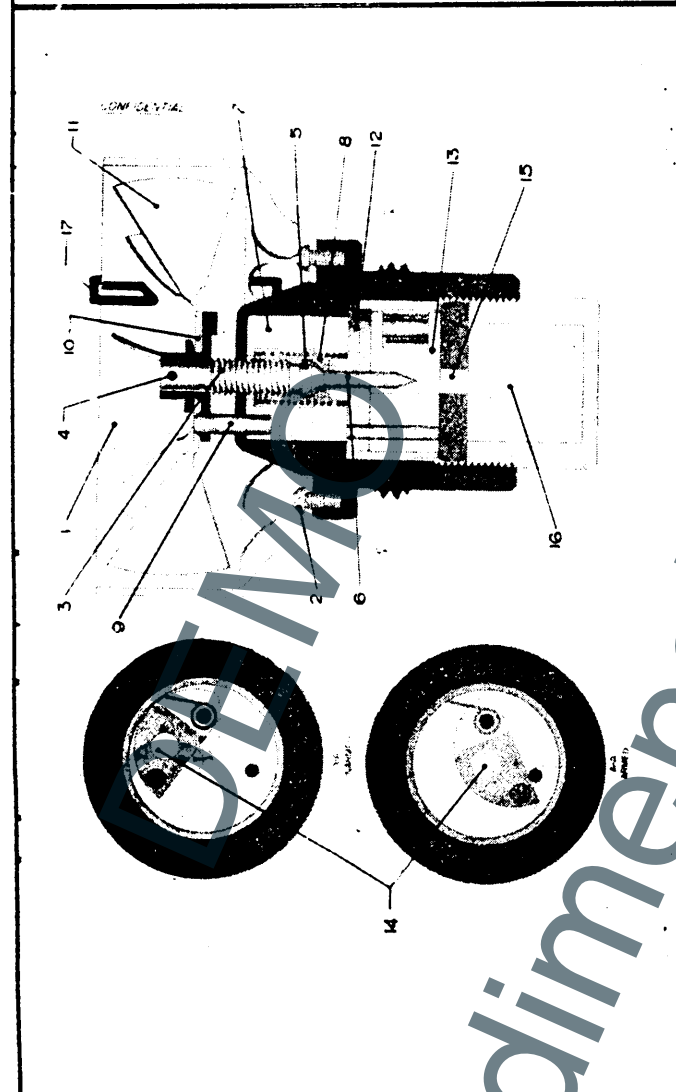
SECTION A-A, UNARMED POSITION



FUZE DATA		COPY NO.	FUZE DATA		COPY NO.
FILE NO.			FILE NO.		
NATIONALITY: U.S. Navy.	INFORMATION DATE: Sept. 1943		NATIONALITY: U.S. Navy.	INFORMATION DATE: Sept. 1943	
DESIGNATION: Mk-135 H.I.R.	TYPE OF MISSILE: AS projector		DESIGNATION: Mk-135 H.I.R.	TYPE OF MISSILE: AS projector	
	Mk 20, 21 & 22.			Mk 20, 21, and 22.	
CLASSIFICATION: Hydrostatic arming, impact firing, rocket fuze.	PRINCIPAL MARKING: RF Mk-135		DATA		
MARKINGS & SUBSIDIARY MARKINGS.	R.F. Mk-135 and lot, manufacturer, inspector, and date of manufacture.		10. ARMING TIME.	Arms under static pressure of approximately 50 feet of water - at high velocity with which it strikes the water, dynamic pressure is built up on the head, and it arms at depth of from 15 to 20 feet.	
DATA			11. OPERATION.	The safety wire (13) is removed; water enters ports of nose cap (1) and pressure acts on the phosphor-bronze diaphragm (2) until it pops at a depth of 15 - 20 feet. This diaphragm action moves two bell cranks (4) out of engagement with the weight (6) and the spring loaded detonator shutter (5) which slides into position being locked there by sprung detent (14). The fuze is now fully armed. (A freely moving safety sleeve (11) on set-back, engages bell crank hooks to prevent premature arming; on deceleration in water this sleeve engages the bell cranks (4) to reduce possibility of premature functioning). Upon impact the sudden deceleration pulls the weight (6) forward forcing locking balls (10) inward freeing the weight (6). The balls are forced out by sprung firing pin (8) which strikes the detonator (15).	
1. COLOR	Unpainted brass.		12. REMARKS.	1. In Mods. 1 and 2 the sensitivity is doubled. 2. If the fuze is lowered into the water it will arm at approximately 50 feet but when it is projected it arms at approximately 20 foot depth. 3. Mod 2 has detents which lock bell cranks in armed position.	
2. OVERALL LENGTH	5 inches.				
3. OVERALL WIDTH	3 1/4 inches.				
4. MATERIAL OF CONSTRUCTION.	Brass.				
5. PARTS.					
1. Nose cap with 2 water intake ports.	8. Firing pin.				
2. Phosphor-bronze diaphragm.	9. Firing pin spring.				
3. Diaphragm button.	10. 3 locking balls.				
4. Bell cranks.	11. Safety sleeve.				
5. Detonator shutter.	12. Gasket.				
6. Weight.	13. Safety wire.				
7. Body.	14. Sprung detent.				
	15. Detonator.				
6. DESCRIPTION.	A nose cap with two water intake ports (1) is screwed on the upper fuze housing. Phosphor-bronze diaphragm (2) works against diaphragm button (3) and bell cranks (4). In the unarmed position bell cranks (4) engage detonator shutter (5) and maintain body and weight (6) locked together. In this position firing pin (8) is locked with spring (9) compressed by three locking balls (10). Freely moving safety sleeve (11) on set-back and on deceleration in water engages hooks in the bell cranks (4). Gasket (12) provides water tight seal. Safety wire (13) locks diaphragm (2) in unarmed position. Sprung detent (14) locks detonator shutter (5) in armed position.				
7. POSITION AND METHOD OF FIXING IN BOMB.	Nose - screw in, using spanner wrench; check gasket to insure water tightness; remove safety wire from water intake - also check safety sleeve to see that it is freely moving.				
8. FUZES LIKELY TO BE FOUND WITH	Used alone - propellant and primer in tail.				
9. COMPONENTS OF EXPLOSIVE TRAIN.	Detonator - in shutter. Booster lead-in - in disc. Booster - 30 grams of tetryl in booster cap.				



FUZE DATA		FILE NO.	COPY NO
NATIONALITY: U.S. Navy		INFORMATION DATE: Sept. 1943	
DESIGNATION: MK 137(A.I.R)		TYPE OF MISSILE: Barrage rockets for use aboard small craft.	
CLASSIFICATION: Air arming, Impact Firing, Rocket fuze.		PRINCIPAL MARKING: R.F. MK 137	
MARKINGS AND SUB-SIDIARY MARKINGS	R.F. MK 137 and Lot, Manufacturer, Inspector and date of manufacture.		



FUZE DATA		FILE NO.: 2214.N2
NATIONALITY: BRITISH		INFORMATION DATE: October 1942
DESIGNATION No. 35 Mark I or Mark II	PRINCIPAL MARKING	No. 35 Mark I or Mark II
	CLASSIFICATION	Mechanical Nose Pyrotechnic
	TYPE OF MISSILE	Flare

**SECTION X-X**

**SECTION Y-Y**

**OPERATION** When the flare is released, the firing plug (23) is withdrawn from the retaining plug (22) by the fuze setting link which remains attached to the carrier. Withdrawal of the firing plug causes the striker (21) to be drawn back against its spring until the 2 balls (25) are clear of the retaining plug. The balls then fall outwards, freeing the striker and allowing it to move forward under the action of its spring to fire the detonator (26). The flash from the detonator ignites the powder pellet (27) which blows out the brass escape hole disc, allowing flash to pass through a hole (20) in the body of the fuze; this ignites the fuze composition in the lower groove (13) of the time ring, which burns in a clockwise direction. After the safety delay period, the powder pellet (17) communicating with upper groove (12) is ignited and its flash blows out the escape hole strip (18) igniting the fuze composition in the upper groove (12), which burns around in a counter-clockwise direction. After an interval of time determined by the position of the setting ring (8), the powder pellets (9) in the setting ring are fired, the flash passing around the annular groove to ignite the powder pellet (7) in the spigot (4). The flash from these pellets passes down the firing channels (14) and (15) and ignites the contents of the magazine (31). When the setting ring (8) is in the SAFE position, the powder pellets (9) are masked and cannot be ignited by the burning composition in the upper groove (12) of the fixed ring. Thus the fuze will be blind if it is set in the SAFE position when the flare is dropped, even though the aircraft fuze setting control is moved to LIVE.

2638

FUZE DATA		FILE NO.: 2214.N2
NATIONALITY: BRITISH		INFORMATION DATE: October 1942
DESIGNATION No. 35 Mark I or II	PRINCIPAL MARKING	No. 35 Mark I or Mark II
	CLASSIFICATION	Mechanical Nose Pyrotechnic
	TYPE OF MISSILE	Flare

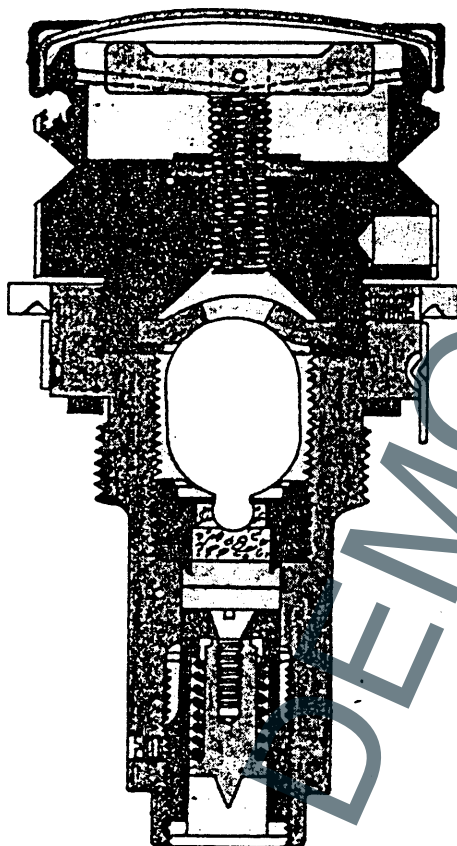
  

MARKINGS AND SUBSIDIARY MARKINGS:		BOMBS USED IN: This fuze is for use in flares.
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1	COLOR	
2	OVERALL LENGTH	
3	OVERALL WIDTH	
4	MATERIAL OF CONSTRUCTION	
5	<p><b>DESCRIPTION</b> This fuze consists of a time ring containing two grooves of pressed fuze composition, a rotatable setting ring, used to set the desired delay period, a mechanism for igniting the train of fuze composition, and a magazine for igniting the ejection charge of the flare. The time ring, which is mounted on a spigot screwed into the upper portion of the fuze body, is graduated from 3½ to 17, each graduation representing the burning for approximately one second of the delay composition; a red pointer marked SAFE is also engraved on the ring. When the setting ring is turned to SAFE, the powder pellets (9) are completely masked.</p> <p>The position of safety or a particular delay period may be set by making the red arrow engraved on the rotatable setting ring correspond with the proper marking or graduation on the time ring.</p> <p>The mechanism for igniting the train of fuze composition consists of a spring loaded striker (21) and a 1.7 grain detonator pellet (26). Two steel balls (25) are located in holes in a firing plug (23) which is fitted over the outer end of the striker. These balls engage in a groove in the striker and prevent it from moving forward onto the detonator until the firing plug is withdrawn and the balls freed. The striker and firing plug assemblage are retained in the SAFE position by a safety pin (33) which is screwed into the fuze body and engages in a groove between the two flanges at the head of the striker. A closing plug (32) is screwed into a blind hole in the fuze body. The safety pin is unscrewed after the flare is attached to the plane, and the closing plug is screwed into the hole vacated by the safety pin to exclude moisture.</p>	
6	POSITION AND METHOD OF FIXING IN BOMB	Screwed into the nose and secured by a locking ring.
7	FUZZES LIKELY TO BE FOUND WITH	None
8	COMPONENTS OF EXPLOSIVE TRAIN	
9	ARMING TIME	
10	<p><b>REMARKS:</b></p> <ol style="list-style-type: none"> <li>The No. 35 Mark I fuze is intended primarily for use as an alternative to fuze, time, aircraft flare, nose, No. 28A, B or D.</li> <li>It differs from Fuze No. 28 Mark II A, B or D mainly with respect to the safety devices and waterproofing arrangements.</li> <li>The necessary period of safety, after the release of the flare, is ensured by a fixed minimum time of delay, 3½ seconds; the maximum setting is 17 seconds. No arming vane mechanism is included.</li> <li>The fuze is capable of being dropped safe in an emergency. This is achieved in the usual way, by releasing the flare while the airplane cockpit fuze setting control is in the SAFE position.</li> <li>The No. 35 Mark I fuze is obsolete.</li> <li>The No. 35 Mark II is similar in design and use to the No. 35 Mark I except that the time rings are filled with a powder having a slower rate of burning, so that a longer maximum delay is obtained.</li> <li>The graduations on the time ring of the No. 35 Mark II are in terms of hundreds and thousands of feet drop of the 4.5 inch reconnaissance flare, on the assumption that the fuze is set so that the flare will function at a height of 3000 feet above sea level. Tables of fuze settings are, therefore, not necessary with this fuze. The fuze admits of a maximum delayed drop of 5500 feet with the 4.5 inch flare.</li> </ol>	

FUZE DATA		COPY NO.
NATIONALITY: BRITISH		FILE NO.: 2233.T1
DESIGNATION		INFORMATION DATE: October 1942
No. 37 Mark I	PRINCIPAL MARKING	No. 37 Mark I
	CLASSIFICATION	Chemical Tail Long Delay
	TYPE OF MISSILE	G.P. - H.E. and S.A.P. - H.E. Bombs
MARKINGS AND SUBSIDIARY MARKINGS:		BC&BS USED IN: 250 lb. and 500 lb. G.P. Mk. IV 250 lb. and 500 lb. S.A.P. Mk. V



FUZE DATA		COPY NO. 2638
NATIONALITY: BRITISH		FILE NO.: 2233.T1
DESIGNATION		INFORMATION DATE: October 1942
No. 37 Mark I	PRINCIPAL MARKING	No. 37 Mark I
	CLASSIFICATION	Chemical Tail Long Delay
	TYPE OF MISSILE	G.P. - H.E. and S.A.P. - H.E. Bombs
MARKINGS AND SUBSIDIARY MARKINGS:		BC&BS USED IN: 250 lb. and 500 lb. G.P. Mk. IV 250 lb. and 500 lb. S.A.P. Mk. V
	DATA	No. 37 Mark I
1	COLOR	
2	OVERALL LENGTH	4.0 inches (approx.)
3	OVERALL WIDTH	2.0 inches (approx.)
4	MATERIAL OF CONSTRUCTION	
5	DESCRIPTION	<p>The fuze is constructed in two main parts, the head and the body, which are screwed together with washers between them and locked by a locking screw. The upper part, or head, contains the arming screw which is packed with a soft rubber washer. In the body of the fuze is located a vial or ampoule resting on a zinc disc which contains the chemical used in the solution of the celluloid disc in the lower part of the body. A countersunk screw, located in the lower celluloid disc, holds the spring loaded striker in position.</p> <p>Safety Devices:- The fuze is provided with a safety plate and press cap which protects and prevents the arming screw from rotating during transit. A deep V-shaped groove is machined around the head of the fuze, the remaining annulus of metal forming a weak link so that the projecting portion of the head will fracture, should side impact of the bomb occur without damaging the sealing arrangements of the fuze.</p>
6	POSITION AND METHOD OF FIXING IN BOMB	Screwed into the adapter in the base plate of bomb and held in position by a spring locking collar.
7	FUZZES LIKELY TO BE FOUND WITH	None.
8	COMPONENTS OF EXPLOSIVE TRAIN	Individual exploder tube containing detonator and exploder.
9	ARMING TIME	
10	OPERATION	On release of the bomb, the arming screw of the fuze is screwed down by rotation of the arming vane, forcing the ampoule against the knife edges of the zinc disc which breaks it open and releases the acetone. In descending, the head of the arming screw screws into the soft rubber washer sealing the acetone in the fuze. The solvent action of the acetone on the celluloid disc or discs continues until the countersunk celluloid disc dissolves, thus allowing the striker to move forward by the action of the striker spring to function the detonator in the bomb.
11	REMARKS	<p>Alternative delays are provided by varying the number of celluloid discs used. The following fuzes are used with the time based on Temperature of 60 degrees F:</p> <p>Fuze No. 37D Mark I - 72 hours. Fuze No. 37 Mark I - 6 hours. Fuze No. 37A Mark I - 12 hours. Fuze No. 37D Mark I - 36 hours. Fuze No. 37E Mark I - 144 hours.</p>

2638

