

MIL 145

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MIL-HDBK-145
1 OCTOBER 1980

SUPERSEDING
MIL-HDBK-137
VOLUME 1
20 FEBRUARY 1970

MILITARY HANDBOOK

FUZE CATALOG

PROCUREMENT STANDARD

AND

DEVELOPMENT FUZES



THIS DOCUMENT CONTAINS 476 PAGES

FSC 1390

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MIL-HDBK-145
1 October 1980

DEPARTMENT OF DEFENSE, WASHINGTON, DC 20025

MIL-HDBK-145
Fuze Catalog
1 October 1980

1. This standardization handbook was developed by the Department of Defense in accordance with established procedure.
2. This publication was approved 1 October 1980 for printing and inclusion in the military standardization handbook series.
3. This document provides technical information on production standard and development fuzes of the Army, Air Force, Marine Corps, and Navy. It will provide valuable information and guidance to personnel concerned with the preparation of specifications and the design and procurement of military fuzes. The handbook is not intended to be referenced in purchase specifications except for informational purposes, nor shall it supersede any specification requirements.
4. Every effort has been made to reflect the latest fuze information. It is the intent to review this handbook periodically to ensure its completeness and accuracy. Users of this document are encouraged to report any errors discovered and any recommendations for changes or inclusions. A set of blank data sheets and instructions is included in Appendix C to facilitate the submission of new data. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be submitted on the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter. Address information to Commander, U. S. Army Armament Research and Development Command, DRDAR-TST-S, Dover, NJ 07801.

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FOREWORD

This handbook is the first of a series of documents revising or superseding MIL-HDBK-137, Fuze Catalog. MIL-HDBK-137 was written in 3 Volumes: Vol. 1, Current Fuzes; Vol. 2, Obsolete and Terminated Fuzes; and Vol. 3, Fuze Explosive Components.

MIL-HDBK-145 supersedes MIL-HDBK-137, Volume 1, and contains information on all production standard and development fuzes.

MIL-HDBK-146, to be issued at a later date, will supersede MIL-HDBK-137, Volume 2, and will include fuzes contained in Volume 1 which have subsequently been designated obsolete, obsolescent, or terminated.

MIL-HDBK-137, Volume 3, Fuze Explosive Components, is retained under its present designation.

All of the items contained in MIL-HDBK-145 and some of the items recently designated obsolete, obsolescent, or terminated, which will be contained in MIL-HDBK-146 are maintained in a computer file at the Naval Surface Weapons Center, White Oak Laboratory. Use of the computer will result in a more up-to-date fuze data base and ease the publication of future catalogs.

INTRODUCTION

1. SCOPE

This handbook is a catalog of military non-nuclear fuzes. It lists technical data for both production standard and development items. Excluded are:

- a. fuzes for nuclear ammunition
- b. foreign fuzes
- c. devices of the National Aeronautics and Space Administration and the Department of Energy
- d. commercial explosive components
- e. power sources
- f. complex missile fuzing systems that consist of many identifiable components dispersed throughout the system
- g. obsolete, obsolescent, and terminated fuzes (See MIL-HDBK-146)
- h. fuze explosive components (See MIL-HDBK-137, Volume 3).

2. REFERENCE DOCUMENTS

The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this standard to the extent specified herein.

MIL-STD 331, Fuze and Fuze Components, Environmental and Performance Tests for.
MIL-STD 333, Fuze, Projectile and Accessory Contours for Large Caliber
Armaments.
MIL-STD 444, Nomenclature and Definitions in the Ammunition Area.
MIL-STD 1455, Dispenser and Sub-Munition, Air Delivered, Safety Design and
and Safety Qualification Criteria for.
MIL-STD 322, Explosive Components, Electrically Initiated, Basic Evaluation
Tests for.
MIL STD 1316, Fuze Design, Safety Criteria for.

Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.

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3. DEFINITIONS

Terms used in this handbook are defined in MIL-STD 444.

4. HOW TO USE THIS HANDBOOK

The fuzes are grouped in chapters by their weapon (projectile, bomb, etc.). Within each chapter, the fuzes are listed in numeric-alpha order without regard for the cognizant service.

When searching for a specific fuze data sheet, look first in the master index. This master index lists all fuzes and the handbook number, chapter, and series where each fuze can be located. The fuze number, type, chapter, and series are located on the bottom outer corner of the data sheet.

Appendix A contains the results of several computer searches of the fuze data base presenting information on three data items. These data should provide answers to frequently asked questions regarding fuzes, their characteristics, cognizance, utility, etc. The user of MIL-HDBK-145 should become familiar with the data that are available in Appendix A.

Appendix B contains instructions for accessing the computerized fuze data base including the various programs available.

Appendix C contains instructions for submission of data covering new fuzes. Fuze data are tabulated on a two-page data sheet. An explanation of the data sheet headings is contained in Appendix C.

All fuzes contained in MIL-HDBK-145 and 146 are listed in the index in numerical order.

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<u>Chapter</u>	<u>Title</u>
1	Projectiles
2	Bombs
3	Submunitions
4	Mines
5	Rockets
6	Missiles
7	Small Caliber
8	Grenades
9	Miscellaneous
A	Tabulated Computer Printouts
B	Computer Instructions
C	Data Sheet Description
I	Master Index of Fuzes

A complete list of fuzes contained in this handbook are listed in order of appearance on the following pages.

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145	1	N	MK 30 MOD 5	PD FUZE
145	1	N	MK 42 MODS 1 AND	REAR FITTING SAFETY DEVICE
145	1	N	MK 51 MOD 5	MT FUZE
145	1	N	MK 54 MODS 0-2	AUX DET FUZE
145	1	N	EX 60	TARGET DETECTING DEVICE
145	1	N	EX 61	TARGET DETECTING DEVICE
145	1	A	M 62A2	BD FUZE
145	1	A	M 65A1E1	TIME FUZE
145	1	N	MK 72 MODS 16-17	PROXIMITY FUZE
145	1	N	MK 73 MODS 12-13	PROXIMITY FUZE
145	1	A	M 84A1	TIME FUZE
145	1	A	M 84A1E1	TIME FUZE
145	1	A	M 91A2	BD FUZE
145	1	N	MK 342 MOD 1	MT FUZE
145	1	N	MK 360 MOD 0 & 1	FUZE ADAPTER ASSY
145	1	N	MK 379 MODS 0, 1	AUX DET FUZE
145	1	N	MK 393 MOD 0	MT FUZE
145	1	N	MK 395 MODS 0, 1	AUX DET FUZE
145	1	N	MK 399 MOD 0	PD FUZE
145	1	N	MK 403 MOD 0	MT PD FUZE
145	1	N	MK 404 MOD 0	PROXIMITY FUZE
145	1	N	MK 407 MOD 1	PD FUZE
145	1	N	MK 411 MOD 0	AUX DET FUZE
145	1	N	MK 413 MOD 0	AUX DET FUZE
145	1	N	MK 415 MOD 0	MT PD FUZE
145	1	N	EX 416	ET FUZE
145	1	N	EX 417 MOD 0	PROXIMITY FUZE
145	1	N	EX 418 MOD 0	PROXIMITY FUZE
145	1	A	M509A2	PIBD FUZE
145	1	A	M509A2E1	PIBD FUZE
145	1	A	M564	MT SQ FUZE
145	1	A	M565	MT FUZE
145	1	A	M567	PD FUZE
145	1	A	M577	MTSQ FUZE
145	1	A	M582	MTSQ FUZE
145	1	A	M587	ET FUZE
145	1	A	M724	ET FUZE
145	1	A	M732	PROXIMITY FUZE
145	1	A	M734	MULTI-OPTION FUZE
145	1	A	M739	PD FUZE
145	1	A	M740	PIBD FUZE
145	1	A	XM741	MULTI-OPTION FUZE
145	1	A	XM745	MULTIOPTION PRACTICE FUZE
145	1	A	XM747E2	PD PRACTICE FUZE
145	1	A	XM748	PD, PRACTICE FUZE
145	1	A	XM751	MULTIOPTION PRACTICE FUZE
145	1	A	XM762	ET FUZE
145	1	A	XM763	PI BD FUZE
145	1	A	XM764	PIBD FUZE
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145	2	N	FSU- 9A/B	SAFETY-ARMING DEVICE
145	2	AF	FZU- 39/B	PROXIMITY FUZE SENSOR
145	2	N	MK 43 MOD 0	TARGET DETECTING DEVICE
145	2	AF	FMU- 54A/B	BOMB INERTIAL FUZE
145	2	AF	FMU- 56D/B	BOMB PROXIMITY FUZE
145	2	AF	SUU- 64/SUU- 65	SAFETY-ARMING DEVICE
145	2	N	FMU- 83/B	DISPENSER MT FUZE
145	2	AF	FMU-110/B	PROXIMITY FUZE
145	2	AF	FMU-112/B	BOMB IMPACT FUZE
145	2	AF	FMU-113/B	BOMB PROXIMITY FUZE
145	2	AF	FMU-123/B	BOMB PROXIMITY FUZE
145	2	AF	FMU-124/B	BOMB IMPACT FUZE
145	2	AF	FMU-130/B	BOMB IMPACT FUZE
145	2	N	FMU-139/B	BOMB IMPACT FUZE
145	2	N	M147	ADAPTER BOOSTER
145	2	N	M148E1	ADAPTER BOOSTER
145	2	N	M150	ADAPTER BOOSTER
145	2	N	MK 339 MOD 0,1	DISPENSER MT FUZE
145	2	N	MK 343 MOD 0	BOMB IMPACT FUZE
145	2	N	MK 344 MOD 0	BOMB IMPACT FUZE
145	2	N	MK 344 MOD 1	BOMB IMPACT FUZE
145	2	N	MK 346 MOD 0	BOMB LONG DELAY FUZE
145	2	N	MK 376 MOD 0	BOMB IMPACT FUZE
145	2	N	M904E4	BOMB IMPACT FUZE
145	3	N	MK 1 MODS 0, 1	BOMBLET FUZING SYSTEM
145	3	AF	BLU- 24/B	BOMBLET FUZE
145	3	N	FMU- 88/B	BOMBLET IMPACT FUZE
145	3	N	FMU- 95/B	BOMB IMPACT FUZE
145	3	AF	BLU- 97/B	BOMBLET, FUZE FOR
145	3	A	M219A1	GRENADE FUZE
145	3	A	M223	GRENADE FUZE
145	3	A	M224	GRENADE FUZE
145	3	A	XM230	GRENADE FUZE
145	4	A	M 56	AT MINE SUBSYSTEM, FUZE FOR
145	4	A	M 74	AP MINE, FUZE FOR
145	4	A	M 75	AT MINE, FUZE FOR
145	4	A	XM 84	AT/AV MINE, FUZE FOR
145	4	AF	BLU- 91/B	AT MINE, FUZE FOR
145	4	AF	BLU- 92/B	AP MINE, FUZE FOR
145	4	A	XM131	AP MINE SYSTEM, FUZE FOR
145	4	A	XM132	AT MINE SYSTEM, FUZE FOR
145	4	A	M603	AT MINE FUZE
145	4	A	M605	MINE COMBINATION FUZE
145	4	A	M606	AT MINE FUZE
145	4	A	M607	AT MINE FUZE
145	4	A	M692/731	PROJECTILE, FUZE FOR MINE FOR
145	4	A	M718/741 PROJ	AT PROJECTILE, FUZE FOR
145	5	AF	WDU- 4A/A	WARHEAD, FUZE FOR
145	5	N	MK 93 MOD 0	ROCKET PROXIMITY FUZE

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145	5	N	FMU-136/B	MT FUZE
145	5	N	MK 181 MOD 0-3	ROCKET PI FUZE
145	5	N	MK 188 MOD 0, 1	ROCKET PD FUZE
145	5	N	MK 191 MOD 0, 1	ROCKET BD FUZE
145	5	N	MK 193 MOD 0	ROCKET MT FUZE
145	5	N	MK 352 MOD 2	ROCKET PD FUZE
145	5	A	M412A1	ROCKET PI BD FUZE
145	5	A	M423 ALT	ROCKET PD FUZE
145	5	A	M427 ALT	ROCKET PD FUZE
145	5	A	M429	ROCKET PROXIMITY FUZE
145	5	A	M431	ROCKET PD FUZE
145	5	A	M433	ROCKET MULTI-OPTION FUZE
145	5	A	M434	ROCKET BD FUZE
145	5	A	M438	ROCKET PI BD FUZE
145	5	A	M439	ROCKET ET FUZE
145	5	A	M440	ROCKET PD FUZE
145	5	A	M442	ROCKET PYRO TIME FUZE
145	5	A	XM443	ROCKET ET FUZE
145	5	A	XM444	ROCKET MULTI-OPTION FUZE
145	5	A	XM445	ROCKET ET FUZE
145	5	A	M446	ROCKET PYRO TIME FUZE
145	5	A	XM738 (FRONT)	PIBD FUZE
145	5	A	XM738 (REAR)	BD FUZE
145	5	A	XM750	ET FUZE
145	5	A	XM754	PIBD FUZE
145	6	N	MK 1 MOD 1	ARMING-FIRING DEVICE
145	6	N	MK 3 MOD 5	SAFETY-ARMING DEVICE
145	6	N	FSU- 10/A	SAFETY-ARMING DEVICE
145	6	N	MK 13 MOD 2	SAFETY-ARMING DEVICE
145	6	N	FSU- 13/B	SAFETY-ARMING DEVICE
145	6	N	MK 17 MOD 0	SAFETY-ARMING DEVICE
145	6	N	MK 29 MOD 0	ARMING-FIRING DEVICE
145	6	N	MK 33 MOD 0	SAFETY-ARMING DEVICE
145	6	N	MK 34 MOD 1	SAFETY-ARMING DEVICE
145	6	N	MK 35 MOD 0	SAFETY-ARMING DEVICE
145	6	N	FMU- 94/B	GM IMPACT FUZE
145	6	A	M100	SAFETY-ARMING DEVICE
145	6	N	FMU-109/B	GM IMPACT FUZE
145	6	N	FMU-111/B	GM PROXIMITY FUZE
145	6	A	M114	SAFETY-ARMING DEVICE
145	6	A	M118	SAFETY-ARMING DEVICE
145	6	N	FMU-125/B	GM IMPACT FUZE
145	6	N	FMU-129/B	GM IMPACT FUZE
145	6	N	FMU-131/B	GM IMPACT FUZE
145	6	AF	FMU-132/B	GM IMPACT FUZE
145	6	AF	FMU-133/B	GM IMPACT FUZE
145	6	AF	FMU-137/B	SAFETY-ARMING DEVICE
145	6	A	XM143	SAFETY-ARMING DEVICE
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HDBK-	CHAPTER	SERIES	FUZE NUMBER	TYPE
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145	6	N	MK 334 MOD 0	GM IMPACT FUZE
145	6	A	M811	GM ET FUZE
145	6	A	M817	TARGET DETECTING DEVICE
145	6	A	XM818E1	GM PROXIMITY FUZE
145	6	A	XM820	GM IMPACT FUZE
145	6	A	M821	TARGET DETECTING DEVICE
145	6	A	M934	GM BD FUZE
145	7	AF	FMU-128/B	PD FUZE
145	7	A	M505A3	PD FUZE
145	7	AF	M505A3E2	PD FUZE
145	7	A	M549	PIBD FUZE
145	7	A	M550	PIBD FUZE
145	7	A	M551	PD FUZE
145	7	A	M594	PD SD FUZE
145	7	A	XM755	PD SD FUZE
145	7	A	XM757	PD SD FUZE
145	7	A	M758	PD SD FUZE
145	7	A	M759	PI BD FUZE
145	8	A	M201A1	HAND GRENADE FUZE
145	8	A	M201A1E2	HAND GRENADE FUZE
145	8	A	M206A2	HAND GRENADE FUZE
145	8	A	M213	HAND GRENADE FUZE
145	8	A	M227	HAND GRENADE FUZE
145	8	A	M228	HAND GRENADE FUZE
145	9	AF	LUU 2B/B	TIMER
145	9	A	M 25	FUZE SETTER
145	9	A	M 27	FUZE SETTER
145	9	A	M 34	FUZE SETTER
145	9	A	M 35	FUZE SETTER
145	9	A	M 36	FUZE SETTER
145	9	A	XM122	FIRING DEVICE, DEMOLITION
145	9	A	XM138	ROCKET MGMT SUBSYSTEM
145	9	A	M207A1	FLOATING SMOKE POT FUZE

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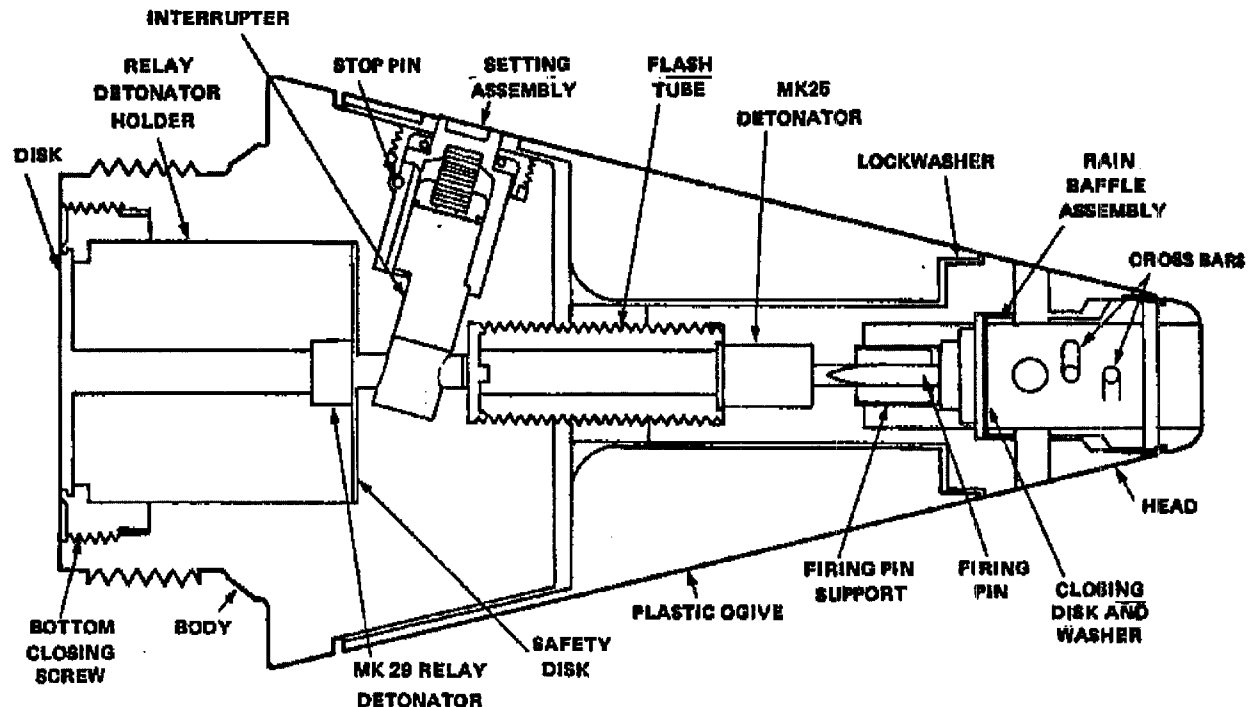
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CHAPTER 1

1-1

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ARMED VIEW

WITH SETTING SCREW IN THE ON POSITION

IDENTIFICATION

AGENCY: NSWC, Code G44
 CONTACT: R. Niemeyer
 AV 290-2750
 STATUS: Procurement Std
 USER: Navy
 ASSY DWG: 2501615
 PARTS LIST: PL 2501615
 SPEC: WS 12048
 NSN: 1390-00-449-1817
 PRIOR NOMENCLATURE: XP-15A, XP-16A
 REPLACES:

GENERAL

MUNITION: 3 in/50, 5 in/54 Projectile
 USE: HE
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: 338 rps
 SETBACK: 20,600 g
 VELOCITY: 2,700 fps
 CREEP:

SERIES: N CHAPTER: 1
 DESIGNATION: MK 30 Mod 5
 PD Fuze

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ARMING DATA

FIRST SAFETY:

Spin: 25 rps, no arm ; 33 rps, all arm.

SECOND SAFETY:

OTHER SAFETY:

Requires Auxiliary Detonating Fuze;
Mk 54, 3 in; Mk 395, 5 in.

DELAY:

1.5 m from muzzle

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 1.38 lb (640 gm)

TOTAL LENGTH: 4.57 in (11.6 cm)

CROSS SECTION: 2.41 in (6.1 cm)

INTRUSION: 0.81 in (2.0 cm)

THREAD SIZE: 1.70-14NS-1'

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 25-0 (STAB)

LEAD:

BOOSTER:

OTHER: Mk 29 Mod 0 Relay

FUNCTIONING DATA

MODE(S): PD, SQ select

TYPE: Mechanical

CHARACTERISTICS:

TARGET: Surface Targets

SENSITIVITY:

Plywood, 5.1 cm thick; obliquity,
0 deg.; Velocity, 800 mps
Water 45 deg obliquity

REMARKS

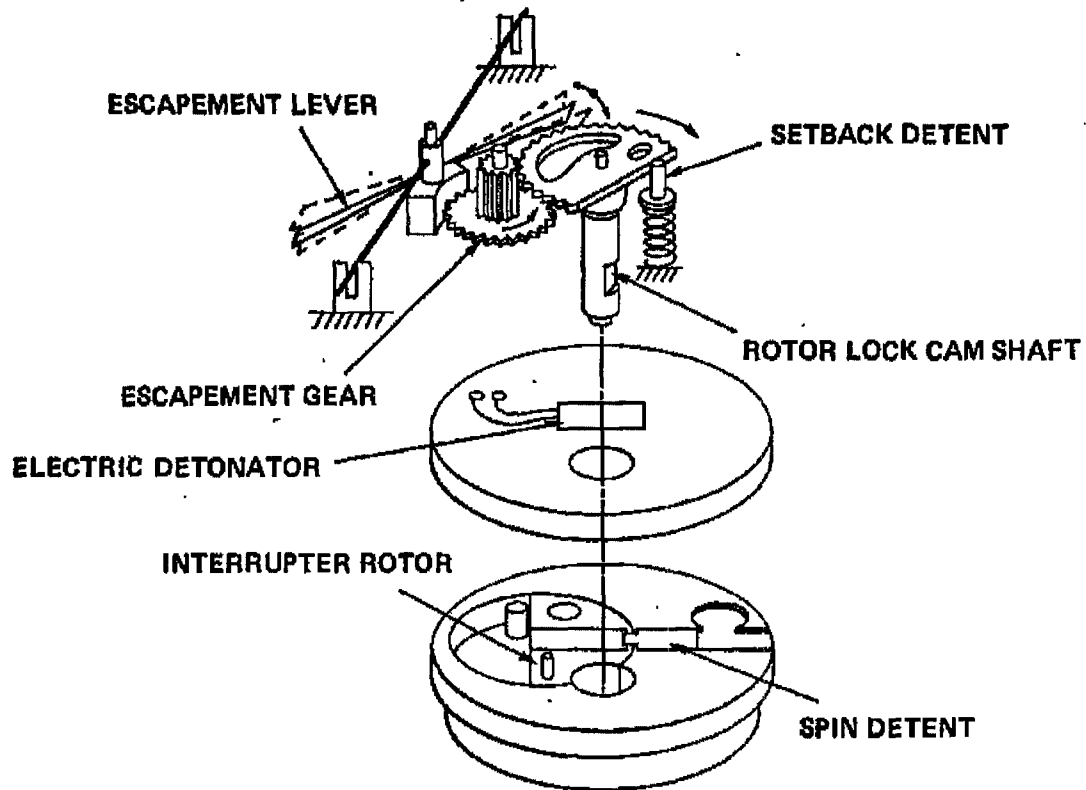
Mod 5 has improved rain trap. Same as Mk 29 except for contour.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 30 Mod 5
PD Fuze

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IDENTIFICATION

AGENCY: NSWC, Code G44
 CONTACT: R. Leary
 AV 290-1995
 STATUS: Procurement Std
 USER: Navy
 ASSY DWG: 2512087
 PARTS LIST: DL 2512087
 SPEC: WS 14927
 NSN:
 PRIOR NOMENCLATURE:
 REPLACES: Mk 18 Safety Device

GENERAL

MUNITION: Projectiles Mod 3 - 3"/50
 and 76 mm Mod 1 - 5"/38 and
 5"/54
 USE: All Navy VT Fuzes
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: 338 rps
 SETBACK: 20,600 g
 VELOCITY: 2,700 fps
 CREEP:

SERIES: N CHAPTER: 1
 DESIGNATION: MK 42 Mods 1 and 3
 Rear Fitting Safety Device

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ARMING DATA

FIRST SAFETY:

Set back, 900g no arm,
1380g all arm

SECOND SAFETY:

Spin, no arm 40 rps,
all arm 254 rps

OTHER SAFETY:

DELAY:

780 to 1400 feet

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: .225 lb (102 gm)

TOTAL LENGTH: 0.946 in (2.4 cm)

CROSS SECTION: 1.48 in (3.75 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 71 Electric (wire
bridge)

LEAD: Tetryl, 70 mgm

BOOSTER: 26 gram tetryl, or
11 gram chg

OTHER: Mk 64 Relay

FUNCTIONING DATA

MODE(S): Delay Arming

TYPE:

CHARACTERISTICS:

TARGET:

SENSITIVITY:

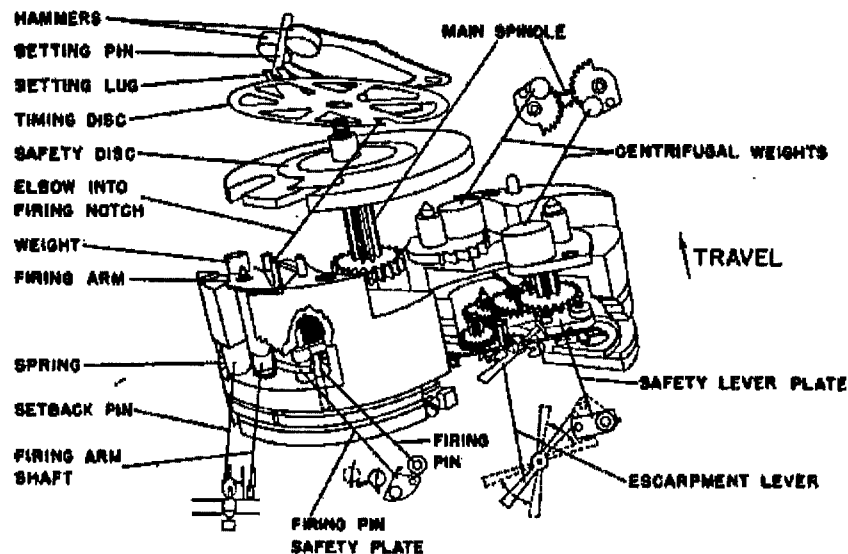
REMARKS

CHAPTER: 1 SERIES: N
DESIGNATION: MK 42 Mods 1 and 3
Rear Fitting Safety Device

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IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: G. Warden
AV 290-1995

STATUS: Procurement Std

USER: Navy

ASSY DWG: GA 1475145

PARTS LIST: LD 299218

SPEC: QS 3891

NSN:

PRIOR NOMENCLATURE:

REPLACES: Mods 0-4

GENERAL

MUNITION: 3 in/50 Projectile

USE: HE and Illuminating

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 338 rps

SETBACK: 20,600 g

VELOCITY: 2,700 fps

CREEP:

SERIES: N
DESIGNATION: MT FuzeCHAPTER: 1
MK 51 Mod 5

ARMING DATA

FIRST SAFETY:

Setback: 1.5 lb, no arm;
7 lb, all arm

SECOND SAFETY:

Spin: 33 rps, no arm;
100 rps, all arm

OTHER SAFETY:

Arms in 0.8 sec

DELAY:

SAFE/ARM CONDITION:

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Mechanical, Junghans Escapement

CHARACTERISTICS:

Settable from 1 to 30 sec

TARGET:

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 1.3 lb (599 gm)

TOTAL LENGTH: 4.54 in (11.8 cm)

CROSS SECTION: 2.4 in (6.1 cm)

INTRUSION: 0.803 in (2.0 cm)

THREAD SIZE: 1.70-14NS-1'

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Mk 104

DETONATORS:

LEAD:

BOOSTER: Black Powder (illum.);
Aux Det Fuze Mk 54
required for HE Proj.

OTHER:

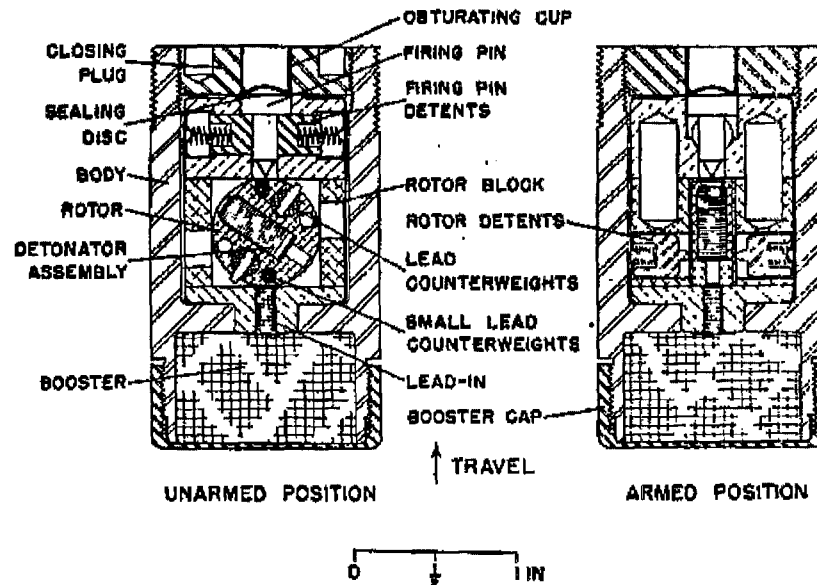
REMARKS

CHAPTER: 1 SERIES: N
DESIGNATION: MK 51 Mod 5

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0210

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IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: D. Jensen
AV 290-2792

STATUS: Procurement Std

USER: Navy

ASSY DWG: 490100

PARTS LIST: LD 166745

SPEC: WS 14161

NSN: 1390-00-917-4158

PRIOR NOMENCLATURE:

REPLACES: Mk 46

GENERAL

MUNITION: 3-in/50, 5 in/38, and
5 in/54 Projectiles

USE: HE or GP

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 338 rps

SETBACK: 21,000 g

VELOCITY: 2,700 fps

CREEP:

SERIES: N
DESIGNATION: MK
Aux Det FuzeCHAPTER: 1
54 Mods U-2

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ARMING DATA

FIRST SAFETY:

Spin: no arm, 50 rps;
all arm, 75 rps

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

FUNCTIONING DATA

MODE(S): SQ

TYPE: Mechanical

CHARACTERISTICS:

TARGET:

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.76 lb (345 gm)

TOTAL LENGTH: 2.5 in (6.35 cm)

CROSS SECTION: 1.37 in (3.48 cm)

INTRUSION: 1.5 in (3.8 cm)

THREAD SIZE: 1.375-20NS-2(LH)

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 28 Mod 1 (STAB)

LEAD: Tetryl, 0.14 gm

BOOSTER: Tetryl, 15 gm

OTHER:

REMARKS

Mod 2 is hermetically sealed.. Documentation is for Mod 2.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 54 Mods 0-2
Aux Det Fuze

0212

1-10

B-6



IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: K. Lloyd
AV 290-1713

STATUS: Development

USER: Navy

ASSY DWG: 5510310

PARTS LIST:

SPEC: XWS 16699(GP)

NSN:

PRIOR NOMENCLATURE: EX-406 Fuze

REPLACES:

GENERAL

MUNITION: 5-in/54 IR Guided
Projectile

USE: HE

LOCATION: Base of Warhead

BALLISTIC LEVELS:

ROTATION: 20 RPS

SETBACK: 7,500 g

VELOCITY: 2,030 fps

CREEP:

SERIES: N CHAPTER: 1
DESIGNATION: EX 60
Target Detecting Device

1-11

0213

B-7

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Safety provided by EX-18 ASD

SECOND SAFETY:

OTHER SAFETY:

Contains logic circuitry for
second environmental safety
in EX-18 ASD

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 1.3 lb (590 gm)

TOTAL LENGTH: 1.5 in (3.81 cm)

CROSS SECTION: 4 in (10.16 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

Uses GP power

EXPLOSIVE TRAIN

S&A DEVICE: EX-18 ASD

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S): Proximity/PD

TYPE: RF

CHARACTERISTICS:

Automatically adapts burst
position to engagement velocity

TARGET: Air Targets

SENSITIVITY:

Classified

REMARKS

Separate conformal microstrip antenna.

CHAPTER: 1 SERIES: N
DESIGNATION: EX 60
Target Detecting Device
0214

B-8

IDENTIFICATION

AGENCY: NSWC, Code G44
CONTACT: K. Lloyd
AV 290-1713
STATUS: Development
USER: Navy
ASSY DWG: 5258395
PARTS LIST:
SPEC: XWS 16699(GP)
NSN:
PRIOR NOMENCLATURE: EX-406 Fuze
REPLACES:

GENERAL

MUNITION: 5-in/54 SAL Guided
Projectile
USE: HE
LOCATION: Mid-body
BALLISTIC LEVELS:
ROTATION: 20 rps
SETBACK: 7,500 g
VELOCITY: 2,030 fps
CREEP:

SERIES: N CHAPTER: 1
DESIGNATION: EX 61
Target Detecting Device

FIRST SAFETY:

Safety provided by EX-18 ASD

SECOND SAFETY:

OTHER SAFETY:

Contains logic circuitry for
second environmental safety in
EX 18 ASD.

DELAY:

SAFE/ARM CONDITION:

WEIGHT: 1.0 lb (454 gm)

TOTAL LENGTH: 1.5 in (3.81 cm)

CROSS SECTION: 4. in (10.16 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

Uses GP power

EXPLOSIVE TRAIN

S&A DEVICE: EX-18 ASD

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S): Proximity/PD

TYPE: RF

CHARACTERISTICS:

TARGET: Surface

SENSITIVITY:

Classified

REMARKS

Separate conformal microstrip antenna.

CHAPTER: 1 SERIES: N

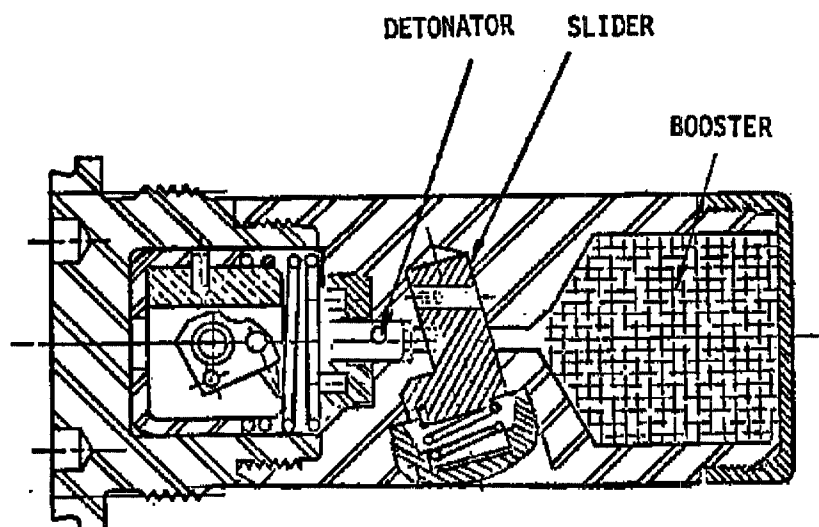
DESIGNATION: EX 61

Target Detecting Device

1-14

0216

B-10



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: M. Solowey
AV 880-2958

STATUS: Procurement Std

USER: Army

ASSY DWG: 886414

PARTS LIST: 886414

SPEC: MIL-F-60043, 60044

NSN: 1390-01-054-5109

PRIOR NOMENCLATURE:

REPLACES: M62, M62A1

GENERAL

MUNITION: Projectile for Combat
Engineer Vehicle,
165mm Gun, M135USE: Cartridge, HEP, M123
and M123A1

LOCATION: Base

BALLISTIC LEVELS:

ROTATION: 6280 rps

SETBACK: 234 g

VELOCITY: 259 m/s

CREEP:

SERIES: A
DESIGNATION:
B0 FuzeCHAPTER: 1
M 62A2

0217

1-15
B-11

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

FP Spin - 28 rps non arm, 60 arm,
Slider - 40 rps non arm, 60 arm

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

Bore safe but no arming delay

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): BD

TYPE: Mechanical, inertial

CHARACTERISTICS:

Non Delay, 400 microsec

TARGET: Ground, Fortifications

SENSITIVITY:

4.0 in Wood Screen

PHYSICAL DATA

WEIGHT: 1.27 lb (576.1 gm)

TOTAL LENGTH: 3.56 in (9.05 cm)

CROSS SECTION: 1.79 in (4.54 cm)

INTRUSION: depth 3.31 in (8.40 cm)
dia 1.378 in (3.50 cm)

THREAD SIZE: 1.5-12UNF-1A (LH)

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M58 Stab

LEAD: 87 mg Tetryl

BOOSTER: 20 gm Tetryl

OTHER: Slider Lead: 87 mg Tetryl

REMARKS

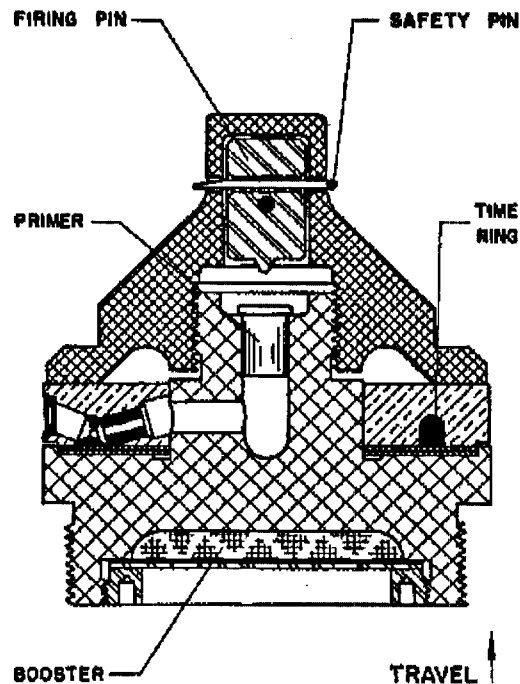
M62A1 is used with 75 and 105mm Rifle HEAT and HEP.
M62A1 uses M22 Stab Det and does not have lock on FP.
M62A2 very similar to M91A2 but does not have tracer.
Dummy Fuze is M573, 8882229.

CHAPTER: 1 SERIES: A
DESIGNATION: M 62A2
BD Fuze

0218

1-16

B-12

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: W. Morgan
AV 880-5344

STATUS: Development

USER: Army, Marines

ASSY DWG: In prep

PARTS LIST:

SPEC: MIL-F- In preparation

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES: M65A1

GENERALMUNITION: Projectile for 60mm Mortar,
M2, M19 and M224USE: Cartridge, Illuminating,
M83A3, and XM7XX

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: None

SETBACK: 3,320 g

VELOCITY: 138 m/s max

CREEP:

SERIES: A
DESIGNATION:
Time FuzeCHAPTER: 1
M 65A1E1

0219

1-17

B-13



ARMING DATA

FIRST SAFETY:

Pull wire

SECOND SAFETY:

Setback 500 g non arm, 900 arm

OTHER SAFETY:

None

DELAY:

No delay arming

SAFE/ARM CONDITION:

No
MIL-STD-1316A does not apply

FUNCTIONING DATA

MODE(S): Time, settable

TYPE: Pyrotechnic

CHARACTERISTICS:

4 to 33 sec x 1 sec incr.

TARGET: None, Illumination

SENSITIVITY:

NA

PHYSICAL DATA

WEIGHT: 0.74 lb (335.7 gm)

TOTAL LENGTH: 2.54 in (6.45 cm)

CROSS SECTION: 2.28 in (5.79 cm)

INTRUSION: 0.48 in (1.22 cm) depth
maj Dia thread, dia

THREAD SIZE: 2-20UNS-1A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M39A1 Perc

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: 2.59 gm Class 5 Blk Pdv Exp
Chg; 227 mg BKNO(3)
Pellets 2 each

REMARKS

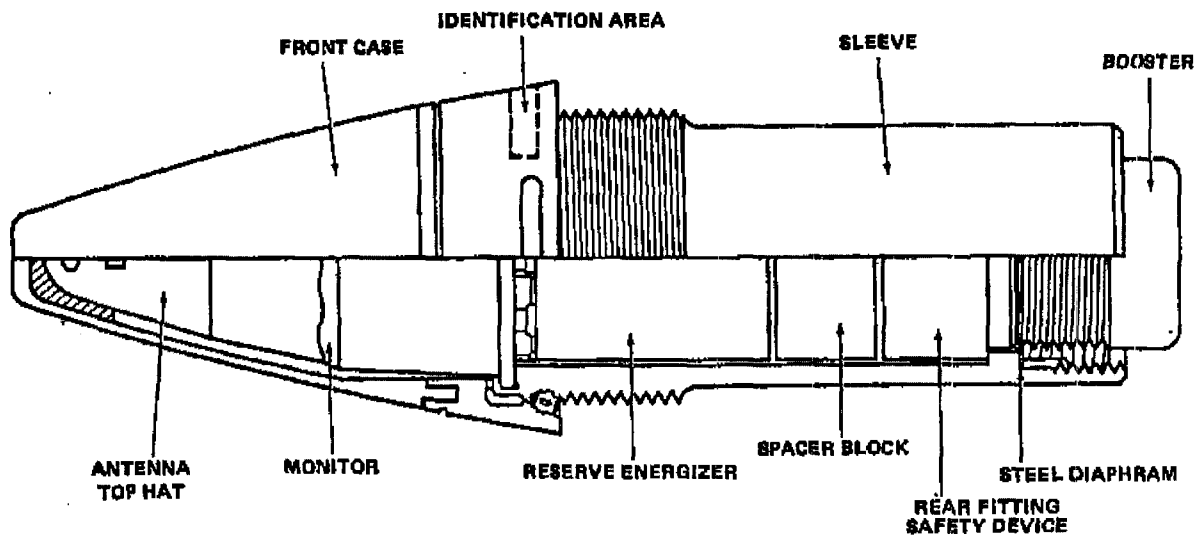
M65A1E1 Fuze is waterproof; M65A1 is not.
M83A3 min prop charge is 2; 1930 g's

CHAPTER: 1 SERIES: A
DESIGNATION: M 65A1E1
Time Fuze

1-18

0220

B-14



IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: C. Knisely
AV 290-1972

STATUS: Procurement Std

USER: Navy

ASSY DWG: 2512218(16) & 2512219(17)

PARTS LIST: 2512218(16) & 2512219(17)

SPEC: WS 13934

NSN: 1390-00-230-2141 (17)

PRIOR NOMENCLATURE:

REPLACES: Mods 12-15 by 17

GENERAL

MUNITION: 3 in/50 Projectiles

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 338 rps

SETBACK: 20,600 g

VELOCITY: 2,700 fps (822.9 mps)

CREEP:

SERIES: N CHAPTER: 1
 DESIGNATION: MK 72 Mods 16-17
 Proximity Fuze

0221

1-19

C-1



MIL-HDBK-145.
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1385 g, all arm

SECOND SAFETY:

Spin: 40 rps, no arm;
338 rps, all arm

OTHER SAFETY:

RC delay of firing capacitor
voltage buildup

DELAY:

780 to 1330 ft arming distance

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 2.85 lb (1293 gm)

TOTAL LENGTH: 7.96 in (20.2 cm)

CROSS SECTION: 2.4 in (6.1 cm)

INTRUSION: 4.23 in (10.7 cm)
1.75 in (4.5 cm) dia

THREAD SIZE: 2.0-12N-2

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 42 (Fuze Mods 16, 17)

PRIMER:

DETONATORS: Mk 71 Electric
Mk 64 Relay

LEAD: Tetryl

BOOSTER: Mk 39-0 Tetryl

OTHER:

FUNCTIONING DATA

MODE(S): Proximity, PD

TYPE: Electrical RF

CHARACTERISTICS:

TARGET: Air and Surface

SENSITIVITY:

REMARKS

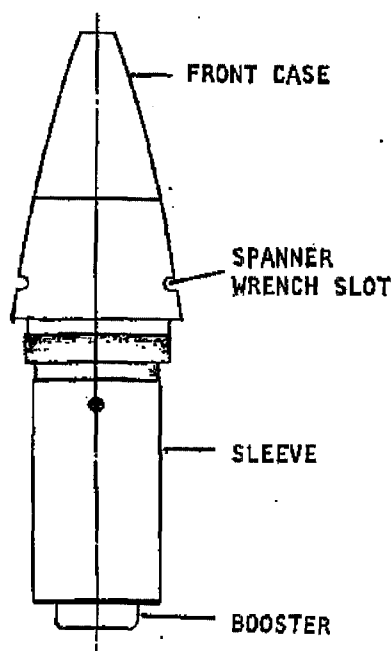
Mods 13, 15, 17 have no SD function.
Mods 12, 14, 16 have SD function.
Mods 16, 17 utilize solid state electronics; prior Mods use tubes.
Mods 14, 15 not produced.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 72 Mods 16-17
Proximity Fuze

1-20

C-2

0222



IDENTIFICATION

AGENCY: NSWC, Code 644

CONTACT: C. Knisely
AV 290-1972

STATUS: Procurement Std

USER: Navy

ASSY DWG: 2512220(12) & 2512221(13)

PARTS LIST: 2512220(12) & 2512221(13)

SPEC: WS 14370

NSN: 1390-00-361-2355 (Mod 13)

PRIOR NOMENCLATURE:

REPLACES: Mods 10 and 11

GENERAL

MUNITION: 5 in/54 Projectile

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 254 rps

SETBACK: 14,500 g

VELOCITY: 2,650 fps (807.7 mps)

CREEP:

SERIES: N CHAPTER: 1
DESIGNATION: MK 73 Mods 12-13
Proximity Fuze

0223

C-3

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g no arm;
1.385 g all arm.

SECOND SAFETY:

Spin: 40 rps, no arm;
254 rps, all arm

OTHER SAFETY:

RC delay of firing capacitor
voltage buildup..

DELAY:

780-1330 ft arming distance

SAFE/ARM CONDITION:

Malassembly feature.

FUNCTIONING DATA

MODE(S): Proximity, PD

TYPE: Electrical - RF

CHARACTERISTICS:

TARGET: Air and Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 4.3 lb (1950 gm)

TOTAL LENGTH: 9.8 in (24.9 cm)

CROSS SECTION: 2.7 in (6.9 cm)

INTRUSION: 5.1 in (13.0 cm)
2.0 in (5.1 cm) dia

THREAD SIZE: 2.35-10NS-2A

OTHER:

POWER SUPPLY:

Mk 38-0 (Mods 12, 13)

EXPLOSIVE TRAIN

S&A DEVICE: Mk 42

PRIMER:

DETONATORS: Mk 71 Electric
Mk 64 Relay

LEAD: Tetryl

BOOSTER: Mk 39 Tetryl

OTHER:

REMARKS

Mods 5, 7, 9, 11, 13 have no SD function.

Mods 4, 6, 8, 10, 12 have SD function.

Mods 12, 13 utilize solid state electronics; prior Mods use tubes.

Mods 10, 11, and 12 not produced.

CHAPTER: 1 SERIES: N

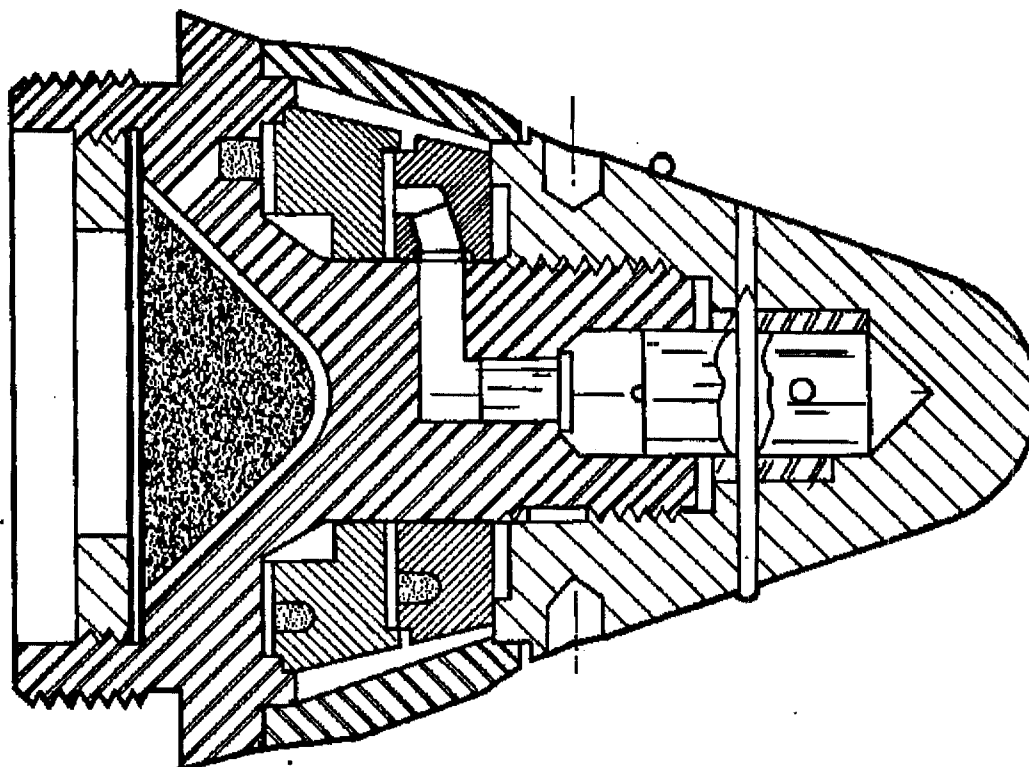
DESIGNATION: MK 73 Mods 12-13

Proximity Fuze

0224

1-22

C-4

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: W. Morgan
AV 880-5344

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9232784

PARTS LIST:

SPEC: MIL-F-14715, 14716

NSN: 1390-00-471-8665

PRIOR NOMENCLATURE: T78, M84

REPLACES: M84

GENERALMUNITION: Projectile for 81mm Mortar,
M1 and M29A1

USE: Cartridge, Illuminating, M301A3

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: None

SETBACK: 7070 g

VELOCITY: 249.6 m/s

CREEP:

SERIES: A
DESIGNATION:
Time FuzeCHAPTER: 1
M 84A1

0225

C-5

1-23



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull wire

SECOND SAFETY:

Setback 500 g non arm 1000 arm
Shear wire on FP

OTHER SAFETY:

None

DELAY:

No Delay Arming

SAFE/ARM CONDITION:

No
MIL-STD-1316A does not apply

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Pyrotechnic

CHARACTERISTICS:

1 to 50 sec x 1 sec incr.

TARGET: Ground, Illumination

SENSITIVITY:

NA

PHYSICAL DATA

WEIGHT: 1.82 lb (825.6 g)

TOTAL LENGTH: 3.85 in (9.78 cm)

CROSS SECTION: 3.00 in (7.62 cm)

INTRUSION: 0.60 in (1.52 cm)
dia maj dia thread

THREAD SIZE: 2.4-18NS-1A'

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M39A1 Percussion

DETONATORS: None

LEAD: BKNO(3)
.165 dia x .215 in

BOOSTER: None

OTHER: Time Rings: Tungsten Compound
Exp. Chg.: 4.86 gm Blk Pdr

REMARKS

9205598

M84 had Black Powder Time Rings and 0-25 sec x 1 sec increments.
M25 Fuze Setter used for both. Chg 3 is min; 2130 g's.

CHAPTER: 1 SERIES: A

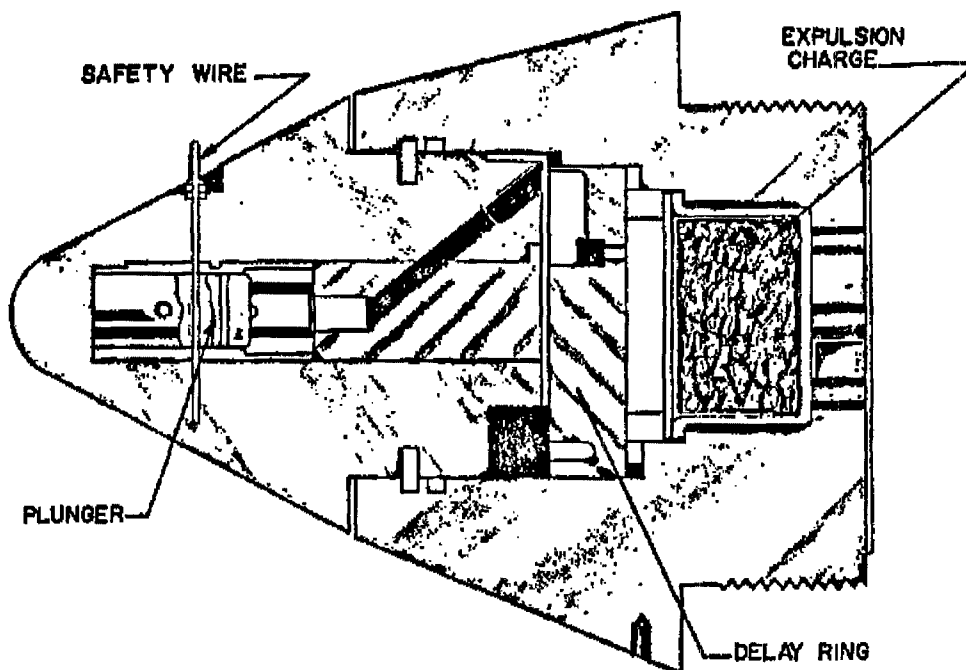
DESIGNATION: M 84A1

Time Fuze

0226

1-24

C-6

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, ORDAR-LCN-T

CONTACT: W. Morgan
AV 880-5344

STATUS: Development

USER: Army, Marines

ASSY DWG: 9311300

PARTS LIST:

SPEC: MIL-F-63088, -63089

NSN: Not yet assigned

PRIOR NOMENCLATURE: M84A1E1

REPLACES: M84A1

GENERAL

MUNITION: Projectile for 81mm Mortar,
M1, M29A1, XM252 and L16/A2USE: Cartridge, Illuminating, M301A3
& Smoke, XM819

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: None

SETBACK: Not determined

VELOCITY: Not determined

CREEP:

SERIES: A	CHAPTER: 1
DESIGNATION: Time Fuze	M 84A1E1

C-7

0227

1-25

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull wire

SECOND SAFETY:

Setback 500 g non arm, 1000 arm
Shear wire on firing pin

OTHER SAFETY:

None

DELAY:

SAFE/ARM CONDITION:

No
MIL-STD-1316A does not apply

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Pyrotechnic

CHARACTERISTICS:

5 to 50 sec x 1 sec incr

TARGET: Ground-Illum & screening

SENSITIVITY:

NA

PHYSICAL DATA

WEIGHT: 1.93 lb (875.4 gm)

TOTAL LENGTH: 3.85 in (9.78 cm)

CROSS SECTION: 3.00 in (7.62 cm)

INTRUSION: depth 0.60 in (1.52 cm)
dia maj dia thread

THREAD SIZE: 2.4-18UNS-1A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M39A1 Perc

DETONATORS: None

LEAD: BKNO(3), .215 x .165 in dia

BOOSTER:

OTHER: Time Rings: Tungsten Compound
Expl. Charge: 75
Grains Blk Pdr

REMARKS

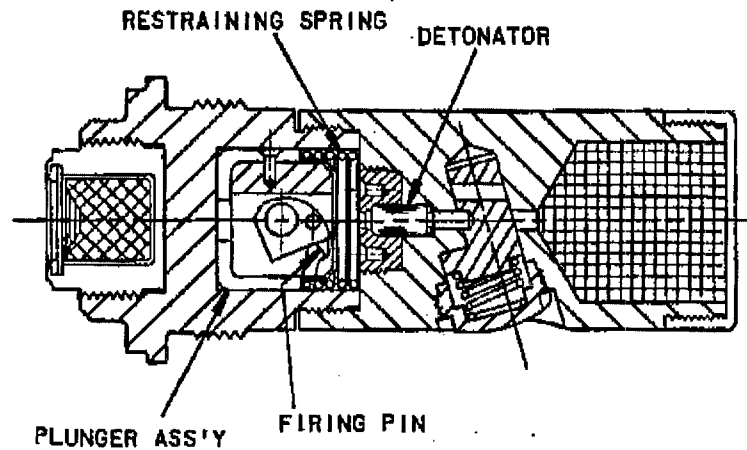
Spanner Wrench or Adjustable wrench used to set.
Very different from M84A1. Waterproof, single time ring, head rotated to set.

CHAPTER: 1 SERIES: A
DESIGNATION: M 84A1E1
Time Fuze

0228

C-8

1-26

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: M. Solowey
AV 880-2958

STATUS: Procurement Std

USER: Army, FMS

ASSY DWG: 8837308

PARTS LIST:

SPEC: MIL-F-20405, -20423

NSN: 1390-00-857-2989

PRIOR NOMENCLATURE: T93

REPLACES: M91, M91A1

GENERAL

MUNITION: Projectile for 106mm Rifle,
M40A2

USE: Cartridge, HEP-T, M346A1

LOCATION: Base

BALLISTIC LEVELS:

ROTATION: 237 rps

SETBACK: 7500 g

VELOCITY: 498.3 m/s

CREEP:

SERIES: A
DESIGNATION:
BD FuzeCHAPTER: 1
M 91A2

0229

C-9

1-27

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Spin, FP 28 rps non arm 60, arm
Slider 40 rps non arm, 60 arm

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

Bore safe but no arming delay

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): BD

TYPE: Mechanical, inertial

CHARACTERISTICS:

Non Delay, 400 micro sec

TARGET: Ground, Tank

SENSITIVITY:

4.0 in wood screen

PHYSICAL DATA

WEIGHT: 1.40 lb (635 g)

TOTAL LENGTH: 4.21 in (10.69 cm)

CROSS SECTION: 1.84 in (4.68 cm)

INTRUSION: 3.31 in (8.41 cm) depth
1.38 in (3.51 cm) dia

THREAD SIZE: 1.5-12UNF-1A (LH)

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M58 Stab

LEAD: 87 mg Tetryl

BOOSTER: 20 gm Tetryl

OTHER: Slider Lead: 87 mg Tetryl
Tracer: M5A2B1

REMARKS

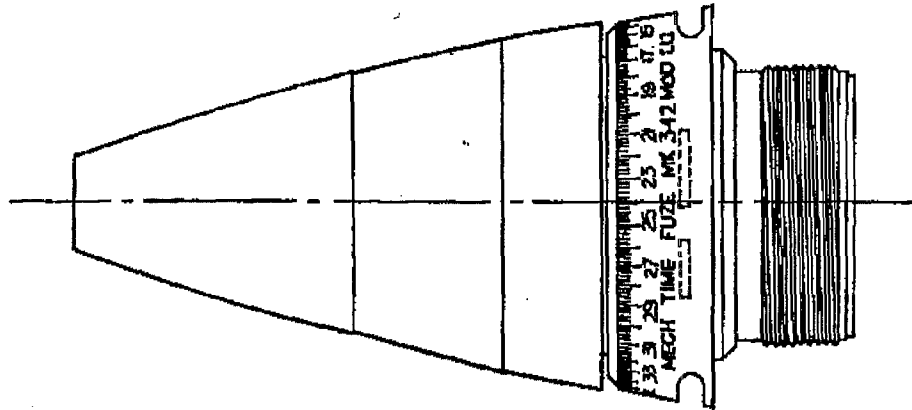
M91 is used in 105mm How, HEP-T M327. M91A1 is used in 105mm Rifle, HEP-T M326. M91 and M91A1 have M22 Stab Det. M91 has integral pressed tracer. M91A1 has M5A2B1 Tracer. Similar to M62A1 except M91 Series has Tracer. Dummy Fuze is M86.

CHAPTER: 1 SERIES: A
DESIGNATION: M 91A2
BD Fuze

1-28

C-10

0230



IDENTIFICATION

AGENCY: NSWC, Code G44
CONTACT: A. Munach
AV 290-1970
STATUS: Procurement Std
USER: Navy
ASSY DWG: 2511237
PARTS LIST: DL 2511237
SPEC: WS 5405
NSN: 1390-00-451-8695
PRIOR NOMENCLATURE:
REPLACES:

GENERAL

MUNITION: 5 in/54 and 6 in/47
projectiles
USE: 5 in/54-ACC, PUFF, CHAFF, ILLUM;
6 IN/47-ILLUM
LOCATION: Nose
BALLISTIC LEVELS:
ROTATION: 254 rps
SETBACK: 13,800 g
VELOCITY: fps m/s
CREEP:

SERIES: N CHAPTER: 1
DESIGNATION: MK 342 Mod 1
MT Fuze

0231

1-29

C-11



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1380 g, all arm

SECOND SAFETY:

Spin: 33 g, no arm;
100 g, all arm

OTHER SAFETY:

Aux Det Fuze
Premature Trap*

DELAY:

0.8 sec

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 1.4 lb (640 gm)

TOTAL LENGTH: 4.58 (11.6 cm)

CROSS SECTION: 2.4 in (6.1 cm)

INTRUSION: 0.8 in (2.0 cm)

THREAD SIZE: 1.70-14NS-1'

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: In AUX DET Fuze

PRIMER: Mk 104

DETONATORS:

LEAD:

BOOSTER: 40 grains black Powder for
illum.

OTHER:

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Mech, Junghans Escapement

CHARACTERISTICS:

Settable from .8 to 45 sec
in .2-sec increments

Accuracy at 10 sec, +/- .200 sec;
at 40 sec, +/- .344 sec

TARGET: Air, Ground Targets

SENSITIVITY:

REMARKS

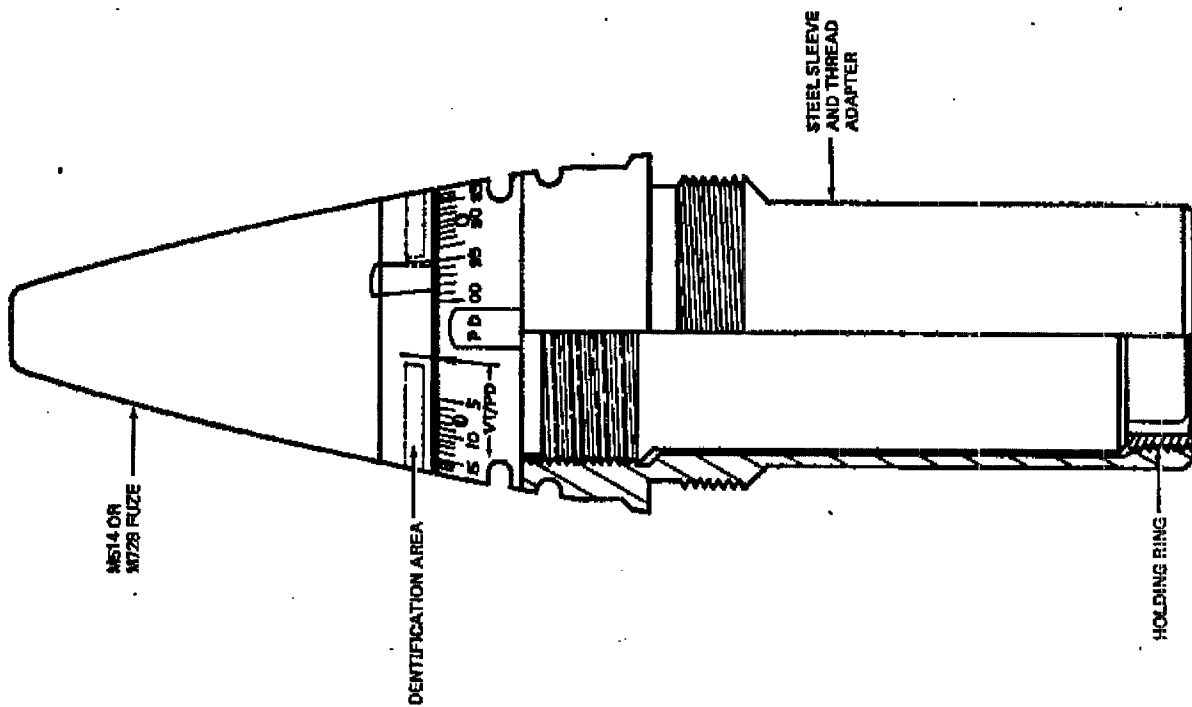
*Premature trap prevents runaway escapement.
Requires Aux Det Fuze - Mk 395, Mk 396, Mk 43, Mk 54.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 342 Mod 1
MT Fuze

0232

1-30

C-12

MIL-HDBK-145
1 October 1980


IDENTIFICATION

AGENCY: NSWC, Code G44
 CONTACT: C. Knisely
 AV 290-1972
 STATUS: Procurement Std
 USER: Navy
 ASSY DWG: 2429024(0) & 5177422(1)
 PARTS LIST: 550013(0) & 5177422(1)
 SPEC: OD 28655 (Assy Proc)
 NSN:
 PRIOR NOMENCLATURE:
 REPLACES:

GENERAL

MUNITION: 5 in/54 Projectile
 USE: HE
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: 254 rps
 SETBACK: 14,500 g
 VELOCITY: 2,650 fps
 CREEP:

SERIES: N CHAPTER: 1
 DESIGNATION: MK 360 Mod 0 & 1
 Fuze Adapter Assy

C-13

0233

1 31

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 800 g, no arm;
1325 g, all arm

SECOND SAFETY:

Spin: 27 rps, no arm;
38 rps, all arm

OTHER SAFETY:

RC delay of firing capacitor
voltage buildup

DELAY:

2.9 sec nominal

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 3.8 lb (1725 gm)

TOTAL LENGTH: 8.77 in (22.3 cm)

CROSS SECTION: 2.73 in (6.93 cm)

INTRUSION: 4.01 in (10.16 cm)
2.00 in (5.08 cm) dia

THREAD SIZE: 2.35-10UNS-2A

OTHER:

POWER SUPPLY:

DWG 11707601

EXPLOSIVE TRAIN

S&A DEVICE: DWG 11718101

PRIMER: Mk 124 Dwg 1178177

DETONATORS: DWG 11713610

LEAD: Dwg 11713589 & 11713604

BOOSTER:

OTHER: Dwg 11713599

FUNCTIONING DATA

MODE(S): Proximity, PD

TYPE: Electrical - CVT-RF

CHARACTERISTICS:

Setable turn-on time
from 5 to 100 sec

TARGET: Ground Targets

SENSITIVITY:

REMARKS

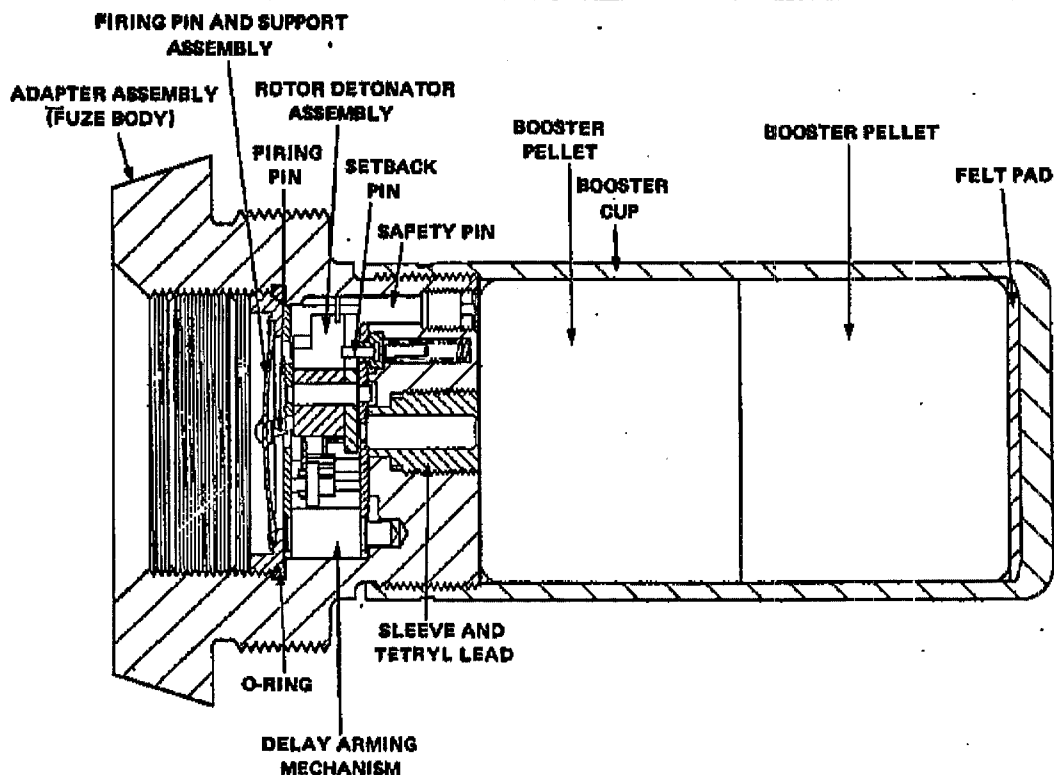
Assembly in accordance with OD 28655 contains M728 CVT Fuze,
adapter, holding ring, and windshield.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 360 Mod 0 & 1
Fuze Adapter Assy

0234

1-32

C-14

**IDENTIFICATION**

AGENCY: NSWC, Code G44

CONTACT: D. Jensen
AV 290-2792

STATUS: Procurement Std

USER: Navy

ASSY DWG: 2512188

PARTS LIST: DL 2512188

SPEC: WS 12052

NSN: 1390-00-488-0970

PRIOR NOMENCLATURE:

REPLACES:

GENERALMUNITION: 5-in/38 Projectile,
FCL(VT)

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 208 rps

SETBACK: 12,800 g

VELOCITY: 2,600 fps

CREEP:

SERIES: N CHAPTER: 1
DESIGNATION: MK 379 Mods 0, 1
Aux Det Fuze

0255

D-1

1-33



MIL-HDBK-145
7 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1385 g, all arm

SECOND SAFETY:

Spin: 50 rps, no arm;
75 rps, all arm

OTHER SAFETY:

DELAY:

275 ft min (37 to 52 turns)

SAFE/ARM CONDITION:

FUNCTIONING DATA

MODE(S): Delay Arming

TYPE: Mechanical

CHARACTERISTICS:

TARGET:

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 1.57 lb (712 gm)

TOTAL LENGTH: 5.6 in (14.22 cm)

CROSS SECTION: 2.0 in (5.08 cm)

INTRUSION: 5.1 in (13.0 cm)

THREAD SIZE: 2.65-10NS

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 41-0

PRIMER:

DETONATORS: Mk 23 (STAB)

LEAD: Tetryl, .345 gm

BOOSTER: Tetryl, 200 gm (Mod 0)
CH-6, 208 gm (Mod 1)

OTHER:

REMARKS

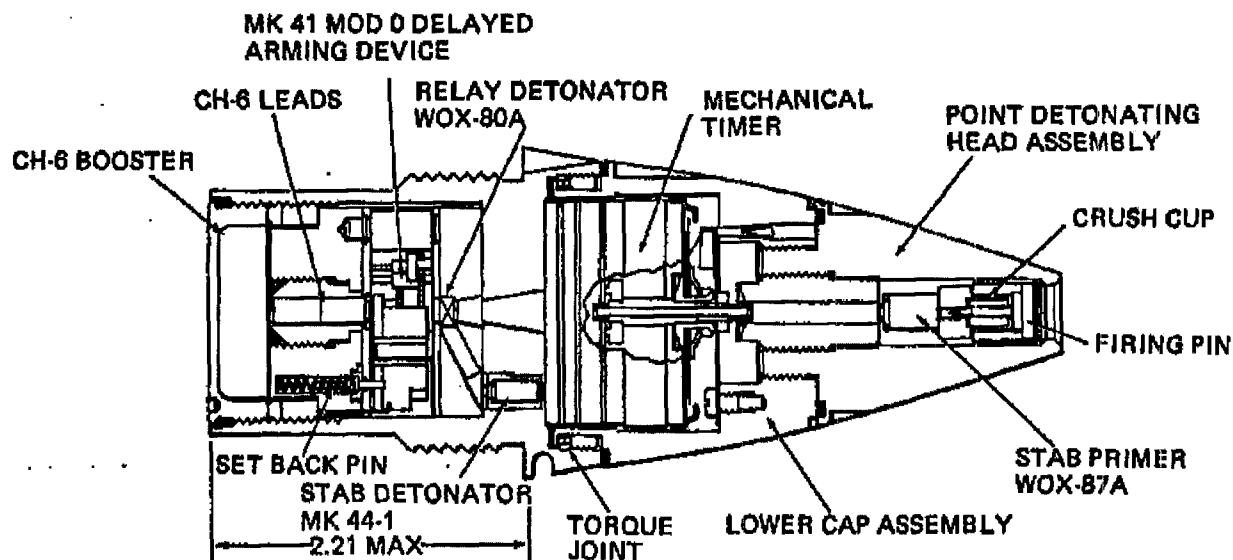
Provides safety for fuzes without S&A.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 379 Mods 0, 1
Aux Det Fuze

0236

1-34

D-2

MIL-HDBK-145
1 October 1980

- NOTE: 1. POINT DETONATING ONLY AT SAFE SETTING.
2. POINT DETONATING BACKUP AT TIME SETTING.
3. TIME SETTINGS FROM 3 TO 95 SECONDS.

IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: R. Leary
AV 290-1995

STATUS: Procurement Std

USER: Navy

ASSY DWG: 2512434

PARTS LIST: DL 2512434

SPEC: WS 13929

NSN: 1390005637712

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: 5 in/54 Projectiles

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 254 rps

SETBACK: 14,500 g

VELOCITY: 2,650 fps

CREEP:

SERIES: N CHAPTER: 1
DESIGNATION: MK 393 Mod 0
MT Fuze

0237

1-35
D-3

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1385 g, all arm

SECOND SAFETY:

Spin: 50 rps, no arm;
75 rps, all arm

OTHER SAFETY:

DELAY:

37 to 52 turns

SAFE/ARM CONDITION:

FUNCTIONING DATA

MODE(S): MT/PD

TYPE: Mechanical

CHARACTERISTICS:

Settable from 5 to 95 sec

TARGET: Air, Ground Targets

SENSITIVITY:

2 in plywood 0 deg

PHYSICAL DATA

WEIGHT: 1.5 lb (681 gm)

TOTAL LENGTH: 6.0 in (15.24 cm)

CROSS SECTION: 2.4 in (6.1 cm)

INTRUSION: 2.21 in (5.61 cm)

THREAD SIZE: 2-12UN-2A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 41-0

PRIMER:

DETONATORS: WOX 87A, WOX 80A, Mk
23-1, Mk 44-1

LEAD: (2) Mk 8

BOOSTER: CH-6

OTHER:

REMARKS

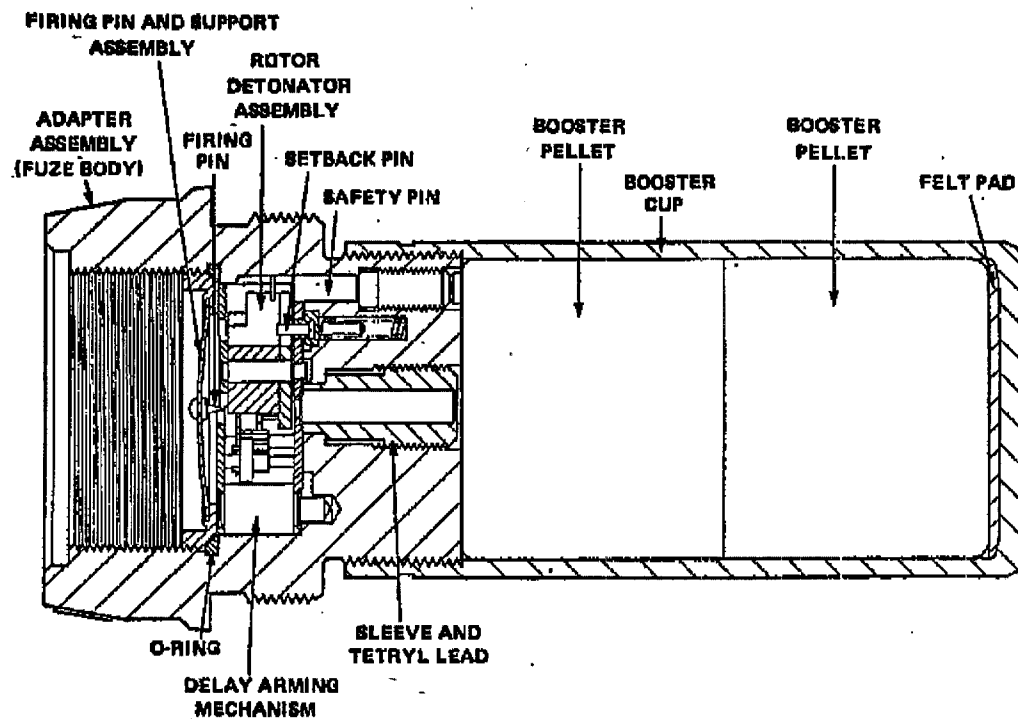
PD backup in time mode.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 393 Mod 0
MT Fuze

0238

D-4

1-36



IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: D. Jensen
AV 290-2792

STATUS: Procurement Std

USER: Navy

ASSY DWG: 2512190

PARTS LIST: DL 2512190

SPEC: WS 13598

NSN: 1390-00-032-1666

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: 5-in/54 Projectile,
FCL (VT)

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 254 rps

SETBACK: 14,500 g

VELOCITY: 2,650 fps

CREEP:

SERIES: N CHAPTER: 1
 DESIGNATION: MK 395 Mods 0, 1
 Aux Det Fuze

0239

D-5

1-37



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1375 g, all arm

SECOND SAFETY:

Spin: 50 rps, no arm;
75 rps, all arm

OTHER SAFETY:

DELAY:

275 ft min (37 to 52 turns)

SAFE/ARM CONDITION:

FUNCTIONING DATA

MODE(S): Delay Arming

TYPE: Mechanical

CHARACTERISTICS:

TARGET:

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 1.5 lb (681 gm)

TOTAL LENGTH: 5.74 in (14.56 cm)

CROSS SECTION: 2.0 in (5.08 cm)

INTRUSION: 5.1 in (13.0 cm)

THREAD SIZE: 2.35-10NS

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 41-0

PRIMER:

DETONATORS: Mk 23 (STAB)

LEAD: Tetryl, .55 gm

BOOSTER: Tetryl, 200 gm (Mod 0)
CH-6, 208 gm (Mod 1)

OTHER:

REMARKS

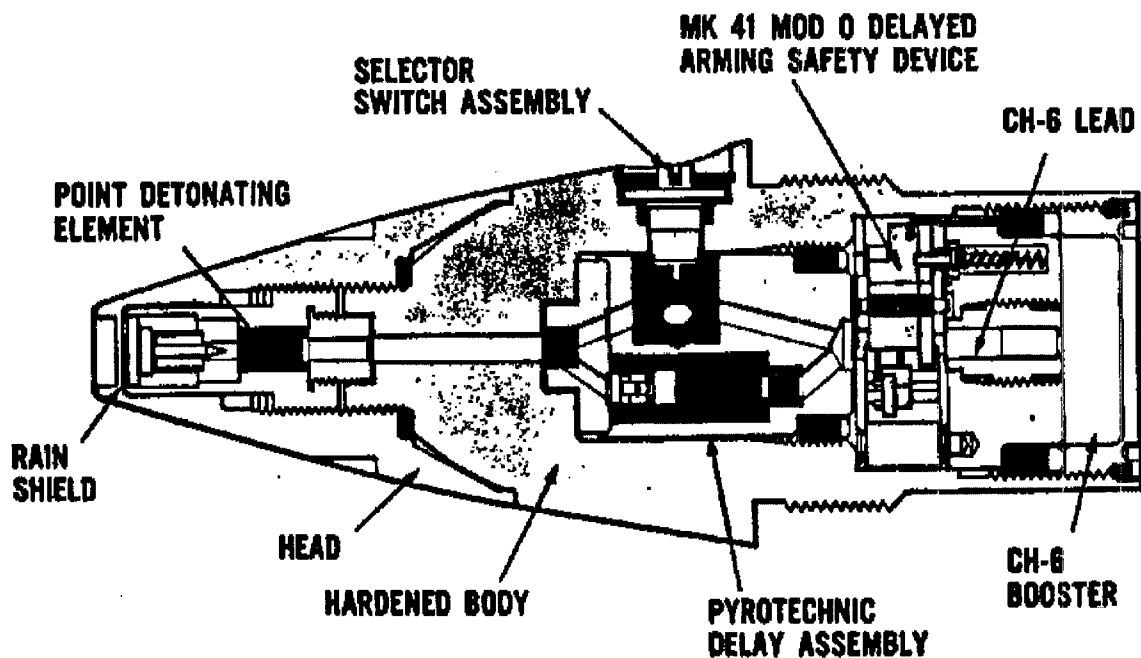
Provides safety for fuzes without S&A. Documentation for Mod 1.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 395 Mods 0, 1
Aux Det Fuze

0240

1-38

D-6

**IDENTIFICATION**

AGENCY: NSWC, Code G44
 CONTACT: R. Leary
 AV 290-1995
 STATUS: Procurement Std
 USER: Navy
 ASSY DWG: 2512724
 PARTS LIST: DL 2512724
 SPEC: WS 14104
 NSN:
 PRIOR NOMENCLATURE:
 REPLACES: Mk 30-5 PDF and BDF

GENERAL

MUNITION: 5 in/54 Projectile
 USE: HE
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: 254 rps
 SETBACK: 14,500 g
 VELOCITY: 2,650 fps
 CREEP:

SERIES: N
 DESIGNATION: MK 399 Mod 0
 PD Fuze

CHAPTER: 1

0241

D-7

1-39

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback

SECOND SAFETY:

Spin: 50 rps, no arm;
75 rps, all arm

OTHER SAFETY:

DELAY:

37 to 52 turns

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 2.64 lb (1199 gm)

TOTAL LENGTH: 6 in (15.24 cm)

CROSS SECTION: 2.4 in (6.1 cm)

INTRUSION: 2.21 in (5.61 cm)

THREAD SIZE: 2-12UN-2A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 41-0

PRIMER:

DETONATORS: Mk 23-1 (STAB)

LEAD: Mk 8 (2)

BOOSTER: 11 gm CH-6

OTHER:

FUNCTIONING DATA

MODE(S): PD or Delay, Selectable

TYPE: Mechanical

CHARACTERISTICS:

Delay time 10 millise

TARGET: Surface Superstructure, Pers

SENSITIVITY:

2 in plywood 0 deg
1/8 in mild steel 0 deg

REMARKS

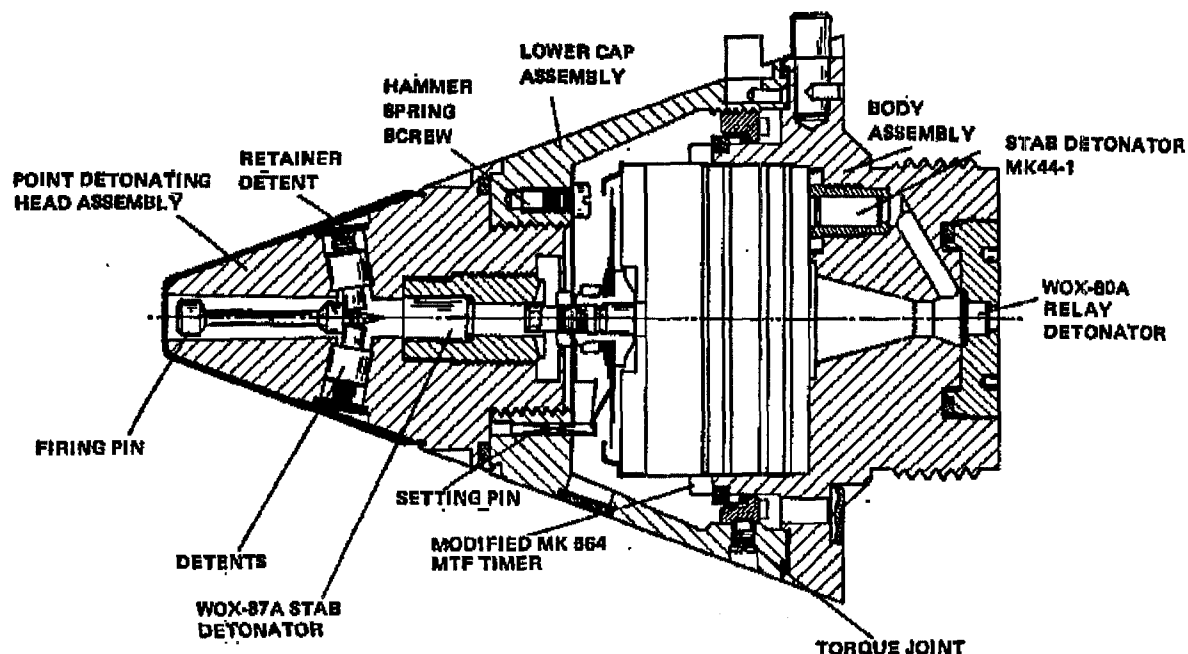
Explosive train prior to rotor contains: Mk 25-1 Stab Det, Mk 29
Relay Det, Black Powder Delay, Mk 101-3 Primer and WOX-83-A Relay Det.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 399 Mod 0
PD Fuze

1-40

0242

0-8

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: NSWC, Code G44
 CONTACT: A. Munach
 AV 290-1970
 STATUS: Procurement Std
 USER: Navy
 ASSY DWG: 2513219
 PARTS LIST: DL 2513219
 SPEC: WS 14369
 NSN: 1390-00-293-4340
 PRIOR NOMENCLATURE: Mk 392 Mod 0
 REPLACES: Mk 349-1 (MT), Mk 29-5 (PD)

GENERAL

MUNITION: 5 in/38 Projectiles

USE: HE, ILLUM, AAC

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 208 rps

SETBACK: 12,800 g

VELOCITY: 2,600 fps

CREEP:

SERIES: N CHAPTER: 1
 DESIGNATION: MK 403 Mod 0
 MT PD Fuze

0243

D-9

1-41

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback

SECOND SAFETY:

Spin: 33 rps, no arm;
50 rps, all arm

OTHER SAFETY:

Premature trap
Requires Aux Det Fuze
Mk 379 or 384

DELAY:

SAFE/ARM CONDITION:

FUNCTIONING DATA

MODE(S): MT/PD

TYPE: Mechanical

CHARACTERISTICS:

Settable 1 to 45 sec in 0.2 sec
Accuracy: 10 sec set time/9.700
-10.100 sec, 40 sec set time/
39.556-40.244 sec.

TARGET: Air, Surface Targets

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 1.25 lb (567 gm)

TOTAL LENGTH: 4.5 in (10.9 cm)

CROSS SECTION: 3 in (7.5 cm)

INTRUSION: 0.8 in (2.0 cm)

THREAD SIZE: 1.7-14UNS-1A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: 1 in AUX DET Fuze

PRIMER:

DETONATORS: WOX-87A/Mk 44-1 stad det,
WOX-80A relay det

LEAD: none

BOOSTER: none

OTHER:

REMARKS

Interchangeable with Mk 349 MTF and Mk 29 Mod 5 PD Fuze.

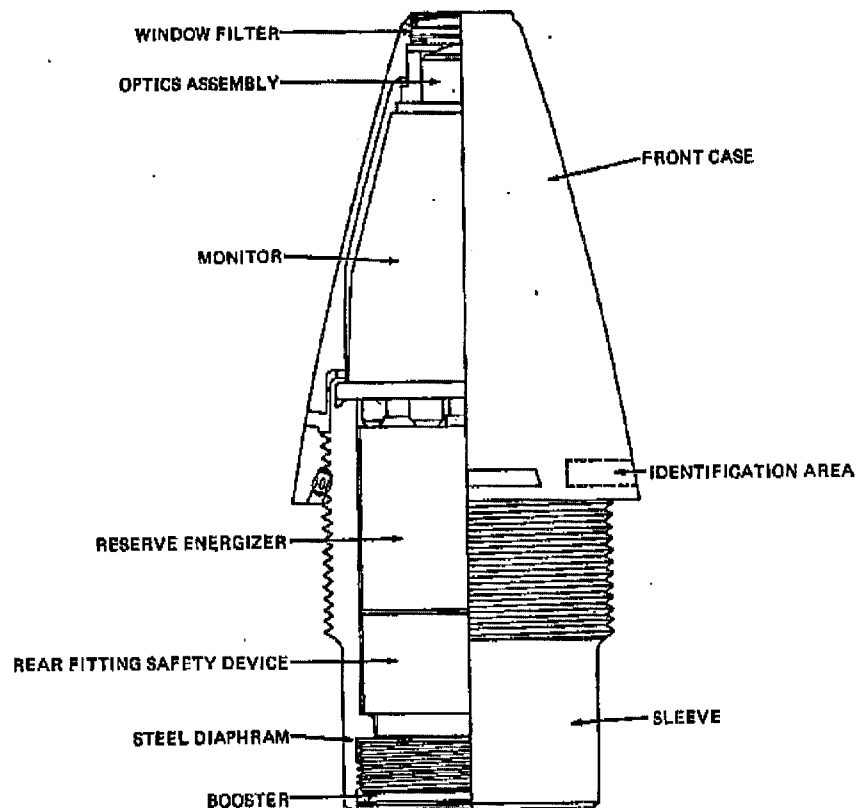
CHAPTER: 1 SERIES: N
DESIGNATION: MK 403 Mod 0

0244

MT PD Fuze

1-42

D-10



IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: C. Knisely
AV 290-1972

STATUS: Procurement Std

USER: Navy

ASSY DWG: 2513306

PARTS LIST: DL 2513306

SPEC: WS 14631

NSN:

PRIOR NOMENCLATURE: EX-404

REPLACES: Mk 91 & 92

GENERAL

MUNITION: 3 in/50, 76 mm/62, 5"/54
Projectiles

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: See remarks

SETBACK: See remarks

VELOCITY: See remarks

CREEP:

SERIES: N CHAPTER: 1
DESIGNATION: MK 404 Mod 0
Proximity Fuze

0245

0-11

1-43

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback

SECOND SAFETY:

Spin: 40 rps, no arm;
254 rps, all arm

OTHER SAFETY:

RC delay of firing capacitor
voltage buildup

DELAY:

780 to 1330 feet

SAFE/ARM CONDITION:

Malassembly feature

PHYSICAL DATA

WEIGHT: 2.1 lb (953 gm)

TOTAL LENGTH: 5.7 in (14.52 cm)

CROSS SECTION: 2.4 in (6.1 cm)

INTRUSION: 2.2 in (5.59 cm)
1.75 in (4.45 cm) dia

THREAD SIZE: 2-12UN-2A

OTHER:

POWER SUPPLY:

Mk 40-0 Reserve Energizer

EXPLOSIVE TRAIN

S&A DEVICE: Mk 42-3

PRIMER:

DETONATORS: Mk 71 Electric
Mk 64 Relay

LEAD: Teteryl

BOOSTER: CH-6 (11 gm)

OTHER:

FUNCTIONING DATA

MODE(S): Proximity, PI

TYPE: Electric - Passive Infrared

CHARACTERISTICS:

TARGET: Air Targets

SENSITIVITY:

REMARKS

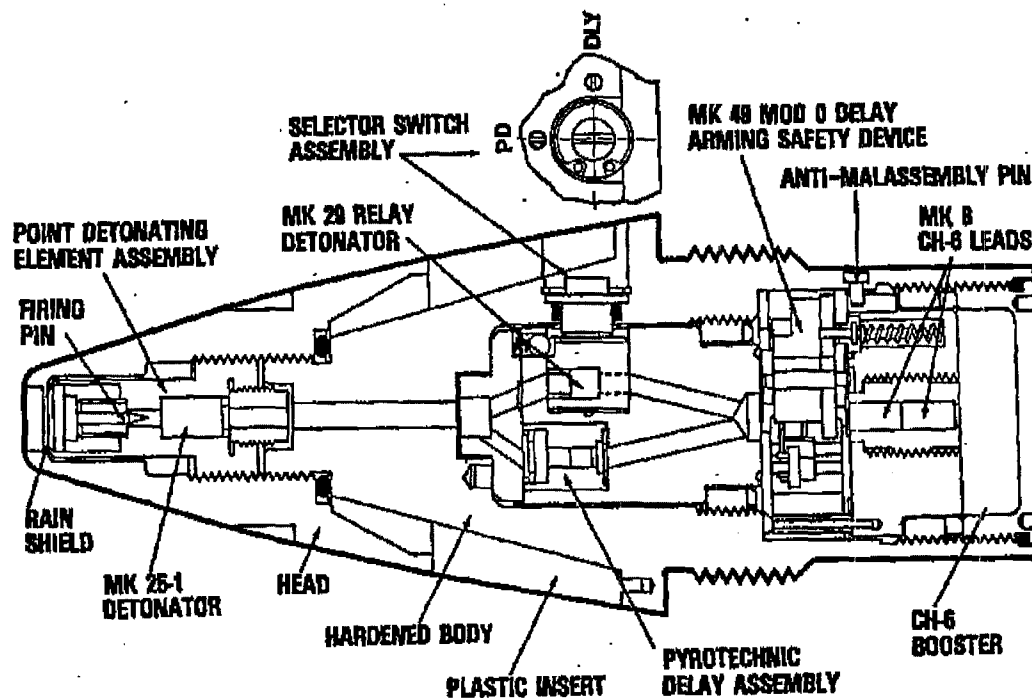
No SD action. Impact backup. Ballistic levels: Rotation - 254 rps (5"/54), 338 rps (3"/50), 408 rps (76mm/62); Setback - 14,500 g (5"/54), 20,600 g (3"/50), 26,000 g (76mm/62); Velocity - 2,650 fps (5"/54), 2,700 fps (3"/50), 3,034 fps (76mm/62).

CHAPTER: 1 SERIES: N
DESIGNATION: MK 404 Mod 0
Proximity Fuze

0246

1-44

D-12



IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: R. Leary
AV 290-1995

STATUS: Procurement Std

USER: Navy

ASSY DWG: 5177549

PARTS LIST: DL 5177549

SPEC: WS 18888

NSN:

PRIOR NOMENCLATURE: MK 407 Mod 0

REPLACES: Mk 399-0 and 407-0

GENERAL

MUNITION: 3 in/50, 76 mm, 5 in/54
Projectiles

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 408 rps

SETBACK: 20,900 g

VELOCITY: 3,034 fps

CREEP:

SERIES: N
DESIGNATION: PD FuzeCHAPTER: 1
MK 407 Mod 1

D-13

1-45

0247

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1385 g, all arm

SECOND SAFETY:

Spin: 50 rps, no arm;
75 rps, all arm

OTHER SAFETY:

DELAY:

37 to 52 turns

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 2.1 lb (953 gm)

TOTAL LENGTH: 6 in (15.2 cm)

CROSS SECTION: 2.4 in (4.5 cm)

INTRUSION: 2.21 in (5.6 cm)

THREAD SIZE: 2.12-UN-2A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 41-0

PRIMER:

DETONATORS: Mk 23 Mod 1 (STAB)(S&A)✓.

LEAD: Mk 8 (2)

BOOSTER: 11 gm CH-6

OTHER:

FUNCTIONING DATA

MODE(S): PD or Delay, Selectable

TYPE: Mechanical

CHARACTERISTICS:

Hand-set PD or 8 ms delay

TARGET: Surface Superstructure, Pers

SENSITIVITY:

2" plywood at 0 degree
1/8" steel at 0 degree

REMARKS

Explosive train prior to S&A contains: Mk 25-1 STAB DET, Mk 29 Relay det, basic lead stypnnate, delay. The Mk 407 Mod 1 replace the Mk 407 Mod 0 which had a 10 msec black powder delay. Det.

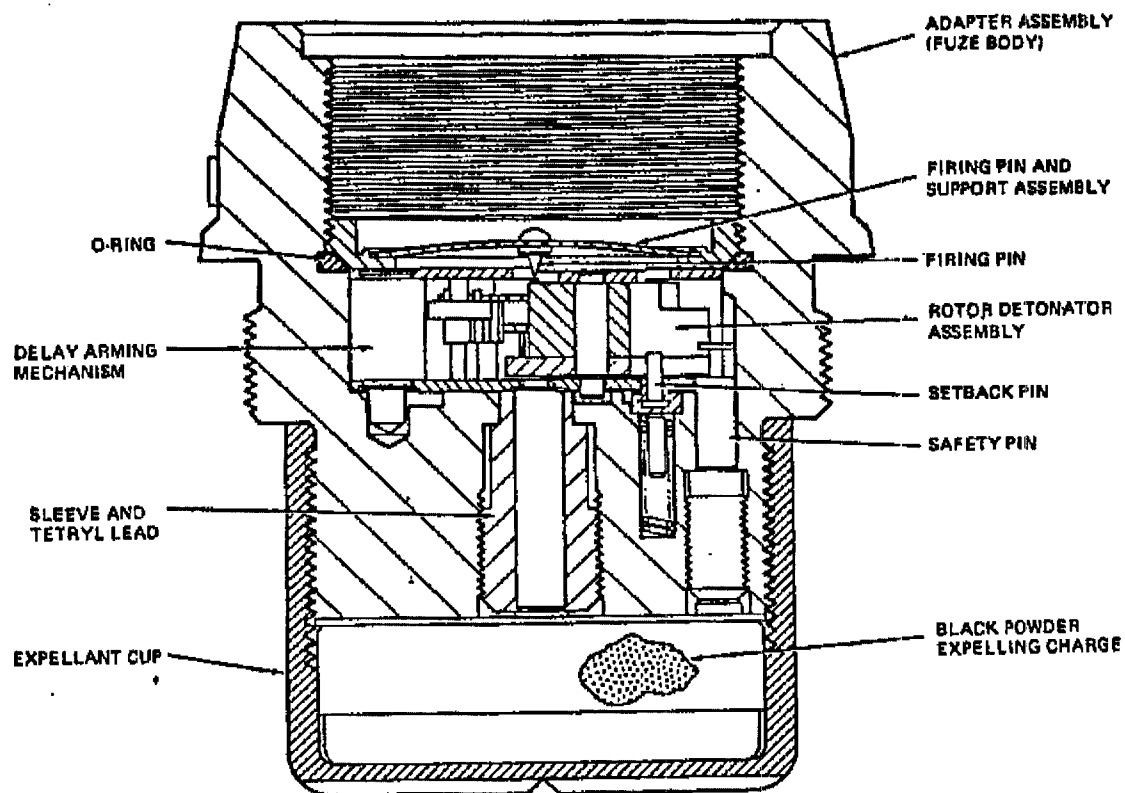
CHAPTER: 1 SERIES: N
DESIGNATION: MK 407 Mod 1
RD Fuze

0248

1-46

D-14





IDENTIFICATION

AGENCY: NSWC, Code G44
CONTACT: R. Niemeyer
AV 290-2750
STATUS: Development
USER: Navy
ASSY DWG: 5177470
PARTS LIST: DL 5177470
SPEC: WS 18488
NSN:
PRIOR NOMENCLATURE: EX-411
REPLACES: Mk 396 (ILLUM only)

GENERAL

MUNITION: 5-in/54 Projectile
USE: Illumination, WP
LOCATION: Nose
BALLISTIC LEVELS:
ROTATION: 254 rps
SETBACK: 14,500 g
VELOCITY: 2,650 fps
CREEP:

SERIES: N CHAPTER: 1
DESIGNATION: MK 411 Mod 0
Aux Det Fuze

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1385 g, all arm

SECOND SAFETY:

Spin: 50 rps, no arm;
75 rps, all arm

OTHER SAFETY:

DELAY:

37 to 52 turns

SAFE/ARM CONDITION:

FUNCTIONING DATA

MODE(S): Delay Arming

TYPE: Mechanical

CHARACTERISTICS:

TARGET:

SENSITIVITY:

PHYSICAL DATA

WEIGHT: .97 lb (441 gm)

TOTAL LENGTH: 3.5 in (8.89 cm)

CROSS SECTION: 2.75 in (6.99 cm)

INTRUSION: 2.48 in (6.30 cm)

THREAD SIZE: 2.35-10NS-2A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 41

PRIMER:

DETONATORS: Mk 23 (STAB)

LEAD: Tetryl 550 mg

BOOSTER: 36 gm Black powder
expelling charge

OTHER:

REMARKS

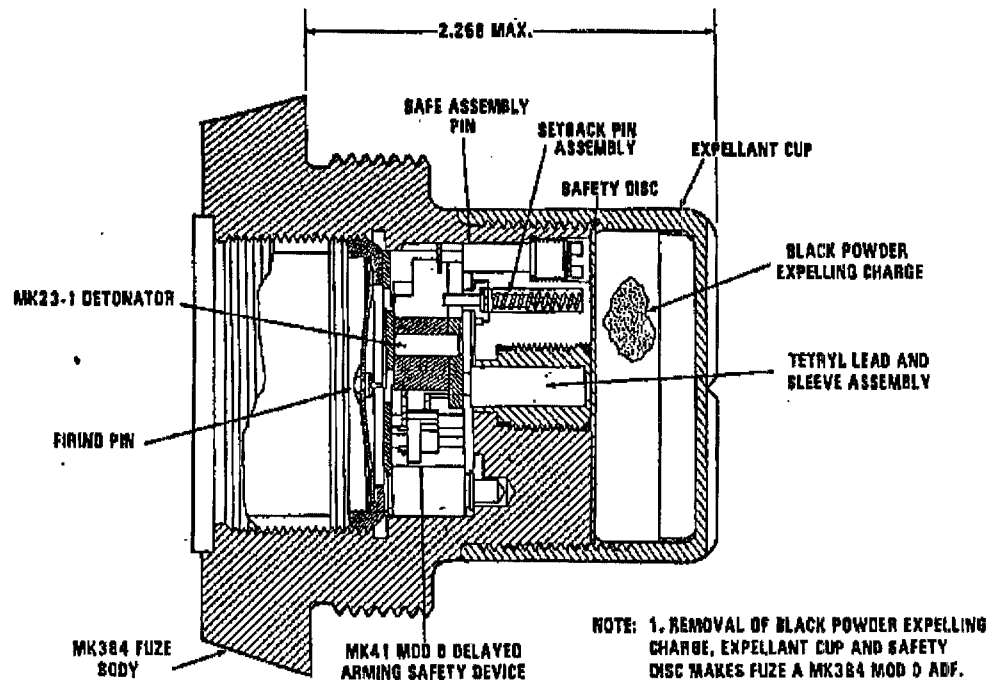
Delay arming mechanism same as in Mk 396 ADF. Replaced Mk 396 ADF
and separate expelling charge bag.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 411 Mod 0
Aux Det Fuze

0250

1-48

E-2



IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: R. Niemeyer
AV 290-2750

STATUS: Procurement Std

USER: Navy

ASSY DWG: 5177560

PARTS LIST: PL 5177560

SPEC: WS 18894

NSN:

PRIOR NOMENCLATURE: EX 413

REPLACES: Mk 384 (ILLUM only)

GENERAL

MUNITION: 5-in/38 Projectile

USE: Illumination, WP

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 208 rps

SETBACK: 12,800 g

VELOCITY: 2,600 fps

CREEP:

SERIES: N CHAPTER: 1

DESIGNATION: MK 413 Mod 0

Aux Det Fuze

0251

1-49
E-3

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1385 g, all arm

SECOND SAFETY:

Spin: 50 rps, no arm;
75 rps, all arm

OTHER SAFETY:

DELAY:

37 to 52 turns

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 1.0 lb (450 gm)

TOTAL LENGTH: 3 in (7.62 cm)

CROSS SECTION: 3.38 in (8.58 cm)

INTRUSION: 2.27 in (5.76 cm)

THREAD SIZE: 2.65-10NS-2A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 41

PRIMER:

DETONATORS: Mk 23 (STAB)

LEAD: Tetryl, 345 mg

BOOSTER: 23 gm black powder
expelling charge

OTHER:

FUNCTIONING DATA

MODE(S): Delay Arming

TYPE: Mechanical

CHARACTERISTICS:

TARGET:

SENSITIVITY:

REMARKS

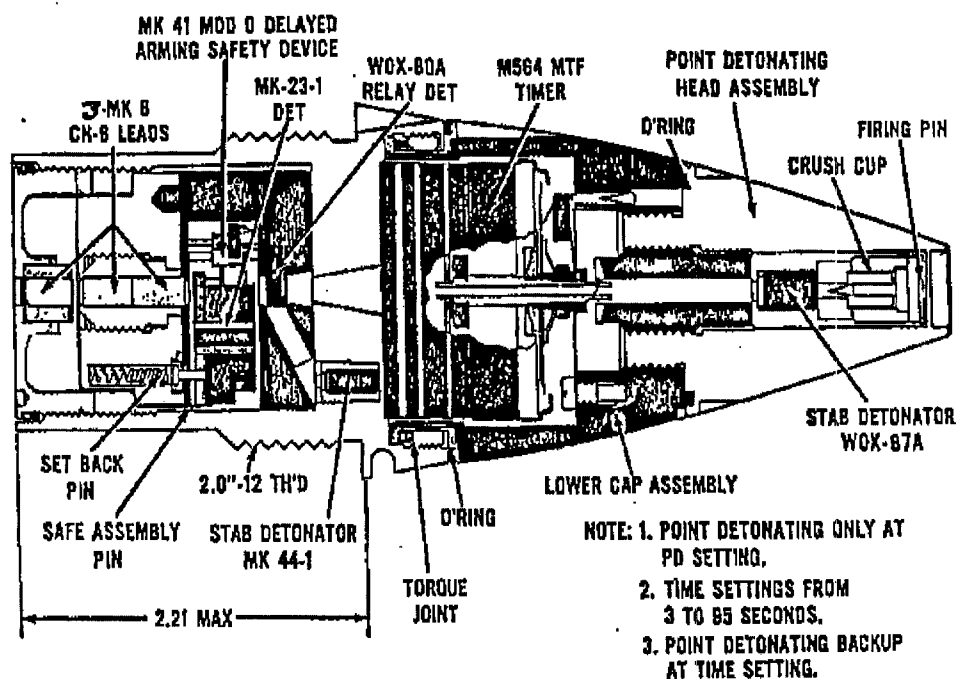
Provides safety for fuzes without S&A. Replaced Mk 384 ADF and separate expelling charge bag.

CHAPTER: 1 SERIES: N
DESIGNATION: MK 413 Mod 0
Aux Det Fuze

0252

1-50

E-4

**IDENTIFICATION**

AGENCY: NSWC, Code 644
 CONTACT: R. Niemeyer
 AV 290-2750
 STATUS: Development
 USER: Navy
 ASSY DWG: 5177568
 PARTS LIST: PL 5177568
 SPEC: WS 18966
 NSN:
 PRIOR NOMENCLATURE: EX-415
 REPLACES:

GENERAL

MUNITION: 5 in/54 Projectile
 USE: Illumination
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: 254 rps
 SETBACK: 14,500 g
 VELOCITY: 2,650 fps
 CREEP:

SERIES: N CHAPTER: 1
 DESIGNATION: MK 415 Mod 0
 MT PD Fuze

0253

E-5
1-51



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1385 g, all arm

SECOND SAFETY:

Spin: 50 rps, no arm;
75 rps, all arm

OTHER SAFETY:

DELAY:

37 to 52 turns

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 1.4 lb (635.6 gm)

TOTAL LENGTH: 6 in (15.24 cm)

CROSS SECTION: 2.4 in (6.1 cm)

INTRUSION: 2.21 in (5.61 cm)

THREAD SIZE: 2-12UN-2A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 41

PRIMER:

DETONATORS: WOX-87A (STAB),
Mk 44-1 (STAB)

LEAD: (3) Mk 8, CH-6

BOOSTER:

OTHER: WOX 80A Relay
Mk 23-1 Relay

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Mechanical

CHARACTERISTICS:

Settable from 5 to 95 sec

TARGET: Illumination

SENSITIVITY:

REMARKS

Same as Mk 393 MTF except CH-6 booster is replaced with an additional Mk 8 lead. Used with ILLUM PROJ that has its own expelling charge.

CHAPTER: 1 SERIES: N.
DESIGNATION: MK 415 Mod 0
MT PD Fuze

0254

1-52

E-6

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: NSWC, Code G43

CONTACT: W. Pickler
AV 290-1663

STATUS: Development

USER: Navy

ASSY DWG:

PARTS LIST:

SPEC:

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: 5"/54 Projectile

USE: Cargo and HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION:

SETBACK:

VELOCITY:

CREEP:

0255

E-7

SERIES: N
DESIGNATION: ET FuzeCHAPTER: 1
EX 416

1-63

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback

SECOND SAFETY:

Spin

OTHER SAFETY:

(See Remarks, below.)

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 2.1 lb

TOTAL LENGTH:

CROSS SECTION:

INTRUSION: ABCA

THREAD SIZE: 2-12 NS

OTHER:

POWER SUPPLY:

Modified Mk 38 RE or Mk 40 Mod 1

EXPLOSIVE TRAIN

S&A DEVICE: Mk 42

PRIMER:

DETONATORS: Mk 71 Mod 0 (elec)
Mk 64 Mod 0 (flash)

LEAD: 100 mgm PBXN-5; 166 mgm PBXN-5

BOOSTER: 17 gm CH-6

OTHER:

FUNCTIONING DATA

MODE(S): Precision Time, Settable

TYPE: Electronic

CHARACTERISTICS:

Settable from 3 to 200 sec via
Remote Inductive Link

TARGET: Surface and Illum.

SENSITIVITY:

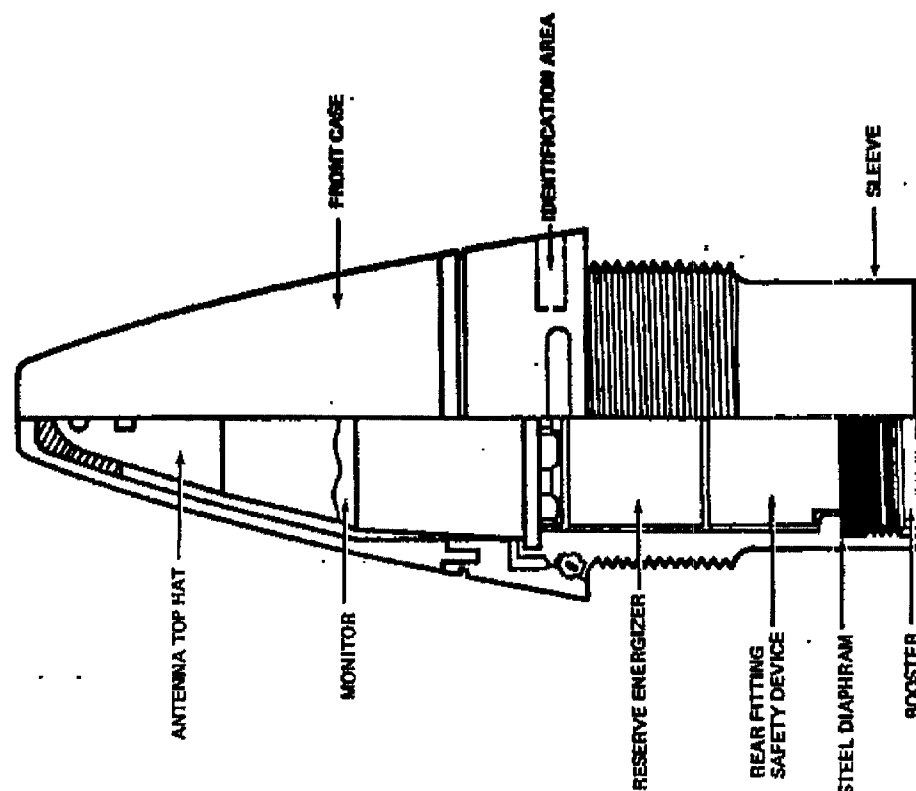
REMARKS

Verification of setting; 1000 feet nom. arming dist.; firing
capacitor not charged until 0.5-sec prior to set time.

CHAPTER: 1 SERIES: N
DESIGNATION: EX 416
FT Fuze
0256

1-54

E-8



IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: C. Knisely
AV 290-1972

STATUS: Development

USER: Navy

ASSY DWG: 5467652

PARTS LIST: 5467652

SPEC: WS 19609

NSN: N/A

PRIOR NOMENCLATURE: None

REPLACES: Mk 72 Mod 17

GENERAL

MUNITION: 76 mm/62 Projectile
3 in/50 Projectile

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: See remarks

SETBACK: See remarks

VELOCITY: See remarks

CREEP:

SERIES: N CHAPTER: 1
DESIGNATION: Ex 417 Mod 0
Proximity Fuze

1-55

0257

E-9

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1,385 g all arm

SECOND SAFETY:

Spin: 40 rps, no arm;
338 rps, all arm.

OTHER SAFETY:

RC delay of firing capacitor
voltage buildup

DELAY:

780 to 1330 ft

SAFE/ARM CONDITION:

Malassembly feature

FUNCTIONING DATA

MODE(S): Proximity/PI

TYPE: Electric RF

CHARACTERISTICS:

TARGET: Air and Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 2.10 lb (952.6 gm)

TOTAL LENGTH: 5.97 in (15.2 cm)

CROSS SECTION: 2.4 in (6.1 cm)

INTRUSION: 2.21 in (5.6 cm)
1.827 in (4.64 cm) dia

THREAD SIZE: 2.0-12N-2

OTHER:

POWER SUPPLY:

Ex 43 Mod 0 Reserve Energizer

EXPLOSIVE TRAIN

S&A DEVICE: Mk 42 Mod 3

PRIMER:

DETONATORS: Mk 71 (Electric)
Mk 64 Relay

LEAD: PBXN-5 (100 mg)

BOOSTER: CH-6 (11 gm)

OTHER:

REMARKS

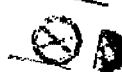
Ballistic levels: Rotation - 338 rps (3"/50), 408 rps (76mm/62); Setback -
20,600 g (3"/50), 26,000 g (76mm/62); Velocity - 2,700 fps (822.9 mps) (3"/50),
3,035 fps (925.1 mps) (76mm/62).

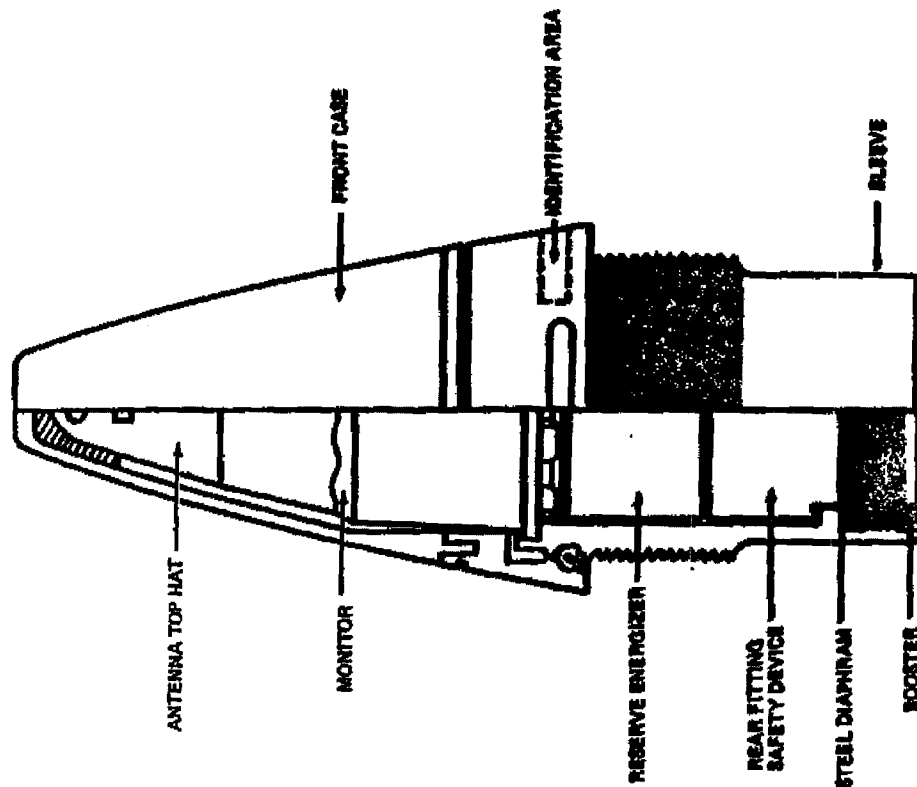
CHAPTER: 1 SERIES: N
DESIGNATION: Ex 417 Mod 0
Proximity Fuze

0258

1-56

E-10





IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: C. Knisely
AV 290-1972

STATUS: Development

USER: Navy

ASSY DWG: 5178407

PARTS LIST: 5178407

SPEC: WS 19610

NSN: N/A

PRIOR NOMENCLATURE: None

REPLACES: Mk 73 Mod 13

GENERAL

MUNITION: 5 in/54 Projectile

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 254 rps

SETBACK: 14,500 g

VELOCITY: 2,650 fps (807.7 mps)

CREEP:

SERIES: N

CHAPTER: 1

E-11

DESIGNATION: Ex 418 Mod 0
Proximity Fuze

0259

1-57



ARMING DATA

FIRST SAFETY:

Setback: 900 g, no arm;
1,385 g all arm

SECOND SAFETY:

Spin: 40 rps, no arm;
254 rps, all arm.

OTHER SAFETY:

RC delay of firing capacitor
voltage buildup

DELAY:

780 to 1330 ft

SAFE/ARM CONDITION:

Malassembly feature

PHYSICAL DATA

WEIGHT: 1.88 lb (852.6 gm)

TOTAL LENGTH: 5.97 in (15.2 cm)

CROSS SECTION: 2.4 in (6.1 cm)

INTRUSION: 2.21 in (5.6 cm)
1.75 in (4.45 cm) dia sleeve

THREAD SIZE: 2.0-12N-2

OTHER:

POWER SUPPLY:

Ex 43 Mod U Reserve Energizer

FUNCTIONING DATA

MODE(S): Proximity/PI

TYPE: Electric RF

CHARACTERISTICS:

TARGET: Air and Surface

SENSITIVITY:

EXPLOSIVE TRAIN

S&A DEVICE: Mk 42 Mod 3

PRIMER:

DETONATORS: Mk 71 (Electric)
Mk 64 Relay

LEAD: PBXN-5 (100 mg)

BOOSTER: CH-6 (11 gm)

OTHER:

REMARKS

CHAPTER: 1 SERIES: N
DESIGNATION: Ex 418 Mod 0
Proximity Fuze

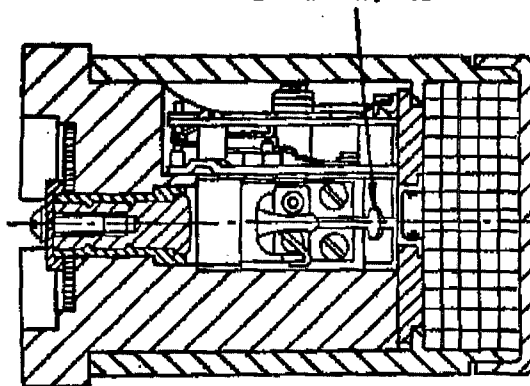
1-58

E-12

0260

MIL-HDBK-145
1 October 1980

DETONATOR, M48



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-CV
CONTACT: J. Julianio
AV 880-6376
STATUS: Procurement Std
USER: Army, Marines
ASSY DWG: 9323857
PARTS LIST: Same
SPEC: MIL-F-63270, -63271
NSN:
PRIOR NOMENCLATURE: M509A1, T208
REPLACES: M509A1

GENERAL

MUNITION: Projectile for 90 & 105 mm
Tank Gun and 106mm Rifle
USE: Cartridge 90mm HEAT-T M431
Cartridge 105mm HEAT-T M456A1E2
Cartridge 106mm HEAT-T M344A1
LOCATION: Front and Base
BALLISTIC LEVELS:
ROTATION: None
SETBACK: 40,000 g
VELOCITY: 1173.4 m/s
CREEP: 31 g

SERIES: A
DESIGNATION:
PIBD Fuze

CHAPTER: 1
M509A2

E-13

1-59

0261

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Multi leaf setback on rotor
2500 g non arm, 4300 arm

SECOND SAFETY:

Setback duration 1.5 to 3 millise

OTHER SAFETY:

Setback electrical switch, approx
1800 g (only in M456A1E2)

DELAY:

5.2 to 21 millise arming

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PIBD

TYPE: Electric

CHARACTERISTICS:

SQ, graze funct w/FFAIS only

TARGET: Ground-Tank

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.31 lb (140.6 gm)

TOTAL LENGTH: 1.96 in (4.98 cm)

CROSS SECTION: 1.35 in (3.43 cm)

INTRUSION: 1.96 in (4.98 cm) depth
1.26 in (3.20 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

piezo elec PS (setback) M456A1E2
piezo elec disc (impact) M431 and
M344A1. Wound Rotor Spring

EXPLOSIVE TRAIN

S&A DEVICE: Sequential Leaf Setback

PRIMER: None

DETONATORS: M69 Elec

LEAD: 69 mg comp A-5

BOOSTER: 8 gm comp A5, 9323860

OTHER:

REMARKS

M509A1 and M509A2 are similar except that M509A1 has leaf contact instead of button contact on rotor, M48 Elec Det instead of M69, and Teteryl instead of Comp A-5 in lead and booster. M509A2 used with Full Frontal Area Impact Switch, FFAIS, with piezo elec power supply on spike in 105mm M456A1E2. M509A2 used with piezo elec impact element in 90mm M431 and 106mm M344A1.

CHAPTER: 1 SERIES: A

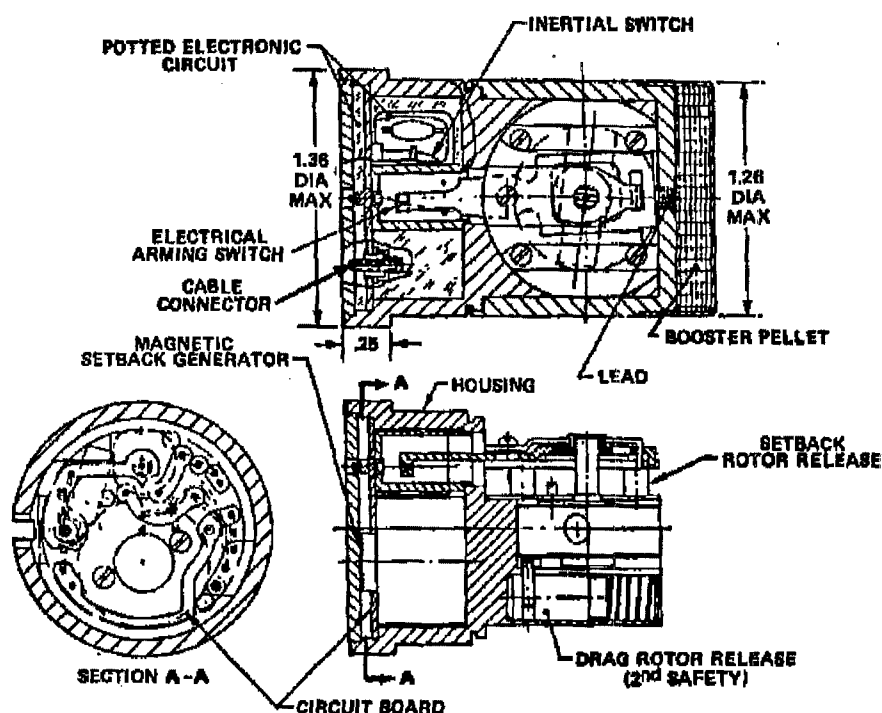
DESIGNATION: M509A2

PIAD Fuze

0262

1-60

E-14

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: W. Holley
AV 880-6378

STATUS: Development

USER: Army, Marines

ASSY DWG: Not available

PARTS LIST:

SPEC: Not available

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES: M509A1, M509A2

GENERAL

MUNITION: Projectile for 105mm
Tank Guns, M68

USE: 105mm HEAT-MP-T, M456 Series

LOCATION: Front and Base

BALLISTIC LEVELS:

ROTATION: Negligible

SETBACK: 60,000 g

VELOCITY: 1173 m/s

CREEP: 32 g

SERIES: A
DESIGNATION:
PIBD FuzeCHAPTER: 1
M509A2E1

0263

F-1

1-61

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

setback 2500 g non arm, 4300 arm

SECOND SAFETY:

creep est. 4 g non arm, 8 arm

OTHER SAFETY:

None

DELAY:

5 to 21 millisec delay

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): PIBD, graze

TYPE: Electric, Mechanical

CHARACTERISTICS:

SQ, graze

TARGET: Ground-Tank

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.4 lb (180 gm) approx

TOTAL LENGTH: 1.96 in (4.98 cm)

CROSS SECTION: 1.35 in (3.43 cm)

INTRUSION: 1.96 in (4.98 cm) depth
1.26 in (3.20 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Magnetic Setback Power Supply

EXPLOSIVE TRAIN

S&A DEVICE: Sequential Leaf Setback &
Creep Mechanism

PRIMER: None

DETONATORS:

LEAD: Unknown mg PBXN-5

BOOSTER: Unknown gm comp A-5

OTHER:

REMARKS

Functioning is accomplished by closure of the FFAIS which is part of the projectile. Fuze is an outgrowth of the M509 & M530 series but has additional creep & is not interchangeable.

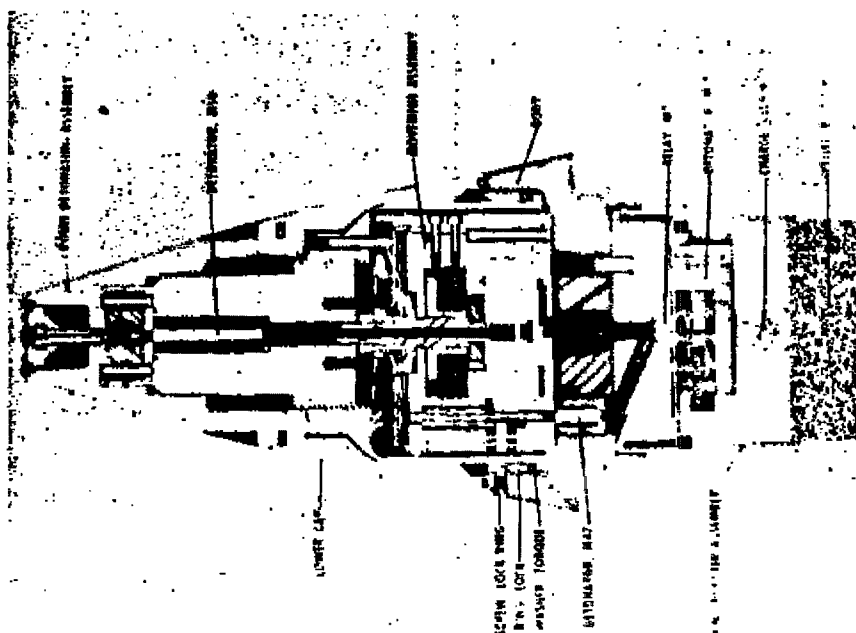
CHAPTER: 1 SERIES: A
DESIGNATION: M509A2E1
PIBD Fuze

1-62

F-2

0264

MIL-HDBK-145
1 October 1980



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: D. Taravella
- AV 880-3174

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 10534285

PARTS LIST: PL 10534285

SPEC: MIL-F-14854

NSN: 1390-00-889-2044

PRIOR NOMENCLATURE: T197E1

REPLACES: See Remarks

GENERAL

MUNITION: 105mm How, 155mm How
8 in How, 4.2 in Mortar

USE: HE (except ICM), HERA,
HD, and WP

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 500 rps

SETBACK: 18,000 g

VELOCITY: 762.0 m/s

CREEP:

SERIES: A
DESIGNATION:
MT SQ Fuze

CHAPTER: 1
M564



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback 600 g non arm, 900 arm
Setback pin in Safety Adapter
& Movement

SECOND SAFETY:

Spin 16.7 rps non arm, 33.3 arm
2 Pallet Locks on escapement; 2
detents PD FP & rotor in saf adapt

OTHER SAFETY:

Safety Disc in Movement
Lever Lock in movement

DELAY:

Runaway Escapement in Safety
Adapter gives 200 ft delay arming

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): PD or Time, Settable

TYPE: Mechanical, Junghans Escapement

CHARACTERISTICS:

2 to 100 secs time, 1 sec incr.
0.000025 sec SQ functioning

TARGET: Ground-Personnel

SENSITIVITY:

1 in wood screen
70 degrees obliquity, 762 m/s

PHYSICAL DATA

WEIGHT: 2.14 lb (971 gm)

TOTAL LENGTH: 5.97 in (15.15 cm)

CROSS SECTION: 2.41 in (6.10 cm)

INTRUSION: 2.22 in (5.63 cm) depth
1.73 in (4.40 cm) dia

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

Wound main spring for Timer

EXPLOSIVE TRAIN

S&A DEVICE: Safety Adapter

PRIMER: T103 Stab

DETONATORS: M47 Stab,
M17 Flash *

LEAD: 244 mg Tetryl *

BOOSTER: 27.3 gm comp A-5

OTHER: M7 Relay

REMARKS

Same as M565 except has PD SQ Feature. Practice Fuze is XM746.
Replaces M500A1, M502A1, M520A1, and XM548

* After 1980, the M17 det will be replaced by the PA519 det (RDX and Lead Azide)
and the lead by PA518 (244 mg of comp A-5).

CHAPTER: 1 SERIES: A

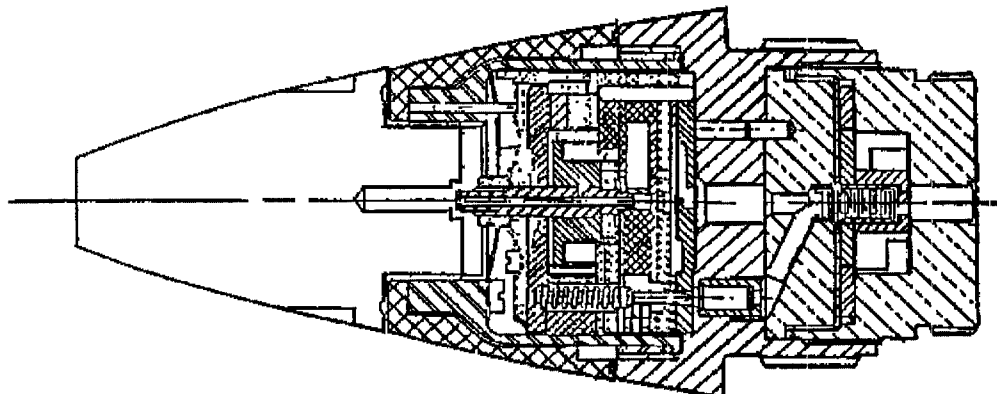
DESIGNATION: M564

MT SQ Fuze

F-4

0266

1-64



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: D. Taravella
AV 880-3174

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 10522991

PARTS LIST: PL 10522991

SPEC: MIL-F-14848

NSN: 1390-00-889-2104

PRIOR NOMENCLATURE: T275E1

REPLACES: M562

GENERAL

MUNITION: 105mm How, 155mm How
8 in How, 4.2 in MortarUSE: HE, Smoke, Illuminating,
Tactical CS

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 500 rps

SETBACK: 18,000 g

VELOCITY: 762.0 m/s

CREEP:

SERIES: A
DESIGNATION:
MT FuzeCHAPTER: 1
M565

0267

1-65
F-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback 600 g non arm 900 arm
setback pins in movement &
in safety adapter

SECOND SAFETY:

Spin 16.7 rps non arm 33.3 arm
2 detents in S.A.,
2 pallet locks in movement

OTHER SAFETY:

One safety disc in movement,
lever lock in movement

DELAY:

Runaway escapement in safety adapter
give approx 200 ft arm delay.

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Mechanical, Junghans Escapement

CHARACTERISTICS:

2 to 100 sec x 1 sec increments

TARGET: Ground, Personnel

SENSITIVITY:

NA

PHYSICAL DATA

WEIGHT: 2.05 lb (929.9 gm)

TOTAL LENGTH: 5.27 in (13.38 cm)

CROSS SECTION: 2.41 in (6.10 cm)

INTRUSION: 1.52 in (3.85 cm) depth
1.65 in (4.18 cm) dia

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

Wound main spring

EXPLOSIVE TRAIN

S&A DEVICE: Safety Adapter

PRIMER: None

DETONATORS: M47 Stab M17 Flash

LEAD: 244 mg Teteryl

BOOSTER: None

OTHER: M7 Relay

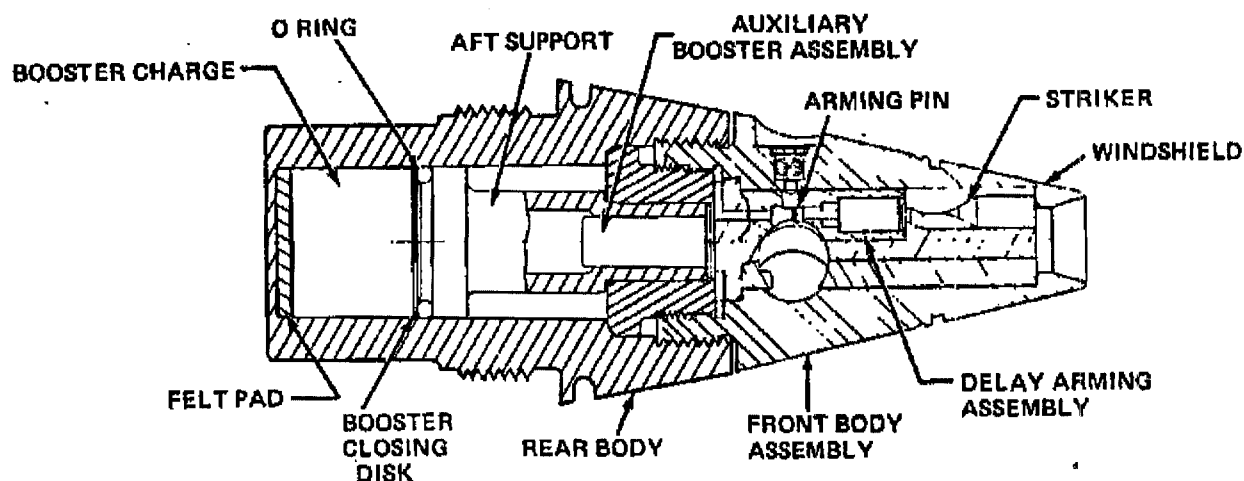
REMARKS

Same as M564 without PD SQ Element, Practice Fuze is XM746.

CHAPTER: 1 SERIES: A
DESIGNATION: M565
MT Fuze

0268

1-66 F-6

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARADCOM, DROAR-LGN-T

CONTACT: F. McCann
AV 880-3060

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9246242

PARTS LIST: 9246242

SPEC: MIL-F-50945, -50988

NSN: 1390-00-182-3029

PRIOR NOMENCLATURE: 36 Dutch, XM567E7

REPLACES: M524A6, M526, M519

GENERAL

MUNITION: Projectile for 81mm Mortar,
M1 and M29A1USE: HE, M374 Series
WP, M375 Series

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 32 rps

SETBACK: 10,000 g

VELOCITY: 268 m/s

CREEP:

SERIES: A
DESIGNATION:
PD FuzeCHAPTER: 1
M567

F-7

1-67

0269



ARMING DATA

FIRST SAFETY:

Safety Pull Wire

SECOND SAFETY:

Setback 400 g non arm, 700 arm

OTHER SAFETY:

None

DELAY:

100 m, 1.7 to 6 sec, Delay Arming

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): PD or Delay, Selectable

TYPE: Mechanical, Pyrotechnic Delay

CHARACTERISTICS:

SQ, Delay 0.05 sec

TARGET: Ground-Personnel, Spotting

SENSITIVITY:

Unknown

PHYSICAL DATA

WEIGHT: 1.30 lb (589.7 gm)

TOTAL LENGTH: 5.97 in (15.16 cm)

CROSS SECTION: 2.40 in (6.10 cm)

INTRUSION: 2.20 in (5.58 cm) depth
1.70 in (4.32 cm) dia

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: Pyrotechnic Delay

PRIMER: None

DETONATORS: M76 Delay Stab, M98 Stab

LEAD: 140 mg RDX Type A or B,
Class C 9234683

BOOSTER: 23.4 gm RDX Comp. A5
9255163

OTHER: Delay: M53, 9246248
Aux Booster: M122, 9239270

REMARKS

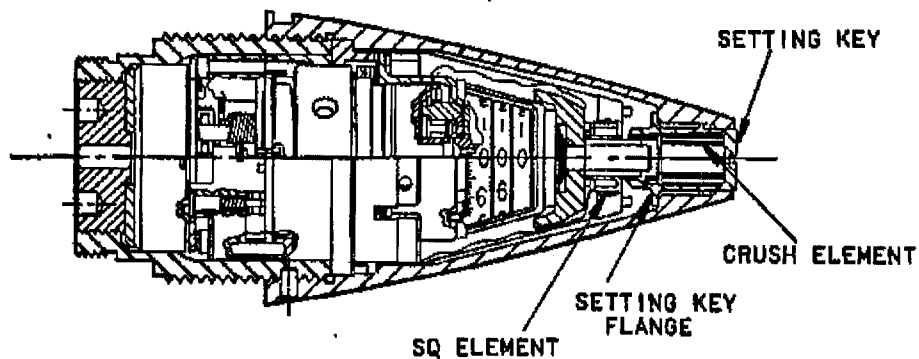
Head of Fuze is M935 used on 60mm Mortar.

CHAPTER: 1 SERIES: A
DESIGNATION: M567
PD Fuze

1-68

0270

F-8



IDENTIFICATION

AGENCY: ARRADCOM, ORDAR-LCN-T

CONTACT: E. Chesky
AV 880-2908

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9236500

PARTS LIST: PL 9236500

SPEC: MIL-F-50983

NSN: 1390-00-805-0692

PRIOR NOMENCLATURE: XM577

REPLACES: M548, M565

GENERAL

MUNITION: Projectiles for 155mm
and 8 in How
and 4.2 in mortar

USE: See remarks

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 500 rps

SETBACK: 30,000`g

VELOCITY: 914.4 m/s

CREEP: 6 g

SERIES: A
DESIGNATION: M577
MTSQ Fuze

CHAPTER: 1

0271

1-69
F-9

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback 300 g non arm, 600 arm

SECOND SAFETY:

Spin 16.7 rps non arm, 30 arm

OTHER SAFETY:

Safe separation arming 2 to 4 sec
before set time

DELAY:

61 m delay arming for PD

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time or PD, Settable

TYPE: Mechanical

CHARACTERISTICS:

1 to 200 sec x 0.1 sec time
80-90 microsec funct hard grd.

TARGET: Ground-Personnel

SENSITIVITY:

1.0 in plywood, 0 degree obliquity,
122 m/s, 155 H

PHYSICAL DATA

WEIGHT: 1.41 lb (639.6 gm)

TOTAL LENGTH: 5.28 in (13.41 cm)

CROSS SECTION: 2.41 in (6.12 cm)

INTRUSION: depth 1.51 in (3.84 cm)
dia 1.66 in (4.18 cm)

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

Wound Mainspring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M94 Stab, Two M55 Stab

LEAD: PA-510, 258 mg RDX

BOOSTER: None

OTHER: Relay: Mild Det Fuze, 9236565

REMARKS

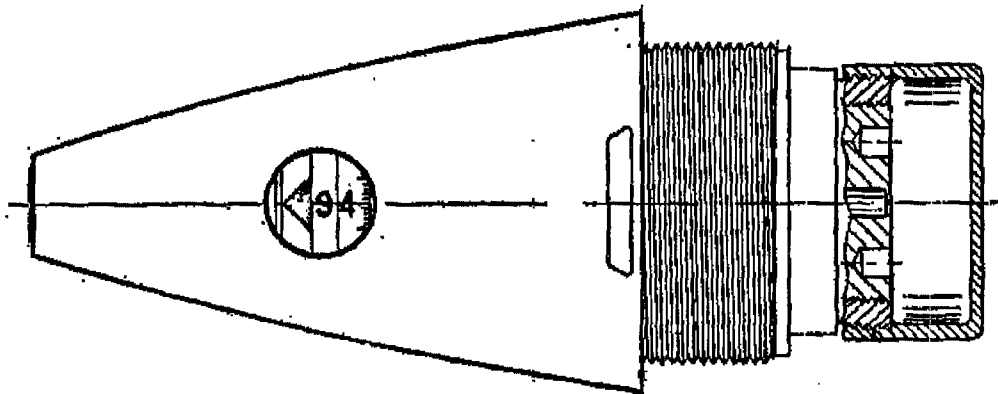
Use: 155mm HE ICM M449A1 and M483A1, HE M692/731, and AT M718/741 8 in HE ICM,
M404 and M509A1, 4.2 in Illum M335A2.
Same as M582 except has no booster. Dummy Fuze is M931.
Fuze Setter is M35 or Screwdriver.

CHAPTER: 1 SERIES: A
DESIGNATION: M577
MTSQ Fuze

1-70

F-10

0272



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: E. Chesky
AV 880-2908

STATUS: Procurement Std

USER: Army

ASSY DWG: 9236701

PARTS LIST: 9236701

SPEC: MIL-F-48880

NSN: 1390-00-169-5864

PRIOR NOMENCLATURE: XM582

REPLACES: M564, M548

GENERAL

MUNITION: Proj for 105mm, 155mm
and 8 in HowUSE: 105mm HE M1, 155mm HE,
M107 and WP M60 WP M110,
8 in HE, M106

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 500 rps

SETBACK: 30,000 g

VELOCITY: 914.4 m/s

CREEP: 6 g

SERIES: A
DESIGNATION:
MTSQ FuzeCHAPTER:
M582

0273

F-11

1-71

MIL-HDBK-145
1 October 1980

ARMING DATA FIRST SAFETY: Setback 300 g non arm, 600 arm SECOND SAFETY: Spin 16.7 rps non arm, 30 arm OTHER SAFETY: 2 to 4 sec mech. arming before set time DELAY: 61 m delay arming for PD SAFE/ARM CONDITION: No Meets MIL-STD-1316B	PHYSICAL DATA WEIGHT: 1.51 lb (684.9 gm) TOTAL LENGTH: 5.82 in (14.78 cm) CROSS SECTION: 2.41 in (6.13 cm) INTRUSION: 2.06 in (5.23 cm) depth 1.73 in (4.40 cm) dia THREAD SIZE: 2-12UNS-1A OTHER:
FUNCTIONING DATA MODE(S): Time and PD, Settable TYPE: Mechanical CHARACTERISTICS: 1 to 200 sec x 0.1 sec incr. 80-90 micro sec funct. hard grd. TARGET: Gnd-Personnel, Light Targets SENSITIVITY: 1 in Plywood, 0 degree obliq., 122 m/s, 155 H	POWER SUPPLY: Wound Mainspring EXPLOSIVE TRAIN S&A DEVICE: PRIMER: None DETONATORS: M94 Stab, two M55 Stab LEAD: PA-510, 258 mg RDX BOOSTER: 27.3 gm comp A-5 OTHER: Relay: Mild Det Fuze, 9236565

REMARKS

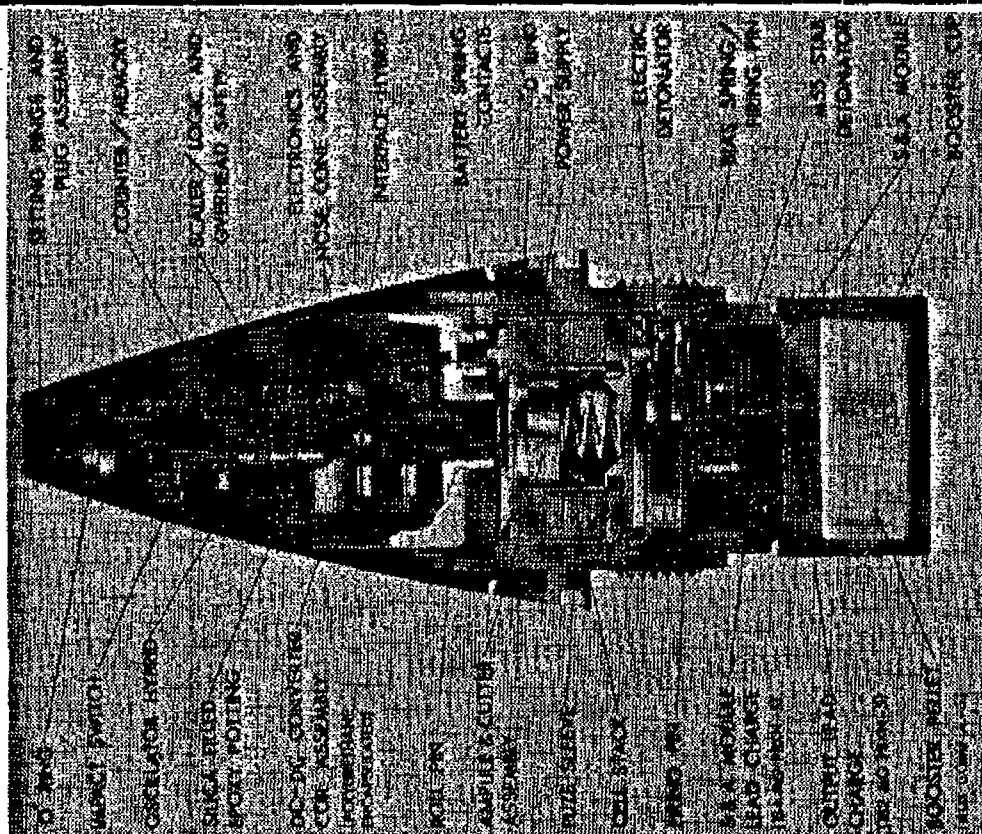
Same as M577 except has Booster. Dummy Fuze is XM931, 9288736.

CHAPTER: 1 SERIES: A
DESIGNATION: M582
MTSQ Fuze

1-72

F-12

0274

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ERADCOM, DELHD-D-OE-ET

CONTACT: N. Doctor
AV 290-2650

STATUS: Procurement Std

USER: Army

ASSY DWG: 17711435

PARTS LIST: 11711435

SPEC: MIL-F-48700

NSN: 1390-01-062-4574

PRIOR NOMENCLATURE: XM587E2

REPLACES: M548, M564, M582

GENERAL

MUNITION: Proj for 105mm, 155mm
and 8 in HowUSE: 105mm HEM1, 155mm HE
M107, HERA M549 8 in
HE M106, HERA M650

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 500 rps

SETBACK: 30,000 g

VELOCITY: 1005.8 m/s

CREEP: 7 g

SERIES: A
DESIGNATION:
ET FuzeCHAPTER: 1
M587

0275

F-13

1-73

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback 800 g non arm, 1200 arm

SECOND SAFETY:

Spin 18 rps non arm, 28.4 arm

OTHER SAFETY:

Elec arming 3 to 4 sec
before set time

DELAY:

400 calibers delay arming

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time and Impact, Settable

TYPE: Electronic, mechanical

CHARACTERISTICS:

0.2 to 199.9 sec by 0.1 incr.
mechanical impact backup

TARGET: Ground-Personnel, Materiel

SENSITIVITY:

Unknown

PHYSICAL DATA

WEIGHT: 1.81 lb (821.0 gm)

TOTAL LENGTH: 5.97 in (15.16 cm)

CROSS SECTION: 2.41 in (6.13 cm)

INTRUSION: 2.21 in (5.61 cm) depth
1.71 in (4.34 cm) dia

THREAD SIZE: 2.0-12UNS-1A

OTHER:

POWER SUPPLY:

PS-127, Liquid Reserve, 11720216

EXPLOSIVE TRAIN

S&A DEVICE: 11720300

PRIMER: None

DETONATORS: Micro Det, Elec. 11722405
M55 Stab

LEAD: 182 mg PBXN-5, 11720258
134 mg PBXN-5, 11720310

BOOSTER: 27 gm comp A5, 11720213

OTHER:

REMARKS

Uses M36 Fuze Setter. Same as M724 but has booster. Training Fuze is M744, 11726806, MIL-F-50831.

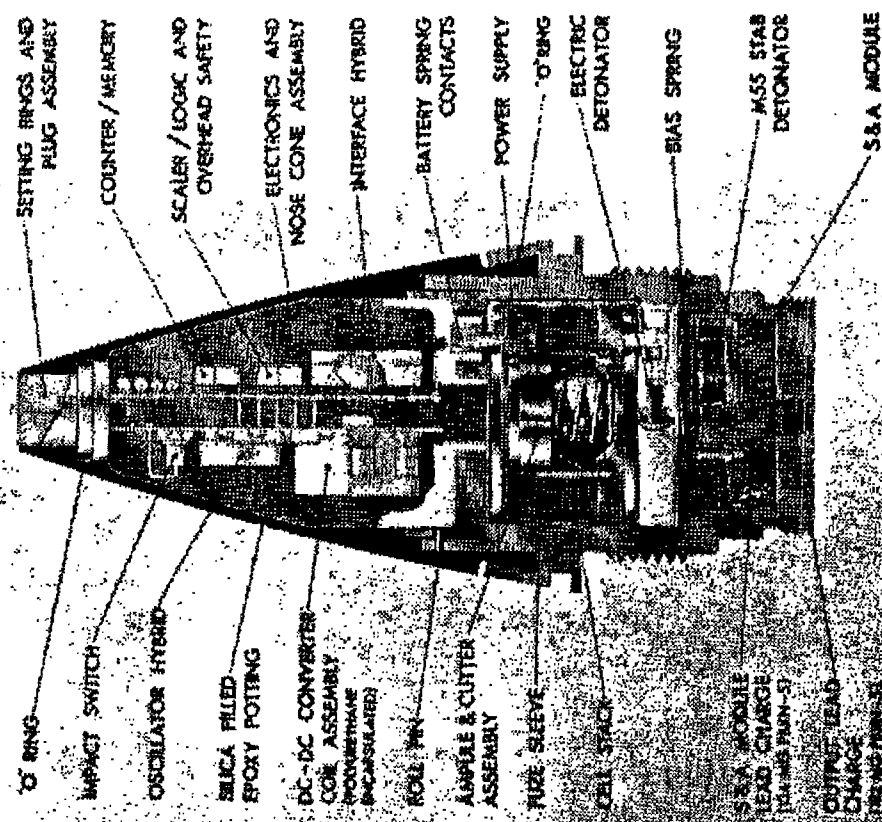
CHAPTER: 1 SERIES: A
DESIGNATION: M587

FT. FUZE

0276

1-74

F-14

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ERADCOM, DELHD-D-OE-ET

CONTACT: N. Doctor
AV 290-2650

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 11711268

PARTS LIST: 11711268

SPEC: MIL-F-48702

NSN: 1390-01-068-3936

PRIOR NOMENCLATURE: XM724

REPLACES: M565, M548, M577

GENERAL

MUNITION: Projectile for 155mm How
and 8 in HowUSE: HE ICM, M483A1; AT M718 and
M741; HE M692 and M731,
HE ICM M509A1

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 500 rps

SETBACK: 30,000 g

VELOCITY: 1005.8 m/s

CREEP: 7 g

SERIES: A
DESIGNATION:
ET FuzeCHAPTER: 1
M724

0277

G-1

1-75

MIL-HDBK-145
7 October 1980

ARMING DATA

FIRST SAFETY:

Setback 800 g non arm, 1200 arm

SECOND SAFETY:

Spin 18 rps non arm, 28.4 arm

OTHER SAFETY:

Elec arming 3 to 4 sec
before set time

DELAY:

Delay Arm: 400 calibers

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time and Impact, Settable

TYPE: Electronic

CHARACTERISTICS:

0.2 to 199.9 sec x 0.1 sec incr.
selections are: time with no
impact backup and impact

TARGET: Gnd-pers, tanks, vehicles

SENSITIVITY:

N/A

PHYSICAL DATA

WEIGHT: 1.69 lb (766.6 gm)

TOTAL LENGTH: 5.268 in (13.38 cm)

CROSS SECTION: 2.415 in (6.13 cm)

INTRUSION: 1.51 in (3.84 cm) depth
1.66 in (4.22 cm) dia

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

PS 127, Liquid Reserve,
11720216

EXPLOSIVE TRAIN

S&A DEVICE: 11720300

PRIMER: None

DETONATORS: Micro Det. Elec, 11722405
M55 Stab

LEAD: 182 mg PBXN-5, 11720258
134 mg PBXN-5, 11720310

BOOSTER: None

OTHER:

REMARKS

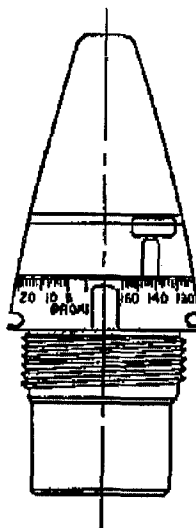
Uses M36 Fuze Setter. Same as M587 but has no booster. Training Fuze
is M744, 11726806, MIL-F-50831 with inert booster removed.

CHAPTER: 1 SERIES: A
DESIGNATION: M724
ET Fuze

0278

1-76

G-2



IDENTIFICATION

AGENCY: ERADCOM, DELHD-I-EC

CONTACT: M. Jacobs
AV 290-2680

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 11716451

PARTS LIST: 11716451

SPEC: MIL-F-50596

NSN: 1390-01-020-0096

PRIOR NOMENCLATURE: M514A1E4, XM583

REPLACES: M728, M514A1

GENERAL

MUNITION: Projectiles for 4.2 in
Mortar, 105mm, 155mm and 8
in Howitzers & 175mm Gun

USE: HE, HERA

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 50 rps to 360 rps

SETBACK: 1600 g to 20,000 g

VELOCITY: 100 m/s to 1000 m/s

CREEP: 6 g

SERIES: A CHAPTER: 1
DESIGNATION: M732
Proximity Fuze

0279

1-77

6-3

MIL-HDBK-145
1 October 1980

ARMING DATA**FIRST SAFETY:**

Setback 800 g non arm, 1300 all-arm

SECOND SAFETY:

Spin 17 rps non arm, 42 rps all-arm

OTHER SAFETY:

Electric arming 3 sec before
expected functioning

DELAY:

400 cal mechanical delay arming

SAFE/ARM CONDITION:

No visual indic. Contains anti-
armed assy. Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Proximity, PD

TYPE: Electronic, RF CW

CHARACTERISTICS:

Inertial switch impact back-up
5 to 150 sec setting for
prox mode

TARGET: Ground-Personnel, Materiel

SENSITIVITY:

1.0 in Plywood, 0 degree obliq.,
195 m/s 105 Howitzer

PHYSICAL DATA

WEIGHT: 1.76 lb (798.3 gm)

TOTAL LENGTH: 5.97 in (15.16 cm)

CROSS SECTION: 2.42 in (6.14 cm)

INTRUSION: 2.21 in (5.61 cm) depth
1.79 in (4.55 cm) dia

THREAD SIZE: 2.0-12UNS-1A

OTHER:

POWER SUPPLY:

Liquid Reserve, 11007046

EXPLOSIVE TRAIN

S&A DEVICE: S&A Module, 11716741

PRIMER: None

DETONATORS: Elec, 11722405;
Stab, 11005146

LEAD: 110 mg PBXN-5, 11718279

BOOSTER: 5.85 gm RDX (CH-6), 11716731

OTHER: Sliding detonator impact
backup system

REMARKS

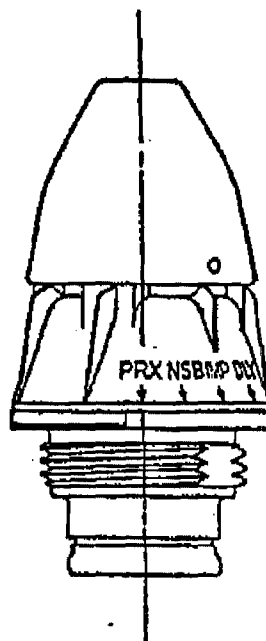
Electric Delay Timer replaces Mk 15 Rear Fitting of M728.
Short Intrusion replaces long intrusion of M728. Practice Fuze is XM748.
Mechanical PD system backs up prox mode.

CHAPTER: 1 SERIES: A
DESIGNATION: M732
Proximity Fuze

0280

1-78

G-4



IDENTIFICATION

AGENCY: ERADCOM, DELHD-I-ED

CONTACT: D. Briggman
AV 290-2430

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 11723100

PARTS LIST: 11723100

SPEC: MIL-F-50828

NSN: Not yet assigned

PRIOR NOMENCLATURE: XM734

REPLACES: M525A1, XM935

GENERAL

MUNITION: Proj for 60mm Mortar,
M224, LWCM, and 81mm Mortar
L16/A2(UK)USE: 60mm HE, M720 and Smoke M722,
81mm HE, XL31E3 (UK)

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 7,000 g

VELOCITY: 242 m/s

CREEP:

SERIES: A
DESIGNATION: M734
Multi-Option Fuze

CHAPTER: 1

ARMING DATA

FIRST SAFETY:

Setback 225 g non arm, 375 arm

SECOND SAFETY:

Sustained air flow
minimum vel. 25 m/s

OTHER SAFETY:

None

DELAY:

100 m minimum

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316A

FUNCTIONING DATA

MODE(S): Prox, near burst, or DELAY

TYPE: Electronic, Mechanical

CHARACTERISTICS:

Prox. RF, near surface burst,
SQ & delay, PD mode by inertial
switch, delay mode 0.1 sec pyro

TARGET: Gnd-Personnel and Material

SENSITIVITY:

Functions in 700 microsec at
55 m/s and 200 microsec at
244 m/s both at 30 degrees obliq.

PHYSICAL DATA

WEIGHT: 0.50 lb (226.8 gm)

TOTAL LENGTH: 3.713 in (9.43 cm)

CROSS SECTION: 1.935 in (4.91 cm)

INTRUSION: depth 1.11 in (2.82 cm)
dia 1.19 in (3.03 cm)

THREAD SIZE: 1.5-12UNF-1A

OTHER:

POWER SUPPLY:

Turbine Alternator, 11722760

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: (in BBU-19/B)

DETONATORS: Mod M100 Elec, 11722405.
M61 Stab (all options)

LEAD: 413 mg PBXN-5 11722542

BOOSTER: 8 gm comp A-5

OTHER: Delay: BBU-19/B .05 to .15 sec
11730630, 11722790 alt.

REMARKS

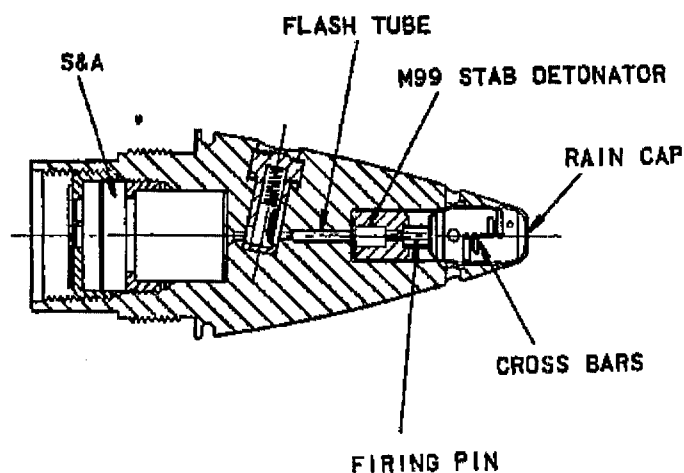
When used with 1.5-12NF to 2.0-12NS Adapter becomes M741 Fuze for 81mm
Mortar. Practice fuze for HE projectile is M745. Practice fuze for
inert projectiles is M751.

CHAPTER: 1 SERIES: A
DESIGNATION: M734
Multi-Option Fuze

1-80

6-6

0282

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: R. Nitzsche
AV 880-4270

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9258605

PARTS LIST: PL 9258606

SPEC: MIL-F-48277

NSN: 1390-00-574-7705

PRIOR NOMENCLATURE: M572E2

REPLACES: M557, M572, M51A5

GENERALMUNITION: Projectile for 105mm How,
4.2 in Mortar, 155mm How,
175mm Gun and 8 in HowUSE: HE, HERA, H, WP, HD,
GB and VX

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 500 rps

SETBACK: 30,000 g

VELOCITY: 1000 m/s

CREEP: 7 g

SERIES: A
DESIGNATION:
PD FuzeCHAPTER: 1
M739

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback 30 g non arm, 40 arm

SECOND SAFETY:

Spin, 18.3 rps non arm, 28.3 arm

OTHER SAFETY:

Uses safety adapter in fuze instead of separate booster as in M557.

DELAY:

35 m, 20 to 30 turns

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): PD or Delay, Selectable

TYPE: Mechanical

CHARACTERISTICS:

SQ 170 microsec
Delay 30 msec to 70 msec

TARGET: Ground-Personnel, Vehicles

SENSITIVITY:

1.25 Plywd, 0 deg obliq, 162 m/s
in 4.2 m and 204 m/s in 105 H; 1/4
plywd, 0 deg obliq, 914 m/s, 175 G;

PHYSICAL DATA

WEIGHT: 1.43 lb (647.7 gm)

TOTAL LENGTH: 5.97 in (15.16 cm)

CROSS SECTION: 2.41 in (6.13 cm)

INTRUSION: 2.21 in (5.61 cm)
1.73 in (4.40 cm)

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: Integral Safety Adapter

PRIMER: None

DETONATORS: M99 Stab, M55 Flash

LEAD: 172 mg Comp A-5-Type VI,
PA 508

BOOSTER: 21.58 gm Comp A-5, Type VI

OTHER: Delay Elements: M2 (M54 Stab,
Primer, Boron-Barium-Chromate
Delay, and M7 Relay)

REMARKS

SENSITIVITY (cont.) water, 45 deg, 137 m/s in 4.2 M. Has solid alum. body and Rain Foliage Disintegrator in PD Module. Practice Fuze is XM747. M2 Delay Element is in M1 Delay Plunger.

CHAPTER: 1 SERIES: A
DESIGNATION: M739
PD Fuze

0284

1-82

G-8

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T
CONTACT: R. Shaffer
AV 880-2019
STATUS: Procurement Std
USER: Army, Marines
ASSY DWG: 9307468 (fuze module)
PARTS LIST:
SPEC: MIL-F-63232 (Fuze module)
NSN: Unknown
PRIOR NOMENCLATURE: None
REPLACES: None

GENERAL

MUNITION: Projectile for 155mm How

USE: Projectile, Guided, HEAT,
M712, "Copperhead"

LOCATION: Front, sides and base
BALLISTIC LEVELS:
ROTATION: 30 rps
SETBACK: 9000 g
VELOCITY: 609.6 m/s

CREEP: 3 g

SERIES: A
DESIGNATION: M740
PIBD Fuze

CHAPTER: 1



ARMING DATA

FIRST SAFETY:

setback. 530 g non arm, 800 arm

SECOND SAFETY:

muzzle exit magnetic induction
sensors

OTHER SAFETY:

setback wound, spring driven delay
timers and "good guidance" signal
to firing circuit

DELAY:

1.0 sec to 2.5 sec;
245 to 1500 m

SAFE/ARM CONDITION:

Yes - windows
Meets MIL-STD-1316A

FUNCTIONING DATA

MODE(S): PIBD

TYPE: Electric, mechanical

CHARACTERISTICS:

Nose piezo electric crystal
six shock wave sensors

TARGET: Ground-Tank

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 4.2 lb (1.90 kg) Fuze Module

TOTAL LENGTH: 3.50 in (8.89 cm)

CROSS SECTION: 3.0 in (7.62 cm)

INTRUSION: 3.5 in (8.89 cm)
dia 3.0 in (7.62 cm)

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Thermal Battery in projectile
11 and 30 V DC

EXPLOSIVE TRAIN

S&A DEVICE: Two each

PRIMER: In Battery

DETONATORS: Mk 96 Elec, 2 each

LEAD: 1400 mg PBXN-5, 2 each

BOOSTER: 2.80 gm PBXN-5

OTHER:

REMARKS

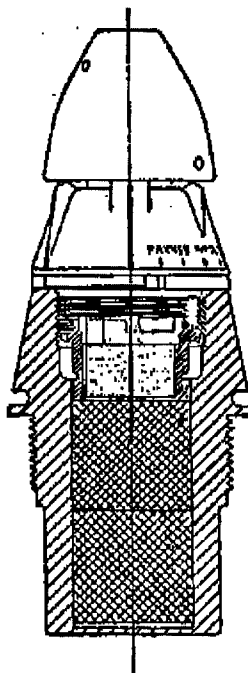
S&A resets to dual safe condition if second safety is not actuated within
specific time after first safety is enabled.

CHAPTER: 1 SERIES: A
DESIGNATION: M740
PIBD Fuze

1-84

0286

6-10



IDENTIFICATION

AGENCY: ERADCOM, DELHD-D-OE-EW

CONTACT: D. Briggman
AV 290-2430

STATUS: Development

USER: Army, Marines

ASSY DWG: 11723140

PARTS LIST: 11723140

SPEC: MIL-F-50828

NSN: Not yet assigned

PRIOR NOMENCLATURE: None

REPLACES: See Remarks

GENERAL

MUNITION: Projectile for 81mm mortar,
M1, M29A1USE: Cartridge, HE, M374 Series
and Smoke, M375 Series

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 32 rps

SETBACK: 10,000 g

VELOCITY: 268 m/s

CREEP:

SERIES: A CHAPTER: 1
DESIGNATION: XM741
Multi-Option Fuze

ARMING DATA

FIRST SAFETY:

Setback 225 g non arm, 375 arm

SECOND SAFETY:

Sustained air flow
25 m/s minimum velocity

OTHER SAFETY:

None

DELAY:

100 m

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316A

FUNCTIONING DATA

MODE(S): Prox, NB, PD, or Delay

TYPE: Electronic, Mechanical

CHARACTERISTICS:

Prox RF, Near Surface Burst,
SQ & Delay, PD inertial switch,
Delay 0.10 sec pyro

TARGET: Gnd-Personnel, Light Material

SENSITIVITY:

700 micro sec funct at 55 m/s
and 200 microsec at 244 m/s,
both at 30 degrees obliq

PHYSICAL DATA

WEIGHT: 1.10 lb (499.0 gm)

TOTAL LENGTH: 6.083 in (15.45 cm)

CROSS SECTION: 2.41 in (6.12 cm)

INTRUSION: depth 2.20 in (5.59 cm)
dia 1.74 in (4.42 cm)

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

Turbine Alternator, 11722760

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: (in BBU-19/B Delay)

DETONATORS: Mod M100 micro elec,
11722405, M61 Stab

LEAD: 413 mg PBXN-5, 11722542

BOOSTER: 8 gm Comp A-5 (in 734)
65.4 gm Comp A-5
(in adapter)

OTHER: Delay BBU-19/B .05 to .15 sec,
11730630 (11722790 alt)

REMARKS

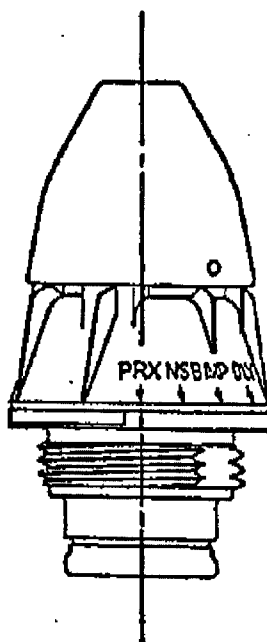
Fuze is M734 plus 1.5-16UNF to 2-12UNS Adapter with extra booster pellets.
XM752 Fuze is same as XM741 except that it is ruggedized for use on 4.2 in
Mortars. Replaces M526, M517, M524A6, M532 & M567.

CHAPTER: 1 SERIES: A
DESIGNATION: XM741
Multi-Option Fuze

0288

1-86

G-12



IDENTIFICATION

AGENCY: ERADCOM, DELHD-D-OE-EW
 CONTACT: D. Briggman
 AV 290-2430
 STATUS: Development
 USER: Army
 ASSY DWG: F 11737000
 PARTS LIST: PL 11737000
 SPEC: MIL-F- In preparation
 NSN: Not yet assigned
 PRIOR NOMENCLATURE: None
 REPLACES: M734/XM741 Practice HE ammo

GENERAL

MUNITION: Projectile for 60mm Lt. Wt.
 Co. Mortar, M224 & 81mm
 L16/A2

USE: Cartridge 60mm HE M720
 and Smoke M722, Cartridge
 81mm HE XL31E3 (UK)

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 10,000 g

VELOCITY: 320 m/s (L16/A2)

CREEP:

SERIES: A CHAPTER: 1
 DESIGNATION: XM745
 Multioption Practice Fuze

1-87

0289

A-2

MIL-HDBK-145
1 October 1980

ARMING DATA FIRST SAFETY: Setback 225 g non arm, 375 arm SECOND SAFETY: Sustained air flow 25 m/s minimum velocity OTHER SAFETY: None DELAY: .100 m delay arming SAFE/ARM CONDITION: No Meets MIL-STD-1316B	PHYSICAL DATA WEIGHT: 0.50 lb (226.8 gm) TOTAL LENGTH: 3.713 in (9.43 cm) CROSS SECTION: 1.935 in (4.91 cm) INTRUSION: 1.11 in (2.82 cm) dia 1.19 in (3.03 cm) THREAD SIZE: 1.5-12UNF-1A @ OTHER:
FUNCTIONING DATA MODE(S): PD TYPE: Mechanical CHARACTERISTICS: SQ, selectable modes but only PD funct. TARGET: Ground-Practice SENSITIVITY: Not yet available	POWER SUPPLY: Turbine alternator 11722760, for arming not elec generation EXPLOSIVE TRAIN S&A DEVICE: PRIMER: None DETONATORS: M55 Stab, M61 Stab LEAD: 413 mg PBXN-5 11722542 BOOSTER: 8 gm Comp A-5, OTHER:

REMARKS

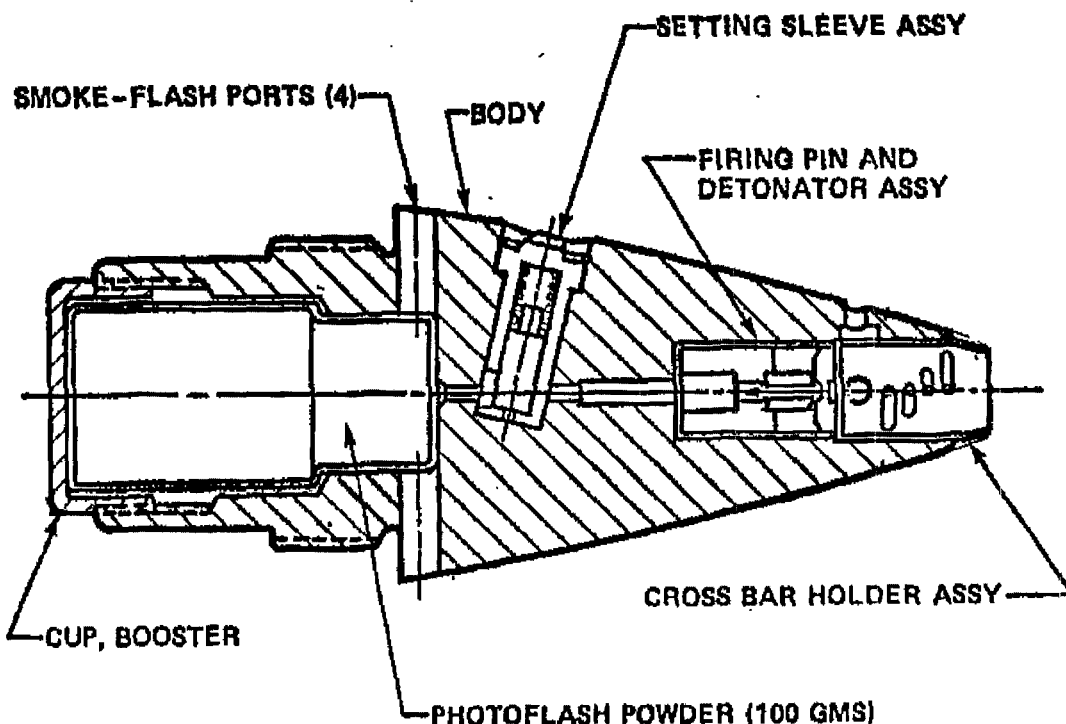
Fuze is same as M734 except prox, near surface, and delay components and functioning are eliminated. XM745 used with HE Rounds, XM751 used with Inert Practice Rounds.

CHAPTER: 1 **SERIES:** A
DESIGNATION: XM745
Multioption Practice Fuze

0290

1-88

A-3



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: L. Post
AV 880-4216

STATUS: Development

USER: Army

ASSY DWG: 9331823

PARTS LIST:

SPEC: In preparation

NSN: Not yet assigned

PRIOR NOMENCLATURE: None

REPLACES: M739 practice use

GENERAL

MUNITION: Practice projectile for
105mm, 155mm, & 8"
How & 4.2 in Mortar

USE: Training Proj. 155mm XM804

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 500 rps

SETBACK: 25,000 g

VELOCITY: 914 m/s

CREEP:

SERIES: A CHAPTER: 1
DESIGNATION: XM747E2
PD Practice Fuze

0291

1-89

A-4

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Spin 18.3 rps non arm, 28.3 arm,
Interrupter

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

None - bore safe only

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): PD

TYPE: Mechanical

CHARACTERISTICS:

SQ action only

TARGET: None - Indirect Fire Practice

SENSITIVITY:

1 in plywood, 70 degrees obliq.,
305 m/s, 155 H

PHYSICAL DATA

WEIGHT: 1.50 lb (680.4 gm)

TOTAL LENGTH: 5.97 in (15.16 cm)

CROSS SECTION: 2.41 in (6.10 cm)

INTRUSION: depth 2.21 in (5.61 cm)
dia 1.73 in (4.40 cm)

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: None except interrupter

PRIMER: None

DETONATORS: M99 Stab

LEAD: None

BOOSTER: None

OTHER: Spotting chg: 52 gm ZnKClO(3),
KNO(3), & AL

REMARKS

Similar M739 but with spotting charge replacing M1 Delay Plunger, S&A, &
Booster. XM746 is same except that ogive is settable 2 to 100 sec and
SQ to simulate M564 Fuze.

CHAPTER: 1 SERIES: A

DESIGNATION: XM747E2

0292

PD Practice Fuze

1-90

A-5

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: L. Post
AV 880-4216

STATUS: Development

USER: Army

ASSY DWG: In preparation

PARTS LIST:

SPEC: In preparation

NSN: Not yet assigned

PRIOR NOMENCLATURE: None

REPLACES: M739 practice use

GENERAL

MUNITION: Practice projectile for
(1/10 RANGE) 4.2 inch
Mortar

USE: Training Proj.

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 100 rps

SETBACK: 5,000 g

VELOCITY: 85 m/s

CREEP:

SERIES: A CHAPTER: 1
DESIGNATION: XM748
PD, Practice Fuze

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

To be determined

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

None - bore safe only

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 1.50 lb (680.4 gm)

TOTAL LENGTH: 5.97 in (15.16 cm)

CROSS SECTION: 2.41 in (6.10 cm)

INTRUSION: depth 2.21 in (5.61 cm)
dia 1.73 in (4.40 cm)

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: None

PRIMER: None

DETONATORS: To be determined

LEAD: None

BOOSTER: None

OTHER: Spotting chg: To be determined

FUNCTIONING DATA

MODE(S): PD

TYPE: Mechanical

CHARACTERISTICS:

SQ action only

TARGET: None - Indirect Fire Practice

SENSITIVITY:

Ground impact at 85 m/s

REMARKS

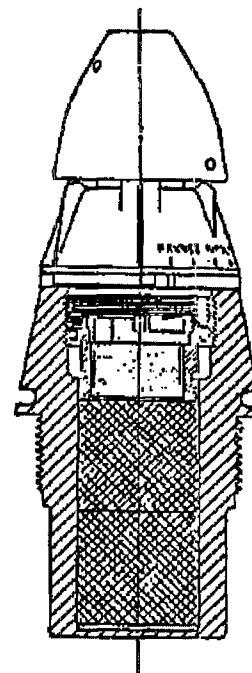
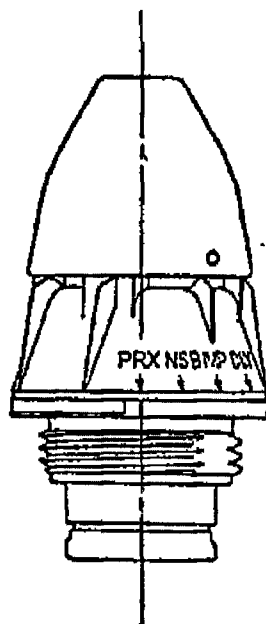
Training projectile simulates M329A2 Mortar projectile fired to 1/10 ranges only. Daylight visible signature only.

CHAPTER: 1 SERIES: A
DESIGNATION: XM748
PD, Practice Fuze

0294

1-92

A-7

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: F. McCann
AV 880-3060

STATUS: Development

USER: Army

ASSY DWG: Not assigned

PARTS LIST:

SPEC: MIL-F- unknown

NSN: Not yet assigned

PRIOR NOMENCLATURE: None

REPLACES: M734, XM741, XM745 HE Ammo

GENERALMUNITION: Practice Proj for Mortars,
60mm, M224, and 81mm,
M1, M29A1, and L16/A2USE: Cartridge, Practice 60mm, XM816
Cartridge, Practice, 81mm, XM798

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 32 rps

SETBACK: 10,000 g

VELOCITY: 268 m/s

CREEP:

SERIES: A CHAPTER: 1
DESIGNATION: XM751
Multioption Practice Fuze

0295

1-93
A-8

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull wire

SECOND SAFETY:

Setback 300 g non arm, 790 arm

OTHER SAFETY:

None

DELAY:

0.36 sec.

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PD only

TYPE: Mechanical

CHARACTERISTICS:

Selectable modes but only PD funct.

TARGET: Ground-Practice

SENSITIVITY:

Same as M734

PHYSICAL DATA

WEIGHT: 0.50 lb (226.8 gm)

TOTAL LENGTH: 4.71 in (11.96 cm)

CROSS SECTION: 1.935 in (4.91 cm)

INTRUSION: 2.125 in (5.40 cm) depth
1.407 in (3.57 cm) dia

THREAD SIZE: 1.5-12UNF-1A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Std in 20 ga shot shell

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: 9 gm flash pyro mix
in 20 ga shell

REMARKS

Practice Fuze for 60mm M734 and 81mm XM741 multi-option Fuzes. XM751 used with Inert Practice Rounds; XM745 used with HE Rounds. 1.5-16UNF to 2-12UNS adapter with extra booster pellets used with 81mm M1 and M29A1 ammunition.

CHAPTER: 1 SERIES: A

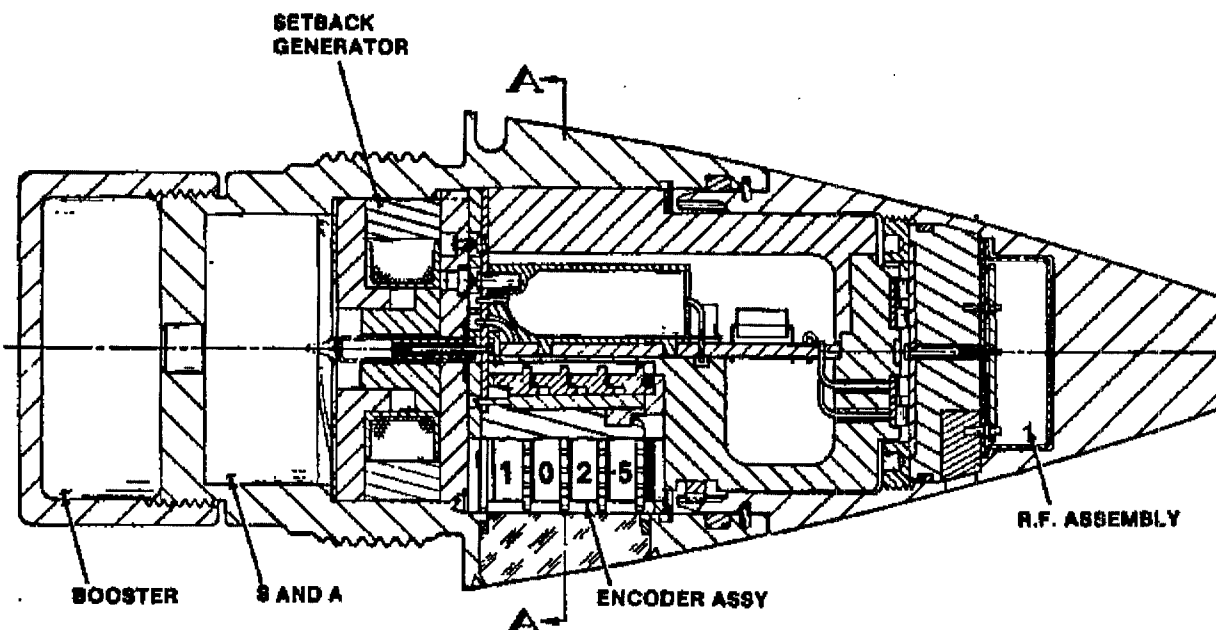
DESIGNATION: XM751

Multioption Practice Fuze

0296

1-94

A-9

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: P. Weldon
AV 880-2155

STATUS: Development

USER: Army, Marines

ASSY DWG: In preparation

PARTS LIST:

SPEC: In preparation

NSN: Not yet assigned

PRIOR NOMENCLATURE: XM753

REPLACES: M577, 582, 587, 724

GENERAL

MUNITION: Proj for 105mm, 155mm,
8 in Hows 175mm Gun
and 4.2 in mortar

USE: HE, ICM & AT Projectiles

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 500 rps

SETBACK: 30,000 g

VELOCITY: 915 m/s

CREEP: 7 g

0297

A-10

SERIES: A
DESIGNATION:
ET FuzeCHAPTER: 1
XM762

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback 800 g non arm, 1100 arm

SECOND SAFETY:

Spin 18.3 rps non arm, 28.3 arm

OTHER SAFETY:

Remote setting

DELAY:

400 calibers

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time, PD

TYPE: Electronic

CHARACTERISTICS:

0.2 to 200 sec x 0.1 sec incr.
Remote and manual settable

TARGET: Ground-Personnel, Materiel

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 1.50 lb (680.4 gm)

TOTAL LENGTH: 5.27 in (13.39 cm) (a)

CROSS SECTION: 2.41 in (6.12 cm)

INTRUSION: 1.51 in (3.84 cm) depth
1.65 in (4.18 cm) (a) dia

THREAD SIZE: 2-12UNS-1A

OTHER:

POWER SUPPLY:

Inductive Setback Gen for fuze;
Auto set transmitter power
provided by weapon.

EXPLOSIVE TRAIN

S&A DEVICE: To be determined (TBD)

PRIMER: None

DETONATORS: TBD

LEAD: TBD

BOOSTER: TBD

OTHER:

REMARKS

(a) without booster. XM753 was prior model number but was canceled due to confusion with XM 753 Projectile.

CHAPTER: 1 SERIES: A
DESIGNATION: XM762
ET Fuze

0298

A-11

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: R. Shaffer
AV 880-2019

STATUS: Development

USER: Army

ASSY DWG: In preparation

PARTS LIST:

SPEC:

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES: None

GENERAL

MUNITION: Projectile for 105mm Tank
Gun, M68USE: Projectile, HEAT-T-MP,
XM815

LOCATION: Nose and base

BALLISTIC LEVELS:

ROTATION: Negligible

SETBACK: 38,000 g

VELOCITY: 1173 m/s

CREEP: 15 g

SERIES: A CHAPTER: 1
DESIGNATION: XM763
PI BD Fuze

1-97

A-12

0299

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback 2500 g non arm,
4300 arm estimated

SECOND SAFETY:

Creep 4 g non arm, 8 arm
estimated

OTHER SAFETY:

DELAY:

11 to 18 m

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): PI BD Graze

TYPE: Electric

CHARACTERISTICS:

SQ or Delay, Graze
SQ 50 microsec, delay 600
microsec

TARGET: Gnd-Tank/Pers Hard Tgt

SENSITIVITY:

See remarks.

PHYSICAL DATA

WEIGHT: 0.40 lb (181.4 gm)

TOTAL LENGTH: 1.92 in (4.88 cm)

CROSS SECTION: 1.36 in (3.45 cm)

INTRUSION: 1.67 in (4.24 cm)
1.26 in (3.20 cm)

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Magnetic setback power
supply

EXPLOSIVE TRAIN

S&A DEVICE: Sequential leaf and creep

PRIMER: None

DETONATORS: M69

LEAD: PBXN-5

BOOSTER: Comp A-5

OTHER:

REMARKS

95% reliability on armor 0 to 80 deg obliquity. 60% funct 89-90 deg obliquity
graze first impact (85% reliability). Functioning initiated by closure of
double ogival switch on nose of projectile.

CHAPTER: 1 SERIES: A

DESIGNATION: XM763

PI BD Fuze

0300

1-98

A-13

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: E. Bisson
AV 880-6375

STATUS: Development

USER: Army, Marines

ASSY DWG: In preparation

PARTS LIST:

SPEC: In preparation

NSN: Not assigned

PRIOR NOMENCLATURE:

REPLACES: DM781, XM765

GENERAL

MUNITION: Projectile for 120 mm
Tank GunUSE: Projectile, HEAT-T-MP,
XM830

LOCATION: Nose and base

BALLISTIC LEVELS:

ROTATION: Negligible

SETBACK: 50,000 g

VELOCITY: 1150 mps

CREEP: 32 g

SERIES: A CHAPTER: 1
DESIGNATION: XM764
PIBD Fuze

0301

1-99

A-14

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 2500 g non arm
4300 arm, estimated

SECOND SAFETY:

Creep, 4 g non arm
8 arm estimated

OTHER SAFETY:

None

DELAY:

11 to 18 m

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): PI BD, Graze

TYPE: Electric, Mechanical

CHARACTERISTICS:

SQ, 10 microsec

TARGET: Ground - tank

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.40 lb (181.4 gm)

TOTAL LENGTH: 1.98 in (5.03 cm)

CROSS SECTION: 1.57 in (4.00 cm)

INTRUSION: 1.98 in (5.03 cm) depth
1.57 in (4.00 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Magnetic setback generator

EXPLOSIVE TRAIN

S&A DEVICE: Sequential leaf and creep

PRIMER: None

DETONATORS: M69

LEAD: PBXN-5

BOOSTER: None

OTHER:

REMARKS

Functioning initiated by closure of frontal area crush switch (FACS) on projectile.

CHAPTER: 1 SERIES: A
DESIGNATION: XM764
PIBD Fuze

0302

1-100

B-1

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: E. Bisson
AV 880-6375

STATUS: Development

USER: Army

ASSY DWG: 12526354 (Hnywl)

PARTS LIST:

SPEC:

NSN: Not assigned

PRIOR NOMENCLATURE: DM781

REPLACES: DM 781

GENERAL

MUNITION: Projectile for 120mm tank
gunUSE: Projectile, HEAT-T-MP
X570 DMR and XM830

LOCATION: Nose and base

BALLISTIC LEVELS:

ROTATION: Negligible

SETBACK: 50,000 g

VELOCITY: mps

CREEP: 32 g

SERIES: A CHAPTER: 1
DESIGNATION: XM765
PI BD Fuze

0303

1-101

B-2

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 12,000 g non arm,
18,000 arm shear pins and
sequential pins

SECOND SAFETY:

Runaway delay escapement

OTHER SAFETY:

None

DELAY:

30 to 100m (25-45 ms)

SAFE/ARM CONDITION:

No
Will meet MIL-STD-1316B

FUNCTIONING DATA

MODE(S): PI BD, Graze

TYPE: Electric, Mechanical

CHARACTERISTICS:

SQ, 10 microsec

TARGET: Ground-tank

SENSITIVITY:

1mm Dural

PHYSICAL DATA

WEIGHT: 0.32 lb (144 gm)

TOTAL LENGTH: 1.98 in (5.03 cm)

CROSS SECTION: 1.57 in (4.0 cm)

INTRUSION: 1.98 in (5.03 cm) depth
1.57 in (4.0 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Magnetic setback generator

EXPLOSIVE TRAIN

S&A DEVICE: Runaway and creep

PRIMER: None

DETONATORS: M-DN 7 Elec

LEAD: M-DN 1002, 275 mg

BOOSTER:

OTHER:

REMARKS

This is an Americanized DM781 with the addition of a second safety, creep. Functioning initiated by Frontal Area Crush Switch (FACS) on projectile.

CHAPTER: 1 SERIES: A

DESIGNATION: XM765

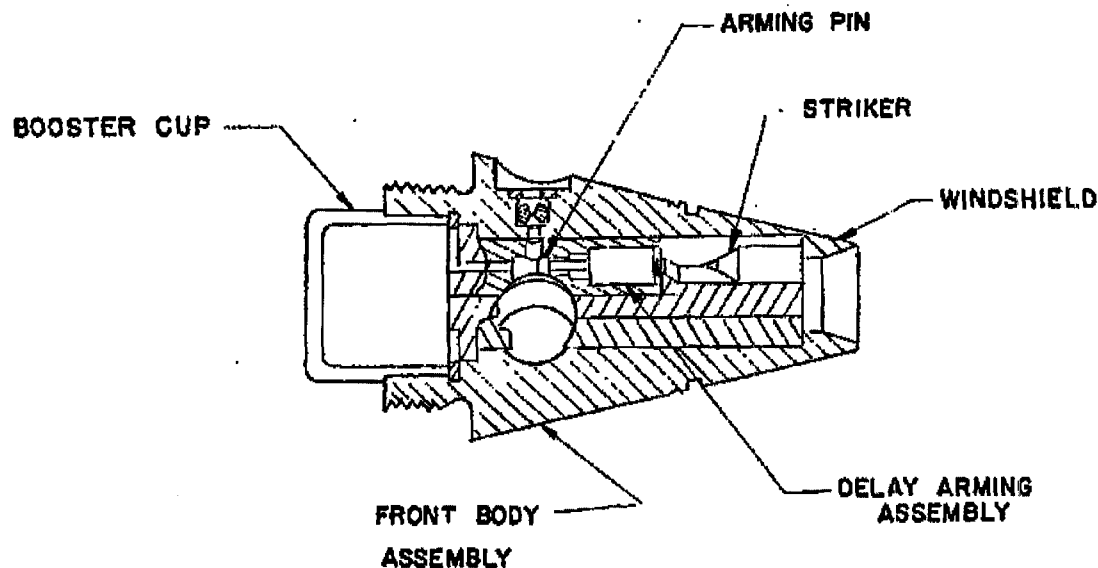
PI BD Fuze

0304

1-102

B-3



MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-T

CONTACT: F. McCann
AV 880-3060

STATUS: Development

USER: Army, Marines

ASSY DWG: 9255258

PARTS LIST: 9255258

SPEC: MIL-F-50945, -50988

NSN: Not yet assigned

PRIOR NOMENCLATURE:

REPLACES: M525A1, M717

GENERAL

MUNITION: Projectile for 60mm Mortar
M2, M19, M224

USE: Cartridge HE M49A3 and M720

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 7000 g

VELOCITY: 242 m/s

CREEP:

SERIES: A
DESIGNATION:
PD FuzeCHAPTER: 1
XM935

0305

B-4
1-103

MIL-HDBK-145
7 October 1980

ARMING DATA FIRST SAFETY: Pull wire SECOND SAFETY: Setback 150 g non arm, 300 arm OTHER SAFETY: None DELAY: 2 to 4 sec. SAFE/ARM CONDITION: Yes Waiver for MIL-STD-1316B	PHYSICAL DATA WEIGHT: 0.57 lb (258.6 gm) TOTAL LENGTH: 3.58 in (9.09 cm) CROSS SECTION: 1.951 in (4.96 cm) INTRUSION: 1.10 in (2.79 cm) depth 1.13 in (2.87 cm) dia THREAD SIZE: 1.5-12UNF-1A OTHER:
FUNCTIONING DATA MODE(S): PD or Delay, Selectable TYPE: Mechanical, Pyrotechnic CHARACTERISTICS: SQ, 0.05 sec Delay TARGET: Ground-Personnel SENSITIVITY:	POWER SUPPLY: None EXPLOSIVE TRAIN S&A DEVICE: Pyrotechnic delay PRIMER: (In delay) DETONATORS: M76 Stab Delay M98 Stab LEAD: 140 mg RDX Type A or B BOOSTER: 12.73 gm RDX Type VIa or b OTHER: Delay Arming: M53 Delay, 9244248

REMARKS

XM936 is same except has no booster and is used with 60mm WP smoke cartridge, M722, replacing M527 and M719. Weight M936 is also 0.57 lb though.

CHAPTER: 1 SERIES: A
DESIGNATION: XM935
PD Fuze
0306

1-104

B-5

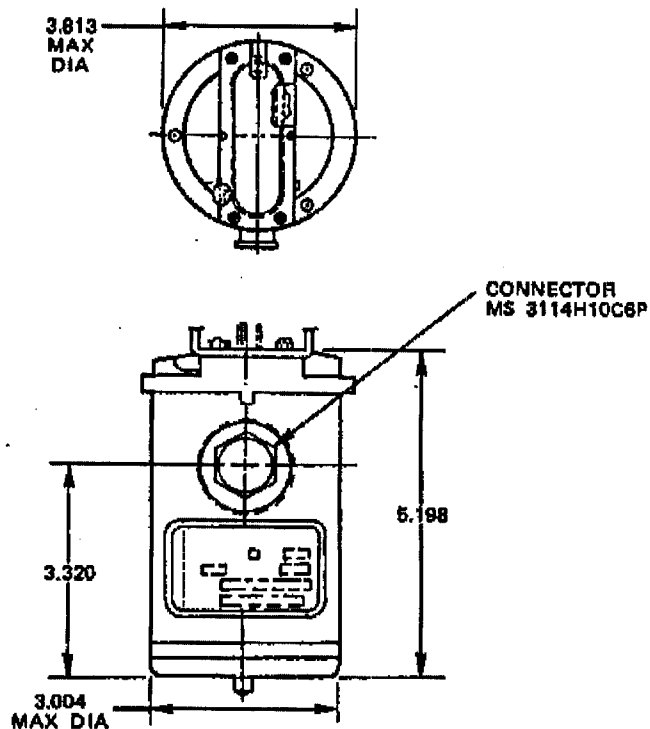
CHAPTER 2

B
O
M
B
S

0307

2-1

B-6



IDENTIFICATION

AGENCY: NWC, Code 3355
 CONTACT: R. Leach
 AV 437-7493
 STATUS: Development
 USER: Navy/AF, Marines
 ASSY DWG: X1155AS426
 PARTS LIST: PLX1155AS426
 SPEC: XAS-4622
 NSN: Not assigned
 PRIOR NOMENCLATURE: FMU-126/B
 REPLACES: FMU-126/B

GENERAL

MUNITION: Fuel Air Explosive BLU-95/B
 FAE II
 USE: Fuel Air Explosive
 LOCATION: Base of Warhead
 BALLISTIC LEVELS:
 ROTATION: Free fall
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 2
 DESIGNATION: FSU- 9A/B
 Safety-Arming Device

0308

2-3

B-7



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Arming wire activated during launch

SECOND SAFETY:

Dynamic Air Pressure
1.5 psi

OTHER SAFETY:

3.3 sec mech timer
3.1 sec elec timer

DELAY:

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): Proximity

TYPE: Electric

CHARACTERISTICS:

Two independent isolated
explosive outputs one instantaneous
and one delay

TARGET: Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 2.0 lb (907.2 gm)

TOTAL LENGTH: 5.31 in (13.49 cm)

CROSS SECTION: 3.0 in (7.62 cm)

INTRUSION: 5.31 in (13.49 cm)

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Plus or minus 16V, Weapon
Power Supply

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-line expl train

PRIMER: None

DETONATORS: 2 (Mk 96) Elec

LEAD: None

BOOSTER: None

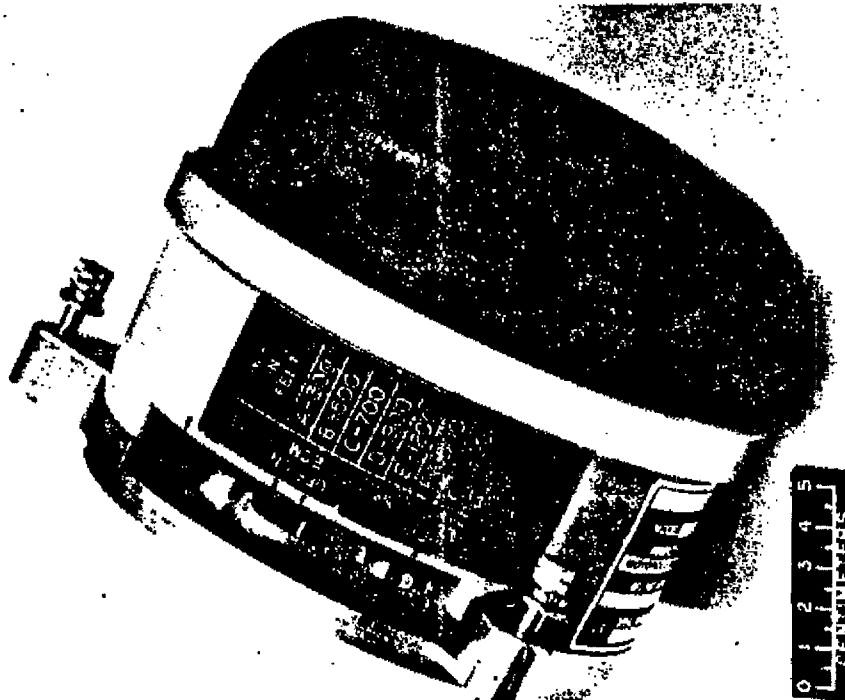
OTHER:

REMARKS

The FSU-9/B uses an external TOD to provide a firing signal.

CHAPTER: 2 SERIES: N
DESIGNATION: FSU- 9A/B
Safety-Arming Device
0309

2-4 B-8

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: Eglin AFB, ADTC/S03

CONTACT: N. Brown
AV 872-8186

STATUS: Development

USER: AF

ASSY DWG: 777577

PARTS LIST: DL 777577

SPEC: SP 777577

NSN:

PRIOR NOMENCLATURE: None

REPLACES: None

GENERAL

MUNITION: SUU-64 and -65 Dispensers

USE: General Purpose Cluster Munition

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION:

SETBACK:

VELOCITY:

CREEP:

0310

B-9

2-5

SERIES: AF CHAPTER: 2
DESIGNATION: FZU- 39/8
Proximity Fuze Sensor

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Uses Dispenser S and A

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 4.0 lb (1814.4 gm)

TOTAL LENGTH: 5.21 in (13.23 cm)

CROSS SECTION: 6.20 in (15.75 cm)

INTRUSION: .23 in (.58 cm)

THREAD SIZE: Not applicable

OTHER:

Mounts to dispenser with
three screws (777562)

POWER SUPPLY:

Receives power from dispenser

EXPLOSIVE TRAIN

S&A DEVICE: Not applicable

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S): Proximity (300 to 3000 ft)

TYPE: Electronic, Pulse Doppler Radar

CHARACTERISTICS:

Height of function: 300, 500,
700, 900, 1200, 1500, 1800,
2200, 2600, 3000 ft.

TARGET: Ground

SENSITIVITY:

All approach angles

REMARKS

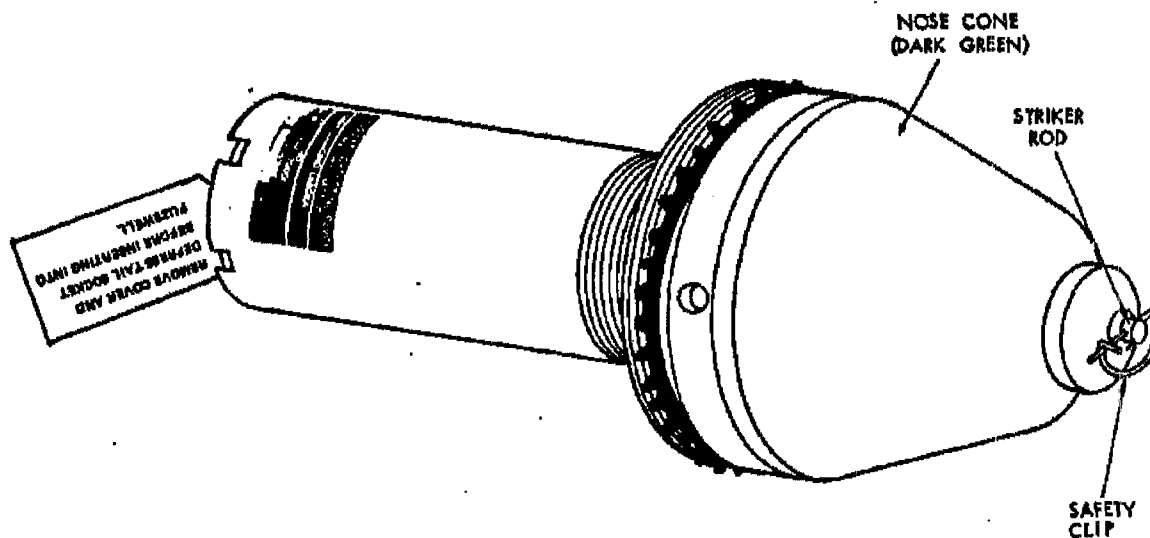
Uses proximity sensor of FMU-110 Fuze. Used with the Tactical Munitions
Dispenser.

CHAPTER: 2 SERIES: AF
DESIGNATION: FZU-39/B
Proximity Fuze Sensor

0311

2-6

B-10



IDENTIFICATION

AGENCY: NSWC, Code G44
 CONTACT: A. Clarke
 AV 290-1713
 STATUS: Procurement Std
 USER: Navy, Marines
 ASSY DWG: GA 2421506
 PARTS LIST: LD 549764
 SPEC: WS 6057
 NSN:
 PRIOR NOMENCLATURE: M20E1
 REPLACES: M20

GENERAL

MUNITION: Mk 80 Series Bombs
 USE: HE
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: Free-Fall
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 2
 DESIGNATION: MK 43 Mod 0
 Target Detecting Device

0312

2-7
 B-11



ARMING DATA

FIRST SAFETY:

Provided by Tail Fuze

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 6 lb (2724 gm)

TOTAL LENGTH: 11.75 in (29.85 cm)

CROSS SECTION: 4.5 in (11.43 cm)

INTRUSION: 6.75 in (17.15)

THREAD SIZE: 3.5-12 UN-2A

OTHER:

POWER SUPPLY:

Mk 93 Mod 0 Thermal Battery;
1.5 v "A,"
170 v "B," -8 v "C"

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S): Proximity (rf)

TYPE: Electric

CHARACTERISTICS:

Must be used with Electric
Tail Fuze

TARGET: Surface

SENSITIVITY:

Classified

REMARKS

Burst height depends on approach angle (details classified).
Compatible with M990, Mk 344, Mk 376, FMU-117/B, FMU-54/B and
FMU-112/B Tail Fuzes.

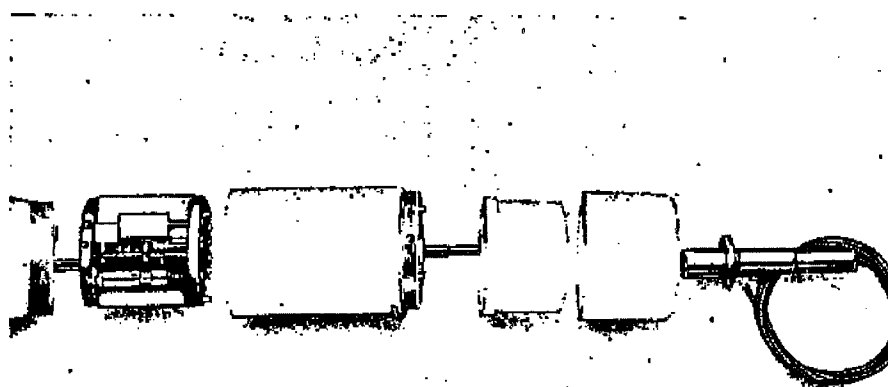
CHAPTER: 2 SERIES: N
DESIGNATION: MK 43 Mod 0
Target Detecting Device

2-8

B-12

0313

1 October 1980



IDENTIFICATION

AGENCY: OO-ALC/MMWRAE

CONTACT: F. Shifrar
AV 458-7804

STATUS: Procurement Std

USER: AF

ASSY DWG: 68E6400

PARTS LIST:

SPEC: 68E6400/B

NSN: 1325-00-613-0484

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: Mk 82 Snakeye
M-117 Retarded Bombs

USE: HE

LOCATION: Tail

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

SERIES: AF CHAPTER: 2
DESIGNATION: FMU- 54A/B
Bomb Inertial Fuze

0314

B-13

2-9

ARMING DATA

FIRST SAFETY:

Inter al Lanyard

SECOND SAFETY:

Deceleration; 3.5 to 4.5 g's
for .6 sec

OTHER SAFETY:

Arming Times of 2.5 to 6.0 sec
by .25 sec preselected

DELAY:

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Impact

TYPE: Mechanical

CHARACTERISTICS:

TARGET: Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 3.6 lb (1633 gm)

TOTAL LENGTH: 6.0 in (15.24 cm)

CROSS SECTION: 3.0 in (7.62 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Lead Azide 43 mg

DETONATORS: RDX 43 mg

LEAD: Long - Tetryl 350 mg
Short - Tetryl 60 mg

BOOSTER: A-5 156 gm

OTHER:

REMARKS

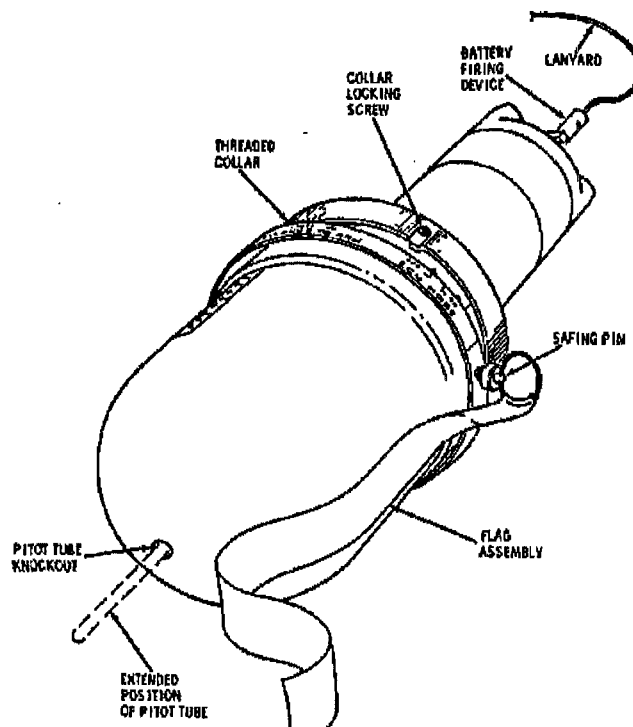
Proximity function requires use of Mk 43 TOD in nose well.

CHAPTER: 2 SERIES: AF
DESIGNATION: FMU- 54A/B
Bomb Inertial Fuze

2-10

0315

B-14



IDENTIFICATION

AGENCY: OO-ALC/MMWRAE
 CONTACT: R. Muhlestein
 AV 458-7056
 STATUS: Procurement Std
 USER: AF
 ASSY DWG: 744000
 PARTS LIST: DL 744000
 SPEC: 744000
 NSN:
 PRIOR NOMENCLATURE:
 REPLACES:

GENERAL

MUNITION: Cluster Bombs
 USE: Dispenser Opening (SUU-30)
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: Free Fall
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: AF
 DESIGNATION: FMU- 56D/B
 Bomb Proximity Fuze

CHAPTER: 2

0316

2-11

C-1



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Lanyard

SECOND SAFETY:

Electronic Timer

OTHER SAFETY:

Selectable Arming Times of
3, 4, 5, 6, 7, 8, 9, 10 and
18 sec

DELAY:

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Proximity

TYPE: Electronic, Pulse Doppler Radar

CHARACTERISTICS:

TARGET: Surface

SENSITIVITY:

Selectable HOB 250-3000 ft

PHYSICAL DATA

WEIGHT: 6.0 lb (272.2 gm)

TOTAL LENGTH: 15.0 in (38.1 cm)

CROSS SECTION: 3.0 in (7.62 cm)

INTRUSION: 6.0 in (16.24 cm)

THREAD SIZE: 2-12NS-1A

OTHER:

POWER SUPPLY:

Thermal Battery

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: D74B1

LEAD:

BOOSTER: FZU-1/B

OTHER:

REMARKS

CHAPTER: 2 SERIES: AF
DESIGNATION: FMU-56D/B
Bomb Proximity Fuze

0317

2-12

C-2

IDENTIFICATION

AGENCY: Eglin AFB, ADTC/SD3

CONTACT: R. Giordano
AV 872-8186

STATUS: Development

USER: AF

ASSY DWG: 777444

PARTS LIST: Not applicable

SPEC: SUU-64 and SUU-65

NSN: Not applicable

PRIOR NOMENCLATURE: Not applicable

REPLACES: Not applicable

GENERAL

MUNITION: Tactical Munitions
Dispenser (TMD) SUU-64/B
and SUU-65/B

USE: Integrate fuze in TMD

LOCATION: Forward Nose Fairing

BALLISTIC LEVELS:

ROTATION: 50 rps

SETBACK: Free Fall

VELOCITY:

CREEP:

SERIES: AF CHAPTER: 2
DESIGNATION: SUU- 64/SUU- 65
Safety-Arming Device

0318

2-13

C-3

ARMING DATA

FIRST SAFETY:

Lanyard pull

SECOND SAFETY:

Air speed sensor 200 KCAS min.

OTHER SAFETY:

Mechanical timer, spin sensor

DELAY:

SAFE/ARM CONDITION:

Red barrier lock pitot tube
retracted/safe, extended/arm

FUNCTIONING DATA

MODE(S): See Remarks

TYPE: See Remarks

CHARACTERISTICS:

Spin (rpm) 0, 500, 1000, 1500,
2000, 2500 Timer (plus 6 percent
tol.) .6, .9, 1.3, 1.7, 2.0, 2.3,
2.7, 3.0 3.3, 3.7, 4.0, 4.3

TARGET: AREA

SENSITIVITY:

Not applicable

PHYSICAL DATA

WEIGHT: less than 14 lbs

TOTAL LENGTH: 15.2 in (38.6 cm)

CROSS SECTION: 3.55 in (9.0 cm)

INTRUSION: flush with bulkhead

THREAD SIZE: Not applicable

OTHER:

POWER SUPPLY:

776955 Thermal Battery mechanically
actuated 12-18 VDC, 500 MA, 60 sec
.5 sec rise time

EXPLOSIVE TRAIN

S&A DEVICE: 2 in-line barriers

PRIMER: 30 mg PBXN-5, 105 mg HNS

DETONATORS: T20E1 (65 mg lead azide/
70 mg PETN)

LEAD: HMX, 33 mg

BOOSTER: 425 mgs PBXN-5, 36 mg HNS

OTHER:

REMARKS

Integral fuze with TMD (SUU-64/B and SUU-65/B)

FUNCTION MODES: Spin/non spin timer/proximity input.

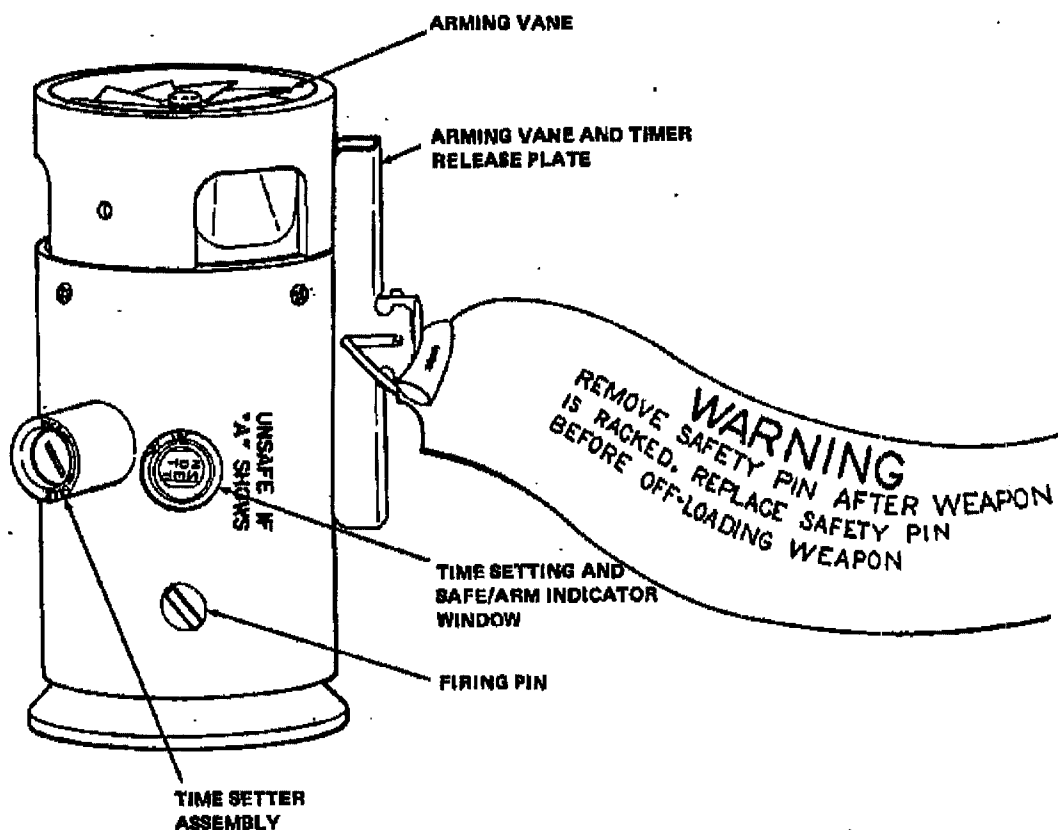
FUNCTION TYPE: Mechanical escapement electrical fin cant/pyrotechnic
detonator.

CHAPTER: 2 SERIES: AF
DESIGNATION: SUU- 64/SUU- 65
Safety-Arming Device

0319

2-14

C-4

**IDENTIFICATION**

AGENCY: NSWC, Code G44
 CONTACT: A. Munach
 AV 290-1977
 STATUS: Procurement Std
 USER: Navy, Marines
 ASSY DWG: 68A85F67
 PARTS LIST: PL 68A85F67
 SPEC: AS 1910
 NSN: 1325-00-151-4372
 PRIOR NOMENCLATURE: EX-377
 REPLACES: None

GENERAL

MUNITION: Fuel-Air expl bomb cluster
 CBU-55A/B (LSFAE)
 USE: Initiates explosive
 communications link
 to open dispenser
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: None
 SETBACK:
 VELOCITY: 75 to 300 KIAS
 CREEP:

SERIES: N CHAPTER: 2
 DESIGNATION: FMU- 83/B
 Dispenser MT Fuze

2-15

0320

C-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Arming wire

SECOND SAFETY:

Velocity Discriminating Vane
No-arm 50 KIAS, All-arm 70 KIAS

OTHER SAFETY:

Safe set feature prevents
function prior to .85 sec

DELAY:

.85 sec enable time

SAFE/ARM CONDITION:

Viewing Window

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Mechanical(pin lever - 50 b/s)

CHARACTERISTICS:

Time selectable from 1 to 9.7 sec
in 0.1-sec increments.
Accuracy plus or minus 0.1 sec

TARGET:

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 2.1 lb (952.5 gm)

TOTAL LENGTH: 5.5 in (13.97 cm)

CROSS SECTION: 2.5 in (6.35 cm)

INTRUSION: 0.5 in (1.27 cm)

THREAD SIZE:

OTHER:

Base dia 2.75 in (6.99 cm)
No threads

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-line slider has
det and lead

PRIMER: None

DETONATORS: Mk 43 Mod 1

LEAD: Mk 8 Mod 0
188 mg CH-6

BOOSTER: None

OTHER: Arms and fires simultaneously
at set time

REMARKS

Fuze time manually set in either direction. May be set through "zero".
Settings between 9.7 sec and 0, and 0 and 0.9 are "safe" and will prevent arming.

CHAPTER: 2 SERIES: N
DESIGNATION: FMU- 83/B
Dispenser MT Fuze

2-16

0321

C-6



IDENTIFICATION

AGENCY: Eglin AFB, ADTC/SD3

CONTACT: E. Smith
AV 872-8186

STATUS: Procurement Std

USER: AF, Marines

ASSY DWG: 727728

PARTS LIST: DL 727728

SPEC: SP 727728

NSN:

PRIOR NOMENCLATURE:

REPLACES: FMU-56A/B

GENERAL

MUNITION: SUU-30 Dispenser

USE: Dispenser Opening of
Unguided CBU's

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

SERIES: AF CHAPTER: 2
DESIGNATION: FMU-110/B
Proximity Fuze

0322

2-17

C-7



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Lanyard

SECOND SAFETY:

Electronic Electro-Explosive
Actuator

OTHER SAFETY:

Arm Times of 3, 4, 5, 6, 7,
8, 9, 10 and 18 sec

DELAY:

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Proximity

TYPE: Electronic, Pulse Doppler Radar

CHARACTERISTICS:

Function heights from 300
to 3000 feet

TARGET: Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 7.25 lb (3289 gm)

TOTAL LENGTH: 13.35 in (33.9 cm)

CROSS SECTION: 6.2 in (15.75 cm)

INTRUSION: 7.2 in (18.29 cm)

THREAD SIZE: 3.50-12UNS-2A

OTHER:

POWER SUPPLY:

Thermal Battery

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: D74B1

LEAD:

BOOSTER: FZU-1/B

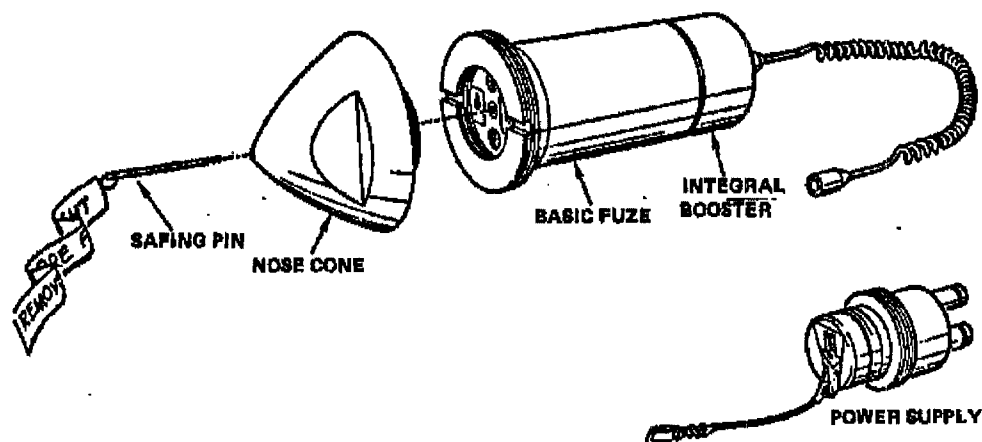
OTHER:

REMARKS

CHAPTER: 2 SERIES: AF
DESIGNATION: FMU-110/B
Proximity Fuze
0323

2-18

C-8

**IDENTIFICATION**

AGENCY: Eglin AFB, AD/SD3

CONTACT: A. Tubbs, Capt.
AV 872-8186

STATUS: Procurement Std

USER: AF

ASSY DWG: 728020

PARTS LIST:

SPEC: SP728020

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES:

GENERALMUNITION: Guided, unguided, high
and low-drag bombsUSE: Mk 80 GP Series and
M117, HE

LOCATION: Nose and tail

BALLISTIC LEVELS:

ROTATION: Free fall

SETBACK:

VELOCITY:

CREEP:

SERIES: AF CHAPTER: 2
 DESIGNATION: FMU-112/B
 Bomb Impact Fuze

0324

2-19

C-9



MIL-H08K-145
1 October 1980

MIL-HDBK-145 ■ 9999970 0119725 008 ■

ARMING DATA

FIRST SAFETY:

Lanyard pull

SECOND SAFETY:

Air flow for turbine generator,
100 knots no start, 200 start

OTHER SAFETY:

electronic timer

DELAY:

4 to 20 sec settable
2.6 or 4.0 sec high drag

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): Impact & Short delay

TYPE: Electronic

CHARACTERISTICS:

Instantaneous or 5, 10, 25, 50,
100 or 200 msec delay,
selectable

TARGET: Ground - all targets

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 4.5 lb (2041 gm)

TOTAL LENGTH: 7.25 in (18.42 cm)

CROSS SECTION: 3.0 in (7.62 cm)

INTRUSION: 7.25 in (18.42 cm)

THREAD SIZE: 3.5-12UNS-2A closure ring

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

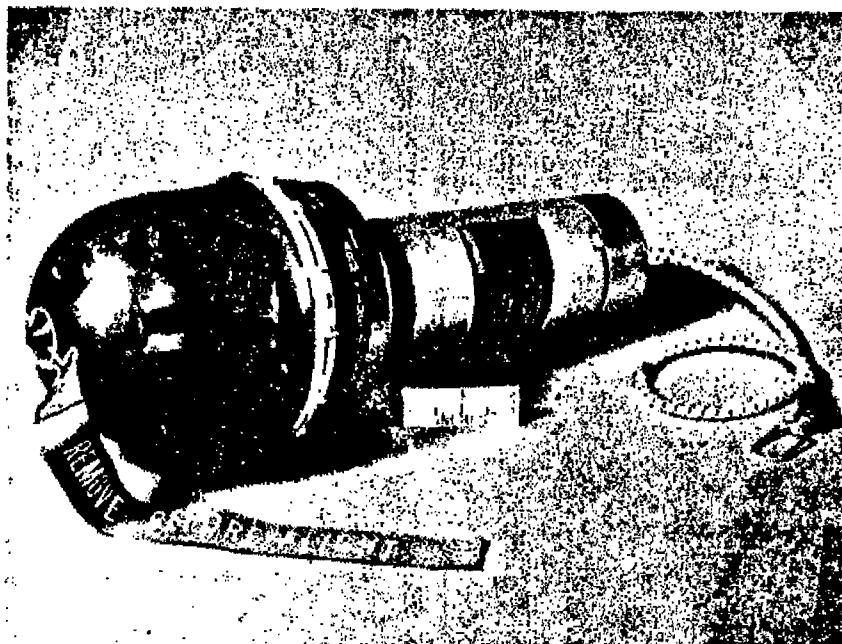
REMARKS

CHAPTER: 2 SERIES: AF
DESIGNATION: FMU-112/B
Bomb Impact Fuze

2-20

0325

C-10



IDENTIFICATION

AGENCY: Eglin AFB, ADTC/SD3
CONTACT: E. Smith
AV 872-8186
STATUS: Procurement Std
USER: AF
ASSY DWG: 727272
PARTS LIST: DL 717171
SPEC: SP 727272
NSN:
PRIOR NOMENCLATURE: "Safe" Fuze
REPLACES:

GENERAL

MUNITION: Mk 80 Series Bombs
USE: HE
LOCATION: Nose
BALLISTIC LEVELS:
ROTATION: Free Fall
SETBACK:
VELOCITY:
CREEP:

SERIES: AF CHAPTER: 2
DESIGNATION: FMU-113/B
Bomb Proximity Fuze

0326

2-21

C-11

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Bungee Cord Lanyard

SECOND SAFETY:

Turbine Alternator

OTHER SAFETY:

Pre-installation selectable
arm times of 5, 6, 7, 8, 9,
10 and 18 sec

DELAY:

SAFE/ARM CONDITION:

yes

FUNCTIONING DATA

MODE(S): Proximity, Impact

TYPE: CW Doppler/Crush

CHARACTERISTICS:

TARGET: Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 7.5 lb (3402 gm)

TOTAL LENGTH: 13.52 in (34.34 cm)

CROSS SECTION: 5.5 in (13.97 cm)

INTRUSION: 7.0 in (17.78 cm)

THREAD SIZE: 3.5-12UNS-2A

OTHER:

POWER SUPPLY:

Turbine Alternator

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: RDX 90 mg

LEAD: CH-6 466 mg

BOOSTER: FZU-2/B

OTHER:

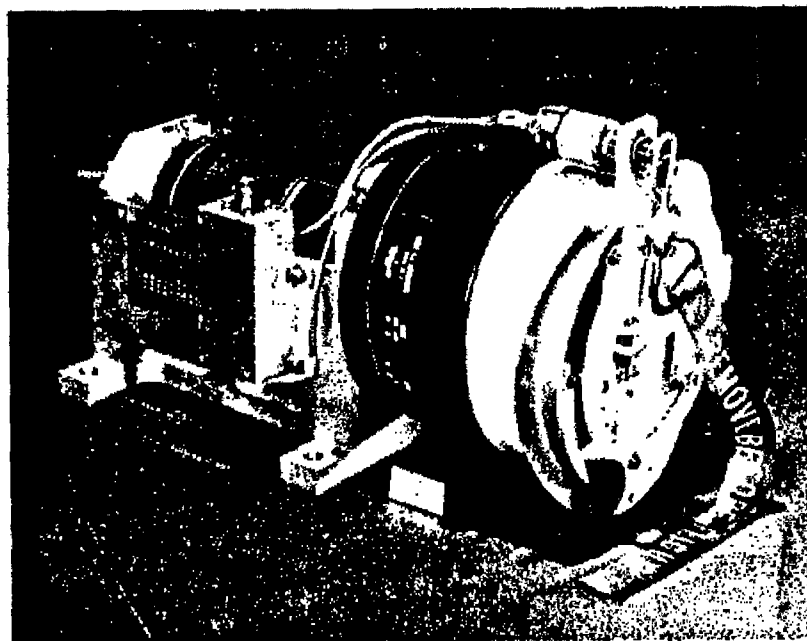
REMARKS

CHAPTER: 2 SERIES: AF
DESIGNATION: FMU-113/B
Bomb Proximity Fuze

0327

2-22

C-12

**IDENTIFICATION**

AGENCY: Eglin AFB, ADTC/S03

CONTACT: E. Smith
AV 872-8186

STATUS: Development

USER: AF

ASSY DWG:

PARTS LIST:

SPEC:

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: SUU-54 Dispenser/GBU-15

USE: STANDOFF Guided CBU

LOCATION: Between SUU-54 & guidance

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

SERIES: AF CHAPTER: 2
DESIGNATION: FMU-123/B
Bomb Proximity Fuze

0328

2-23

C-13

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Lanyard Safing Pin

SECOND SAFETY:

Electronic Signal from Weapon

OTHER SAFETY:

Arm Times of 3, 4, 5, 6, 7,
8, 9, 10 and 18 sec

DELAY:

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Proximity

TYPE: Electronic, Pulse Doppler Radar

CHARACTERISTICS:

Ground selectable HOB from
300 to 3000 feet

TARGET: Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 16 lb (7258 gm)

TOTAL LENGTH: 18 in (45.72 cm)

CROSS SECTION: 8.0 in (20.32 cm)

INTRUSION:

THREAD SIZE: 3.5-12UNS-2A

OTHER:

POWER SUPPLY:

Thermal Battery

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: D74B1

LEAD:

BOOSTER:

OTHER:

REMARKS

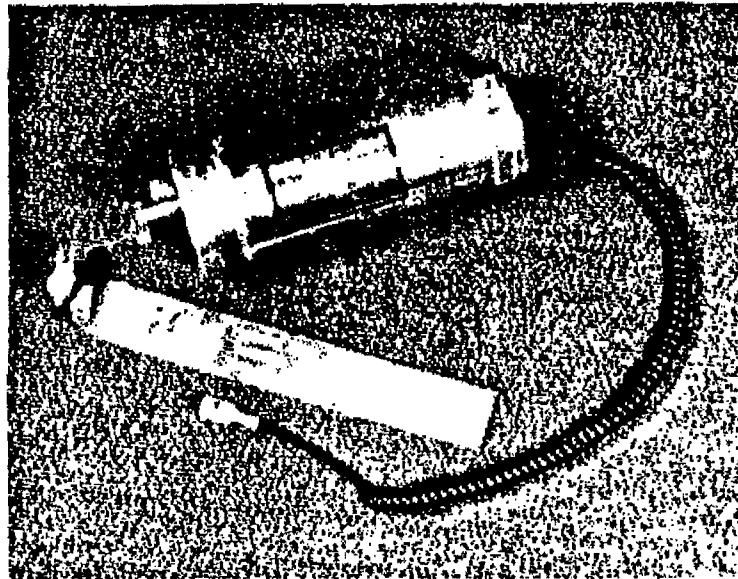
This is a modification of the FMU-110/B.

CHAPTER: 2 SERIES: AF
DESIGNATION: FMU-123/B
Bomb Proximity Fuze

0329

2-24

C-14



IDENTIFICATION

AGENCY: Eglin AFB, ADTC/SD3

CONTACT: E. Smith
AV 872-8186

STATUS: Development

USER: AF, Marines, Navy

ASSY DWG: 1270A1

PARTS LIST: PL 1270A1

SPEC: ED-DP-9

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: Guided Bombs

USE: HE

LOCATION: Nose or Tail

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

SERIES: AF CHAPTER: 2
DESIGNATION: FMU-124/B
Bomb Impact Fuze

2-25

0330

D-1

ARMING DATA

FIRST SAFETY:

Arming Wire

SECOND SAFETY:

Electrical energy from
turbine alternator

OTHER SAFETY:

4 sec mech. enable and
5.5 or 12 sec electric
arm time

DELAY:

SAFE/ARM CONDITION:

Plunger extended indicates
arm enable

FUNCTIONING DATA

MODE(S): Impact, delay

TYPE: Electric

CHARACTERISTICS:

Ground select function times
of 0.0, .01, or .025 sec

TARGET: Surface, hard target

SENSITIVITY:

100 g's

PHYSICAL DATA

WEIGHT: 3.6 lb (1633 gm)

TOTAL LENGTH: 8 in (20.3 cm)

CROSS SECTION: 3 in (7.62 cm)

INTRUSION:

THREAD SIZE: 3.5-12UNS-2A

OTHER:

POWER SUPPLY:

Turbine Alternator

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 100 (100 mg lead
styphnate)

LEAD:

BOOSTER: 123 gm tetryl

OTHER: 2 bellows drivers - 50 mg LMNR

REMARKS

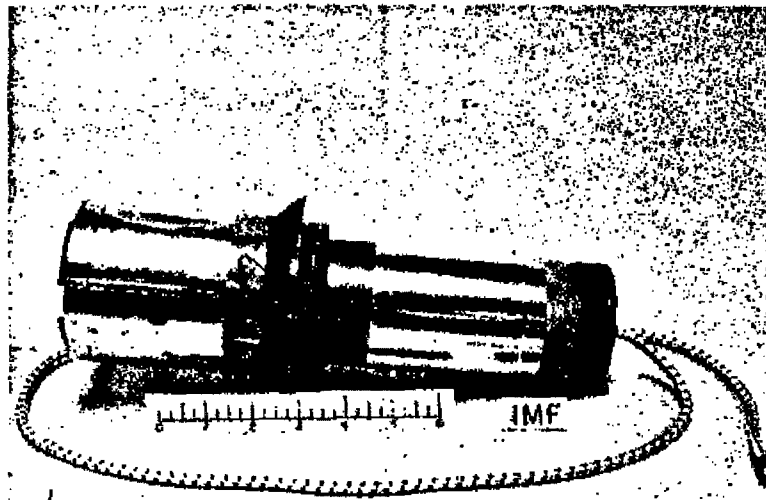
Compatible with FZU-39/B to achieve low HOB.

CHAPTER: 2 SERIES: AF
DESIGNATION: FMJ-124/B
Bomb Impact Fuze

2-26

0331

D-2

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: Eglin AFB, ADTC-S03

CONTACT: J. Johnson
AV 872-3054

STATUS: Development

USER: AF

ASSY DWG: Contractor Dwg. IMF-200-605

PARTS LIST:

SPEC: SP747878A

NSN:

PRIOR NOMENCLATURE: Impact Mech Fuze

REPLACES: Potential for M904/M905

GENERAL

MUNITION: M117 and Mk 80 Series,
General Purpose Bombs

USE: General Purpose Bombs

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

SERIES: AF CHAPTER: 2
DESIGNATION: FMU-130/B
Bomb Impact Fuze

0332

D-3

2-27

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Ground Safing Pin, Manually
Removed

SECOND SAFETY:

See Remarks

OTHER SAFETY:

See Remarks

DELAY:

SAFE/ARM CONDITION:

Yes

PHYSICAL DATA

WEIGHT: 10 lb (4536 gm)

TOTAL LENGTH: 11.83 in (30.048 cm)

CROSS SECTION: 3.5 in (8.89 cm)

INTRUSION: Dia 2.83 in (7.183 cm)
Length 6.9 in (24.714 cm)

THREAD SIZE: 3.5-12UNS-2A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: See Remarks

DETONATORS: 2 grains lead azide,
4 grains RDX

LEAD: 8.34 grains - CH6

BOOSTER: 174 gm - CH6

OTHER:

FUNCTIONING DATA

MODE(S): Impact & Delay after impact

TYPE: Mechanical

CHARACTERISTICS:

Event delays .010, .025 and
.060 secs. plus or minus 20 percent
accuracy

TARGET: Ground Targets

SENSITIVITY:

REMARKS

2nd SAFETY: 1. Lanyard requires 40-60 lbs. force to release subsystems 2.
MAU-162 breakaway forces 86-100 lbs. OTHER SAFETY: 1. Air vane sensor detonator
rotor non-arm 188 KCAS, arm 142 KCAS. 2. Arming delays (mech. timer) 4, 6, 8, 10,
12, 14, 16 and 18 sec. PRIMER: 1/2 grain lead styphate tetracene and grit oxider, 3
3/4 grains m900 olybdenum potassium perchorate and 3/4 grain lead azide.

CHAPTER: 2 SERIES: AF
DESIGNATION: FMU-130/B
Bomb Impact Fuze

2-28

0333

D-4

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: NWC/CL, Code 3355

CONTACT: L. Brauer
AV 437-7455

STATUS: Development

USER: Navy, AF

ASSY DWG:

PARTS LIST:

SPEC:

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: GP Bombs

USE: HE

LOCATION:

BALLISTIC LEVELS:

ROTATION:

SETBACK:

VELOCITY:

CREEP:

SERIES: N CHAPTER: 2
DESIGNATION: FMJ-139/B
BOMB IMPACT FUZE

0334

2-29

D-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH:

CROSS SECTION:

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S):

TYPE:

CHARACTERISTICS:

TARGET:

SENSITIVITY:

REMARKS

The FMU-139/B is being developed to provide a common bomb fuze for the services.
Details not available.

CHAPTER: 2 SERIES: N

DESIGNATION: FMU-139/B

BOMB IMPACT FUZE

2-30

D-6

0335



MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: PMTC, Code 2141
CONTACT: R. Villers
AV 351-6424
STATUS: Procurement Std
USER: AF
ASSY DWG: 9218504
PARTS LIST: 9218509
SPEC: MIL-A-14731A
NSN: 1325-00-926-4082-F387
PRIOR NOMENCLATURE: T46E
REPLACES:

GENERAL

MUNITION: Mk 81-84 GP Bombs
M117 Bomb

USE: HE

LOCATION: Tail

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

SERIES: N CHAPTER: 2
DESIGNATION: M147
Adapter Booster

0336

2-31

D-7

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH: 7.8 in (19.8 cm)

CROSS SECTION:

INTRUSION: 7.8 in (19.8 cm)

THREAD SIZE: 3.5-12

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER: 130 gm A-6 and
320 gm A-3

OTHER:

FUNCTIONING DATA

MODE(S):

TYPE:

CHARACTERISTICS:

TARGET:

SENSITIVITY:

REMARKS

Earlier load was 126 gm tetryl and 284 gm tetryl.
Similar to M150

CHAPTER: 2 SERIES: N
DESIGNATION: M147

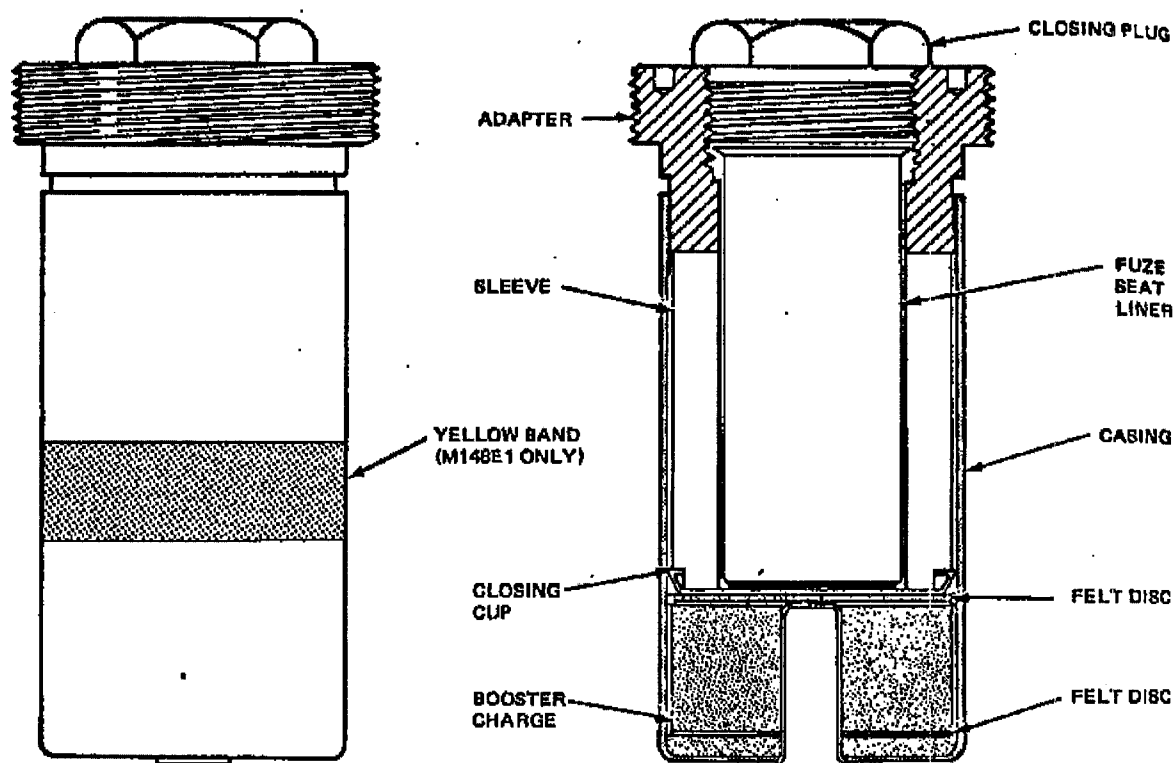
Rooster

0337

2-32

D-8

C

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: PMTC, Code 2141
 CONTACT: R. Villers
 AV 351-6424
 STATUS: Procurement Std
 USER: Navy - M148E1, AF - M148
 ASSY DWG: 9272263
 PARTS LIST: 9272263
 SPEC: MIL-A-14711A
 NSN: 1325-00-491-6562-F392
 PRIOR NOMENCLATURE: T45E
 REPLACES:

GENERAL

MUNITION: Mk 81-84 GP Bombs
 M117 Bomb
 USE: HE
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: Free Fall
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 2
 DESIGNATION: M148E1
 Adapter Booster

0338

2-33

D-9

ARMING DATA

FIRST SAFETY:

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH: 6.8 in (17.27 cm)

CROSS SECTION: 2.84 in (7.23 cm)

INTRUSION: 7.2 in (18.29 cm)

THREAD SIZE: 3.5-12

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER: Tetryl, 180 gm

OTHER:

FUNCTIONING DATA

MODE(S):

TYPE:

CHARACTERISTICS:

TARGET:

SENSITIVITY:

REMARKS

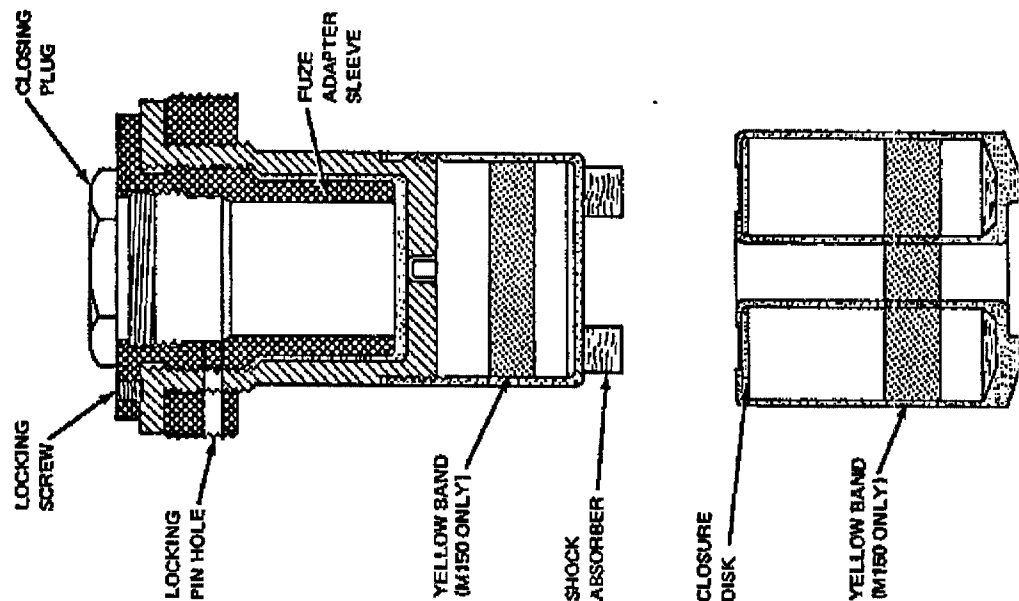
Navy version M148E1 is thermally protected. Air Force version M148 is not thermally protected and is loaded with 190 gm of A-3. M148 documentation: Parts List 9216900, NSN: 1325-00-926-3954-F372.

CHAPTER: 2 SERIES: N
DESIGNATION: M148E1
Adapter Booster

2-34

0339

D-10

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: PMTC, Code 2141

CONTACT: R. Villers
AV 351-6424

STATUS: Procurement Std

USER: Navy

ASSY DWG: 9238938

PARTS LIST: 9238938

SPEC: MIL-A-14996

NSN: 1325-00-143-7145-F390

PRIOR NOMENCLATURE: T46E

REPLACES:

GENERAL

MUNITION: MK 81-84 GP Bombs

USE: HE

LOCATION: Tail

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

0340

0-11

2-35

SERIES: N

DESIGNATION: M150
Adapter Booster

CHAPTER: 2



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 0.91 lb (411 gm)

TOTAL LENGTH: 7.9 in (20.1 cm)

CROSS SECTION:

INTRUSION:

THREAD SIZE: 3.5-12UN

OTHER:

3.5-12

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER: 130 gm A-5 and 320 gm A-3

OTHER:

FUNCTIONING DATA

MODE(S):

TYPE:

CHARACTERISTICS:

TARGET:

SENSITIVITY:

REMARKS

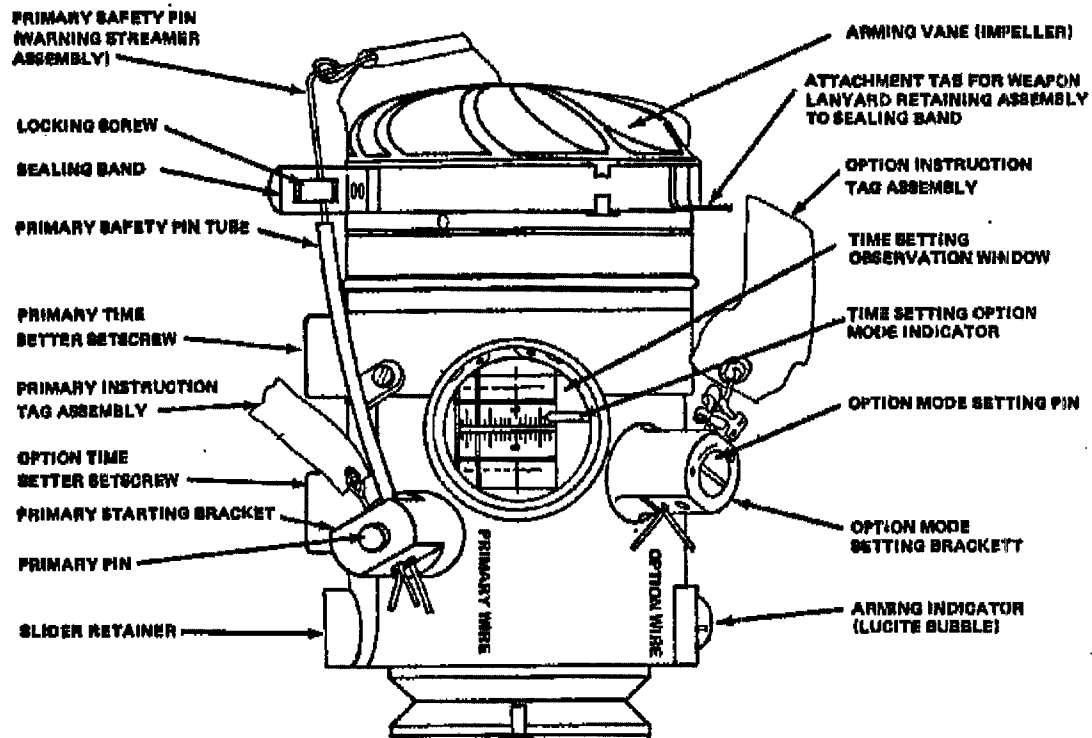
Special version for use with Mk 346 Long Delay Bomb Fuze. Thermal protection and anti-withdrawal pin hole. Earlier units loaded with 126 gm tetryl and 284 gm tetryl.

CHAPTER: 2 SERIES: N
DESIGNATION: M150
Adapter Booster

0341

2-36

D-12



IDENTIFICATION

AGENCY: NSWC, Code G44
 CONTACT: J. Potts
 AV 290-1981
 STATUS: Procurement Std
 USER: Navy, AF, Marines
 ASSY DWG: 479AS100
 PARTS LIST: PL 479AS100
 SPEC: AS 2671
 NSN:
 PRIOR NOMENCLATURE: EX 66 Mod 0
 REPLACES: Mk 339 Mod 0

GENERAL

MUNITION: Bomb, Cluster
 USE: Dispenser-type weapon cases
 LOCATION: - Nose
 BALLISTIC LEVELS:
 ROTATION: Free Fall
 SETBACK:
 VELOCITY: MACH 2
 CREEP:

SERIES: N CHAPTER: 2
 DESIGNATION: MK 339 Mod 0,1
 Dispenser MT Fuze



ARMING DATA

FIRST SAFETY:

Arming wire releases impeller vane and starts timer.

SECOND SAFETY:

Impeller vane; 200 KIAS air velocity to enable

OTHER SAFETY:

Timer arms at 1.1 sec. No function at 1 sec or less. Set thru zero without triggering firing pin.

DELAY:

SAFE/ARM CONDITION:

Viewing window

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Mechanical

CHARACTERISTICS:

Settable 1.2 to 100 sec in 0.1-sec increments on 2 independent timing dials

TARGET: Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 3.75 lb (1700 gm)

TOTAL LENGTH: 6.75 in (17.15 cm)

CROSS SECTION: 3.75 in (9.53 cm)

INTRUSION: 2.75 in (6.98 cm) DIA
x .75 in (1.9 cm) deep

THREAD SIZE:

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 43 Mod 1

LEAD:

BOOSTER:

OTHER:

REMARKS

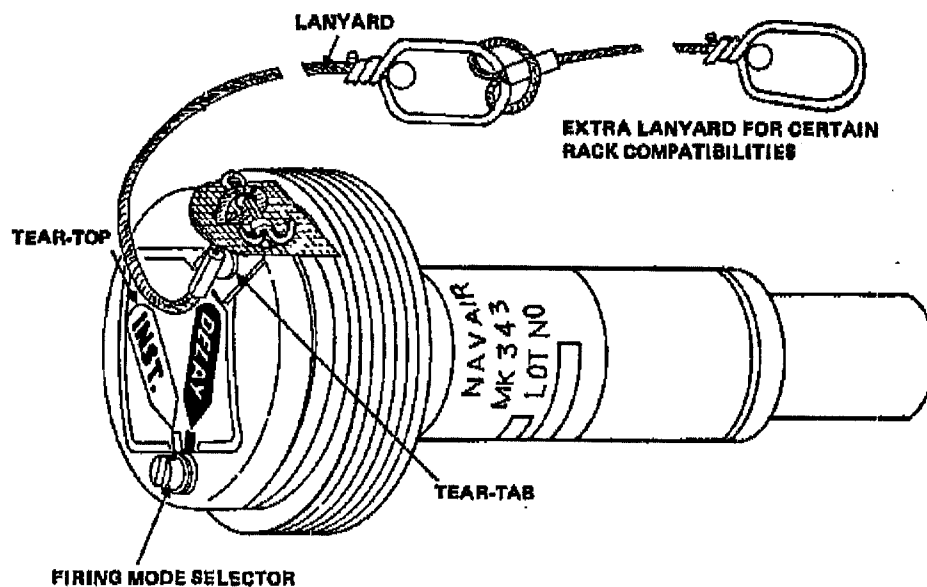
Fuze has two preset pilot selectable function times. Mod 0 fuze max time was 50 sec. Mod 0 documents; ASSY dwg 2424305, PARTS LIST LD 549439 and SPEC WS 5000.

CHAPTER: 2 SERIES: N
DESIGNATION: MK 339 Mod 0,1
Dispenser MT Fuze

2-38

0343

D-14

**IDENTIFICATION**

AGENCY: NSWC, Code G43
 CONTACT: G. Briggs
 AV 290-1663
 STATUS: Procurement Std
 USER: Navy, Marines
 ASSY DWG: 2428355
 PARTS LIST: LD 549668
 SPEC: AS 1093
 NSN:
 PRIOR NOMENCLATURE: EX-343
 REPLACES: M-173, M-918

GENERAL

MUNITION: Bomb (Firebomb)

USE: Flame

LOCATION: Side

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

0344

E-1

2-39

SERIES: N CHAPTER: 2
 DESIGNATION: MK 343 Mod 0
 Bomb Impact Fuze

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Lanyard

SECOND SAFETY:

Anemometer Vane; no arm
80 KIAS, all arm 300 KIAS

OTHER SAFETY:

Safe separation provided by timer
at airspeeds above 80 kts

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 1.25 lb (567 gm)

TOTAL LENGTH: 6.0 in (15.24 cm)

CROSS SECTION: 2.75 in (6.98 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Mk 158 Mod 0

DETONATORS: Mk 104 Mk 105 (inst det);
Mk 106 (delay det)

LEAD: (2) Tetryl, 108 mg

BOOSTER: Tetryl, 6.0 gm

OTHER:

FUNCTIONING DATA

MODE(S): Impact or 0.27-sec delay

TYPE: Mechanical

CHARACTERISTICS:

TARGET: Ground

SENSITIVITY:

Functions on water in all
orientations.

REMARKS

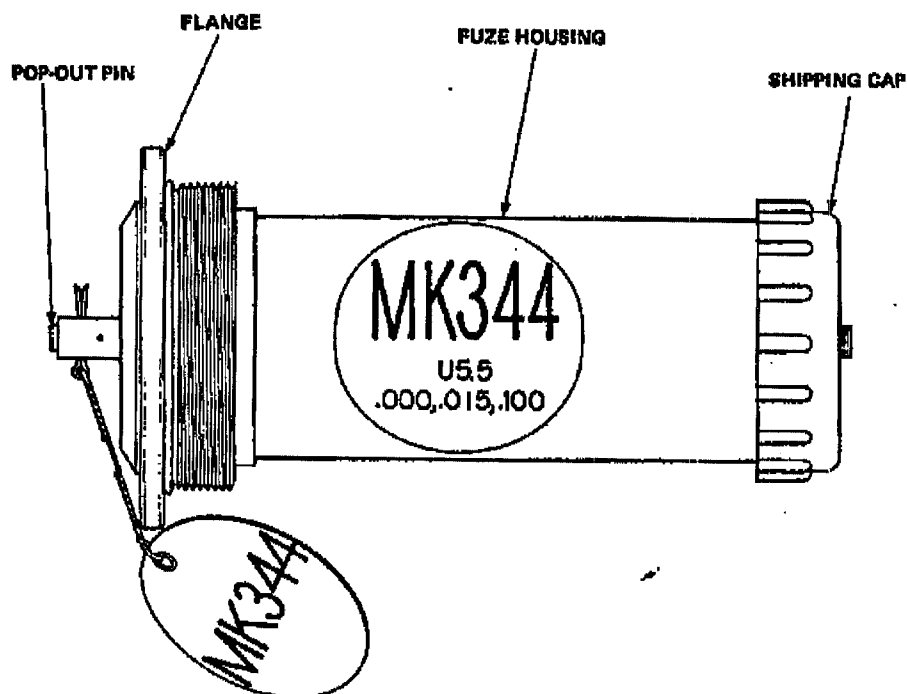
Igniter Mk 273 Mod 1 and fuze combine to be Firebomb Initiator, Mk 13 Mod 0,
for Mk 77 Mod 4 Firebomb. Each Firebomb weapon contains two Mk 13 Mod 0
initiators.

CHAPTER: 2 SERIES: N
DESIGNATION: MK 343 Mod 0
Bomb Impact Fuze

0545

2-40

E-2

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: J. Abell
AV 290-1545

STATUS: Procurement Std

USER: Navy, Marines

ASSY DWG: 2421417

PARTS LIST: LD 549680

SPEC: WS 5893

NSN: 1325-00-918-7053

PRIOR NOMENCLATURE:

REPLACES: M990 Series

GENERAL

MUNITION: MK 80 series GP (LD)
and Laser Guided Bombs

USE: HE

LOCATION: Tail

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

0346

E-3

2-41

SERIES: N CHAPTER: 2
DESIGNATION: MK 344 Mod 0
Bomb Impact Fuze

ARMING DATA

FIRST SAFETY:

Arming wire

SECOND SAFETY:

High voltage electrical
signal required from A/C

OTHER SAFETY:

HERO safe

DELAY:

5.5 sec

SAFE/ARM CONDITION:

Pop-out pin extended

PHYSICAL DATA

WEIGHT: 4.3 lb (1950 gm)

TOTAL LENGTH: 8.5 in (21.59 cm)

CROSS SECTION: 4.25 in (10.8 cm)

INTRUSION: 7.5 in (19.05 cm)

THREAD SIZE: 3.5-12

OTHER:

POWER SUPPLY:

Energy obtained from A/C during
release cycle

EXPLOSIVE TRAIN

S&A DEVICE: Mk 31 Mod 1

PRIMER: None

DETONATORS: Mk 100 Mod 0

LEAD: Tetryl

BOOSTER: Tetryl, 4.4 oz (125 gm)

OTHER: Expl switch Mk 127 Mod 0 (4)
Expl driver Mk 20 Mod 0 (2)

FUNCTIONING DATA

MODE(S): Impact/DELAY

TYPE: Electric

CHARACTERISTICS:

In flight selection of one of 3
function times; 0, .015, and .1
sec.

TARGET: Surface

SENSITIVITY:

Functions on water;
40 to 80 g's

REMARKS

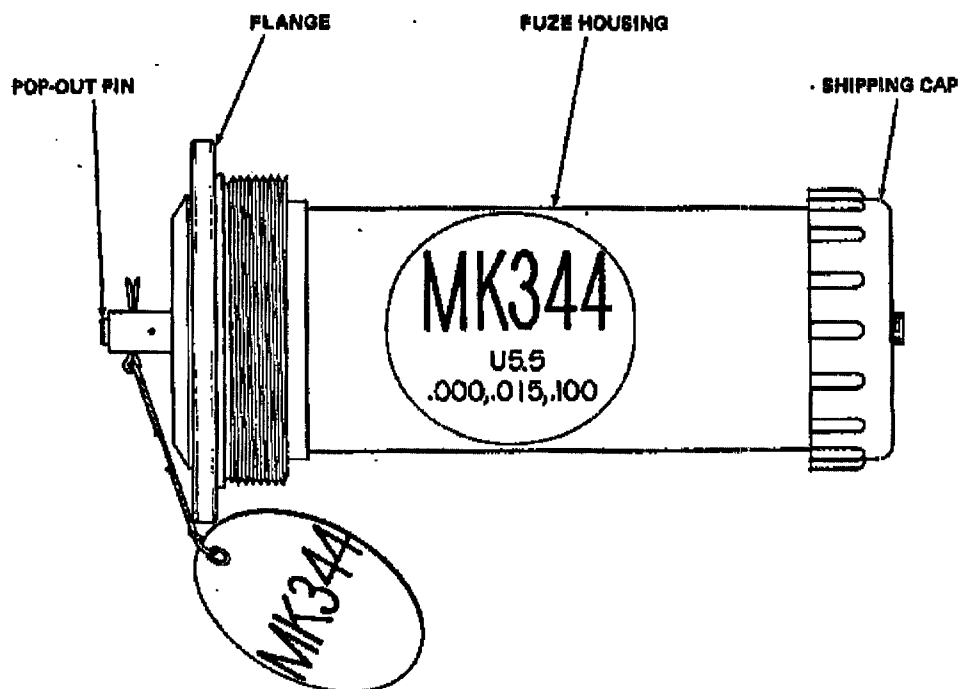
Airburst can be had by using the fuze with a TOD (Mk 43 or M20). The Mod 0 will automatically switch to 2.6 sec arm time if retardation is sensed (restricted from use in High Drag Mode).

CHAPTER: 2 SERIES: N
DESIGNATION: MK 344 Mod 0
Bomb Impact Fuze

2-42

0347

E-4



IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: J. Abe11
AV 290 1545

STATUS: Procurement Std

USER: Navy, Marines

ASSY DWG: 2512316

PARTS LIST: PL 2512316

SPEC: AS 2677

NSN: 1325-00-009-0348

PRIOR NOMENCLATURE:

REPLACES: Mk 344 Mod 0

GENERAL

MUNITION: Mk 80 series GP (LD)
and Laser Guided Bombs

USE: HE

LOCATION: Tail

BALLISTIC LEVELS:

ROTATION:

SETBACK:

VELOCITY:

CREEP:

SERIES: N CHAPTER: 2
DESIGNATION: MK 344 Mod 1
Bomb Impact Fuze

0348

2-43

E-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Arming wire

SECOND SAFETY:

High voltage electrical
signal required from A/C

OTHER SAFETY:

HERO safe

DELAY:

5.5 sec

SAFE/ARM CONDITION:

Pop-out pin extended

FUNCTIONING DATA

MODE(S): Impact/Delay

TYPE: Electric

CHARACTERISTICS:

Inflight selection of one of 3
function times; 0, .015 or .1
sec

TARGET: Surface

SENSITIVITY:

Functions on water;
40 to 80 g's

PHYSICAL DATA

WEIGHT: 4.3 lb (1950 gm)

TOTAL LENGTH: 8.5 in (21.59 cm)

CROSS SECTION: 4.25 in (10.8 cm)

INTRUSION: 7.5 in (19.05 cm)

THREAD SIZE: 3.5-12

OTHER:

POWER SUPPLY:

Energy is obtained from A/C
during release cycle.

EXPLOSIVE TRAIN

S&A DEVICE: Mk 31 Mod 2

PRIMER: None

DETONATORS: Mk 100 Mod 0

LEAD: Tetryl

BOOSTER: Tetryl, 4.4 oz (125 gm)

OTHER: Expl switch Mk 127 Mod 0 (3)
Expl driver Mk 20 Mod 0 (2)

REMARKS

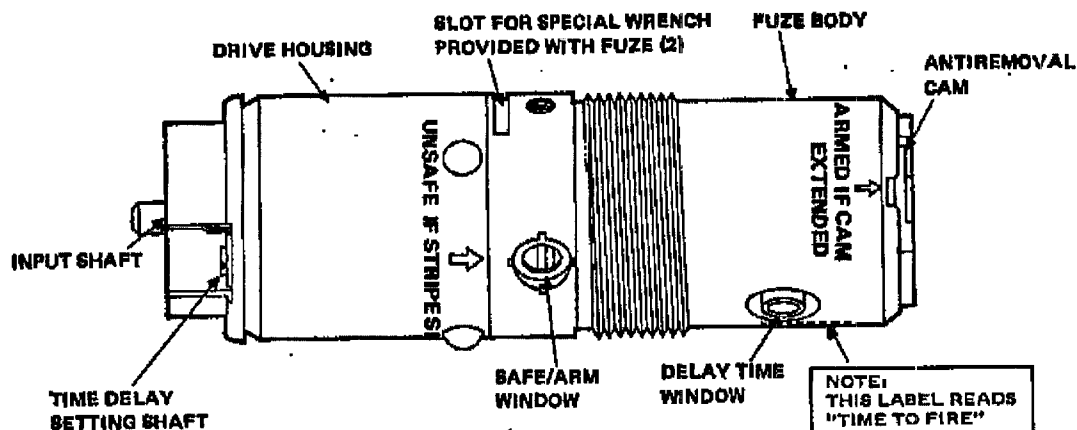
Airburst can be had by using the fuze with a TDD (Mk 43 or M20). Mod 1 does not have retardation sensor.

CHAPTER: 2 SERIES: N
DESIGNATION: MK 344 Mod 1
Bomb Impact Fuze

0349

2-44

E-6



IDENTIFICATION

AGENCY: NSWC, Code G44
 CONTACT: A. Munach
 AV 290-1970
 STATUS: Procurement Std
 USER: Navy, Marines
 ASSY DWG: 2424046
 PARTS LIST: LD 548713
 SPEC: WS 5394
 NSN: 1325-00-937-0982
 PRIOR NOMENCLATURE: WOX-138B
 REPLACES: M132 series

GENERAL

MUNITION: Bomb, Mk 81 and 82 (Low or High Drag), Mk 83 Low Drag only
 USE: HE
 LOCATION: Tail
 BALLISTIC LEVELS:
 ROTATION: Free Fall
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 2
 DESIGNATION: MK 346 Mod 0
 Bomb Long Delay Fuze

2-45

0350

E-7



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Arming wire

SECOND SAFETY:

Requires 1200 rpm input from
ancillary arming assy to enable

OTHER SAFETY:

Enable times (sec) for Mk 3,4, & 5:
Mod 1 - 1.5-2.0 LD, 2.0-4.0 HD
Mod 2 - 0.3-1.0 LD, 1.0 max HD

DELAY:

Arms at impact if enabled

SAFE/ARM CONDITION:

Viewing window

FUNCTIONING DATA

MODE(S): Long delay

TYPE: Mechanical Time

CHARACTERISTICS:

30 min to 33 hr by 15-min
increments, set prior to fuze
installation

TARGET: Surface

SENSITIVITY:

Shallow angle impacts on any
target and low speed impacts
on water may prevent arming

PHYSICAL DATA

WEIGHT: 1.4 lb (635 gm)

TOTAL LENGTH: 6.1 in (15.49 cm)

CROSS SECTION: 2.0 in (5.08 cm)

INTRUSION: 2.7 in (6.86 cm)

THREAD SIZE: 2.0-12UN-2A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: Mk 44 Mod 1

LEAD: 148 mg CH-6

BOOSTER: See Remarks

OTHER:

REMARKS

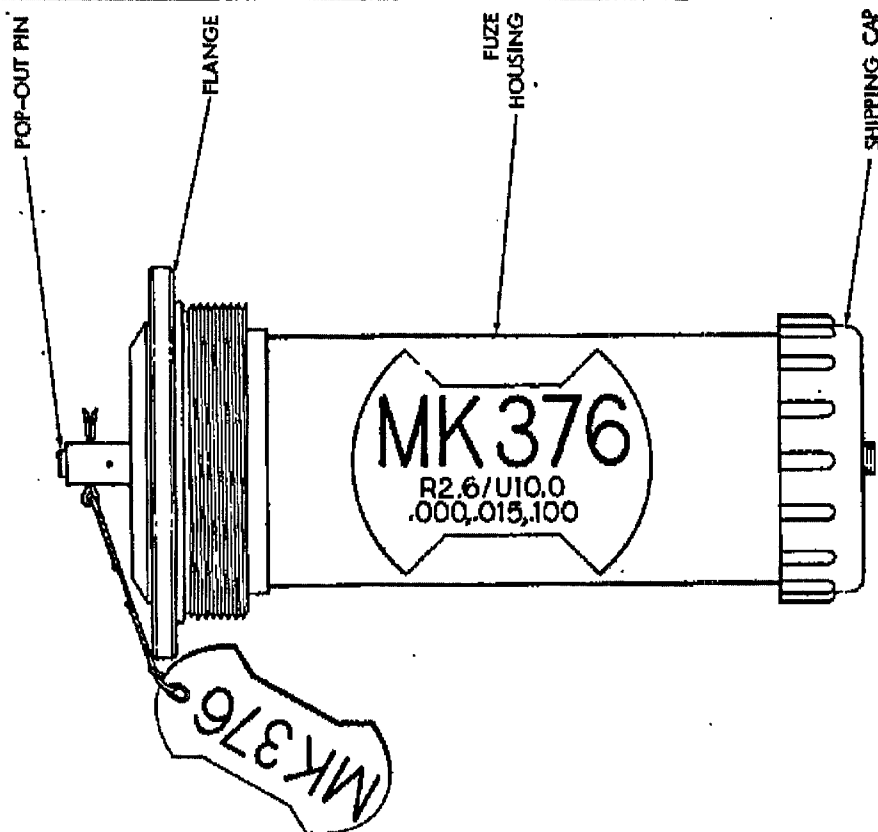
Req Mk 3,4,5 Arming Assy (Mod 1 1800 rpm governed, Mod 2 ungoverned); M150 Adapter
Booster, and Mk 68 Thermal Shield. Accuracy in minutes (set time/min-max function
delay: 30/20-48, 45/36-60, 60/50-75, 75/64-90, 90/78-105, 105/92-135, 120/106-135
135/120-150, 150 to 33 hrs/90% of set time-110% of set time.

CHAPTER: 2 SERIES: N
DESIGNATION: MK 346 Mod 0
Bomb Long Delay Fuze

2-46

0351

E-8

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: J. Abell
AV 290-1545

STATUS: Procurement Std

USER: Navy, Marines

ASSY DWG: LD 2499578

PARTS LIST: PL 2499578

SPEC: AS 1099

NSN: 1325-00-106-6136

PRIOR NOMENCLATURE:

REPLACES: M990 Series

GENERAL

MUNITION: Mk 80 series GP (LD & HD)
and Laser Guided Bombs

USE: HE

LOCATION: Tail

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY: 550 KIAS

CREEP:

SERIES: N CHAPTER: 2
DESIGNATION: MK 376 Mod 0
Bomb Impact Fuze

0352

2-47

E-9

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Arming wire

SECOND SAFETY:

High voltage electrical
signal required from A/C

OTHER SAFETY:

Senses retardation for 2.6 sec.
Arming time, HERO safe.

DELAY:

10 sec; 2.6 sec automatic
for high drag bomb

SAFE/ARM CONDITION:

Pop-out pin extended

PHYSICAL DATA

WEIGHT: 4.3 lb (1950 gm)

TOTAL LENGTH: 8.5 in (21.59 cm)

CROSS SECTION: 4.25 in (10.8 cm)

INTRUSION: 7.5 in (19.05 cm)

THREAD SIZE: 3.5-12

OTHER:

POWER SUPPLY:

None; energy from A/C transferred
during release cycle

EXPLOSIVE TRAIN

S&A DEVICE: Mk 31 Mod 1

PRIMER:

DETONATORS: Mk 100 Mod 0

LEAD: Tetryl

BOOSTER: Tetryl, 4.4 oz (125 gm)

OTHER: Expl switch Mk 127 Mod 0 (4)
Expl driver Mk 20 Mod 0 (2)

FUNCTIONING DATA

MODE(S): Impact/Delay

TYPE: Electric

CHARACTERISTICS:

Inflight selection between 0,
.015 or .100 sec

TARGET: Surface

SENSITIVITY:

Functions on water;
40 to 80 g's

REMARKS

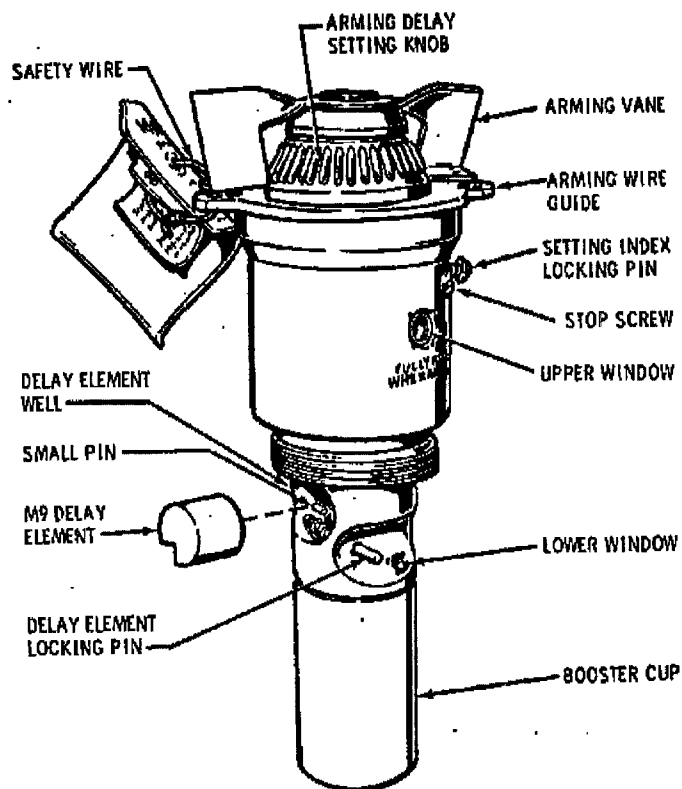
Proximity mode avail when used with Mk 43 TDD.

CHAPTER: 2 SERIES: N
DESIGNATION: MK 376 Mod 0
~~Bomb Impact Fuze~~

0353

2-48

E-10

MIL-HDBK-145
1 October 1980**IDENTIFICATION**

AGENCY: NSWC, Code G44
CONTACT: J. Abell
AV 290-1545
STATUS: Procurement Std
USER: Navy, Marines
ASSY DWG: 333AS102
PARTS LIST: PL 333AS102
SPEC: AS 2669
NSN: 1325-00-689-4062
PRIOR NOMENCLATURE: T709E4
REPLACES: M904E1 and E2, M103

GENERAL

MUNITION: Bomb, Mk 80 series
or M117

USE: HE

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY:

CREEP:

0354

E-11
2-49

SERIES: N
DESIGNATION: M904E4
Bomb Impact Fuze

CHAPTER: 2

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Arming wires

SECOND SAFETY:

Air flow to drive arming vane

OTHER SAFETY:

Lock must be removed to select
2 or 4 sec arm time

DELAY:

Arm times of 2, 4, 6, 8, 10, 12,
14, 16, 18 or 20 sec

SAFE/ARM CONDITION:

Viewing window

PHYSICAL DATA

WEIGHT: 2.1 lb (953 gm)

TOTAL LENGTH: 9.4 in (23.8 cm)

CROSS SECTION: 2.5 in (6.4 cm)

INTRUSION: 5.13 in (14.5 cm)

THREAD SIZE: 2.0-12 UNS-1

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: M35

LEAD: Tetryl (100 mg)

BOOSTER: Tetryl (74.3 gm)

OTHER: M9 Delay
XM9 relay

FUNCTIONING DATA

MODE(S): Impact, Delay

TYPE: Mechanical/Pyro

CHARACTERISTICS:

M9 Delays inserted prior to installation determine function time

TARGET: Surface

SENSITIVITY:

REMARKS

Requires use of M148E1 Adapter Booster. Six M9 delay elements avail.; delay times are: 0, .01, .025, .05, .1 and .25 sec E4 version has thermal protection shield.

CHAPTER: 2 SERIES: N
DESIGNATION: M904E4
Bomb Impact Fuze

0355

2-50
E-12

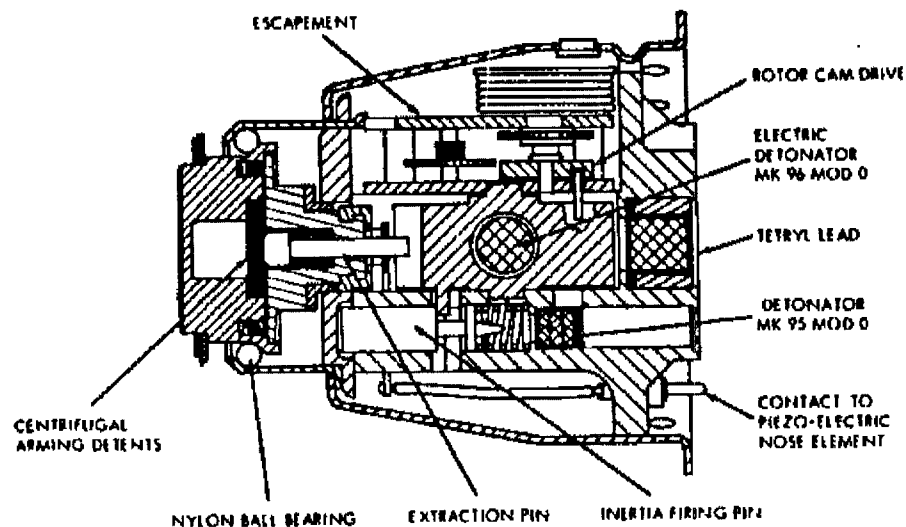
CHAPTER 3

S
U
B
M
U
N
I
T
I
O
N
S

0356

3-1

E-13



IDENTIFICATION

AGENCY: NSWC, Code G43
 CONTACT: W. Pickler
 AV 290-1663
 STATUS: Procurement Std
 USER: Navy, AF, Marines
 ASSY DWG: GA 2428145
 PARTS LIST: LD 549587
 SPEC: WS 4995
 NSN:
 PRIOR NOMENCLATURE: EX-1 Mod U
 REPLACES:

GENERAL

MUNITION: ROCKEYE II Mk 20-4 CBU
 USE: HE and AP
 LOCATION: Base of Mk 118-0 Bomblet
 BALLISTIC LEVELS:
 ROTATION: Free Fall
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 3
 DESIGNATION: MK 1 Mods 0, 1
 Bomblet Fuzing System

0357

3-3

E-14

MIL-HDBK-145
7 October 1980

ARMING DATA

FIRST SAFETY:

Air velocity discriminating vane
no-arm 130 KIAS, all-arm 220 KIAS

SECOND SAFETY:

Out-of-line explosive train

OTHER SAFETY:

No stored energy in arming cycle

DELAY:

SAFE/ARM CONDITION:

Viewing window

FUNCTIONING DATA

MODE(S): Impact, SQ (Hard Tgt)

TYPE: Mechanical

CHARACTERISTICS:

One-second arming time

TARGET: Surface, Armor

SENSITIVITY:

PHYSICAL DATA

WEIGHT: .23 lb (104 gm)

TOTAL LENGTH: 1.714 in (4.35 cm)

CROSS SECTION: 1.418 in (3.6 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 95 Mod 0 (2) (stab)
Mk 96 Mod 0 (Electric)

LEAD: Tetryl, 135 mg

BOOSTER:

OTHER:

REMARKS

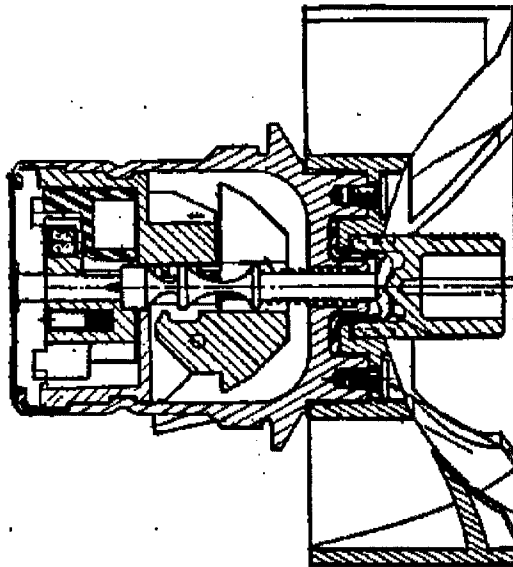
The Mk 1 is mechanically armed and electrically initiated by a piezoelectric element on the bomblet nose. Base has arming vane, angular velocity discriminating sensing device, and friction drive arming feature. An out-of-line rotor has electric detonator shorted in the safe position. Base has an inertia initiated firing train which acts as a back-up to the nose sensing element.

CHAPTER: 3 SERIES: N
DESIGNATION: MK 1 Mods 0, 1
Bomblet Fuzing System

0358

3-4

F-1



IDENTIFICATION

AGENCY: OO-ALC/MMWRAE

CONTACT: W. Morgan
AV 458-7056

STATUS: Procurement Std

USER: AF

ASSY DWG: 65F12271

PARTS LIST:

SPEC: MIL-A-2550, PD ATW-114

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: BLU-24 Bomblet
BLU-66 Bomblet

USE: HE

LOCATION: Tail

BALLISTIC LEVELS:

ROTATION: 67 rps

SETBACK:

VELOCITY:

CREEP:

SERIES: AF CHAPTER: 3
DESIGNATION: BLU- 24/B
Bomblet Fuze

0359

3-5

F-2

ARMING DATA

FIRST SAFETY:

Spin - Arms at 3500 rpm

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH: 2.2 in (5.59 cm)

CROSS SECTION: 1.24 in (3.15 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: M55

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(\$): Fire on Spin Decay

TYPE: Mechanical

CHARACTERISTICS:

TARGET: Jungle Penetration

SENSITIVITY:

Fires at 2000 rpm

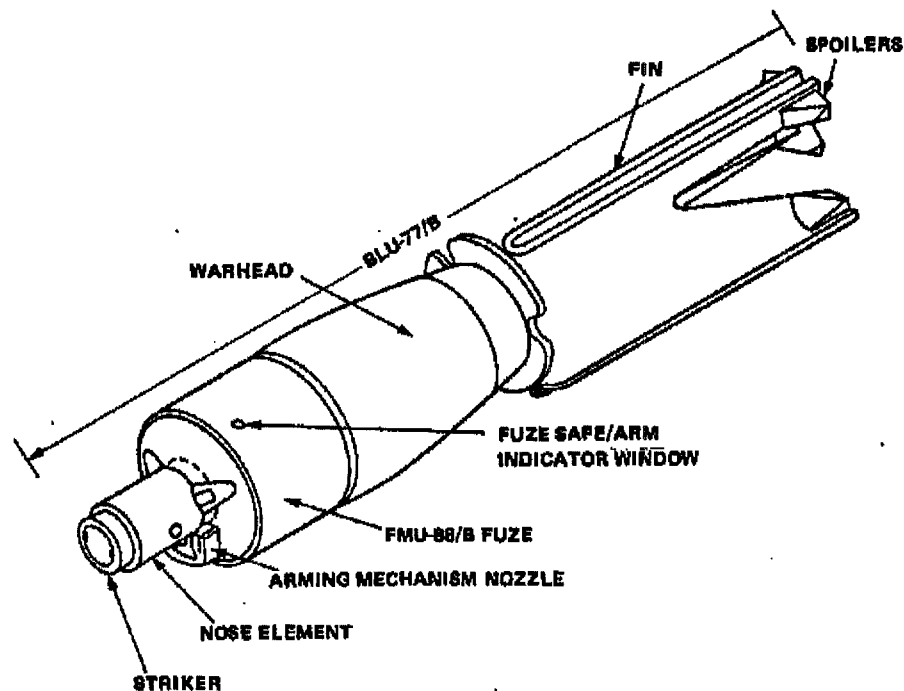
REMARKS

CHAPTER: 3 SERIES: AF
DESIGNATION: BLU- 24/B
Bomblet Fuze

0360

3-6

F-3

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: NSWC, Code G44

CONTACT: J. Abell
AV 290-1545

STATUS: Procurement Std

USER: Navy

ASSY DWG: 488AS100

PARTS LIST: PL 488AS100

SPEC: AS 2592

NSN:

PRIOR NOMENCLATURE:

REPLACES: None

GENERAL

MUNITION: Submunition (APAM),
BLU- 77/B

USE: HE and AP

LOCATION: Integral with Bomblet

BALLISTIC LEVELS:

ROTATION: Free Fall

SETBACK:

VELOCITY: 550 KIAS

CREEP:

0361

SERIES: N CHAPTER: 3
DESIGNATION: FMU- 88/B
Bomblet Impact Fuze

F-4

MIL-HDBK-145
7 October 1980

ARMING DATA

FIRST SAFETY:

Physical lock on vane when loaded
in dispenser

SECOND SAFETY:

Air velocity discrimination
No-arm 120, all-arm 225 KIAS

OTHER SAFETY:

DELAY:

1.3 sec at 225 KIAS
.9 sec at 550 KIAS

SAFE/ARM CONDITION:

Window Indicator

PHYSICAL DATA

WEIGHT: .5 oz (140 gm)

TOTAL LENGTH: 4.63 in (11.75 cm)

CROSS SECTION: 1.5 in (3.8 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Stab 488AS155

DETONATORS: Stab 488AS144

LEAD:

BOOSTER: PBXN-5, 2605849

OTHER: Pyrotechnic elements:
488AS150, 488AS157 and 2877501

FUNCTIONING DATA

MODE(S): Impact, Superquick

TYPE: Mechanical

CHARACTERISTICS:

Superquick on hard targets;
airburst on soft targets

TARGET: Antipersonnel, antimaterial

SENSITIVITY:

REMARKS

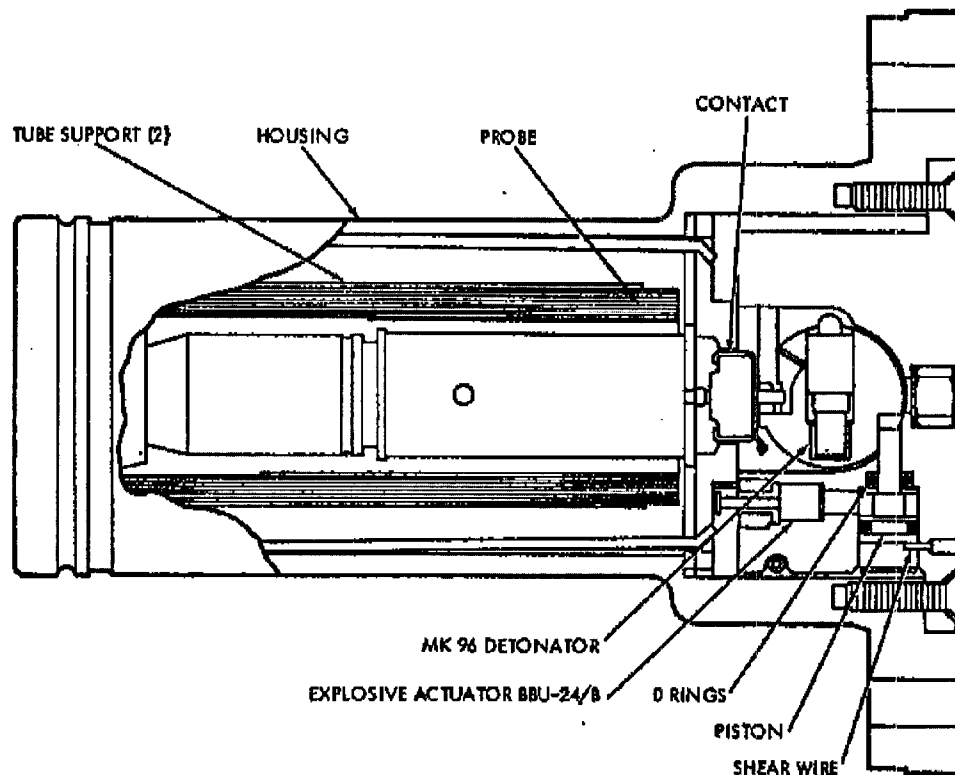
Fuze utilizes a flutter arming mechanism.

CHAPTER: 3 SERIES: N
DESIGNATION: FMU- 88/B
Bomblet Impact Fuze

0362

3-8

F-5



IDENTIFICATION

AGENCY: NSWC, Code G43
 CONTACT: W. Pickler
 AV 290-1663
 STATUS: Procurement Std
 USER: Navy Marines
 ASSY DWG: 367AS140
 PARTS LIST: PL 367AS140
 SPEC: AS 2513
 NSN:
 PRIOR NOMENCLATURE: XWO-143A/B
 REPLACES: FMU-74/B

GENERAL

MUNITION: BLU-73/B FAE bomb
 (Large Bomblet)
 USE: Fuel-Air-Explosive Blast
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: Free Fall
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 3
 DESIGNATION: FMU-95/B
 Bomb Impact Fuze

0363

3-9

F-6



MIL-HDBK-145
1 October 1980

ARMING DATA**FIRST SAFETY:**

Piston lock on rotor initiated
by Master Dispenser Fuze.

SECOND SAFETY:

Lanyard slaved to deployment of
bombs from dispenser

OTHER SAFETY:

Self-destruct

DELAY:**SAFE/ARM CONDITION:**

Cap in place, probe not deployed

FUNCTIONING DATA

MODE(S): Impact, short standoff

TYPE: Mechanical, Piezoelectric

CHARACTERISTICS:

Functions 4 ft. AGL; SD
at 75 to 110 sec after
dispenser opening

TARGET: Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 2.0 lb (907.18 gm)

TOTAL LENGTH: 5.0 in (12.7 cm)

CROSS SECTION: 4.25 in (10.8 cm) base

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 96 Mod 0 (Electric) ✓
Mk 95 Mod 0 (Stab)

LEAD: 135 MG Tetryl

BOOSTER:

OTHER: Delay cord assy.; Explosive
explosive actuator BBU-24/B

REMARKS

Has inertia back-up firing mode. Used with CBU-72/B and CBU-55A/B FAE
weapon systems.

CHAPTER: 3 SERIES: N
DESIGNATION: FMU- 95/B
Bomb Impact Fuze

0364

3-10

F-7

IDENTIFICATION

AGENCY: Eglin AFB, ADTC/SD3

CONTACT: O. Foley
AV 872-2896

STATUS: Development

USER: AF

ASSY DWG:

PARTS LIST:

SPEC:

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: Cluster Bomb, 6 1/2 inches
CBU-87/BUSE: Armor Penetrating, Fragmentation
and Incendiary

LOCATION: Tail

BALLISTIC LEVELS:

ROTATION:

SETBACK:

VELOCITY:

CREEP:

SERIES: AF CHAPTER: 3
DESIGNATION: BLU- 97/B
Bomblet, Fuze for

3-11

0365

F-8

MIL-HDBK-145
7 October 1980

ARMING DATA

FIRST SAFETY:

Confinement

SECOND SAFETY:

Velocity Discrimination

No arm - 75 knots

All arm - 175 knots

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH:

CROSS SECTION:

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

Piezo Crystal

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: CM91 and Mk 96

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S): Impact OMNI Direction

TYPE: Mechanical, Piezoelectric

CHARACTERISTICS:

TARGET: Ground, Armor, material

SENSITIVITY:

REMARKS

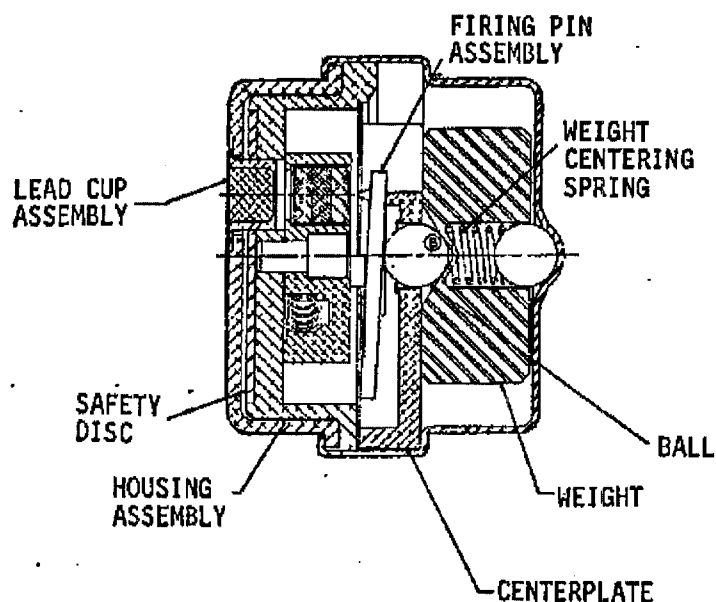
Item is in development - too early to define details at this time.

CHAPTER: 3 SERIES: AF
DESIGNATION: BLU- 97/8
Bomblet, Fuze for

0366

3-12

F-9

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCE-M
 CONTACT: A. King
 AV 880-3970
 STATUS: Procurement Std
 USER: Army, Navy, AF
 ASSY DWG: 9207971
 PARTS LIST: 9207971
 SPEC: MIL-F-50454
 NSN: 1330-01-058-1643
 PRIOR NOMENCLATURE: XM915, T1029
 REPLACES: M219

GENERAL

MUNITION: Cluster Bomblets and Submunition Grenades
 USE: BLU-26/B, BLU-61A/B, BLU-63/B & -63A/B, & M251 W/H for Lance Missile, MGM-52 (XM72 & 74 Gren)
 LOCATION: Center of bomblet
 BALLISTIC LEVELS:
 ROTATION: 45 rps
 SETBACK: None
 VELOCITY: 610 m/s (aircraft)
 CREEP:

SERIES: A CHAPTER: 3
 DESIGNATION: M219A1
 Grenade Fuze

3-13

0367

F-10

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Separation of bomblets
from Dispenser

SECOND SAFETY:

Air spin caused by Flutes on
bomblet, 40 rps non arm, 53 arm

OTHER SAFETY:

None

DELAY:

200 ft Delay Arming after Disp

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): Impact

TYPE: Mechanical

CHARACTERISTICS:

All ways functioning
No impact delay

TARGET: Ground-Personnel

SENSITIVITY:

600 gm perpendicular to spin axis

PHYSICAL DATA

WEIGHT: .053 lb (24.00 gm)

TOTAL LENGTH: 0.842 in (2.14 cm)

CROSS SECTION: 1.01 in (2.56 cm)

INTRUSION: 0.842 in (2.14 cm) depth
1.01 in (2.57 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Wound spring for Rotor

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M55 Stab

LEAD: 36 mg RDX

BOOSTER: 1.45 gm RDX

OTHER:

REMARKS

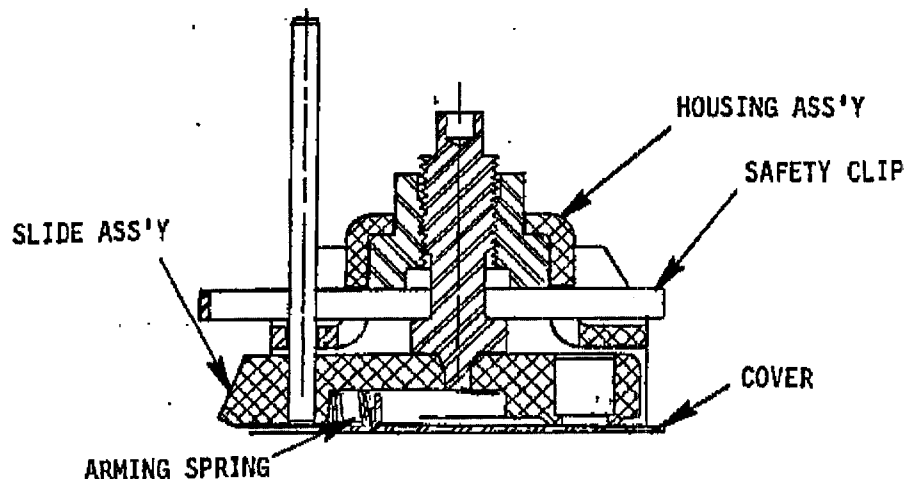
Mod M219 is used with CBU-57/A (BLU-69/B). M219 differs in that it had 3
hinged weights in place of one large firing weight.

CHAPTER: 3 SERIES: A
DESIGNATION: M219A1
Grenade Fuze

0368

3-14

F-11



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-SS

CONTACT: F. Ulrich
AV 880-5469

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9215350

PARTS LIST: 9215350

SPEC: MIL-F-50950A

NSN: 1330-01-052-4928

PRIOR NOMENCLATURE: XM223

REPLACES: None

GENERAL

MUNITION: Submunition Grenade for
155mm How and 8 in HowUSE: M42 and M46 Dual Purpose Grenade
for HE, ICM, M483A1 and M509A1

LOCATION: Top of Grenade

BALLISTIC LEVELS:

ROTATION: 215 rps

SETBACK: 15,000 g

VELOCITY: 759 m/s

CREEP:

SERIES: A	CHAPTER: 3
DESIGNATION: M223	
Grenade Fuze	

3-15

0369

F-12

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Expulsion from Artillery Shell
(grenades restrain slider)

SECOND SAFETY:

Rotation of arming screw,
turned by tape assembly in air
stream

OTHER SAFETY:

None

DELAY:

Very short

SAFE/ARM CONDITION:

Yes
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Impact

TYPE: Mechanical, inertial

CHARACTERISTICS:

Non Delay

TARGET: Ground-Personnel, Materiel

SENSITIVITY:

1/32 in Steel, 60 degrees obliq.,
100 fps impact

PHYSICAL DATA

WEIGHT: 0.025 lb (11.31 gm)

TOTAL LENGTH: 1.3 (3.30 cm)

CROSS SECTION: 1.0 (2.54 cm)

INTRUSION: None

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Compressed Slider Spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M55 Stab

LEAD: None

BOOSTER: (In Grenade)

OTHER:

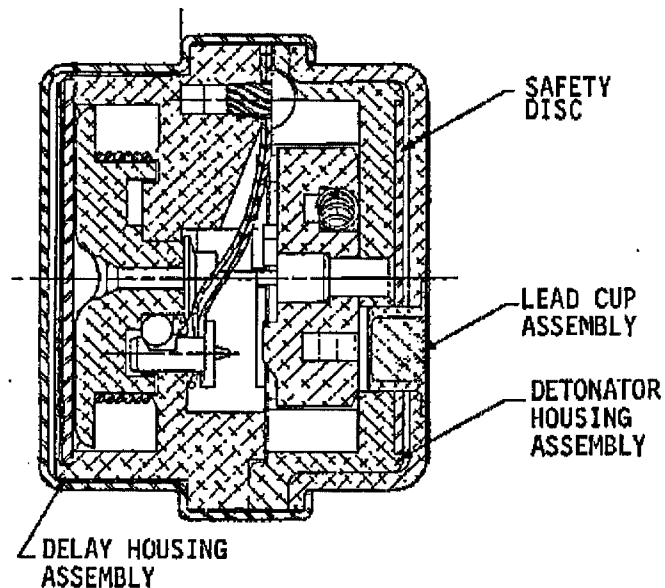
REMARKS

CHAPTER: 3 SERIES: A
DESIGNATION: M223
Grenade Fuze

0370

3-16

F-13



IDENTIFICATION

AGENCY: ARADCOM, DRDAR-LCU-SS

CONTACT: S. Gordon
AV 880-3240

STATUS: Procurement Std

USER: Navy, AF

ASSY DWG: 9211057

PARTS LIST: 9211057

SPEC: AEI-367

NSN: Not assigned

PRIOR NOMENCLATURE: XM224

REPLACES: XM218

GENERAL

MUNITION: Cluster Bomblets

USE: BLU-59/B (CBU-49/B), BLU-86/B
(CBU-75A/B)

LOCATION: Center of bomblet

BALLISTIC LEVELS:

ROTATION: 45 rps

SETBACK: None

VELOCITY: 360 m/s (aircraft)

CREEP:

SERIES: A CHAPTER: 3
DESIGNATION: M224
Grenade Fuze

0371

3-17

F-14

ARMING DATA

FIRST SAFETY:

Separation from Dispenser

SECOND SAFETY:

Spin 40 rps non arm, 53 arm

OTHER SAFETY:

None

DELAY:

Approx 60 m after dispensing

SAFE/ARM CONDITION:

No

PHYSICAL DATA

WEIGHT: 0.055 lb (25.0 gm)

TOTAL LENGTH: 0.78 in (1.98 cm)

CROSS SECTION: 1.01 in (2.57 cm)

INTRUSION: 0.78 in (1.98 cm)
dia 1.01 in (2.57 cm)

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Loaded Springs for Rotor,
Delay, and firing pin

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M55 Stab

LEAD: 36 mg RDX

BOOSTER: 1.45 gm RDX (in Bomblet)

OTHER:

FUNCTIONING DATA

MODE(S): Delay after Impact

TYPE: Mechanical, Fluidic

CHARACTERISTICS:

Delay 0 to 30 min after impact
(50% under 8 min)

TARGET: Ground-Personnel

SENSITIVITY:

Not Applicable

REMARKS

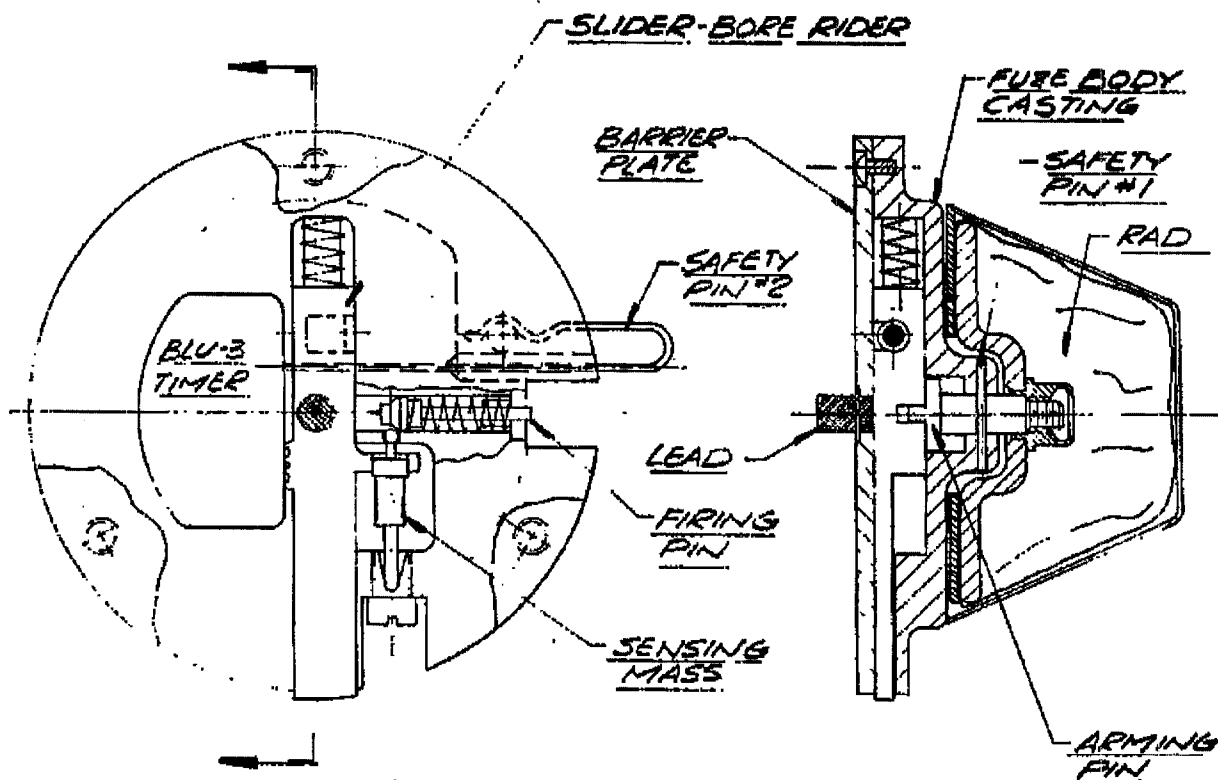
Silicone filled Sac deformed for delay. Same as M218 except has 0-30 min delay functioning instead of 0-120 min.

CHAPTER: 3 SERIES: A
DESIGNATION: M224
Grenade Fuze

3-18

G-1

0372

MIL-HDBK-145
1 October 1980**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: A. Zacharin
AV 880-6477

STATUS: Development

USER: Army

ASSY DWG: Not yet assigned

PARTS LIST:

SPEC: MIL-F not yet assigned

NSN: Not yet assigned

PRIOR NOMENCLATURE: None

REPLACES: None

GENERALMUNITION: Submunition for 2.75
Rockets for HelicoptersUSE: XM73 Grenade HE MP for Warhead
XM261

LOCATION: Center Grenade

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 g

VELOCITY: 700 m/s rocket
760 m/s w/hell

CREEP:

SERIES: A
DESIGNATION: XM230
Grenade Fuze

CHAPTER: 3

0373

3-19

G-2

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Ejection from warhead, Bore rider

SECOND SAFETY:

Ram air deceleration,
shear pin

OTHER SAFETY:

Delay mech in design

DELAY:

1.5 plus or minus 1 sec

SAFE/ARM CONDITION:

Yes
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Impact

TYPE: Mechanical

CHARACTERISTICS:

SQ "Always"

TARGET: Ground-Personnel, Materiel

SENSITIVITY:

To be determined

PHYSICAL DATA

WEIGHT: .116 lb (52.8 gm)

TOTAL LENGTH: 0.60 in (1.52 cm)

CROSS SECTION: 2.208 in (5.61 cm)

INTRUSION: 0.23 in (0.58 cm) depth
2.208 in (5.61 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M55 Stab

LEAD: To be determined

BOOSTER:

OTHER:

REMARKS

CHAPTER: 3 SERIES: A
DESIGNATION: XM230
Grenade Fuze

3-20

0374

G-3



CHAPTER 4

M
I
N
E
S

0375

4-1

G-4

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-SA

CONTACT: D. Davine
AV 880-6305

STATUS: Procurement Std

USER: Army

ASSY DWG: See Remarks

PARTS LIST:

SPEC: See Remarks

NSN: Not a separate item

PRIOR NOMENCLATURE: XM622, XM34 Mine

REPLACES: None

GENERAL

MUNITION: Aerial Land Mine for
HelicopterUSE: Mine AT in SUU-13D/A Dispenser
of M56 Mine Dispersing
Subsystem

LOCATION: Integral with mine

BALLISTIC LEVELS:

ROTATION: None

SETBACK: 20,000 g

VELOCITY: 60 m/s

CREEP: Neg

SERIES: A CHAPTER: 4
DESIGNATION: M 56
AT Mine Subsystem, fuze for

4-3

0376

G-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch Signal

SECOND SAFETY:

Ejection from Dispenser, bore rider

OTHER SAFETY:

Ground Impact, 100 g min

DELAY:

1 to 2 minutes, Electro-Chem cell

SAFE/ARM CONDITION:

No; Meets MIL-STD-1316A

FUNCTIONING DATA

MODE(S): Influence, AD, SD

TYPE: Mechanical, Electronic

CHARACTERISTICS:

Pressure-Time

TARGET: Ground-Tank/Vehicle

SENSITIVITY:

50 to 200 lbs

PHYSICAL DATA

WEIGHT: Integral with Mine

TOTAL LENGTH: 1.55 in (3.94 cm)

CROSS SECTION: 2.57 in (6.53 cm)

INTRUSION: 1.685 in (4.28 cm)

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Mercury Zinc Cell, 7V
Loaded Slider Spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: T20 Elec

LEAD: 120 mg RDX

BOOSTER: 8 gm RDX

OTHER:

REMARKS

DWGS: 9281588 (S&A), 9282563 (Elec Assy), 9285438 (Mine) SPECS: MIL-F-48293
(S&A), MIL-E-48289 (Elec Assy), MIL-M-48351 (Mine)

CHAPTER: 4 SERIES: A

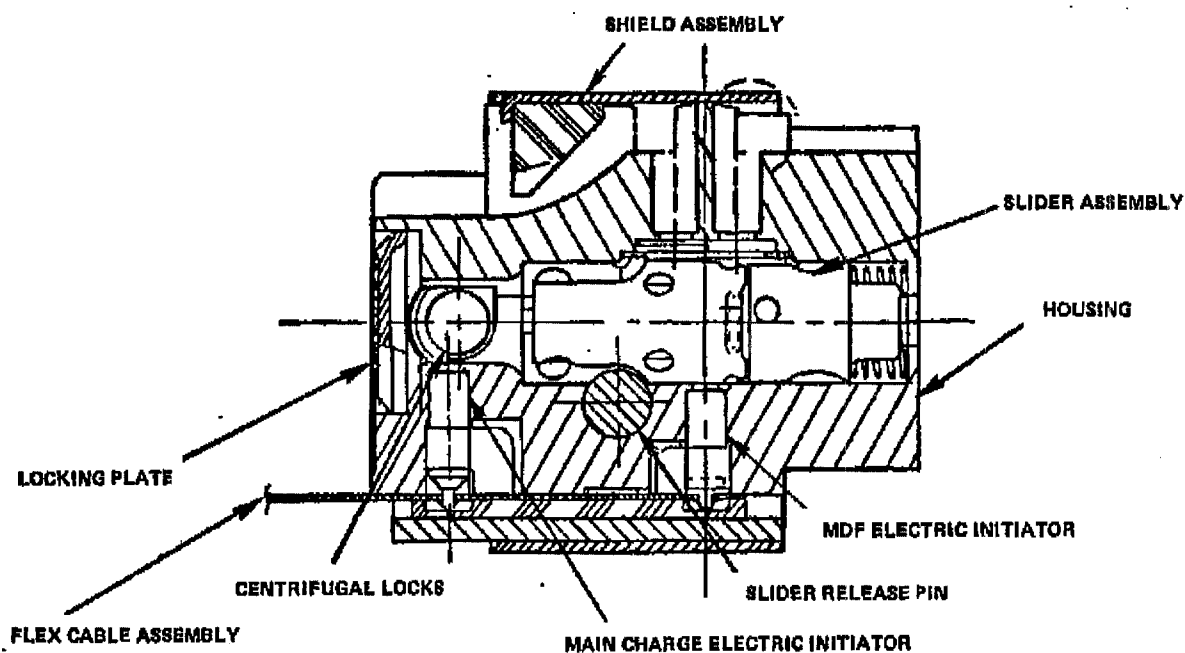
DESIGNATION: M 56

AT Mine Subsystem, fuze for

0377

4-4

G-6



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-SM
 CONTACT: R. Resch, I. McKechnie
 AV 880-5348
 STATUS: Procurement Std
 USER: Army
 ASSY DWG: See Remarks
 PARTS LIST:
 SPEC: See Remarks
 NSN: 1345-01-076-3497 (Mine)
 PRIOR NOMENCLATURE: GVDMS
 REPLACES: None

GENERAL

MUNITION: Scatterable Land Mine
 for Ground Vehicle
 Dispenser, M128
 USE: Mine, AP, HE, M74
 LOCATION: Center, Face and Periphery
 BALLISTIC LEVELS:
 ROTATION: 53 rps
 SETBACK: N/A
 VELOCITY: 20 m/s
 CREEP: Neg

SERIES: A CHAPTER: 4
 DESIGNATION: M 74
 AP Mine, Fuze for

0378

4-5
6-7

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Spin, 16 rps non arm, 42 arm

SECOND SAFETY:

Magnetic coupling device (MCD)
activated at dispenser exit

OTHER SAFETY:

Firing circuit enable
electronic delay timer

DELAY:

Yes, Classified

SAFE/ARM CONDITION:

Yes (S and A)

FUNCTIONING DATA

MODE(S): Trip Line, AD, SD

TYPE: Mechanical, Electronic

CHARACTERISTICS:

40 ft trip line 4 ea end
Antidisturbance
Selectable Digital Elec Timer SD,
2 times

TARGET: Ground-Personnel

SENSITIVITY:

Trip Line 0.3 lb non funct
0.9 funct, AD - 30 deg tilt max
SD on Low Voltage or Selected Time

PHYSICAL DATA

WEIGHT: 0.21 lb (97.0 gm)

TOTAL LENGTH: 1.39 in (3.53 cm)

CROSS SECTION: 1.17 in (2.97 cm)

INTRUSION: 1.39 in (3.53 cm) depth
1.17 in (2.97 cm) dia

THREAD SIZE: None

OTHER:

Sensor, AD & SD circuits integral
w/mine elx, tripline integral w/mine

POWER SUPPLY:

Battery & Lead Assy, 9292678

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Mine battery - 9292624

DETONATORS: M100 Elec

LEAD: PA-513 (center) PBXN-5
PA-517 (main) 4 ea, PBXN-5

BOOSTER: 1.58 gm Comp A-5
(in mine) 4 ea

OTHER: Lead: PA-509 (in mine) 4 ea,
PBXN-5

REMARKS

GEMSS - Ground Emplaced Mine Scatterable System

GVDMS - Ground Vehicle Dispensing Mine System

DWGS: 9292700 (S&A), 9292965 (Elec Assy), 9292600 (Mine)

SPECS: MIL-S-63302 (S&A), MIL-E-63300 (Elec Assy), MIL-M-63304 (Mine)

CHAPTER: 4 SERIES: A

DESIGNATION: M 74

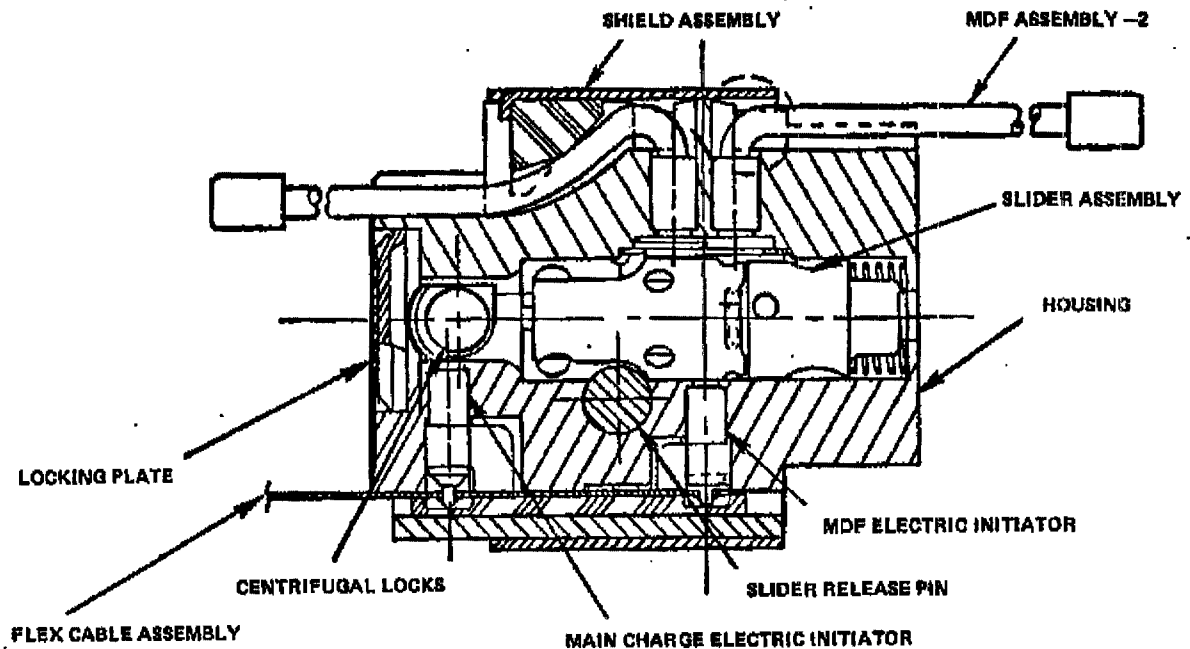
AP Mine, Fuze for

0379

4-6

G-8

1 October 1980



IDENTIFICATION

AGENCY: ARRADCOM, ORDAR-LCU-SM

CONTACT: R. Resch, S. Polanski
AV 880-5348

STATUS: Procurement Std

USER: Army

ASSY DWG: See Remarks

PARTS LIST:

SPEC: MIL-S-63302, MIL-M-63305

NSN: 1345-01-078-4104 (Mine)

PRIOR NOMENCLATURE: GVDMS

REPLACES: None

GENERAL

MUNITION: Scatterable Land Mine
for Ground Vehicle
Dispenser, M128

USE: Mine, AT, HE, M75

LOCATION: Center and Face of Mine

BALLISTIC LEVELS:

ROTATION: 53 rps

SETBACK: N/A

VELOCITY: 20 m/s

CREEP: Neg

SERIES: A

CHAPTER: 2

DESIGNATION: M 75
AT Mine, fuze for

0380

A-7
6-9

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Spin, 16 rps non arm, 42 arm

SECOND SAFETY:

Magnetic coupling device
activated at dispenser exit

OTHER SAFETY:

Firing circuit enable
Electronic delay timer

DELAY:

Yes, classified

SAFE/ARM CONDITION:

Yes (S&A)

FUNCTIONING DATA

MODE(S): Influence, AD, SD

TYPE: Magnetic, Mechanical, Elx.

CHARACTERISTICS:

Senses Tracked Vehicle
Antidisturbance
Selectable Digital Elx SD Timer

TARGET: Ground-Tank, Vehicle

SENSITIVITY:

Sensitivity classified
AD 30 degrees Tilt
SD on voltage drop or select time

PHYSICAL DATA

WEIGHT: 0.22 lb (99.8 gm) S&A

TOTAL LENGTH: 1.39 in (3.53 cm)

CROSS SECTION: 1.17 in (2.97 cm)

INTRUSION: 1.39 in (3.53 cm)
1.17 in (2.97 cm)

THREAD SIZE: None

OTHER:

Sensor, AD, and SD circuits
Integral w/mine electronics

POWER SUPPLY:

Power Supply Assy, 9292208

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Mine Pwr Supply - 9292624

DETONATORS: PA 506 Elec Delay
M100 Elec

LEAD: PA-513 center, PA-517 main 4 ea
PA-516 transfer

BOOSTER: 13.69 gm PBXN-5 (in mine)

OTHER: MDF: PBXN-5 and HMX 2 ea
Clearing Chg: 750 mg M5 Prop.
2 ea (in mine)

REMARKS

GEMSS = Ground Emplaced Mine Scatterable System
GVDMS = Ground Vehicle Dispensed Mine System
DWG: 9328756 (S&A), 9292225 (Elec Assy), 9292227 (Mine)

CHAPTER: 4 SERIES: A
DESIGNATION: M 75
AT Mine, fuze for

0381

4-8

G-10

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-SM

CONTACT: J. Rehkamp
AV 880-5459

STATUS: Development

USER: Army, Marines

ASSY DWG: To be assigned

PARTS LIST:

SPEC: Not yet prepared

NSN: Not yet assigned

PRIOR NOMENCLATURE: STORMS

REPLACES: None

GENERAL

MUNITION: Off Route Land Mine
System

USE: Mine, AT, XM84

LOCATION: Face

BALLISTIC LEVELS:

ROTATION: None

SETBACK: None

VELOCITY: None

CREEP: None

SERIES: A CHAPTER: 4
DESIGNATION: XM 84
AT/AV Mine, fuze for

0382

4-9

G-11

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Switch & pull wire

SECOND SAFETY:

Electronic Timeout

OTHER SAFETY:

Barrier removal

DELAY:

approx 15 min

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Remote, Acoustic w/IR or RF

TYPE: See Remarks

CHARACTERISTICS:

Acoustic alerter signature
RF or IR final signature

TARGET: Ground-Tank, Vehicle

SENSITIVITY:

Classified

PHYSICAL DATA

WEIGHT: 35 lb (15.876 gm)

TOTAL LENGTH: To be determined

CROSS SECTION: To be determined

INTRUSION: To be determined

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Lithium or Lead Res Cell

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: In design

LEAD: In design

BOOSTER: In design

OTHER:

REMARKS

STORMS = Sensor Tank off Route Mine System

ORATMS = Off Route Anti Tank Mine System

Functioning Type is Electronic, Acoustic, Optical or Radiometric

CHAPTER: 4 SERIES: A

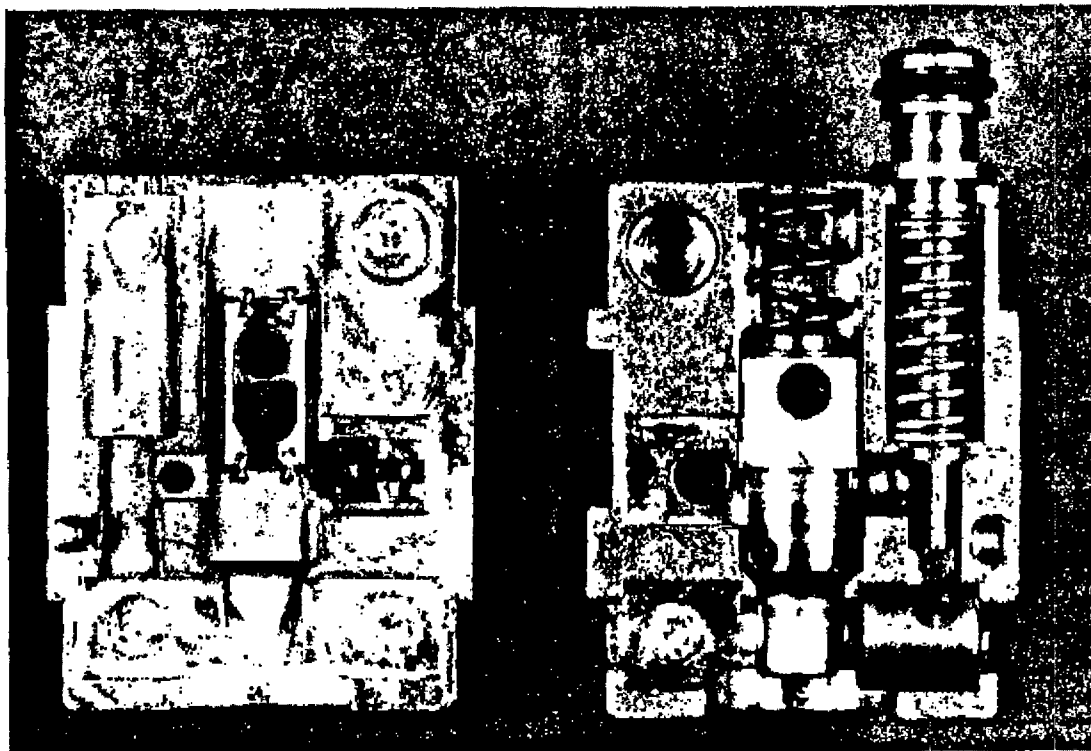
DESIGNATION: XM 84

AT/AV Mine, fuze for

0383

4-10

6-12

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCU-SM

CONTACT: J. Berzins
AV 880-6236

STATUS: Development

USER: AF, Navy, Marines

ASSY DWG: See Remarks

PARTS LIST:

SPEC: MIL- In preparation

NSN: Not separate issue

PRIOR NOMENCLATURE: None

REPLACES: None

GENERALMUNITION: Aerially Dispensed Land
Mines Dispensers SUU-58/B
(Mk 7) and SUU-66/B (TMD)USE: BLU-91/B(X1-1) Mine, AT
CBU-89/B (AF)
CBU-78/B (Navy)

LOCATION: Center and Face of Mine

BALLISTIC LEVELS:

ROTATION: Flettner Rotor

SETBACK: Negligible

VELOCITY: 200 to 700 knots
200 to 5000 ft altitude

CREEP:

SERIES: AF CHAPTER: 4
DESIGNATION: BLU- 91/B
AT Mine, fuze for

0384

4-11

A-2

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Magnetic induction signal

SECOND SAFETY:

Ejection from Dispenser,
Bore rider

OTHER SAFETY:

Digital Electronic Delay Timer

DELAY:

Yes, Classified

SAFE/ARM CONDITION:

Yes, S and A

FUNCTIONING DATA

MODE(S): Influence, SD

TYPE: Magnetic

CHARACTERISTICS:

Senses Tracked and wheeled
Vehicles.
Digital Elec SD Timer

TARGET: Grd-Tank, Vehicle

SENSITIVITY:

Classified
SD's on low voltage

PHYSICAL DATA

WEIGHT: 0.22 lb (100 gm) S&A

TOTAL LENGTH: 1.75 in (4.45 cm)

CROSS SECTION: 1.168 in (2.97 cm)

INTRUSION: depth 1.75 in (4.45 cm)
dia 1.168 in (2.97 cm)

THREAD SIZE: None

OTHER:

Sensor, AD and SD circuits
integral w/mine

POWER SUPPLY:

Lithium Reserve Cell, 9275567,
or high energy density cell,
9328787; 2 each

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Battery Initiator, 9292624

DETONATORS: M100 Elec
PA-506 Elec DelayLEAD: PA-513 center, PA-517 main 4 ea
PA-516 transfer 4 ea (in mine)

BOOSTER: 13.6 gm PBXN-5 (in mine)

OTHER: MDF, PBXN-5 and HMX 2 ea (in
Mine) Clear Chg: 750 mg M5 Prop.
2 ea (in Mine)

REMARKS

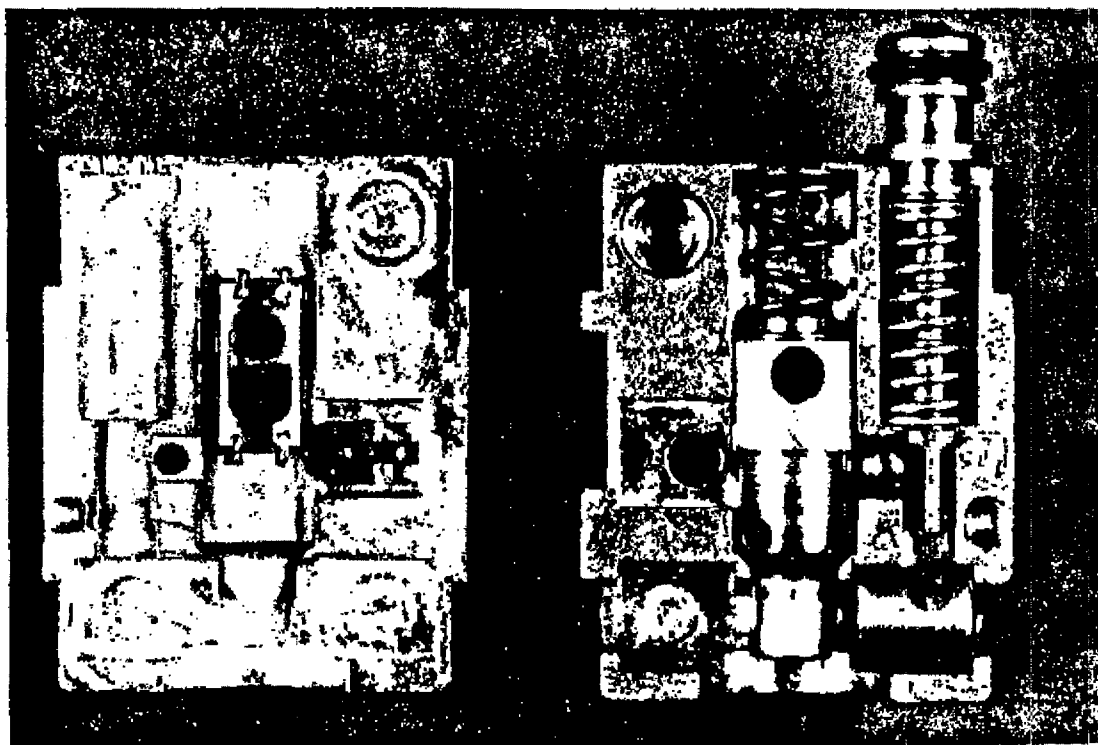
Assy Dwg 9330381 (BLU-91/B), 9330378 (Elec Assy), 9328692 (S&A)

CHAPTER: 4 SERIES: AF
DESIGNATION: BLU- 91/B
AT Mine, fuze for

0385

4-12

A-3

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCU-SM

CONTACT: J. Barzins
AV 880-6236

STATUS: Development

USER: AF, Navy, Marines

ASSY DWG: See Remarks

PARTS LIST:

SPEC: MIL- In preparation

NSN: Not separate issue

PRIOR NOMENCLATURE: None

REPLACES: None

GENERALMUNITION: Aerial Dispensed Land Mines
Dispensers SUU-58/B (Mk 7)
and SUU-66/B (TMD)USE: BLU-92/B (X1-1) AP Mine
CBU-78/B (Navy) and
CBU-89/B (AF)

LOCATION: Center, Face and Periphery

BALLISTIC LEVELS:

ROTATION: Flettner Rotor

SETBACK: Negligible

VELOCITY: 200 to 700 knots
200 to 5000 ft altitude

CREEP:

SERIES: AF CHAPTER: 4
DESIGNATION: BLU- 92/B
AP Mine, Fuze for

ARMING DATA

FIRST SAFETY:

Magnetic induction signal

SECOND SAFETY:

Bore rider, ejection from Disp.

OTHER SAFETY:

Digital Electronic Timer

DELAY:

Yes, Classified

SAFE/ARM CONDITION:

Yes, S and A

FUNCTIONING DATA

MODE(S): Trip Line, AD, SD

TYPE: Mechanical, Electronic

CHARACTERISTICS:

40 ft trip line, 8 each
Antidisturbance
Digital Elect Timer SD

TARGET: Ground-Personnel

SENSITIVITY:

Trip Line - 0.3 lb non funct
0.9 funct, AD - 30 degrees tilt

PHYSICAL DATA

WEIGHT: 0.22 lb (100 gm) S&A

TOTAL LENGTH: 1.75 in (4.45 cm)

CROSS SECTION: 1.17 in (2.97 cm)

INTRUSION: 1.75 in (4.45 cm) depth
1.17 in (2.97 cm) dia

THREAD SIZE: None

OTHER:

Sensor, AD and SD circuits
integral with mine

POWER SUPPLY:

Lithium Res Cell, 9275567, or
high energy density cell, 9328787;
2 each

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Battery Initiator, 9292624

DETONATORS: M100 Elec

LEAD: PA-513 center, PA-517 main 4 ea
PA-509 (in mine) 4 ea

BOOSTER: 1.58 gm Comp A-5 (in mine)
4 ea

OTHER:

REMARKS

ASSY DWGS: 9328743 (S&A), 9292725 (Elec Assy), 9292710 (Mine)

CHAPTER: 4 SERIES: AF
DESIGNATION: BLU- 92/B
AP Mine, Fuze for

0387

4-14

A-5

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-SM

CONTACT: J. Rosamila
AV 880-5694

STATUS: Development

USER: Army

ASSY DWG: See remarks

PARTS LIST:

SPEC: MIL-S- unknown, MIL-M- unknown

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES: None

GENERAL

MUNITION: Scatterable Land Mines
System Manually Emplaced
Dispenser, XM131

USE: Mine AP XM77

LOCATION: Center, Face and Periphery

BALLISTIC LEVELS:

ROTATION: Neg

SETBACK: Neg

VELOCITY: Neg

CREEP: Neg

SERIES: A CHAPTER: 4
DESIGNATION: XM131
AP Mine System, fuze for

4-15

0388

A-6

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

RF or Hardwire Signal

SECOND SAFETY:

Bore rider, Ejection from Disp.

OTHER SAFETY:

Magnetic inductive coupling
Digital Electronic Timer

DELAY:

Yes, Classified

SAFE/ARM CONDITION:

Yes, S and A

FUNCTIONING DATA

MODE(S): Trip Line, SD

TYPE: Mechanical, Electronic

CHARACTERISTICS:

Eight 40 ft trip lines
Digital Elec
SD, Fixed Time, RF Recycleable

TARGET: Ground-Personnel

SENSITIVITY:

Trip Line 0.3 lb nonfunc
0.9 funct

PHYSICAL DATA

WEIGHT: 0.22 lb (99.8 gm) S&A

TOTAL LENGTH: 1.75 in (4.45 cm)

CROSS SECTION: 1.17 in (2.97 cm)

INTRUSION: Depth 1.75 in (4.45 cm)
Dia 1.17 in (2.97 cm)

THREAD SIZE: None

OTHER:

Sensor and SD circuits
Integral with mine

POWER SUPPLY:

Lithium Reserve Cell 9275567,
or High energy density cell,
9328787, 2 each

EXPLOSIVE TRAIN

S&A DEVICE: Same as BLU-92, PEP2

PRIMER: Battery Initiator, 9292624

DETONATORS: M100 Elec

LEAD: PA-513 center, PA-517 main 4 ea
PA-509 (in mine) 4 ea

BOOSTER: 1.58 gm Comp A-5 (in mine)
4 ea

OTHER.

REMARKS

DWGS: 9328743 (S&A), In prep (Elec Assy), In prep (mine)

CHAPTER: 4 SERIES: A
DESIGNATION: XM131
AP Mine System, fuze for

0389

4-16

A-7

IDENTIFICATION	GENERAL
AGENCY: ARRADCOM, ORDAR-LCU-SM	MUNITION: Scatterable Land Mines System Manually Emplaced Dispenser, XM132
CONTACT: J. Rosamila AV 880-5694	USE: XM78 AT Mine
STATUS: Development	LOCATION: Center and Face of Mine
USER: Army	BALLISTIC LEVELS:
ASSY DWG: See remarks	ROTATION: Neg
PARTS LIST:	SETBACK: Neg
SPEC: MIL-S- unknown MIL-M- unknown	VELOCITY: Neg
NSN: Not assigned	CREEP: Neg
PRIOR NOMENCLATURE: None	
REPLACES: None	

SERIES: A CHAPTER: 4
DESIGNATION: XM132
AT Mine System, fuze for

4-17

0390

A-8

MIL-HDBK-145
7 October 1980

ARMING DATA

FIRST SAFETY:

RF or hard wire signal

SECOND SAFETY:

Bore rider, ejection from Dispenser

OTHER SAFETY:

Magnetic inductive coupling
Digital Electronic Timer

DELAY:

Yes, Classified

SAFE/ARM CONDITION:

Yes, S and A

FUNCTIONING DATA

MODE(S): Influence, SD

TYPE: Magnetic

CHARACTERISTICS:

Senses Tracked & Wheeled Vehicles
Digital Elec SD, Fixed Time,
RF recycleable.

TARGET: Gnd-Tank Vehicle

SENSITIVITY:

Classified
SD's on low voltage

PHYSICAL DATA

WEIGHT: 0.22 lb (99.8 gm) S&A

TOTAL LENGTH: 1.75 in (4.45 cm)

CROSS SECTION: 1.17 in (2.97 cm)

INTRUSION: 1.75 in (4.45 cm) depth
1.17 in (2.97 cm) dia

THREAD SIZE: None

OTHER:

Sensor and SD circuits
integral w/mine

POWER SUPPLY:

Lithium Reserve Cell 9275567
High Energy Density Cell
9328787, 2 each

EXPLOSIVE TRAIN

S&A DEVICE: Same as BLU-91 PEP 2

PRIMER: Battery Initiator, 9292624

DETONATORS: M100 Elec
PA-506 Elec Delay

LEAD: PA-513 center, PA-517 main 4 ea
PA-516 transfer 4 ea (in mine)

BOOSTER: 13.6 gm PBXN-5 (in mine)

OTHER: MDF, PBXN-5 and HMX 2 ea
(in mine) Clear Chg: 750 mg M5
Prop 2 ea (in mine)

REMARKS

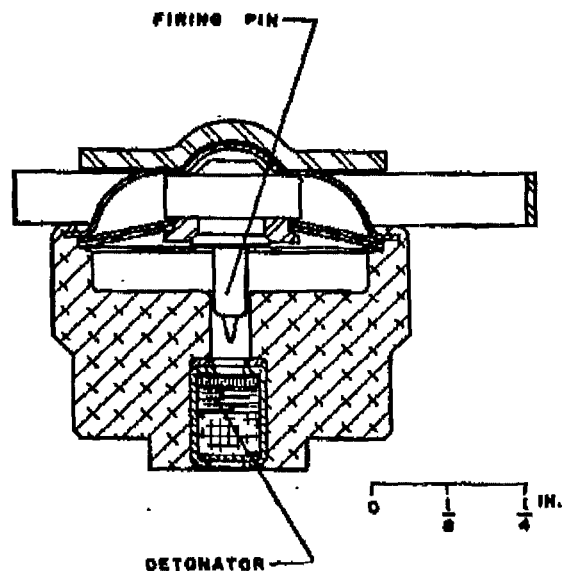
DWG: 9328692 (S&A), In prep (Elec Assy), In prep (mine)

CHAPTER: 4 SERIES: A
DESIGNATION: XM132
AT Mine System, fuze for

4-18

A-9

0391



IDENTIFICATION

AGENCY: ARRAJCOM, DRDAR-LCU

CONTACT: J. Meyer
AV 880-2575

STATUS: Procurement Std

USER: FMS

ASSY DWG: 73-9-55

PARTS LIST: 73-9-55

SPEC: MIL-F-11247

NSN: 1345-00-028-5078

PRIOR NOMENCLATURE: T17E2

REPLACES: T7 M600

GENERAL

MUNITION: Land Mine

USE: Mine, Anti Tank, Heavy, M15
and M6A2 and Light, M7A1

LOCATION: Top of Mine

BALLISTIC LEVELS:

ROTATION: None

SETBACK: None

VELOCITY: None

CREEP: None

SERIES: A CHAPTER: 4
 DESIGNATION: M603
 AT Mine Fuze

0392

4-19

A-10

ARMING DATA

FIRST SAFETY:

Pull Clip

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

Yes

PHYSICAL DATA

WEIGHT: 1.56 oz (44.1 gm)

TOTAL LENGTH: 1.18 in (3.00 cm)

CROSS SECTION: 1.14 in (2.90 cm)

INTRUSION: depth 1.18 in (3.00 cm)
dia 1.14 in (2.90 cm)

THREAD SIZE: None

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M45 Stab

LEAD: None

BOOSTER: M120 (in mine)

OTHER:

FUNCTIONING DATA

MODE(S): Pressure

TYPE: Mechanical

CHARACTERISTICS:

Bellville Washer

TARGET: Ground-Tank

SENSITIVITY:

140 to 240 lb

REMARKS

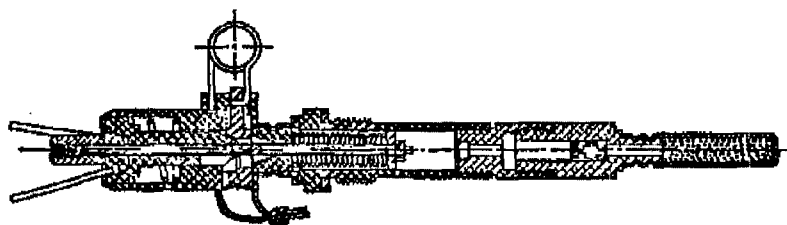
Practice Fuze is M604, 73-9-86, used with M12, M12A1 and M20 Antitank Practice Mines.

CHAPTER: 4 SERIES: A
DESIGNATION: M603
AT Mine Fuze

4-20

0393

A-11



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU

CONTACT: J. Meyer
AV 880-2575

STATUS: Procurement Std

USER: Army, FMS

ASSY DWG: 7548284

PARTS LIST: 7548284

SPEC: MIL-F-12774

NSN: 1345-01-050-2601

PRIOR NOMENCLATURE:

REPLACES: M6A1

GENERAL

MUNITION: Land Mine

USE: Antipersonnel, M16, M16A1
and M16A2

LOCATION: Top of Mine

BALLISTIC LEVELS:

ROTATION: None

SETBACK: None

VELOCITY: None

CREEP: None

SERIES: A CHAPTER: 4
DESIGNATION: M605
Mine Combination Fuze

4-21

0394

A-12

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull Safety Pin in Release Pin

SECOND SAFETY:

Pull Safety Pin in Firing Pin

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): Pressure or Trip Wire

TYPE: Mechanical

CHARACTERISTICS:

Belleville washer

TARGET: Ground, Personnel

SENSITIVITY:

3 to 15 pounds on pull wire
8 to 45 lbs on pressure prongs

PHYSICAL DATA

WEIGHT: 0.38 lb (170.1 gm)

TOTAL LENGTH: 7.14 in (17.53 cm)

CROSS SECTION: 1.75 in (4.45 cm)

INTRUSION: 4.17 in (10.60 cm) depth
0.80 in (2.03 cm) dia

THREAD SIZE: 5/8-11UNC-1A

OTHER:

POWER SUPPLY:

Loaded Firing Pin Spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M42 Perc

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: 470 mg Delay Comp Type II &
MIL-C-13739; Igniter
7548289, 648 mg A5 Blk Pdr

REMARKS

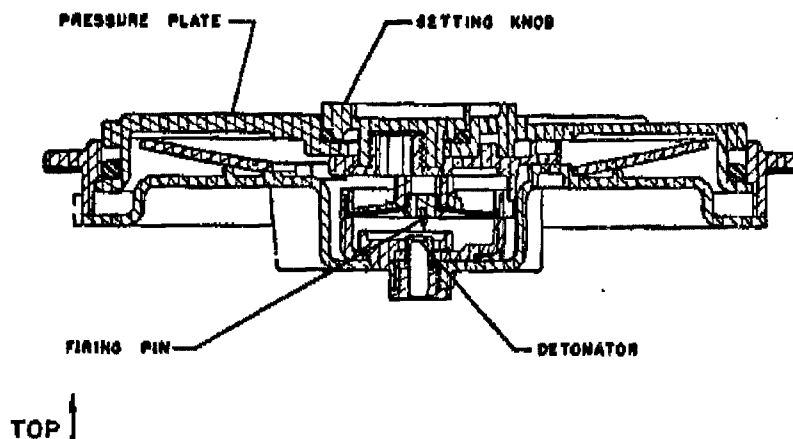
Similar to M6A1, M7A1 and M10A2 combination Mine Fuzes. Uses M25
Fuze wrench.

CHAPTER: 4 SERIES: A
DESIGNATION: M605
Mine Combination Fuze

0595

4-22

A-13

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCU

CONTACT: J. Meyer
AV 880-2575

STATUS: Procurement Std

USER: Army

ASSY DWG: 9220396

PARTS LIST:

SPEC: MIL-F-45061E

NSN:

PRIOR NOMENCLATURE: T1202

REPLACES: None

GENERAL

MUNITION: Land Mine

USE: Antitank, HE, Non Metallic, M19

LOCATION: Top of Mine

BALLISTIC LEVELS:

ROTATION: None

SETBACK: None

VELOCITY: None

CREEP: None

SERIES: A
DESIGNATION: M606
AT Mine Fuze

CHAPTER: 4

0396

A-14

4-23

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Safety Clip Cord

SECOND SAFETY:

Rotatable setting knob

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Pressure

TYPE: Mechanical

CHARACTERISTICS:

TARGET: Ground-Tank

SENSITIVITY:

300-500 lbs force

PHYSICAL DATA

WEIGHT: 2.43 lb (1102.2 gm)

TOTAL LENGTH: 2.7 in (6.86 cm)

CROSS SECTION: 10.0 in (225.4 cm)

INTRUSION: Depth varying
Dia varying

THREAD SIZE: None

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M50 Stab

LEAD: None

BOOSTER: In mine not fuze

OTHER:

REMARKS

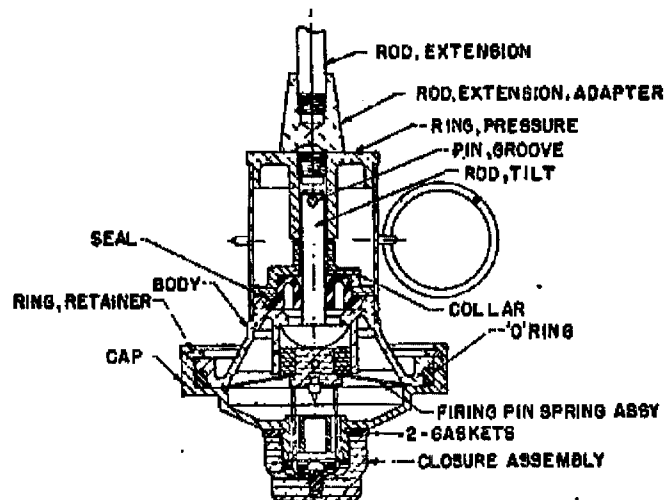
All plastic generally polystyrene or woven glass fabric and resin.

CHAPTER: 4 SERIES: A
DESIGNATION: M606
AT Mine Fuze

4-24

0397

B-1

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCU
 CONTACT: J. Meyer
 AV 880-2575
 STATUS: Procurement Std
 USER: Army, FMS
 ASSY DWG: 8833783
 PARTS LIST: 8833783
 SPEC: MIL-F-45429, MIL-F-45430
 NSN: 1345-00-069-3061 and -077-2187
 PRIOR NOMENCLATURE: T1200E2
 REPLACES: None

GENERAL

MUNITION: Land Mine
 USE: Mine, Antitank, HE, Heavy, M21
 LOCATION: Top of Mine
 BALLISTIC LEVELS:
 ROTATION: None
 SETBACK: None
 VELOCITY: None
 CREEP: None

SERIES: A CHAPTER: 4
 DESIGNATION: M607
 AT Mine Fuze

0398

4-25

B-2

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull Ring of Cotter Pin

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

Yes, broken plastic collar

FUNCTIONING DATA

MODE(S): Tilt Rod or Pressure

TYPE: Mechanical

CHARACTERISTICS:

Fuze ignites blk pdr
expelling charge in Mine
Belleville washer

TARGET: Ground, Tank

SENSITIVITY:

290 lb vertical load thru 1/8 in or
3.75 lb thru 20 degrees of tilt rod

PHYSICAL DATA

WEIGHT: 0.53 lb (240.4 gm)

TOTAL LENGTH: 3.75 (9.52 cm)

CROSS SECTION: 2.83 (7.19 cm)

INTRUSION: 0.25 in (.64 cm)

THREAD SIZE: 3/4-12NS-2A'

OTHER:

24 in (61 cm) tilt rod extension

POWER SUPPLY:

Belleville washer

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M46 Stab

LEAD: None

BOOSTER: In Mine

OTHER:

REMARKS

Uses Fuze wrench, M26

CHAPTER: 4 SERIES: A
DESIGNATION: M607
AT Mine Fuze

4-26

0399

B-3

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-SM
CONTACT: S. Glassman
AV 880-3903
STATUS: Procurement Std
USER: Army, Marines
ASSY DWG: See remarks
PARTS LIST:
SPEC: MIL-M-48186
NSN: See remarks
PRIOR NOMENCLATURE: XM67/72 AP Mines
REPLACES: None

GENERAL

MUNITION: Scatterable land mines for
proj for 155mm How, M1A1E1,
M109, M109A1 & M198

USE: Mine, AP for Proj,

LOCATION:

BALLISTIC LEVELS:

ROTATION:

SETBACK:

VELOCITY:

CREEP:

SERIES: A CHAPTER: 4
DESIGNATION: M692/731
Projectile, fuze for mine for

B-4

4-27

8400

MIL-HDBK-145
1 October 1980

ARMING DATA FIRST SAFETY: SECOND SAFETY: OTHER SAFETY: DELAY: SAFE/ARM CONDITION:	PHYSICAL DATA WEIGHT: TOTAL LENGTH: CROSS SECTION: INTRUSION: THREAD SIZE: OTHER:
FUNCTIONING DATA MODE(S): TYPE: CHARACTERISTICS: TARGET: SENSITIVITY:	POWER SUPPLY: EXPLOSIVE TRAIN S&A DEVICE: PRIMER: DETONATORS: LEAD: BOOSTER: OTHER:

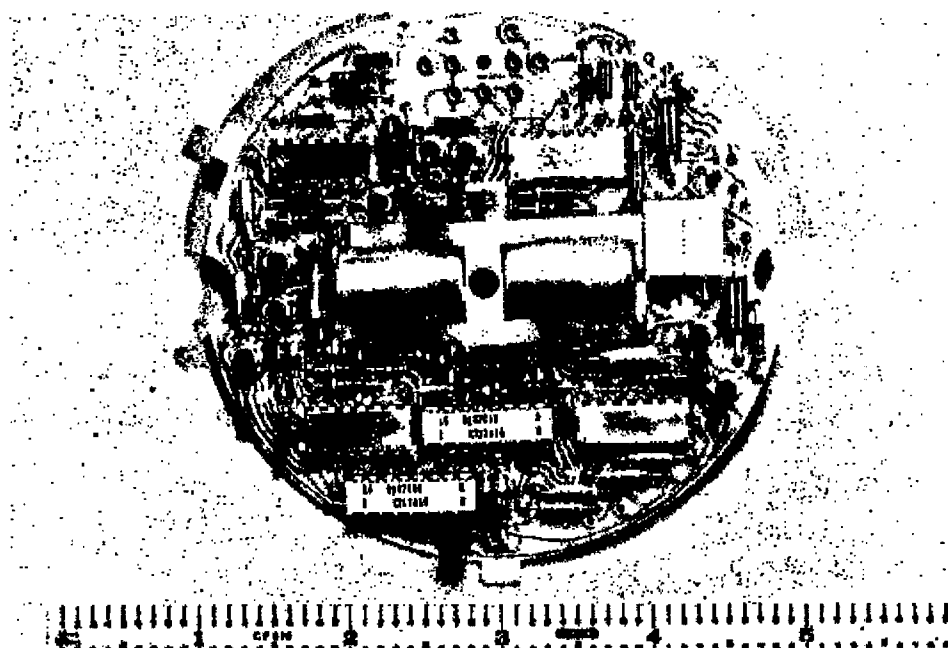
REMARKS

CHAPTER: 4 SERIES: A
 DESIGNATION: M692/731
 Projectile, fuze for mine for

0401

4-28

B-5



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-SM

CONTACT: S. Glassman
AV 880-3903

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: See Remarks

PARTS LIST:

SPEC: MIL-S-48747, MIL-E-63241

NSN: See Remarks

PRIOR NOMENCLATURE: XM70/73 AT Mines

REPLACES: None

GENERAL

MUNITION: Scatterable Land Mines for
Proj for 155mm How, M1A1E1,
M109, M109A1, and M198USE: Antitank Mines
for M718 and M741 AT Shell

LOCATION: Center and Face of Mine

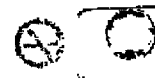
BALLISTIC LEVELS:

ROTATION: 265 rps

SETBACK: 15,000 g

VELOCITY: 792 m/s

CREEP:

SERIES: A CHAPTER: 4
DESIGNATION: M718/741 Proj
AT Projectile, fuze for

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 124 g non arm,
834 arm

SECOND SAFETY:

Spin, 30 rps non arm, 50 arm

OTHER SAFETY:

Set forward of ejection from shell
233 g non arm, 934 arm

DELAY:

Delay Arming Classified

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316A

FUNCTIONING DATA

MODE(S): Influence, AD, SD

TYPE: Magnetic

CHARACTERISTICS:

Magnetic, Elect SD Timer
Antidisturbance

TARGET: Ground-Tank/Vehicle

SENSITIVITY:

Sensitivity Classified
AD - 15 degrees Tilt

PHYSICAL DATA

WEIGHT: 0.44 lb (200.8 gm) S&A

TOTAL LENGTH: 1.4in(3.5 cm)

CROSS SECTION: 1.2in(3.0 cm)

INTRUSION: 1.4in(3.5 cm)

THREAD SIZE: None

OTHER:

Remainder: 235gm, 4.06cm long,
11.53cm dia, no thread

POWER SUPPLY:

Loaded Spring for Slider in S&A
2 Lithium Reserve Cells

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: PA-505 Stab (Battery)

DETONATORS: M100 Elec and PA 506
Elec Delay

LEAD: PA-512, PA-513 and PA-514

BOOSTER: 13.5 g PBXN-5, 9277827
in mine

OTHER:

REMARKS

NSN of M718 is 1320-01-050-6059, of M741 is 1320-01-050-7966. No NSN of mines or fuzes.

RAAMS = Remote Artillery Antitank Mine System. Mines for M718 and M741 Proj differ only in SD Times.

DWG: 9278015 (S&A), 92778811 (Elec Assy M741), 9278012 (Elec Assy M718).

CHAPTER: 4 SERIES: A

DESIGNATION: M718/741 Proj

AT Projectile, fuze for

4-30

0403

B-7

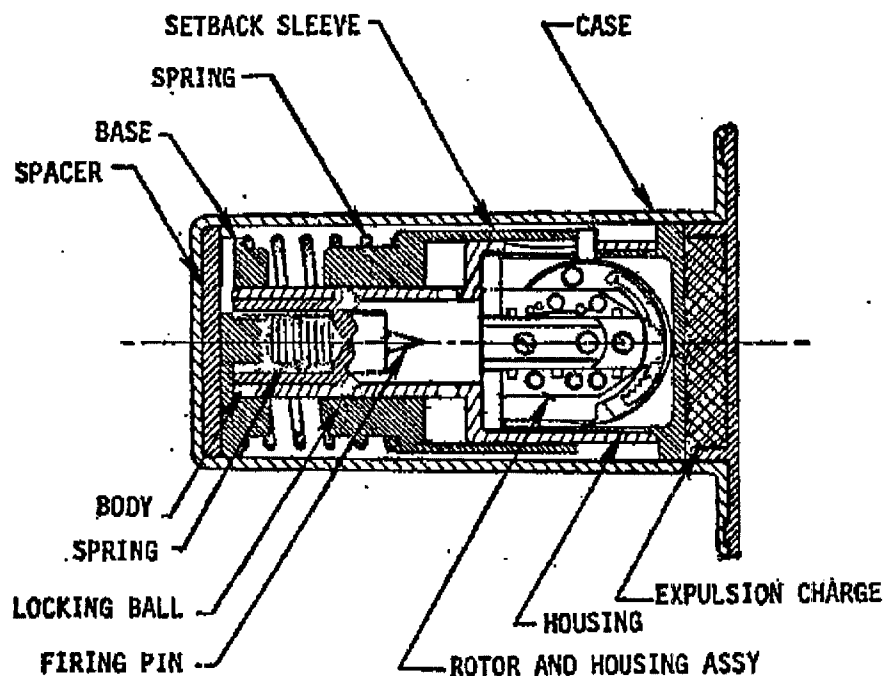
CHAPTER 5

ROCKETS

5-1

0404

B-8



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: A. Zacharin
AV 880-6477

STATUS: Procurement Std

USER: AF, Navy, Marines

ASSY DWG: 65C11046

PARTS LIST: 65C11046

SPEC: MIL-F-50542

NSN: Issued with warhead

PRIOR NOMENCLATURE: XM436

REPLACES: None

GENERAL

MUNITION: 2.75 in Rocket for
High Speed AircraftUSE: Warhead Flechette WDU-4A/A
Warhead Flechette WDU-13/B

LOCATION: Base of warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 40 g

VELOCITY: 594 m/s rocket
826 m/s w/HS AC

CREEP:

SERIES: AF CHAPTER: 5
DESIGNATION: WDU- 4A/A
Warhead, Fuze For

5-3

B-9

0405

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 11.25 g non arm, 20.5 arm

SECOND SAFETY:

Boost, 0.85 to 1.25 sec at 35 g

OTHER SAFETY:

None

DELAY:

0.90 sec, 150 m

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): Time, Fixed

TYPE: Mechanical

CHARACTERISTICS:

Func't at motor burnout
0.90 to 1.20 secs

TARGET: Ground-Personnel, Light Mat.

SENSITIVITY:

Not applicable

PHYSICAL DATA

WEIGHT: 0.82 lb (373 gm)

TOTAL LENGTH: 3.30 in (8.38 cm)

CROSS SECTION: 2.55 in (6.48 cm)

INTRUSION: None

THREAD SIZE: None

OTHER:

Body dia 1.54 in (3.91 cm)

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: EX-100, 2.75 in Type

PRIMER: M104 Stab

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: Expellant: Blk Pdr and
M9 Propellant

REMARKS

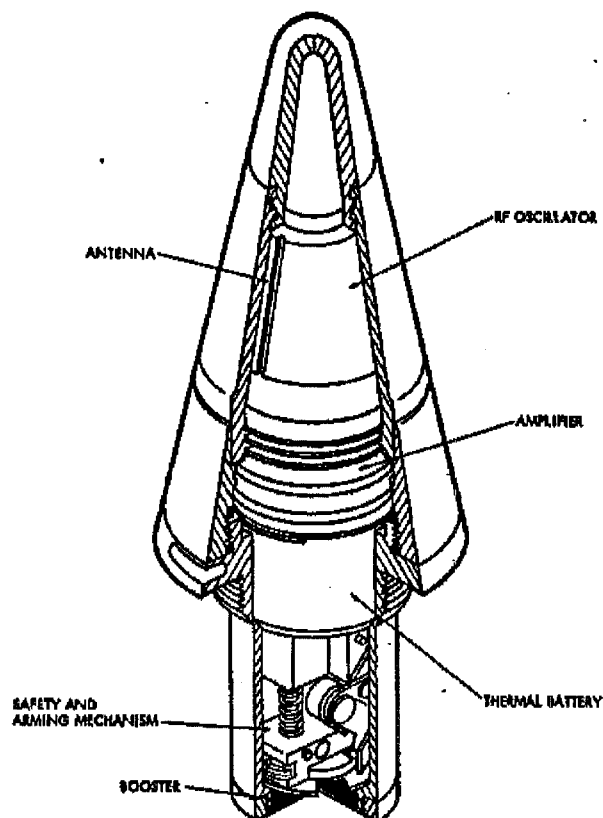
M442 and M446 are similar except for 9 and 4.5 sec pyro delay after burnout.

CHAPTER: 5 SERIES: AF
DESIGNATION: WDU- 4A/A
Warhead, Fuze For

0406

5-4

B-10



IDENTIFICATION

AGENCY: NSWC, Code G43

CONTACT: F. Kluge
AV 290-2570

STATUS: Procurement Std

USER: Navy, Marines

ASSY DWG: GA 2429055

PARTS LIST: LD 549965

SPEC: WS 6711

NSN:

PRIOR NOMENCLATURE: M414A1

REPLACES:

GENERAL

MUNITION: Rocket, 5-in (ZUNI)

USE: HE-FRAG, GP, AT/APERS

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 40 rps

SETBACK: 65 g

VELOCITY: 2200 fps (670.5 mps)

CREEP:

SERIES: N CHAPTER: 5

DESIGNATION: MK 93 Mod 0
Rocket Proximity Fuze

B-11

5-5

0407

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Acceleration Integration, no arm
13 g, all arm 30 g

SECOND SAFETY:

Arms when acceleration decays
to 13 g

OTHER SAFETY:

Runaway trap for delay arming
escapement

DELAY:

400 to 800 ft (commit to ARM)

SAFE/ARM CONDITION:

No indicator

PHYSICAL DATA

WEIGHT: 2.6 lb (1180 gm)

TOTAL LENGTH: 9.184 in (23.327 cm)

CROSS SECTION: 2.980 in (7.5692 cm)

INTRUSION: 2.984 in (7.57936 cm)

THREAD SIZE: 2-12 UN-2A

OTHER:

POWER SUPPLY:

Mk 94 Mod 0, 1.5 V "A," 145V "B,"
-8 V "C"
WS 6703

EXPLOSIVE TRAIN

S&A DEVICE: WS 6713

PRIMER: Mk 102 Mod 1

DETONATORS: M62 (Electric)
WS 7628

LEAD: Tetra1, 0.15 gm

BOOSTER: RDX Comp. CH-6, 11.1 gm

OTHER:

FUNCTIONING DATA

MODE(S):

TYPE: RF Electronic

CHARACTERISTICS:

TARGET: Ground

SENSITIVITY:

REMARKS

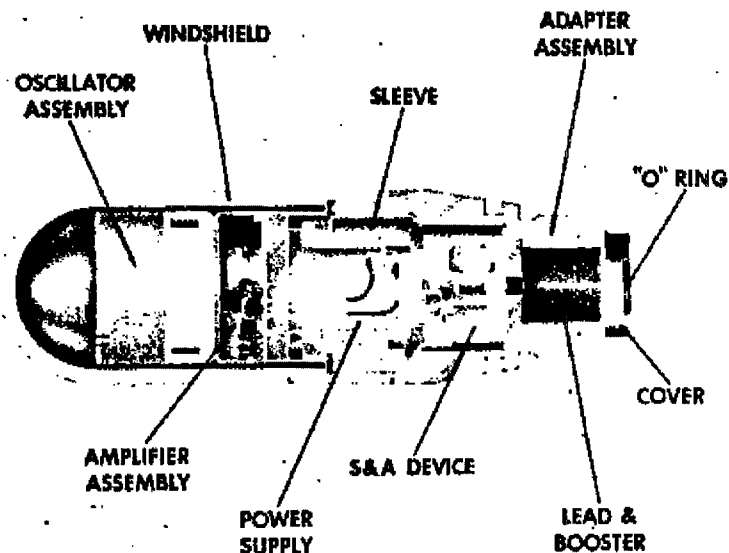
Identical to M414A1.
Monitor Spec WS 6714.

CHAPTER: 5 SERIES: N
DESIGNATION: MK 93 Mod 0
Rocket Proximity Fuze

0408

5-6

8-12

**IDENTIFICATION**

AGENCY: ERADCOM, DELHD-I-EC
 CONTACT: J. Strong
 AV 290-2701
 STATUS: Development
 USER: Army, Navy, AF, Marines
 ASSY DWG: 11004808
 PARTS LIST: 11004808
 SPEC: MIL-F-60971
 NSN: Not yet assigned
 PRIOR NOMENCLATURE:
 REPLACES: M414A1, M429, Mk 93

GENERAL

MUNITION: 2.75 in FFAR Rocket
 5 in Zuni Rocket
 USE: 2.75 in M151 HE & M229
 5 in Mk 24 HE, Mk 32 AT AP
 & Mk 63 HE FRAG
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: (Zuni) 50 rps
 SETBACK: 65 g
 VELOCITY: 1116 m/s with high
 speed A/C
 CREEP:

SERIES: A CHAPTER: 5
 DESIGNATION: FMU- 98/8
 Rocket Proximity Fuze

B-13

5-7

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 12 g non arm, 20 arm

SECOND SAFETY:

Boost 1.04 to 1.34 sec at 27 g

OTHER SAFETY:

None

DELAY:

150 m delay arming, mechanical
457 m additional, electronic

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): Proximity, PD

TYPE: Electronic, RF

CHARACTERISTICS:

Cantilever Graze Switch

TARGET: Ground-Personnel

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.804 lb (364.9 gm)

TOTAL LENGTH: 6.12 in (15.54 cm)

CROSS SECTION: 1.93 in (4.91 cm)

INTRUSION: 0.90 (2.29 cm) depth,
major dia of threads

THREAD SIZE: 1 7/16-16UNS-2A

OTHER:

POWER SUPPLY:

PS113A Thermal Battery, 11001712
initiated by setback

EXPLOSIVE TRAIN

S&A DEVICE: Modified M429, 11008201

PRIMER: M42G (in Battery)

DETONATORS: M84 Elec

LEAD: 300 mg Teteryl

BOOSTER: 9-11 gm Comp A-5

OTHER:

REMARKS

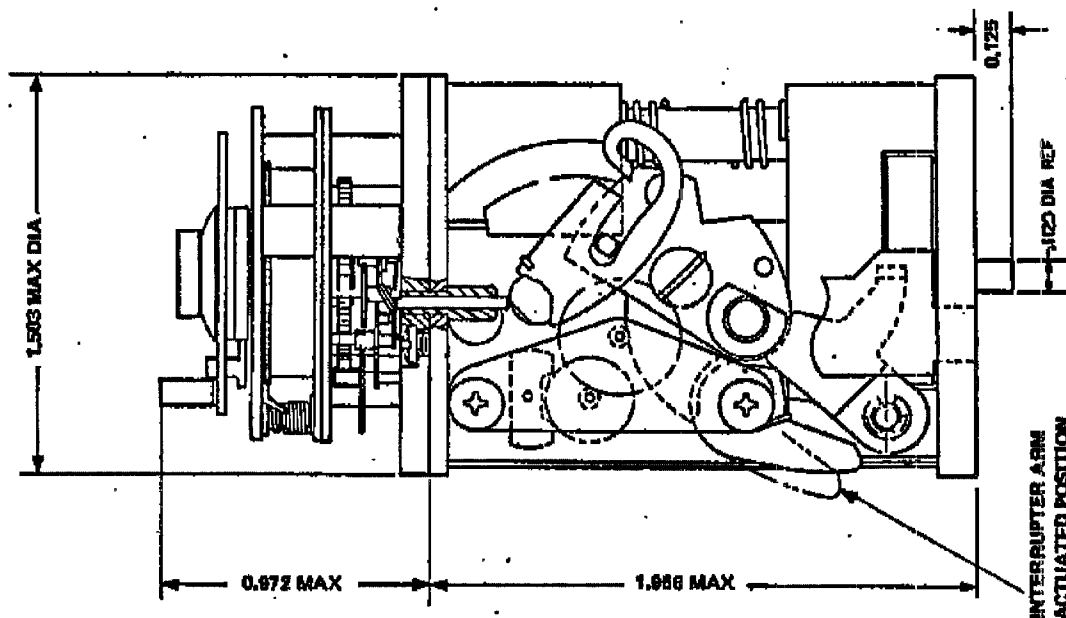
Requires BBU-15/B Adapter for use with 5 in Zuni.

CHAPTER: 5 SERIES: A
DESIGNATION: FMU- 98/B
Rocket Proximity Fuze

0410

5-8

B-14



IDENTIFICATION

AGENCY: NSWC, Code G44
 CONTACT: J. Abell
 AV 290-1545
 STATUS: Development
 USER: Navy
 ASSY DWG: 1260AS100
 PARTS LIST: 1260AS100
 SPEC: AS 2507
 NSN:
 PRIOR NOMENCLATURE: None
 REPLACES: None

GENERAL

MUNITION: 5-in ZUNI Rocket (Air launched)
 USE: Chaff dispersion
 Mk 84
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: 50 rps
 SETBACK: 65 g
 VELOCITY: 2900 fps (884 mps)
 CREEP:

SERIES: N CHAPTER: 5
 DESIGNATION: FMU-136/B
 MT Fuze

0582

5-9

C-1

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Acceleration Integration, 13 g,
no arm; 30 g, all arm

SECOND SAFETY:

OTHER SAFETY:

Runaway trap for DLY arming
escapement

DELAY:

400 to 800 ft

SAFE/ARM CONDITION:

None

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Mechanical

CHARACTERISTICS:

Settable from 2.5 to 80 sec

TARGET: A/C Protection Decoy

SENSITIVITY:

PHYSICAL DATA

WEIGHT: .45 lb (204 gm)

TOTAL LENGTH: 2.928 in (7.40 cm)

CROSS SECTION: 1.5 in (3.81 cm)

INTRUSION: Internal to cnaff thread

THREAD SIZE: N/A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Mk 125 Mod 1 (STAB)

DETONATORS: Dwg 1260AS104 (FLASH)

LEAD: Mk 12 Mod 1

BOOSTER: None

OTHER:

REMARKS

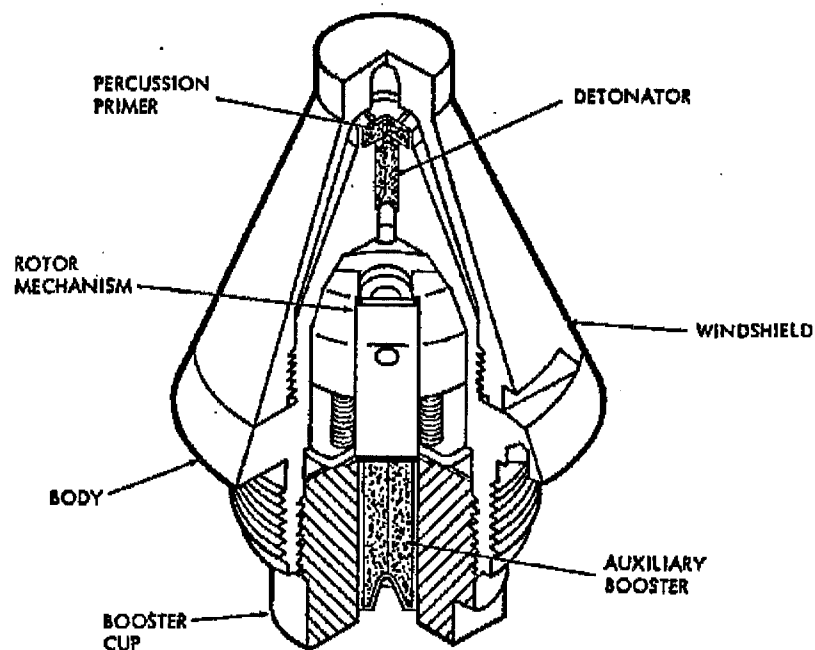
Fuze consists of two main assemblies: the timing movement assembly and the S&A assembly.

CHAPTER: 5 SERIES: N
DESIGNATION: FMU-136/B
MT Fuze

0412

5-10

C-2

**IDENTIFICATION**

AGENCY: NSWC, Code G43

CONTACT: F. Kluge
AV 290-2570

STATUS: Procurement Std

USER: Navy, AF

ASSY DWG: GA657740 (Mod 3)

PARTS LIST: LD 175354 (Mod 3)

SPEC: OS 1402933

NSN:

PRIOR NOMENCLATURE: T2023E1

REPLACES:

GENERAL

MUNITION: Rocket, 2.75-in (FFAR)

USE: HEAT

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 g

VELOCITY: 594 mps Roc
826 mps hs a/c

CREEP:

SERIES: N CHAPTER: 5
DESIGNATION: MK 181 Mod 0-3
Rocket PI Fuze

0413

C-3

5-11



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Acceleration integration no-arm
13 g, all arm 20 g

SECOND SAFETY:

OTHER SAFETY:

DELAY:

400 to 700 ft

SAFE/ARM CONDITION:

None

FUNCTIONING DATA

MODE(S): PI

TYPE: Mechanical

CHARACTERISTICS:

SQ

TARGET: Armored Vehicles

SENSITIVITY:

75 degrees max obliquity
for function

PHYSICAL DATA

WEIGHT: 0.82 lb (372 gm)

TOTAL LENGTH: 3.365 in (8.5471 cm)

CROSS SECTION: 1.95 in (2.24 cm)

INTRUSION: 1.230 in (3.1242 cm) depth
1.165 in (2.96 cm) dia

THREAD SIZE: 1.4375-16UNS-2A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M56 (CRUSH)

DETONATORS: M29 (Flash)

LEAD: RDX COMP CH-6 (2)

BOOSTER: M122 RDX COMP CH-6 (2.28 gm)
(shaped charge)

OTHER:

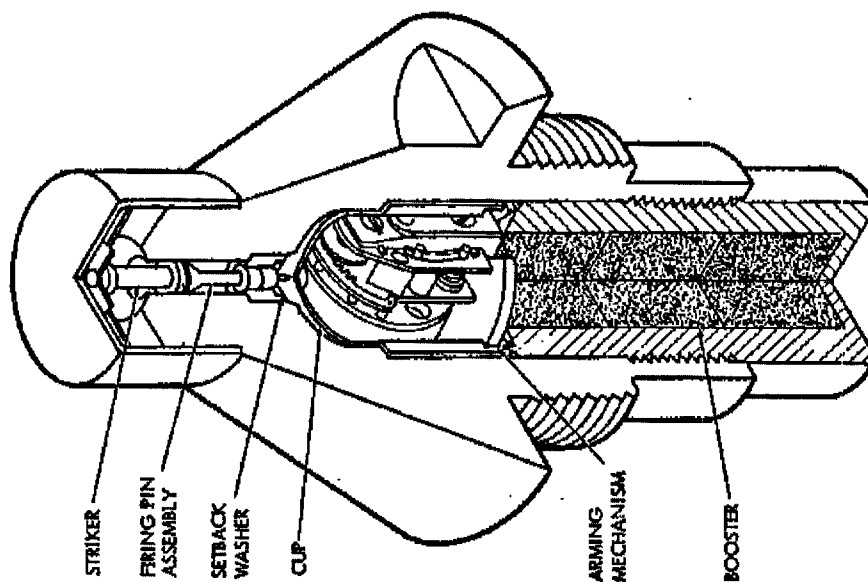
REMARKS

Same as fuze M406.

CHAPTER: 5 SERIES: N
DESIGNATION: MK 181 Mod 0-3
Rocket PI Fuze

0414

5-12
C-4



IDENTIFICATION

AGENCY: NSWC, Code G43

CONTACT: F. Kluge
AV 290-2570

STATUS: Procurement Std

USER: Navy

ASSY DWG: GA657678 (Mod 0)

PARTS LIST: LD 175380

SPEC:

NSN:

PRIOR NOMENCLATURE: EX-109

REPLACES:

GENERAL

MUNITION: 5.0-1n (ZUNI) Rocket

USE: GP, AT/APERS, Smoke

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 50 rps

SETBACK: 70 g

VELOCITY: 2900 fps (884 mps)

CREEP:

SERIES: N CHAPTER: 5
DESIGNATION: MK 188 Mod 0, 1
Rocket PD Fuze

5-13

#415

C-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Acceleration Integration no arm,
13 g; all arm, 20 g

SECOND SAFETY:

OTHER SAFETY:

DELAY:

400 to 800 ft

SAFE/ARM CONDITION:

No indicator

FUNCTIONING DATA

MODE(S): PI

TYPE: Mechanical

CHARACTERISTICS:

SQ

TARGET: Ground

SENSITIVITY:

Aluminum .016-in thick, max obliq
75 degs, velocity 2000 fps

PHYSICAL DATA

WEIGHT: .75 lb (340.5 gm)

TOTAL LENGTH: 5.11 in (12.979 cm)

CROSS SECTION: 2.970 in (7.54 cm)

INTRUSION: 3.215 in (8.17 cm) depth
1.650 in (4.19 cm) dia

THREAD SIZE: 2-12UN-2A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Mk 125 Mod 1 (STAB)

DETONATORS: Mk 59 Mod 0 (FLASH)

LEAD: Tetryl (Approx 22 gm)

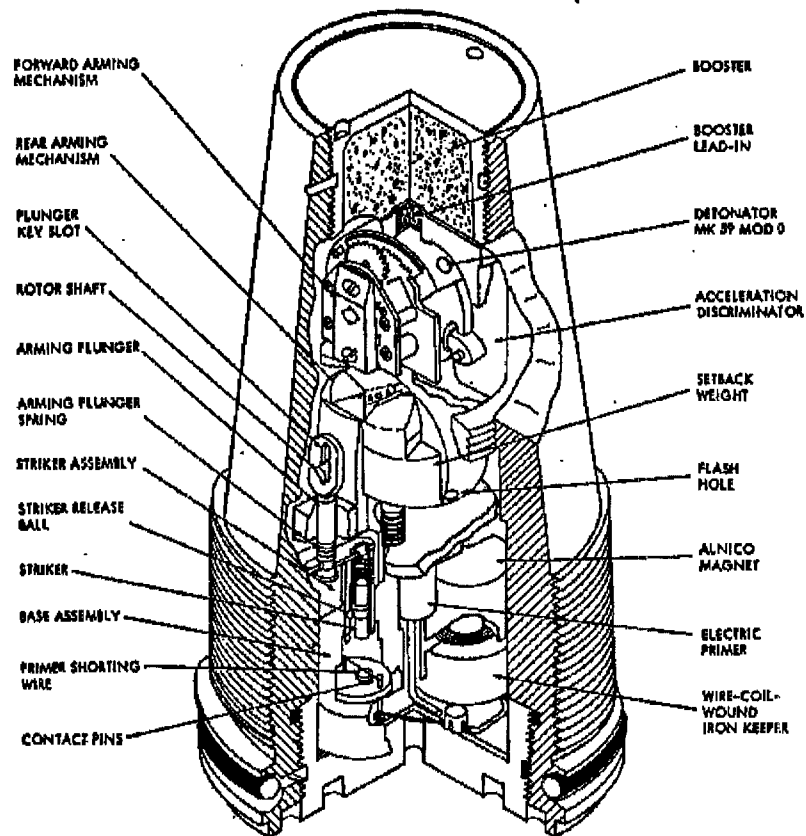
BOOSTER: Tetryl

OTHER:

REMARKS

Sensitive to firing on water impact.

CHAPTER: 5 SERIES: N
DESIGNATION: MK 188 Mod 0, 1
Rocket PD Fuze

**IDENTIFICATION**

AGENCY: NSWC, Code G43

CONTACT: F. Kluge
AV 290-2570

STATUS: Procurement Std

USER: Navy

ASSY DWG: (See Remarks section)

PARTS LIST: (See Remarks section)

SPEC: Mod 0, OS7690; Mod 1, OS11448

NSN:

PRIOR NOMENCLATURE: XR-85

REPLACES:

GENERAL

MUNITION: Rocket 5-in (ZUNI)

USE: GP

LOCATION: Base

BALLISTIC LEVELS:

ROTATION: 50 rps

SETBACK: 70 g

VELOCITY: 2200 fps (670.5 mps)

CREEP:

SERIES: N CHAPTER: 6
 DESIGNATION: MK 191 Mod 0, 1
 Rocket BD Fuze

ARMING DATA

FIRST SAFETY:

Acceleration Integration; non-arm
13 g; all-arm 30 g

SECOND SAFETY:

OTHER SAFETY:

DELAY:

400 to 800 ft

SAFE/ARM CONDITION:

No indicator

FUNCTIONING DATA

MODE(S): BD, delay-.005 sec

TYPE: Pyrotechnic (Lead Styphnate)

CHARACTERISTICS:

TARGET: Concrete, steel plate

SENSITIVITY:

0.125-in mild steel;
max obliq 60 degs;
velocity 2200 fps

PHYSICAL DATA

WEIGHT: 3 lb (1362 gm)

TOTAL LENGTH: 5.260 in (13.3604 cm)

CROSS SECTION: 2.50 in (6.35 cm)

INTRUSION: 5.26 in (13.36 cm)

THREAD SIZE: 2.375-12UN-2A

OTHER:

POWER SUPPLY:

Magnetic Impact Generator

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Mk 134 Mod 0 (Electric Delay)

DETONATORS: Mk 59 Mod 0 (Flash)

LEAD: Tetryl (0.125 gm)

BOOSTER: Tetryl (19 gm)

OTHER:

REMARKS

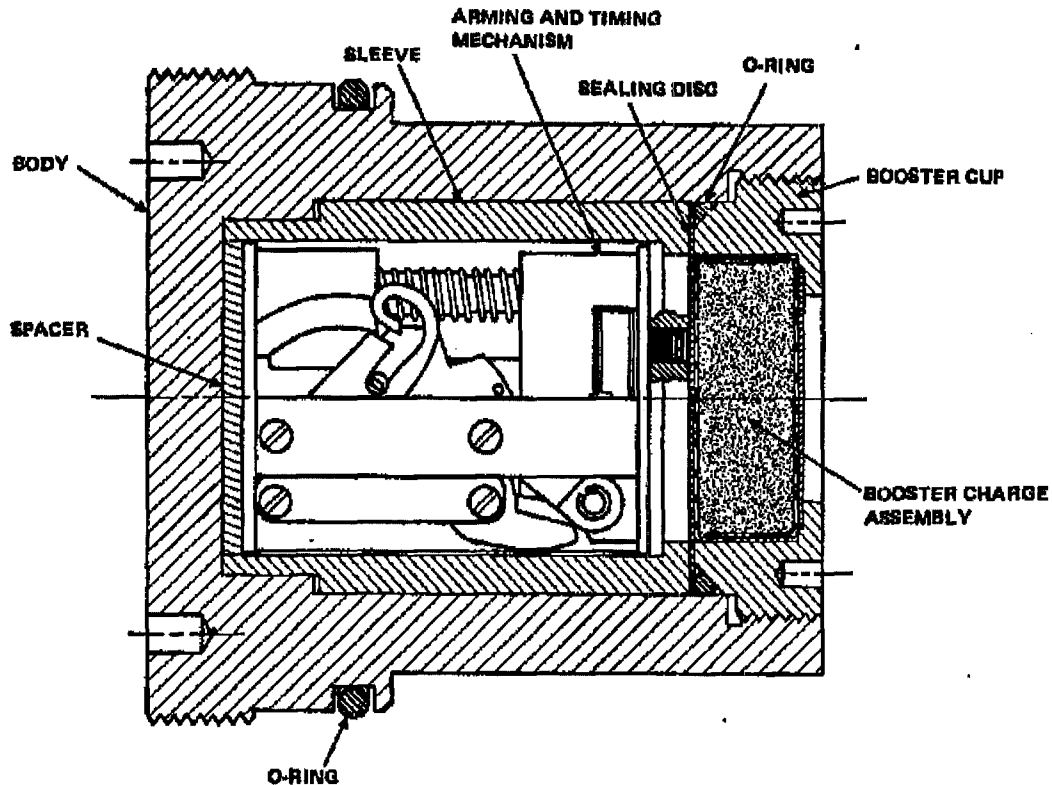
Assembly Drawing No: GA 1442147 (Mod 0); GA 2119045 (Mod 1).
Parts List: LD 295990 (Mod 0); LD 497047 (Mod 1).

CHAPTER: 5 SERIES: N
DESIGNATION: MK 191 Mod-0, 1
Rocket BD Fuze

5-16

0418

C-8



IDENTIFICATION

AGENCY: NSWC, Code G43
 CONTACT: F. Kluge
 AV 290-2570
 STATUS: Procurement Std
 USER: Navy
 ASSY DWG: 1800507
 PARTS LIST: LD 486298 (Mod 0)
 SPEC: OS 8918
 NSN:
 PRIOR NOMENCLATURE: XW-128A
 REPLACES: EX-110

GENERAL

MUNITION: Rocket 5-in (ZUNI)
 USE: Flare
 LOCATION: Nose
 BALLISTIC LEVELS:
 ROTATION: 50 rps
 SETBACK: 70 g
 VELOCITY: 2200 fps (670.5 mps)
 CREEP:

SERIES: N CHAPTER: 5
 DESIGNATION: MK 193 Mod 0
 Rocket MT Fuze

0419

C-9

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Acceleration Integration, no-arm
13 g, all-arm 30 g

SECOND SAFETY:

Arms when acceleration decays
to 13 g

OTHER SAFETY:

Runaway trap for delay arming
escapement

DELAY:

400 to 800 ft
(commit to arm)

SAFE/ARM CONDITION:

None

FUNCTIONING DATA

MODE(S): Time

TYPE: Mechanical

CHARACTERISTICS:

Functions 14 sec after arming
to ignite and deploy flare

TARGET:

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 2 lb (908 gm)

TOTAL LENGTH: 3.160 in (8.0264 cm)

CROSS SECTION: 3.125 in (7.9375 cm)

INTRUSION: 3.160 in (8.0264 cm)

THREAD SIZE: 3.125-12 UN-2A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: Mk 125 Mod 1 (Stab)

DETONATORS: M66 Mod 0 (Flash)

LEAD: Tetryl (0.082 gm)

BOOSTER: Black Powder (10 gm)

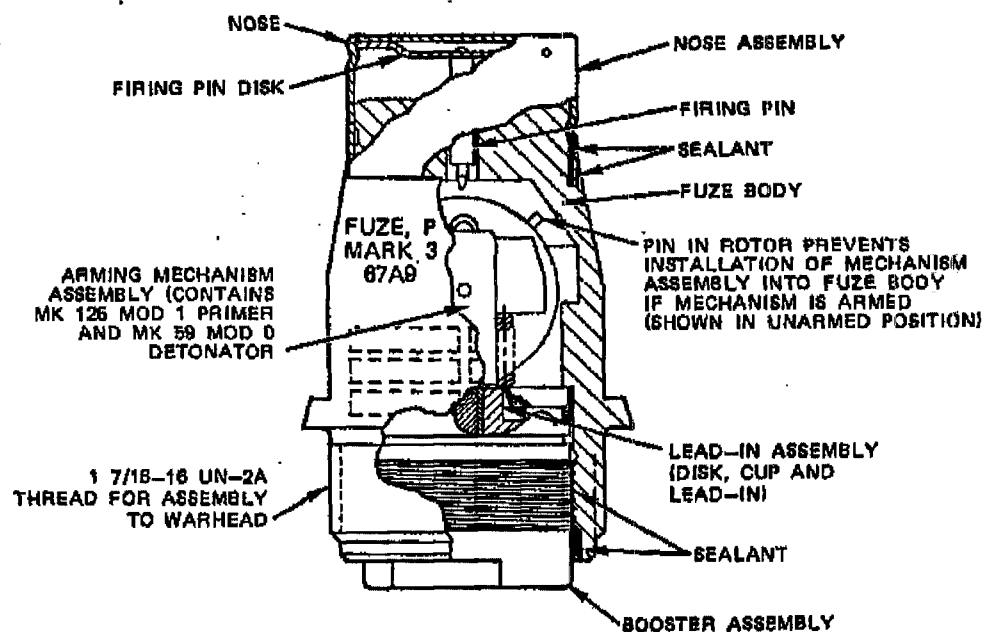
OTHER:

REMARKS

CHAPTER: 5 SERIES: N
DESIGNATION: MK 193 Mod 0
Rocket MT Fuze

5-18

C-10



IDENTIFICATION

AGENCY: NWC, Code 335

CONTACT: R. Higuera
AV 437-7426

STATUS: Procurement Std

USER: Navy

ASSY DWG: 67A90D001

PARTS LIST: DL 67H90D001

SPEC: AS-1379

NSN:

PRIOR NOMENCLATURE:

REPLACES: MK 188 Mod 0

GENERAL

MUNITION: 2.75 in Folding Fin Rocket (FFAR)

USE: HE

LOCATION: Nose of Warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 g

VELOCITY:

CREEP:

C-11

5-19

SERIES: N CHAPTER: 5
DESIGNATION: MK 352 Mod 2
Rocket PD Fuze

MIL-HDBK-145
1 October 1980

ARMING DATA**FIRST SAFETY:**

S&A cannot be installed armed

SECOND SAFETY:

Setback (g) non-arm, 13;
arm 20

OTHER SAFETY:**DELAY:**

825-1100 ft

SAFE/ARM CONDITION:

S&A cannot be installed armed

FUNCTIONING DATA

MODE(S): PD

TYPE: Mechanical

CHARACTERISTICS:

Instantaneous

TARGET: Ground, Personnel

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.5 lb (14.174 gm)

TOTAL LENGTH: 3.027 in (7.688 cm)

CROSS SECTION: 1.695 in (4.30 cm)

INTRUSION: 0.864 in (2.19 cm)

THREAD SIZE: 1.4375-16 UN-2A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN**S&A DEVICE:**

PRIMER: Mk 125 Mod 1

DETONATORS: Mk 59 Mod 0

LEAD: CH-6, 80 mg

BOOSTER: CH-6, 11 gm

OTHER:

REMARKS

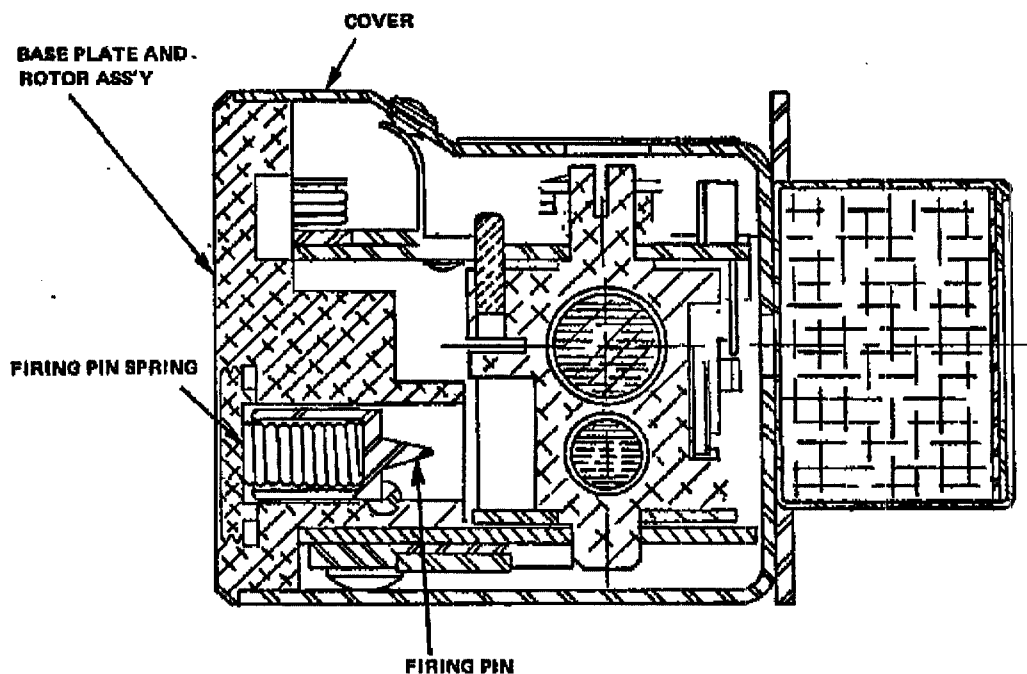
Incorporates Nose Fuze Mk 188 Mod 0 to increase sensitivity.
Not yet in production.

CHAPTER: 5 SERIES: N
DESIGNATION: MK 352 Mod 2
Rocket PD Fuze

1-8822

5-20

C-12



IDENTIFICATION

AGENCY: ARRAJCOM, DRDAR-LCU-SI

CONTACT: J. Bracey
AV 880-4872

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9243295

PARTS LIST:

SPEC: MIL-F-50407, MIL-F-50415

NSN: Not Assigned

PRIOR NOMENCLATURE: M412E1

REPLACES: M412

GENERAL

MUNITION: 66 mm Rocket, Light Assault
Weapon, (LAW)

USE: Warhead, HEAT, M72A2

LOCATION: Nose and of base of warhead

BALLISTIC LEVELS:

ROTATION: Negligible

SETBACK: 3640 g

VELOCITY: 144.8 m/s

CREEP:

SERIES: A CHAPTER: 5
 DESIGNATION: M412A1
 Rocket PI 80 Fuze

C-13

5-21

0423

ARMING DATA

FIRST SAFETY:

Setback, 800 g non arm,
1100 arm

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

8.5 to 14 m delay arming

SAFE/ARM CONDITION:

Yes
Not Meet MIL-1316B

FUNCTIONING DATA

MODE(S): PI BD, Graze

TYPE: Electric

CHARACTERISTICS:

SQ

TARGET: Ground-Tank, Lt Fort.

SENSITIVITY:

1/8 in plywood at 120 m/s
5 in armor plate at 6.0 deg
obliq and 128 m/s

PHYSICAL DATA

WEIGHT: 0.154 lb (69.85 gm)

TOTAL LENGTH: 1.86 in (4.72 cm)

CROSS SECTION: 1.29 in (3.28 cm)

INTRUSION: 0.51 in (1.30 cm) depth
0.80 in (2.03 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Piezoelectric crystal at nose
loaded graze firing pin spring
wound rotor spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M106 Stab

DETONATORS: M48 Elec

LEAD: None

BOOSTER: 5.6 gm Comp A-5

OTHER:

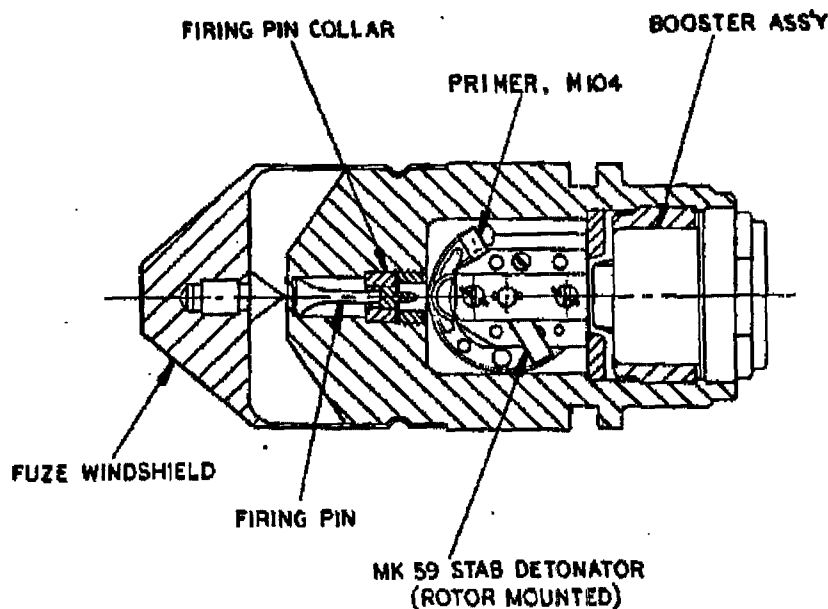
REMARKS

M412 is very similar but has one wire connection between nose crystal and
BD section.

CHAPTER: 5 SERIES: A
DESIGNATION: M412A1
Rocket PI BD Fuze

5-22

C-14



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: A. Zacharin
AV 880-6477

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9254708-1

PARTS LIST: 9254708-1

SPEC: MIL-F-50253

NSN: 1340-00-764-3640

PRIOR NOMENCLATURE: M423

REPLACES: M423

GENERAL

MUNITION: 2.75 in Rocket for
Helicopters

USE: WHO, HE, M151; WP M156

LOCATION: Nose of warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 g

VELOCITY: 594 m/s rocket
655 m/s w/heli

CREEP:

SERIES: A CHAPTER: 5
 DESIGNATION: M423 ALT
 Rocket PD Fuze

0425

5-23

D-1



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 11.25 g non arm,
20.5 g arm

SECOND SAFETY:

Boost 0.63 to .82 sec at 27 g

OTHER SAFETY:

None

DELAY:

43 to 92 m arming delay

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PD, Graze

TYPE: Mechanical

CHARACTERISTICS:

SQ

TARGET: Ground-Personnel, Materiel

SENSITIVITY:

Earth, 88 degrees obliq.,
762 m/s

PHYSICAL DATA

WEIGHT: 0.75 (340.2 gm)

TOTAL LENGTH: 4.03 in (10.24 cm)

CROSS SECTION: 1.75 in (4.44 cm)

INTRUSION: 0.90 in (2.29 cm) deptn,
major dia of thread

THREAD SIZE: 1 7/16-16UNS-2A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: EX-100, 2.75 in Type

PRIMER: M104 Stab

DETONATORS: M85 Flash

LEAD: 75 mg RDX

BOOSTER: 9 gm RDX

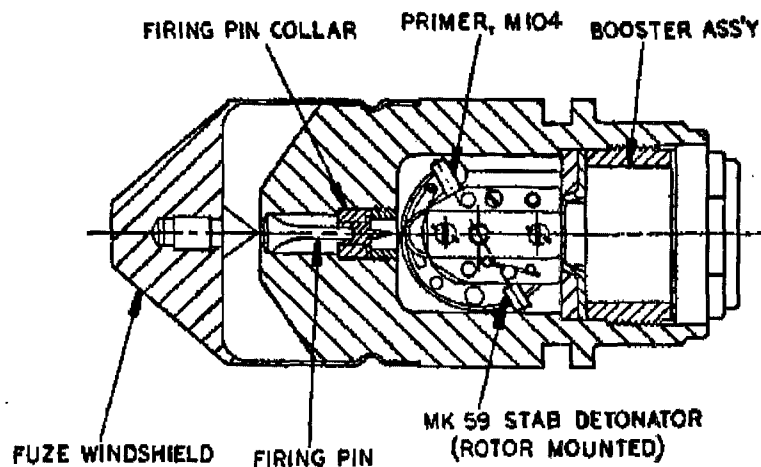
OTHER:

REMARKS

Same as M427 for Fixed Wing Aircraft except for arming acceleration and time. Practice Fuze is M435, 9234469. When Mk 66 motor substituted for Mk 40, rocket velocity will increase to 792 m/s. Previous M423, 8883683, (not alternate) design had striker and FP and did not have tubular fuze body.

CHAPTER: 5 SERIES: A
DESIGNATION: M423 ALT
Rocket PD Fuze

5-24 0-2

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: A. Zacharin
AV 880-6477

STATUS: Procurement Std

USER: Navy, AF, Marines

ASSY DWG: 9254708-2

PARTS LIST: 9254708-2

SPEC: MIL-F-50253

NSN: 1340-00-935-1946

PRIOR NOMENCLATURE: M427

REPLACES: M427, Mk 178

GENERALMUNITION: 2.75 in Rocket for
High Speed AircraftUSE: Warhead HE Mk 1, GP Mk 64,
Smoke Mk 67, HE M151, WP M156

LOCATION: Nose of Warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 40 g

VELOCITY: 826 m/s with
high speed A/C

CREEP:

SERIES: A	CHAPTER: 5
DESIGNATION: M427 ALT	
Rocket PD Fuze	

0427

5-25
0-3

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 12.8 g non arm, 20.5 arm

SECOND SAFETY:

Boost 1.07 to 1.36 sec at 40 g

OTHER SAFETY:

None

DELAY:

180 to 426 m arming delay

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PD, Graze

TYPE: Mechanical

CHARACTERISTICS:

SQ

TARGET: Gnd-Personnel, Light Materiel

SENSITIVITY:

Earth, 85 degrees oblq.

PHYSICAL DATA

WEIGHT: 0.75 lb (340.2 gm)

TOTAL LENGTH: 4.04 in (10.26 cm)

CROSS SECTION: 1.75 in (4.44 cm)

INTRUSION: 0.90 in (2.29 cm) depth,
major dia of threads

THREAD SIZE: 1 7/16-16UNS-2A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: EX-100, 2.75 in Type

PRIMER: M104 Stab

DETONATORS: M85 Flash

LEAD: 75 mg RDX

BOOSTER: 9 gm RDX

OTHER:

REMARKS

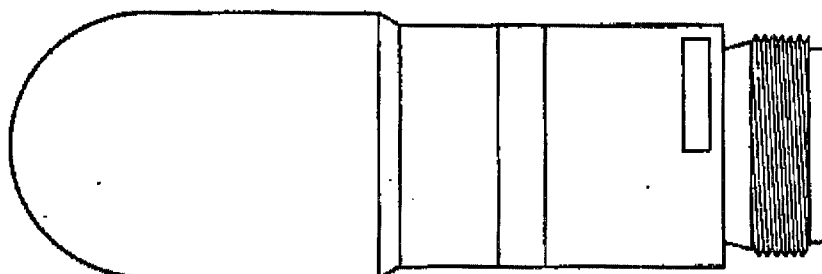
Replaces Firing Pin and Striker of previous model M427 alt with Firing Pin only. Practice Fuze is M435, Dwg. 9234469. Same as Mk 178 except larger striker added. Same as M423 except has longer arming delay. Previous M427 (not alternate) design, 8883745, had both striker and FP and did not have tubular body.

CHAPTER: 5 SERIES: A
DESIGNATION: M427 ALT
Rocket PD Fuze

0428

5-26

D-4



IDENTIFICATION

AGENCY: ERADCOM, DELHD-I-EC

CONTACT: J. Strong
AV 290-2701

STATUS: Procurement Std

USER: Army

ASSY DWG: 11705900

PARTS LIST: 11705900

SPEC: MIL-F-60952

NSN: 1340-00-926-9301

PRIOR NOMENCLATURE: XM429

REPLACES: None

GENERAL

MUNITION: 2.75 in Rocket for
Helicopters & high
speed A/C

USE: WHD, HE, M151 & M229

LOCATION: Nose of Warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 to 40 g

VELOCITY: 594 m/s rocket
655 m/s w/nell
826 m/s w/HS AC

CREEP:

SERIES: A CHAPTER: 5
DESIGNATION: M429
Rocket Proximity Fuze

0429

5-27

D-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 12 g non arm, 30-50 arm

SECOND SAFETY:

Boost 1.04 to 1.34 sec at 27 g
and at 40 g

OTHER SAFETY:

None

DELAY:

153 to 305 m

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): Proximity, PD

TYPE: Electronic, CW RF Doppler

CHARACTERISTICS:

Cantilever graze switch

TARGET: Gnd-pers

SENSITIVITY:

1/8 plywood, 75-85 degrees obliq.
1950 fps (594 m/s)

PHYSICAL DATA

WEIGHT: 0.94 lb (426.4 gm)

TOTAL LENGTH: 5.91 in (15.01 cm)

CROSS SECTION: 1.39 in (4.80 cm)

INTRUSION: .90 in (2.29 cm) depth,
major dia of threads

THREAD SIZE: 1 7/16-16UNS-2A

OTHER:

POWER SUPPLY:

PS 113A, 11707051, Thermal Battery
initiated by setback

EXPLOSIVE TRAIN

S&A DEVICE: EX-100, 2.75 in Type

PRIMER: M42G for battery

DETONATORS: M84 Elec

LEAD: 75 mg Teteryl

BOOSTER: 9 gm Teteryl

OTHER:

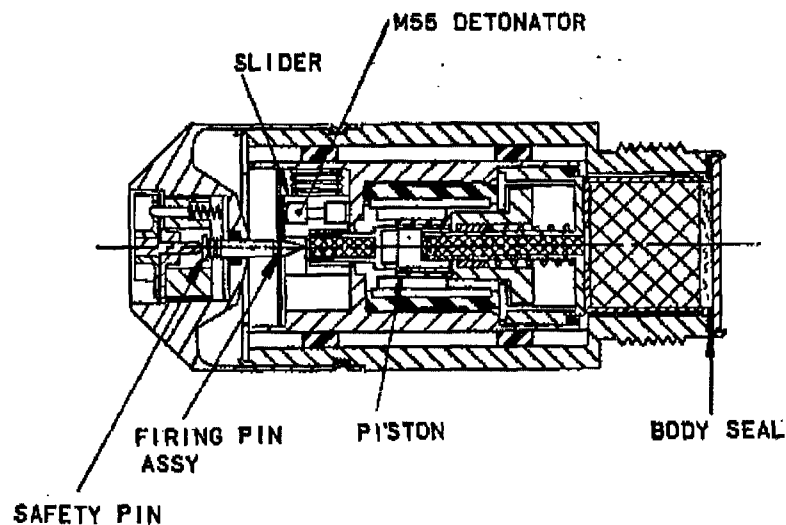
REMARKS

Practice Fuze is M435, 9234469

CHAPTER: 5 SERIES: A
DESIGNATION: M429
Rocket Proximity Fuze

5-28

D-6

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: A. Zacharin
AV 880-6477

STATUS: Procurement Std

USER: Army

ASSY DWG: 9224063

PARTS LIST: 9224063

SPEC: MIL-F-50253

NSN: None assigned

PRIOR NOMENCLATURE: XM431

REPLACES: M423

GENERAL

MUNITION: 2.75 in Rocket for
Helicopters

USE: Warhead HE M151

LOCATION: Nose of Warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 g

VELOCITY: 594 m/s rocket
655 m/s w/hell

CREEP:

SERIES: A

CHAPTER: 5

DESIGNATION: M431

Rocket PD Fuze

0431

5-29

D-7

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 11.25 g non arm, 20.5 arm

SECOND SAFETY:

Boost - 0.63 to .82 sec at 27 g

OTHER SAFETY:

None

DELAY:

43 to 92 m

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PD

TYPE: Mechanical

CHARACTERISTICS:

SQ

TARGET: Grd - Personnel, Lt Mat

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 9.73 oz (275.8 gm)

TOTAL LENGTH: 4.617 in (11.73 cm)

CROSS SECTION: 1.755 in (4.46 cm)

INTRUSION: 1.032 in (2.62 cm) deptn,
major dia of threads

THREAD SIZE: 1 7/16-16UNS-2A

OTHER:

POWER SUPPLY:

Spring loaded by setback

EXPLOSIVE TRAIN

S&A DEVICE: Air Dash Pot

PRIMER: None

DETONATORS: M55 Stab

LEAD: 640 mg RDX

BOOSTER: 14.9 gm RDX

OTHER:

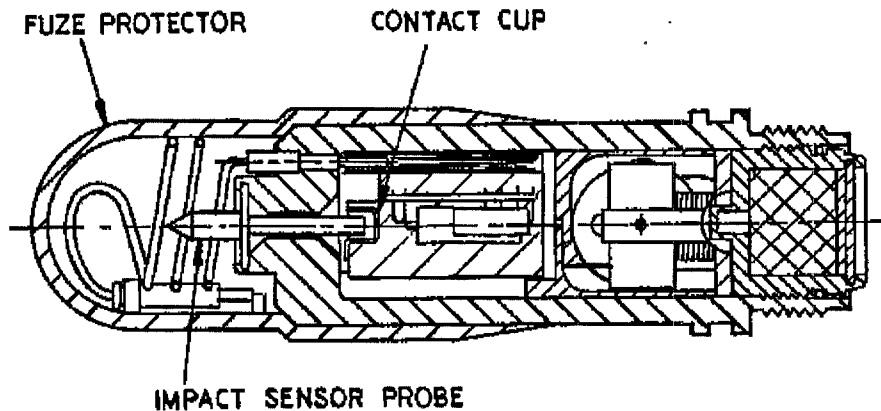
REMARKS

CHAPTER: 5 SERIES: A
DESIGNATION: M437
Rocket PD Fuze

0432

5-30

D-8



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: A. Janushevich
AV 880-4909

STATUS: Procurement Std

USER: Army

ASSY DWG: 9260701

PARTS LIST: PL 9260701

SPEC: MIL-F-63281

NSN: 1340-00-180-9195

PRIOR NOMENCLATURE: XM433E1

REPLACES: M423, M427, M440, M431

GENERAL

MUNITION: 2.75 in Rocket for
Helicopters

USE: HE, M151 Warhead

LOCATION: Nose of Warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 g

VELOCITY: 594 m/s rocket
655 m/s w/heli

CREEP:

SERIES: A CHAPTER: 5
DESIGNATION: M433
Rocket Multi-option Fuze

0433

5-31

D-9

ARMING DATA

FIRST SAFETY:

Aircraft power

SECOND SAFETY:

Setback, 12 g non arm, 27 g arm

OTHER SAFETY:

Boost, 1.04 to 1.34 sec at 27 g
and 0.88 to 1.25 sec at 40 g

DELAY:

150 to 250 m delay arming

SAFE/ARM CONDITION:

No; does not meet
MIL-STD-1316B

FUNCTIONING DATA

MODE(S): PD, Delay Penetration, Select

TYPE: Electric, R-C

CHARACTERISTICS:

SQ 0-600 microsec, 10-45 m
selectable after Canopy, 3
to 20 ms after hard impact

TARGET: Ground-Personnel, Bunkers

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 1.80 lb (816.5 gm)

TOTAL LENGTH: 5.75 in (14.60 cm)

CROSS SECTION: 1.69 in (4.29 cm)

INTRUSION: 0.75 in (1.91 cm) depth,
major dia of threads

THREAD SIZE: 1 7/16-16UNS-2A

OTHER:

POWER SUPPLY:

Charged from Aircraft thru Setter
24 volts DC

EXPLOSIVE TRAIN

S&A DEVICE: Ex-100, 2.75 in Type

PRIMER: None

DETONATORS: M84 Elec

LEAD: 97 mg RDX

BOOSTER: 9 gm RDX

OTHER:

REMARKS

XM128 cockpit setter required, direct wire link.

CHAPTER: 5 SERIES: A
DESIGNATION: M433
Rocket Multi-option Fuze

0434

5-32

D-10

IDENTIFICATION

AGENCY: ARRADCOM, ORDAR-LCU-SI

CONTACT: J. Bracey
AV 880-4872

STATUS: Procurement Std

USER: Army

ASSY DWG: 9240931

PARTS LIST:

SPEC: MIL-F-50407, MIL-F-50220

NSN: None Assigned

PRIOR NOMENCLATURE:

REPLACES: None

GENERAL

MUNITION: 66mm Rocket, Light
Assault Weapon, (LAW)USE: Rocket, Incendiary
M74

LOCATION: Base of warhead

BALLISTIC LEVELS:

ROTATION: Negligible

SETBACK:

VELOCITY: 114 m/s

CREEP:

SERIES: A
DESIGNATION: M434
Rocket BD Fuze

CHAPTER: 5

D-11

5-33

0435

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 800 g non arm,
1100 arm

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

8.5 to 14m delay arming

SAFE/ARM CONDITION:

Yes
Not meet MIL-STD-1316B

FUNCTIONING DATA

MODE(S): BD, Graze

TYPE: Mechanical

CHARACTERISTICS:

Non delay

TARGET: Ground-Incendiary

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.154 lb (69.85 gm)

TOTAL LENGTH: 1.86 in (4.72 cm)

CROSS SECTION: 1.29 in (3.28 cm)

INTRUSION: 0.51 in (1.30 cm) depth
0.80 in (2.03 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Loaded graze firing pin
spring wound rotor spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M106 Stab

DETONATORS: M48 Elec

LEAD: None

BOOSTER:

OTHER:

REMARKS

Similar to M412A1 except has no electric functioning, i.e., no crystal, leads or connectors.

CHAPTER: 5 SERIES: A

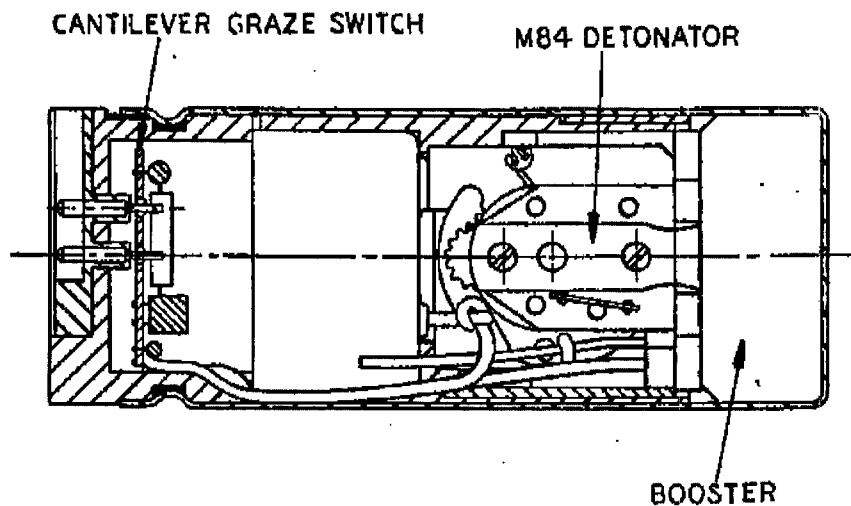
DESIGNATION: M434

Rocket BD Fuze

0436

5-34

D-12



IDENTIFICATION

AGENCY: ARRADCOM, DROAR-LCN-M

CONTACT: A. Zacharin
AV 880-6477

STATUS: Procurement Std

USER: Army, Navy, AF

ASSY DWG: 9259262

PARTS LIST: 9259262

SPEC: MIL-F-48065

NSN: Not yet assigned

PRIOR NOMENCLATURE: XM438

REPLACES: None

GENERAL

MUNITION: 2.75 in Rocket for
Helicopters
and High Speed Aircraft

USE: Dual Purpose HEAT WHD, M247

LOCATION: Base of Warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 g

VELOCITY: 594 m/s rocket
655 m/s helo
826 m/s w/HS AC

CREEP:

SERIES: A CHAPTER: 5
DESIGNATION: M438
Rocket PI BD Fuze

0437

5-35

D-13



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 12 g non arm, 30-50 g arm

SECOND SAFETY:

Boost, 1.03- to 1.35 sec at 40 g

OTHER SAFETY:

None

DELAY:

150 m delay arming

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PIBD, Graze

TYPE: Electronic, Mechanical

CHARACTERISTICS:

Nose piezo elec element
Cantilever graze switch

TARGET: Grd-Tank Vehicle Personnel

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.25 lb (113.4 gm)

TOTAL LENGTH: 3.75 in (9.53 cm)

CROSS SECTION: 1.375 in (3.49 cm)

INTRUSION: 3.75 in (9.53 cm) depth
1.375 in (3.49 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Nose piezo elec disc; and
PS 113A, 11707051, Thermal Battery,
initiated by Setback

EXPLOSIVE TRAIN

S&A DEVICE: Same as M429

PRIMER: M42G in Battery

DETONATORS: M84 Elec

LEAD: 115 mg RDX CH-6

BOOSTER: 20.4 plus or minus 1 gm
RDX CH-6

OTHER:

REMARKS

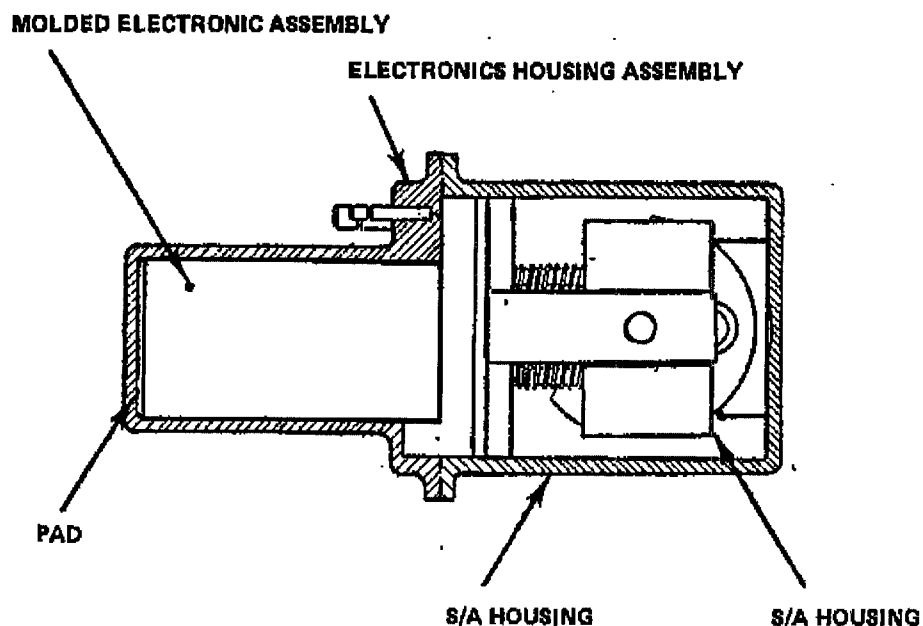
Uses crystal from M72 LAW warhead and S&A, PS, and graze switch from
M429 Fuze.

CHAPTER: 5 SERIES: A
DESIGNATION: M438
Rocket PI BD Fuze

0438

5-36

D-14



IDENTIFICATION

AGENCY: ARRADCOM, ORDAR-LCN-M

CONTACT: A. Janushevich
AV 880-4909

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9260704 and 9298307

PARTS LIST: PL 9260704

SPEC: MIL-F-48877

NSN: None assigned

PRIOR NOMENCLATURE: XM439

REPLACES: M436, M442, M446

GENERAL

MUNITION: 2.75 in Rocket for
HelicopterUSE: HE Flechette XM255, Multi Purp
Submun M261 Smoke and Chaff
XM264, Flare XM262

LOCATION: Base of warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 g

VELOCITY: 549 m/s rocket
610 m/s w/hell

CREEP:

SERIES: A CHAPTER: 5
DESIGNATION: M439
Rocket ET Fuze

0439

5-37
E-1

ARMING DATA

FIRST SAFETY:

Charging capacitor from aircraft

SECOND SAFETY:

Setback, 12 g non arm, 27 g arm

OTHER SAFETY:

Boost, 0.63 to .95 sec at 22 g

DELAY:

150 to 250 m

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time, Settable

TYPE: Electric, R-C

CHARACTERISTICS:

Settable 0.5 to 24 secs
Accuracy plus or minus 1.75 percent
-55 to 155 degrees F

TARGET: Gnd-Personnel, Light Materiel

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.24 lb (108.9 gm)

TOTAL LENGTH: 2.75 in (6.99 cm)

CROSS SECTION: 1.50 in (3.81 cm)

INTRUSION: 2.75 in (6.99 cm)

THREAD SIZE: None - Index Slots

OTHER:

POWER SUPPLY:

Capacitor charged from aircraft
thru XM128 setter, 24 volts

EXPLOSIVE TRAIN

S&A DEVICE: Same as M433 (EX-100)

PRIMER: None

DETONATORS: M84 Elec

LEAD: None

BOOSTER: None

OTHER: Expellent: None (in warhead)

REMARKS

XM128 cockpit setter required, direct wire link.

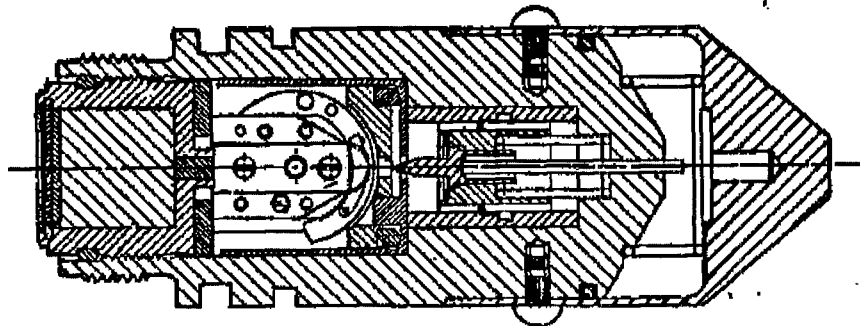
CHAPTER: 5 SERIES: A
DESIGNATION: M439
Rocket ET Fuze

0440

5-38

E-2



**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: A. Zacharin
AV 880-6477

STATUS: Procurement Std

USER: Army, AF

ASSY DWG: 9271602

PARTS LIST: 9271602

SPEC: MIL-F-48067

NSN: 1340-00-021-6516

PRIOR NOMENCLATURE: Mod M423

REPLACES: M423

GENERALMUNITION: 2.75 in Rocket for
Helicopters
and High Speed Aircraft

USE: Warhead, HE, M151

LOCATION: Nose of Warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 - 40 g

VELOCITY: 594 m/s rocket
655 m/s w/hell
826 m/s w/HS AC

CREEP:

SERIES: A
DESIGNATION: M440
Rocket PD Fuze

CHAPTER: 5

ARMING DATA

FIRST SAFETY:

Setback, 11.3 g non arm, 21.5 g arm

SECOND SAFETY:

Boost, 0.63 to .92 sec at 27 g

OTHER SAFETY:

None

DELAY:

43 m

SAFE/ARM CONDITION:

No

PHYSICAL DATA

WEIGHT: 1.656 lb (751.2 gm)

TOTAL LENGTH: 5.046 in (12.82 cm)

CROSS SECTION: 1.75 in (4.45 cm)

INTRUSION: .90 in (2.29 cm) depth
major dia of threads

THREAD SIZE: 1 7/16-16UNS-2A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: Same as M423

PRIMER: M104 Stab

DETONATORS: M85 Flash

LEAD: 75 mg RDX

BOOSTER: 9 gm RDX

OTHER:

FUNCTIONING DATA

MODE(S): PD or Delay, Selectable

TYPE: Mechanical

CHARACTERISTICS:

SQ or delay

TARGET: Ground-Personnel, Bunker

SENSITIVITY:

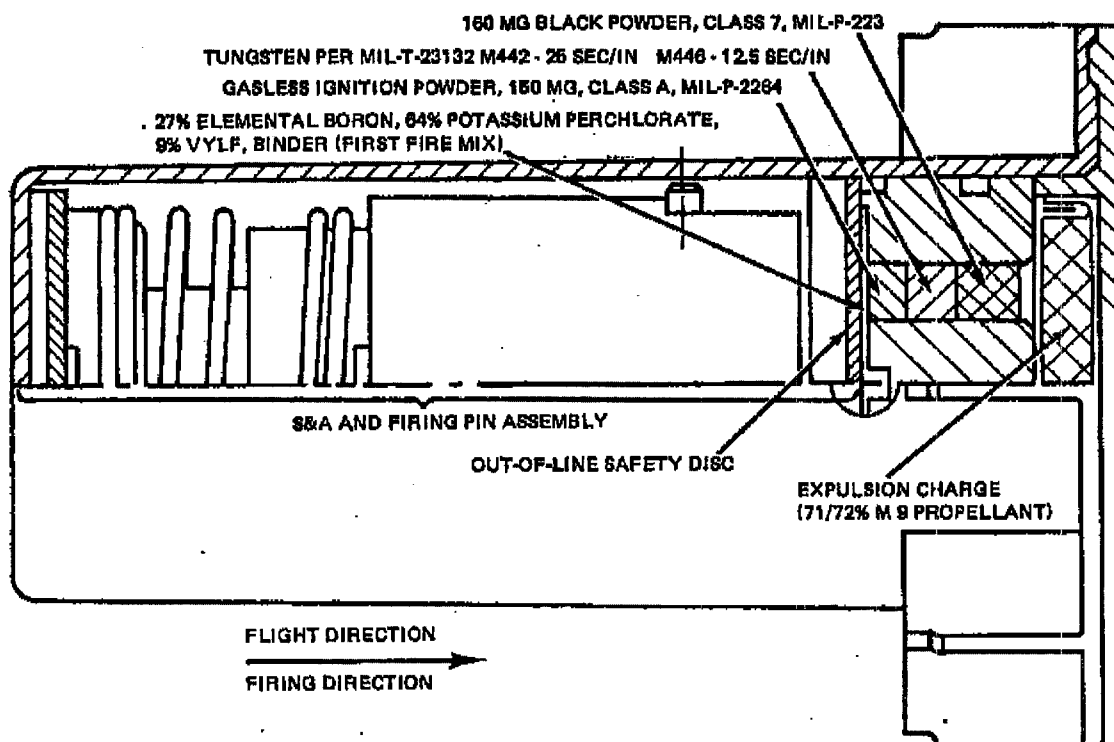
REMARKS

CHAPTER: 5 SERIES: A
DESIGNATION: M440
Rocket PD Fuze

5-40

0442

E-4

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: A. Zacharin
AV 880-6477

STATUS: Procurement Std

USER: Army

ASSY DWG: 9298733

PARTS LIST:

SPEC: MIL-F-50541

NSN: Not yet assigned

PRIOR NOMENCLATURE:

REPLACES: XM436, WDU-4A/A

GENERAL

MUNITION: 2.75 in Rocket for
Helicopters

USE: Warhead, Flare, M257

LOCATION: Base of warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 40 g

VELOCITY: 549 m/s rocket
610 m/s helo

CREEP:

SERIES: A CHAPTER: 5
DESIGNATION: M442
Rocket Pyro Time Fuze

E-5

5-41

0443

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 11.25 g non arm,
20.5 g arm

SECOND SAFETY:

Boost, 0.85 to 1.25 sec at 35 g

OTHER SAFETY:

None

DELAY:

150 m

SAFE/ARM CONDITION:

No
Waiver for MIL-STD-1316A

FUNCTIONING DATA

MODE(S): Time, Fixed

TYPE: Pyrotechnic

CHARACTERISTICS:

9 sec pyro time after burnout;
9.9 to 10.2 sec total

TARGET: Illumination

SENSITIVITY:

Not applicable

PHYSICAL DATA

WEIGHT: 0.70 lb (318.0 gm)

TOTAL LENGTH: 3.87 in (9.83 cm)

CROSS SECTION: 2.55 in (6.48 cm)

INTRUSION: None

THREAD SIZE: None

OTHER:

1.54 in body dia (3.91 cm)

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: Same as WDU-4A/A, M436

PRIMER: PA-515 Stab

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: See Remarks

REMARKS

Similar to Fuze for WDU-4A/A (M436) except 9 sec pyro delay after burnout.
Same as M446 except for 9.0 sec delay. Delay: Boron-KClO(3)-VYLF,
Gasless Ign, Pdr., Tungsten, Blk Pdr.; Expellent: Blk Pdr. and
M9 Propellant.

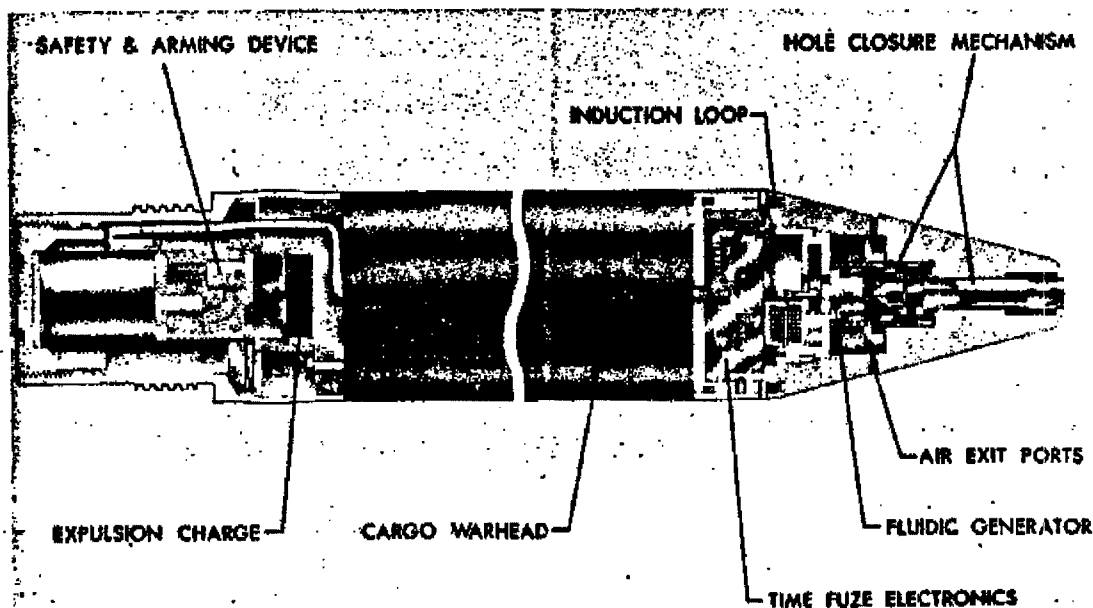
CHAPTER: 5 SERIES: A

DESIGNATION: M442

Rocket Pyro Time Fuze

0444

5-42 E-6



IDENTIFICATION

AGENCY: ERADCOM, DELHD-D-OE-ES

CONTACT: R. Goodman
AV 290-2440

STATUS: Development

USER: Army

ASSY DWG: Unknown

PARTS LIST:

SPEC: Not assigned

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES: M436, 442, 446, XM439

GENERAL

MUNITION: 2.75 in Rocket for
Helicopters
and High Speed AircraftUSE: Cargo Warheads - WDU-4A/A, -13A,
M255 Flechette, M257/262 Flare,
M259 Smoke, XM261 Submun.

LOCATION: Nose and Base of warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 25 g

VELOCITY: 549 m/s rocket
610 m/s helo

CREEP:

SERIES: A CHAPTER: 5
DESIGNATION: XM443
Rocket ET Fuze

0445

5-43

E-7

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 12 g non arm, 27 arm

SECOND SAFETY:

Sustained air flow, 70 m/s
for 0.7 sec

OTHER SAFETY:

DELAY:

0.7 sec (250 m)

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time, settable

TYPE: Electronic, Digital

CHARACTERISTICS:

1.2 to 51.1 sec x 0.1 sec
increments

TARGET: Ground-various

SENSITIVITY:

NA

PHYSICAL DATA

WEIGHT: Unknown

TOTAL LENGTH: 4.70 in (11.94 cm)

CROSS SECTION: 2.75 in (6.99 cm)

INTRUSION: 0.85 in (2.16 cm)

THREAD SIZE: 2.55 in (6.43 cm)

OTHER:

None

POWER SUPPLY:

Fluidic Air Generator

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: ATLAS IMT 172 Piston act

DETONATORS: M84 Elec

LEAD: None

BOOSTER: None

OTHER: Expellent in warhead

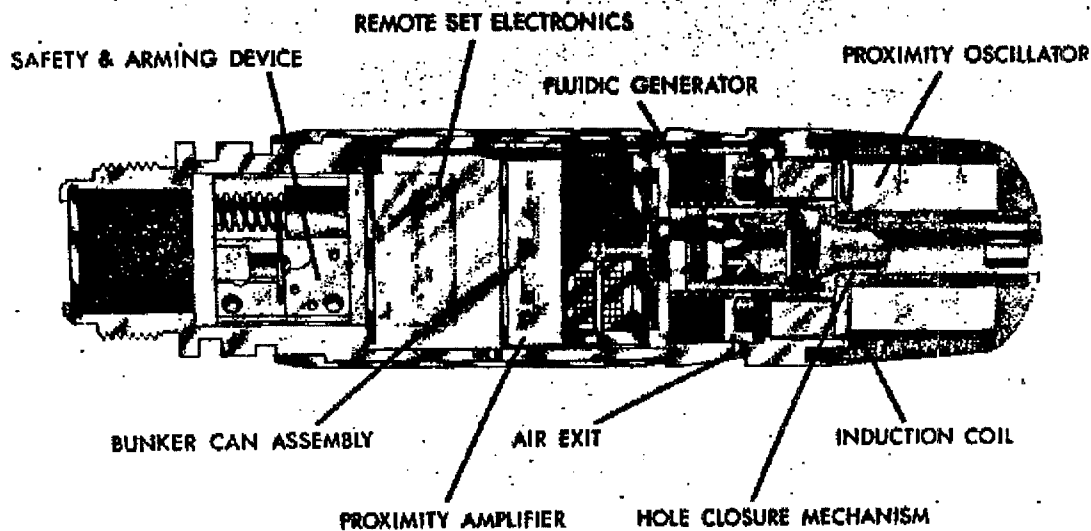
REMARKS

CHAPTER: 5 SERIES: A
DESIGNATION: XM443
Rocket ET Fuze

0446

5-44

E-8

MIL-HDBK-145
1 October 1980**IDENTIFICATION**

AGENCY: ERADCOM, DELHD-D-OE-ES

CONTACT: R. Goodman
AV 290-2440

STATUS: Development

USER: Army, Navy

ASSY DWG: Unknown

PARTS LIST:

SPEC: Not assigned

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES: See Remarks

GENERALMUNITION: 2.75 and 5 in Aircraft
RocketsUSE: 2.75 in, HE M151
5 in Zuni, HE Frag Mk 63
HE GP Mk 24, and AT/APERS Mk 32

LOCATION: Nose of warhead

BALLISTIC LEVELS:

ROTATION: 40 rps

SETBACK: 65 g

VELOCITY: 844 m/s rocket
1116 m/s HS A/C

CREEP:

SERIES: A CHAPTER: 5
DESIGNATION: XM444
Rocket Multi-option Fuze

E-9

5-45

0447

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 11 g non arm, 27 arm

SECOND SAFETY:

Sustained Air Flow
70 m/s for 0.7 sec

OTHER SAFETY:

None

DELAY:

0.7 sec (250 m)

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Prox, PD, Dly, Selectable

TYPE: Electronic, RF CW

CHARACTERISTICS:

Settable for prox, PD or choice
of delay times from 6 to 720 ms

TARGET: Gnd-Personnel, Light Materiel

SENSITIVITY:

Unknown

PHYSICAL DATA

WEIGHT: Unknown

TOTAL LENGTH: 8.0 in (20.32 cm)

CROSS SECTION: 1.59 in (4.04 cm)

INTRUSION: 0.74 in (1.88 cm)

THREAD SIZE: 1 7/16-16UNS-2A

OTHER:

POWER SUPPLY:

Fluidic Air Generator

EXPLOSIVE TRAIN

S&A DEVICE: Same as XM443

PRIMER: ATLAS IMT 172 Piston act

DETONATORS: Mk 84 Elec

LEAD: 250 mg PBXN-5

BOOSTER: 9 gm comp A-5

OTHER:

REMARKS

Requires adapter for 5-inch Zuni warheads, 1 7/16-16UNS to 2-12UNS.
Replaces M429, M433, Mk 93, FMU-98/B.

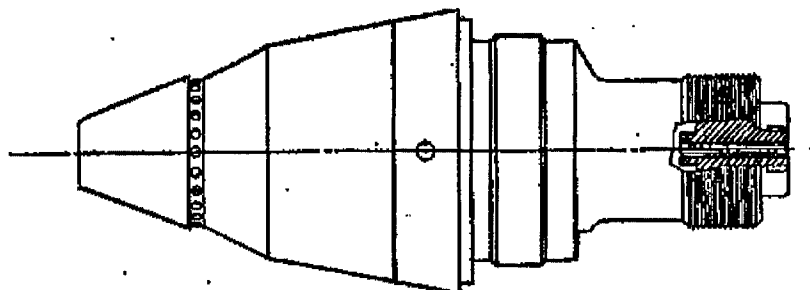
CHAPTER: 5 SERIES: A
DESIGNATION: XM444
Rocket Multi-option Fuze

0448

5-46

E-10





IDENTIFICATION

AGENCY: ERADCOM, DELHD-D-OE-S

CONTACT: R. Goodman
AV 290-2440

STATUS: Development

USER: Army, NATO

ASSY DWG: 11730940

PARTS LIST: 11730940

SPEC: HD(D) F-00009

NSN: Not yet assigned

PRIOR NOMENCLATURE: None

REPLACES: None

GENERAL

MUNITION: 220 to 240 mm
Multiple Launch Rocket
System (MLRS)USE: Submunition Dispensing
warhead, M42

LOCATION: Nose of warhead

BALLISTIC LEVELS:

ROTATION: 12 rps

SETBACK: 100 g

VELOCITY: 1000 m/s

CREEP:

SERIES: A

CHAPTER: 5

DESIGNATION: XM445
Rocket ET Fuze

MIL-HDBK-145
1 October 1980

MIL-HDBK-145 ■ 9999970 0119850 144 ■

ARMING DATA

FIRST SAFETY:

Setback, 10 g non arm, 20 g arm

SECOND SAFETY:

Sustained air flow, 70 m/s

OTHER SAFETY:

Input time setting

DELAY:

Mechanical: 800 millsec.

Electrical: set time - 3.5 sec

SAFE/ARM CONDITION:

No visual, yes electrical
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time, Remote Settable

TYPE: Electronic, MNOS Digital

CHARACTERISTICS:

2.0 to 199.9 sec x 0.1 sec
increments

TARGET: Gnd-Pers, Lt. Mat, & Tank

SENSITIVITY:

Not applicable

PHYSICAL DATA

WEIGHT: 2.2 lb (1000 gm)

TOTAL LENGTH: 8.10 in (20.57 cm)

CROSS SECTION: 3.27 in (8.30 cm)

INTRUSION: 3.78 in (9.60 cm)

THREAD SIZE: M48 x 2.0 - 6 g

OTHER:

POWER SUPPLY:

Fluidic Air Generator,
11730950

EXPLOSIVE TRAIN

S&A DEVICE: 11730948

PRIMER: None

DETONATORS: Mk 96 Elec

LEAD: 740 mg Comp CH-6

BOOSTER: None

OTHER: Expellent in warhead

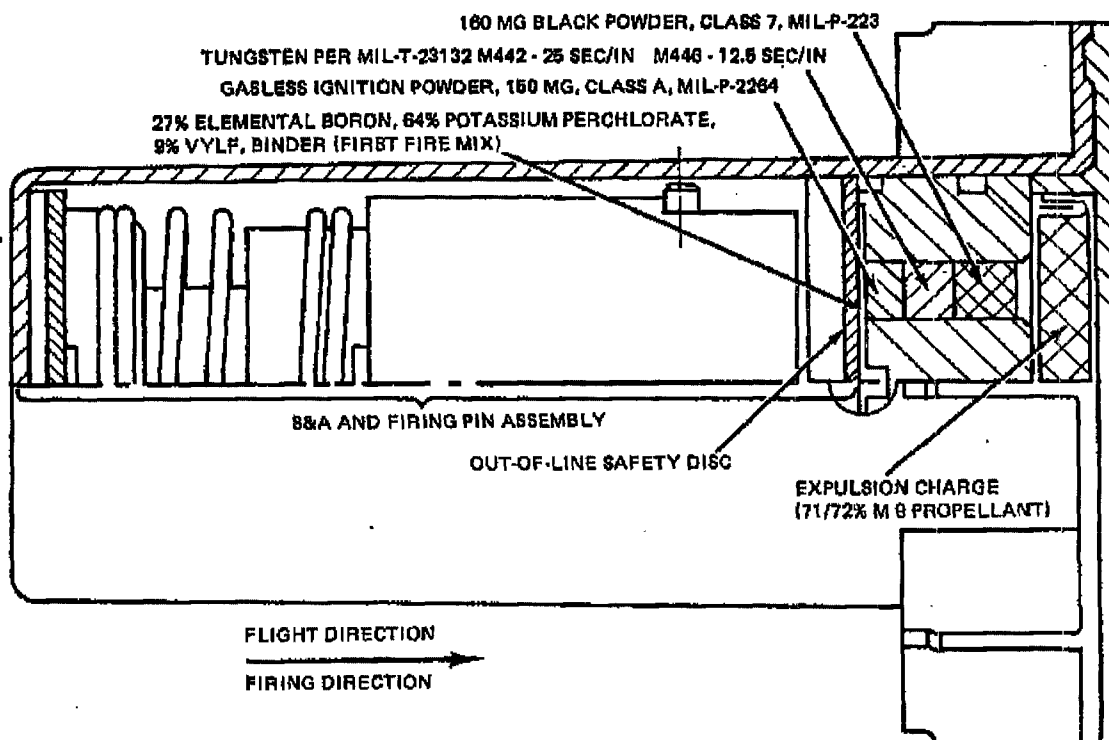
REMARKS

CHAPTER: 5 SERIES: A
DESIGNATION: XM445
Rocket ET Fuze

0450

5-48

E-12



IDENTIFICATION

AGENCY: ARRADCOM, ORDAR-LCN-M

CONTACT: A. Zacharin,
AV 380-6477

STATUS: Procurement Std

USER: Army, AF, Navy, Marines

ASSY DWG: 9326094

PARTS LIST: 9326094

SPEC: MIL-F-50541

NSN: Not yet assigned

PRIOR NOMENCLATURE: XM446

REPLACES: M436, WDU-4A/A

GENERAL

MUNITION: 2.75 in Rocket
for Helicopters
and High Speed Aircraft

USE: Warhead Smoke M259

LOCATION: Base of warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 40 g

VELOCITY: 549 m/s rocket
610 m/s helo
780 m/s HS A/C

CREEP:

SERIES: A CHAPTER: 5
DESIGNATION: M446
Rocket Pyro Time Fuze

0451

5-49

E-13

ARMING DATA

FIRST SAFETY:

Setback, 11.25 g non arm, 20.5 arm

SECOND SAFETY:

Boost, 0.85 to 1.25 sec at 35 g

OTHER SAFETY:

DELAY:

150 m

SAFE/ARM CONDITION:

No
Waiver for MIL-STD-1316A

FUNCTIONING DATA

MODE(S): Time, Fixed

TYPE: Pyrotechnic

CHARACTERISTICS:

4.5 sec after motor burnout
(5.4 to 5.7 sec total)

TARGET: Ground-screening

SENSITIVITY:

Not applicable

PHYSICAL DATA

WEIGHT: 0.70 lb (318.0 gm)

TOTAL LENGTH: 3.87 in (9.83 cm)

CROSS SECTION: 2.55 in (6.48 cm)

INTRUSION: None

THREAD SIZE: None

OTHER:

Body dia 1.54 in (3.91 cm)

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: Same as WDU-4A/A, M436

PRIMER: PA-515 Stab

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: See Remarks

REMARKS

Similar to Fuze for WDU-4A/A except has 4.5 sec delay after burnout. Same as M442 except for delay. Delay: Boron-KCLO(3)-VYLF, Gasless Ign Pdr, Tungsten, Blk Pdr. Expellent: Blk Pdr and M9 Propellant.

CHAPTER: 5 SERIES: A
DESIGNATION: M446
Rocket Pyro Time Fuze

5-50

0452

E-14

IDENTIFICATION

AGENCY: MICOM, DRSMI-OT

CONTACT: W. Zecher
AV 746-1245

STATUS: Development

USER: Army

ASSY DWG: KD 88884 mod.

PARTS LIST:

SPEC: MIL-F- In preparation

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES: None

GENERAL

MUNITION: 70mm Assault Rocket,
Special Hard Target
Assault Weapon, LAW (SHAWL)USE: Forward HEAT penetrating
warhead

LOCATION: Base of Fwd Warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 4000 g

VELOCITY: 213 m/s

CREEP: 3 g

SERIES: A CHAPTER: 5
DESIGNATION: XM738 (front)
PIBD Fuze

0453

5-51

F-1

ARMING DATA

FIRST SAFETY:

Launch signal, piston
actuated rotor lock

SECOND SAFETY:

Setback, 2500 g non arm, 3400 arm

OTHER SAFETY:

None

DELAY:

.030 to .060 sec

SAFE/ARM CONDITION:

No, but can't assemble armed
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): PIBD, Graze

TYPE: Electric, Mechanical

CHARACTERISTICS:

SQ crush switch less than 50 u sec
Graze-electric inertial

TARGET: Gnd-Fortification, Vehicles

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.20 lb (90.7 gm)

TOTAL LENGTH: 2.10 (5.33 cm)

CROSS SECTION: 1.250 (3.175 cm)

INTRUSION: 2.10 (5.33 cm) depth
1.25 (3.175 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Capacitor charged at launch signal
from thermal battery
Wound rotor spring

EXPLOSIVE TRAIN

S&A DEVICE: M530 setback type

PRIMER: None

DETONATORS: M84 Elec

LEAD: Precision Initiator Coupler
(PIC)

BOOSTER: 8 gm Comp A-5

OTHER:

REMARKS

Used as fuze for front warhead producing cavity. Similar to XM754 Fuze except
has piston actuator instead of creep as other safety.

CHAPTER: 5 SERIES: A
DESIGNATION: XM738 (front)
PIBD Fuze

0454

5-52

F-2

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: MICOM, DRSMI-OT

CONTACT: W. Zecher
AV 746-1245

STATUS: Development

USER: Army

ASSY DWG: 11733501 mod

PARTS LIST:

SPEC: MIL-F- In preparation

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES: None

GENERAL

MUNITION: 70mm Assault Rocket,
Special Hard Target
Assault Weapon, LAW (SHAWL)USE: Follow thru Bursting
Charge Warhead

LOCATION: Base of Rear Warhead

BALLISTIC LEVELS:

ROTATION: 10 rps

SETBACK: 4000 g

VELOCITY: 213 m/s

CREEP: 3 g

SERIES: A CHAPTER: 5
DESIGNATION: XM738 (rear)
BD Fuze

0455

5-53

F-3

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch signal on rotor lock

SECOND SAFETY:

Setback, 2500 g non arm, 3400 arm

OTHER SAFETY:

None

DELAY:

.030 to .060 sec

SAFE/ARM CONDITION:

No, but can't be assembled armed
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): BD Delay, Graze

TYPE: Mechanical

CHARACTERISTICS:

Delay - .010 sec nominal
Graze - 85 degrees obliq.

TARGET: Ground-Fort. and Lt Targets

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.18 lb (81.6 gm)

TOTAL LENGTH: 1.53 in (3.89 cm)

CROSS SECTION: 1.25 (3.18 cm)

INTRUSION: 1.53 (3.89 cm) depth
1.25 (3.18 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Wound rotor spring

EXPLOSIVE TRAIN

S&A DEVICE: M530 type

PRIMER: M97 & Stab Dly 11730630

DETONATORS: M55 Stab

LEAD: 85 mg PBXN-5

BOOSTER: 8 gm Comp A-5

OTHER:

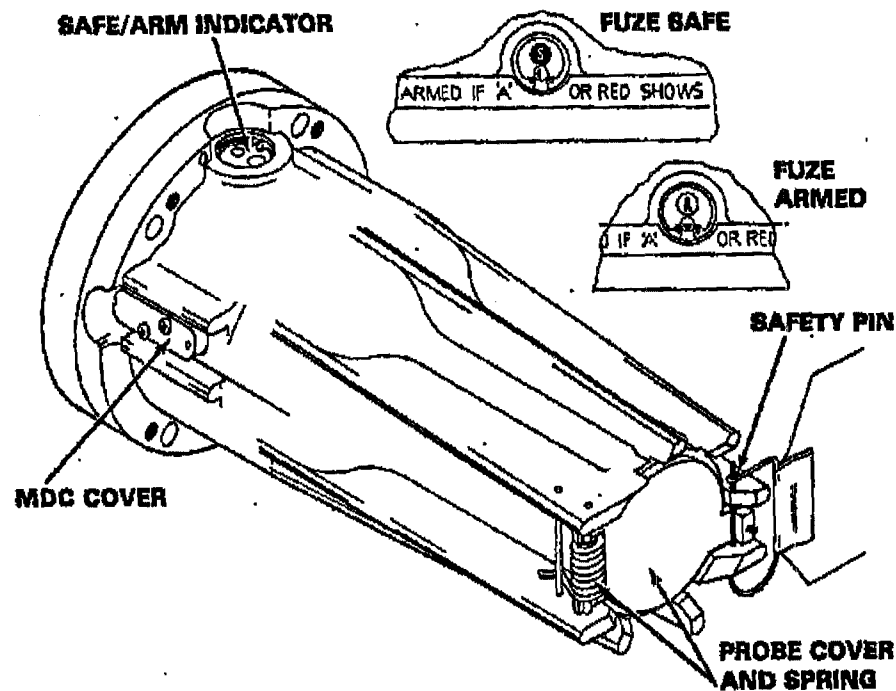
REMARKS

CHAPTER: 5 SERIES: A
DESIGNATION: XM738 (rear)
BD Fuze

0456

5-54

F-4

**IDENTIFICATION**

AGENCY: MERADCOM, DRME-NS
 CONTACT: B. Gabriel, Jr.
 AV 354-4272
 STATUS: Development
 USER: Army
 ASSY DWG: 13220E9836
 PARTS LIST:
 SPEC: MIL-F- Not assigned (WOLS 1025)
 NSN: Not yet assigned
 PRIOR NOMENCLATURE: None
 REPLACES: None

GENERAL

MUNITION: Rocket HE 345mm XM130
 SLU-FAE
 USE: XM130 warhead
 LOCATION: Nose of Warhead
 BALLISTIC LEVELS:
 ROTATION: None
 SETBACK: 55 g
 VELOCITY: 122 m/s
 CREEP:

SERIES: A
 DESIGNATION:
 ET Fuze

CHAPTER: 5
 XM750

0457

5-55

F-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Electrical charging

SECOND SAFETY:

Setback, 18 g non arm, 25 arm

OTHER SAFETY:

Boost, 0.30 plus or minus .05 sec
at 44.5 g

DELAY:

0.66 plus or minus .075 sec or 65 M

SAFE/ARM CONDITION:

Yes
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time, Settable, PD and Delay

TYPE: Electronic, Mechanical

CHARACTERISTICS:

1 to 12 sec x 0.1 sec time
PD/standoff dispersion w/.010 sec
funct delay, back up inertia
for dispersion & function
TARGET: Ground-Mine clearance

SENSITIVITY:

All surfaces except light show

PHYSICAL DATA

WEIGHT: 7.0 lb (3.175 kg)

TOTAL LENGTH: 8.42 in (21.39 cm)

CROSS SECTION: 5.125 in (13.03 cm)

INTRUSION: None

THREAD SIZE: None

OTHER:

POWER SUPPLY:

None External

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: Mk 96-0 Elec, 3 ea

LEAD: See Remarks

BOOSTER: Actuator: BBU-24/B

OTHER:

REMARKS

Electronic time fixed at 12 sec. Functioning time varied by intervalometer
delaying launch. Mk 8 lead 166 mg CH-6, transfer lead XM750, 148 mg PBXN-301.CHAPTER: 5 SERIES: A
DESIGNATION: XM750
ET.Fuze

0458

5-56

F-6

IDENTIFICATION

AGENCY: MICOM, DRCPM-VIC
CONTACT: B. Brown
AV 746-1756, -2371
STATUS: Development
USER: Army, Marines
ASSY DWG: 11571995
PARTS LIST:
SPEC: MIL-F- Not yet assigned
NSN: Not yet assigned
PRIOR NOMENCLATURE: None
REPLACES: None

GENERAL

MUNITION: 70mm Light Anti-Tank Rocket

USE: XM132 Rocket, High Explosive,
70mm VIPER

LOCATION: Base of W/H, nose crush sw
BALLISTIC LEVELS:
ROTATION: 10 rps
SETBACK: 8000 g
VELOCITY: 283 m/s

CREEP:

SERIES: A CHAPTER: 5
DESIGNATION: XM754
PIBD Fuze

0459

5-57
F-7

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

setback, 2500 g non arm, 4000 arm

SECOND SAFETY:

aero drag, 1.5 g non arm, 4 arm

OTHER SAFETY:

None

DELAY:

9-18 m

SAFE/ARM CONDITION:

No

PHYSICAL DATA

WEIGHT: 0.20 lb (90.7 gm)

TOTAL LENGTH: 2.10 (5.33 cm)

CROSS SECTION: 1.25 (3.18 cm)

INTRUSION: 2.10 (5.33 cm)

THREAD SIZE: 1.25 (3.18 cm)

OTHER:

None

POWER SUPPLY:

Capacitor charged from
Launcher Thermal Battery.
Wound rotor spring

EXPLOSIVE TRAIN

S&A DEVICE: Multileaf setback

PRIMER: None

DETONATORS: M84 Elec

LEAD: Precision Initiator Coupler
(PIC) includes booster

BOOSTER: 8 gm PBXN-5

OTHER:

FUNCTIONING DATA

MODE(S): PIBD, Graze

TYPE: Electric, Mechanical

CHARACTERISTICS:

SQ, Nose crush switch
less than 50 u sec funct
Graze, electric inertial

TARGET: Ground-Armor

SENSITIVITY:

70 degrees obliq. SQ;
70-90 degrees graze, not SQ

REMARKS

M530A1 modified with second safety, electric detonator & electronic circuits
including electrical graze switch to meet VIPER requirements.CHAPTER: 5 SERIES: A
DESIGNATION: XM754
PIBD Fuze

0460

5-58

F-8

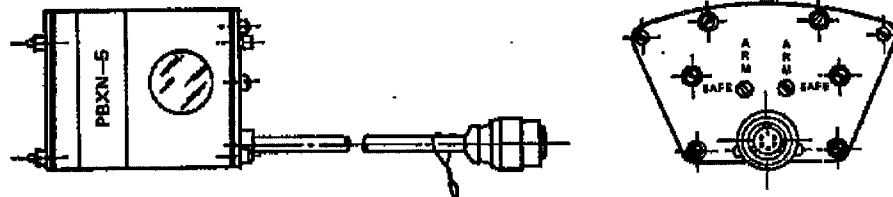
CHAPTER 6

M
I
S
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S

6-1

0461

F-9



IDENTIFICATION

AGENCY: NWC, Code 3351
CONTACT: R. Yost
AV 437-7332
STATUS: Procurement Std
USER: Navy
ASSY DWG: 657417
PARTS LIST: LD 268027
SPEC: OS 11690
NSN: 8T-1375-705-3057
PRIOR NOMENCLATURE: NOTS Model 1000
REPLACES: Mk 2 Mod 1 AF

GENERAL

MUNITION: TERRIER/TARTAR/STANDARD
Guided Missiles
USE: HE
LOCATION: Forward end exercise head
BALLISTIC LEVELS:
ROTATION: Not applicable
SETBACK:
VELOCITY:
CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: MK 1 Mod 1
Arming-Firing Device

6-3

0462

F-10

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Acceleration-Heavy Setback
Weights Resist Launch Shock

SECOND SAFETY:

Acceleration-Setback Weight
Clock Spring Drive Retarded by
Escapement

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Radar Shut Down

TYPE: Electric Primer

CHARACTERISTICS:

Delay 1/4 Sec.

TARGET: Air and Surface

SENSITIVITY:

Actuated by Radar Shut Down

PHYSICAL DATA

WEIGHT: 2.5 lb (1134 gm)

TOTAL LENGTH: 3.084 in (7.83 cm)

CROSS SECTION:

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

28V or 40V from missile power

EXPLOSIVE TRAIN

S&A DEVICE: Dual separate (redundant)
Out-of-Line Firing Trains

PRIMER: Mk 148 Mod 0 (2)

DETONATORS: Mk 50 Mod 0 (2)

LEAD: PBXN-5 (2), 9.2 gm each,
Dwg. 2204009

BOOSTER:

OTHER:

REMARKS

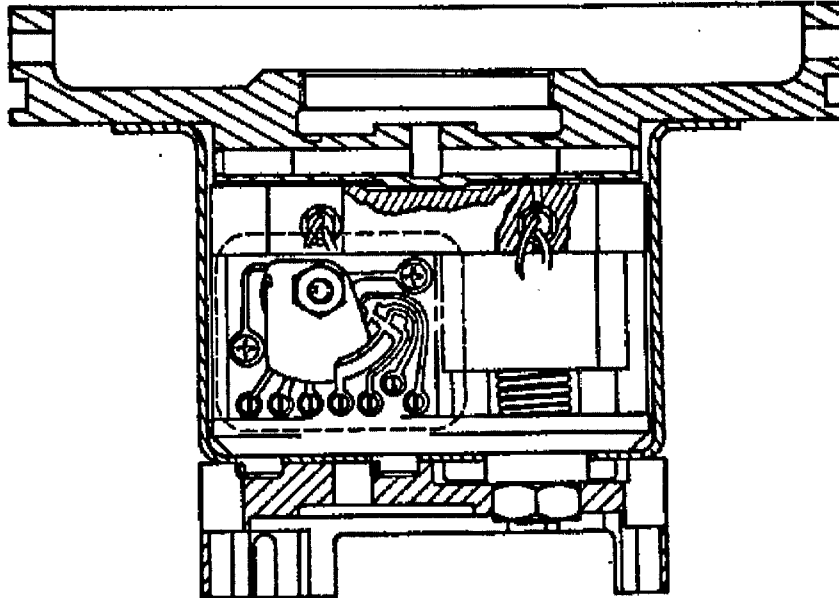
The Mk 1 Mod 0 is the same as the Mod 1 except reverse direction mounting.
Attaches to either Mk 2 Mod 0 or Mk 4 Mod 0 Destructor Charge in exercise
head of missile.

CHAPTER: 6 SERIES: N
DESIGNATION: MK 1 Mod 1
Arming-Firing Device

0463

6-4

F-11



IDENTIFICATION

AGENCY: NWC, Code 3355

CONTACT: J. Janson
AV 437-7510

STATUS: Development

USER: AF

ASSY DWG: 3300100

PARTS LIST: DL 3300100

SPEC: AF-3356-78-4

NSN:

PRIOR NOMENCLATURE:

REPLACES: Mk 3 Mod 4

GENERAL

MUNITION: Sidewinder Missile
AIM-9 N/P

USE: HE

LOCATION: Base of Warhead

BALLISTIC LEVELS:

ROTATION: Not applicable

SETBACK:

VELOCITY:

CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: MK 3 Mod 5
Safety-Arming Device

6-5

0464

F-12

ARMING DATA

FIRST SAFETY:

Clevis Latch Activated by
Electric Solenoid

SECOND SAFETY:

Acceleration

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Proximity, Impact

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET: Air

SENSITIVITY:

100 g to 200 g (Impact Sensor)

PHYSICAL DATA

WEIGHT: 0.81 lb (368 gm)

TOTAL LENGTH: 2.4 in (6.096 cm)

CROSS SECTION:

INTRUSION:

THREAD SIZE:

OTHER:

Flange Size: 82.55 mm

POWER SUPPLY:

25-32 VDC Thermal Battery,
from proximity fuze

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER:

DETONATORS: 2 Mk 71 Mod 0

LEAD: 2 Mk 12 Mod 2

BOOSTER: Mk 34 Mod 0 (supplied
separately)

OTHER:

REMARKS

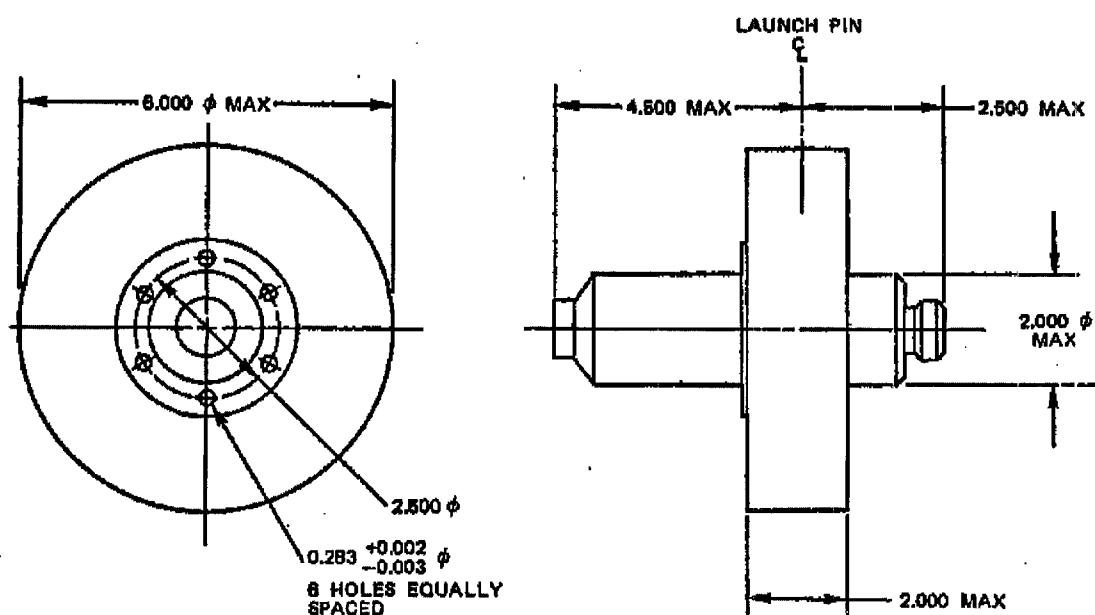
The Mk 3 Mod 5 is an acceleration discrimination electro/mechanical
safety arming device for use in all type missiles.

CHAPTER: 6 SERIES: N
DESIGNATION: MK 3 Mod 5
Safety-Arming Device

6-6

0465

F-13



IDENTIFICATION

AGENCY: NWC, Code 3352

CONTACT: M. Tyler
AV 437-7414

STATUS: Development

USER: Navy

ASSY DWG: 1137AS200

PARTS LIST: DL1137AS200

SPEC: XAS-5002

NSN:

PRIOR NOMENCLATURE:

REPLACES: Mk 334 Mod 0

GENERAL

MUNITION: Phoenix AIM-54 Missile

USE: HE

LOCATION: Forward end of rocket motor

BALLISTIC LEVELS:

ROTATION: Not applicable

SETBACK:

VELOCITY:

CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: FSU- 10/A
Safety-Arming Device

6-7

0466

F-14

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch Pin Pulled

SECOND SAFETY:

Rocket motor pressure
provides arming energy

OTHER SAFETY:

Pre-Launch Electrical Signal

DELAY:

8 sec, mechanical escapement

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Proximity, and/or Impact

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET: Air

SENSITIVITY:

100 g to 200 g

PHYSICAL DATA

WEIGHT: 4.4 lb (1995.8 cm)

TOTAL LENGTH: 7.0 in (17.78 cm)

CROSS SECTION:

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

100 VDC Missile 28 VDC Missile

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER:

DEFONATORS: Mk 71 Mod 0 (2)

LEAD: Mk 24 Mod 0 (2)
Mk 25 Mod 0 (1)

BOOSTER: Mk 60 Mod 1, supplied
separately

OTHER:

REMARKS

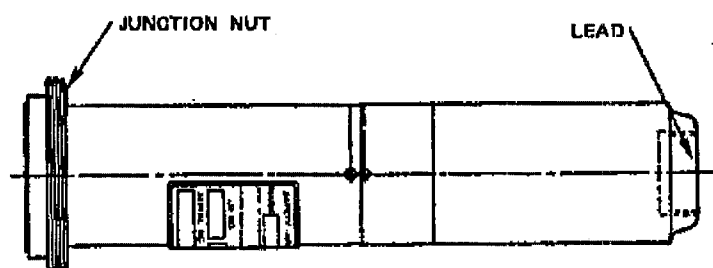
Safety and Arming Device combines the function of a rocket motor arming and firing device with a warhead safing and arming device into a single integrated mechanism.

CHAPTER: 6 SERIES: N
DESIGNATION: FSU- 10/A
Safety-Arming Device

0467

6-8

6-1

**IDENTIFICATION**

AGENCY: NWC, Code 3351
CONTACT: C. Merzals
AV 437-7332
STATUS: Procurement Std
USER: Navy, AF, Marines
ASSY DWG: 639AS1130
PARTS LIST: DL639AS1130
SPEC: AS 2994
NSN: 1336-01-017-4030-V259
PRIOR NOMENCLATURE:
REPLACES: Mk 13 Mod 0

GENERAL

MUNITION: Sidewinder AIM-9L, -9M
USE: HE
LOCATION: Forward end of warhead
BALLISTIC LEVELS:
ROTATION: Not applicable
SETBACK:
VELOCITY:
CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: MK 13 Mod 2
Safety-Arming Device

0468

6-9

6-2

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch latch activated by
electric solenoid

SECOND SAFETY:

Acceleration 4 g no arm

OTHER SAFETY:

Parallel Electronic Timer
(mounted in the target detector)

DELAY:

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Proximity, Contact

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET: Air

SENSITIVITY:

100 - 200 g (Impact Sensor,
mounted elsewhere in the missile)

PHYSICAL DATA

WEIGHT: 1.40 lb (635 gm)

TOTAL LENGTH: 7.109 in (18.2 cm)

CROSS SECTION: 1.500 in (4.13 cm)

INTRUSION:

THREAD SIZE: 2 1/8-16UN-2A

OTHER:

Hermetically Sealed

POWER SUPPLY:

28 VDC from missile
(G and C thermal battery)

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER:

DETONATORS: Mk 71 Mod 0 (2)

LEAD: Mk 8 Mod 0, Mk 16 Mod 0,
Mk 14 Mod 0

BOOSTER:

OTHER:

REMARKS

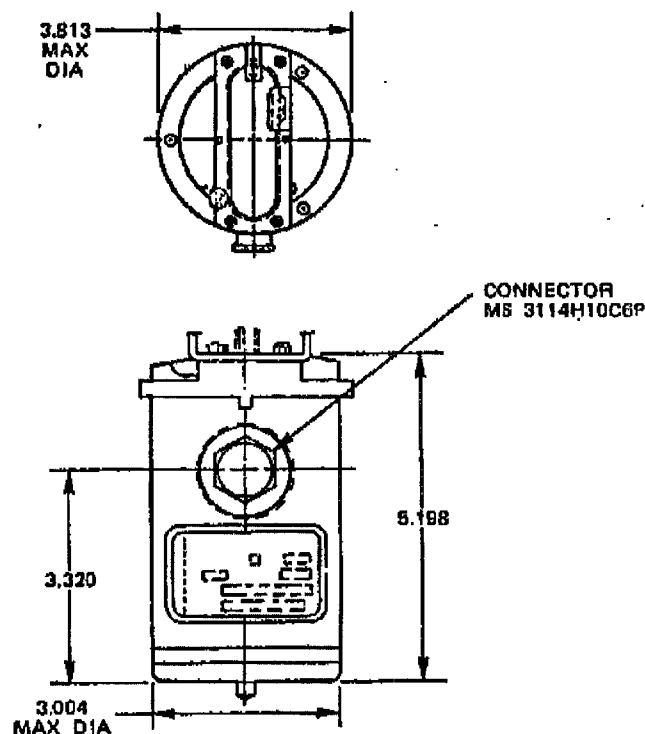
Attaches to target detecting device and fits into the WDU-17/B warhead.
Can be used in Sidewinders AMI-90, G and H with the Mk 48 warhead with the
addition of a shock absorber. NOTE: A limited number of Mk 13 Mod 1 S-As
were manufactured; these have one or both ends of the case shortened slightly,
up to .140 in. maximum.

CHAPTER: 6 SERIES: N
DESIGNATION: MK 13 Mod 2
Safety-Arming Device

6-10

G-3

0469



IDENTIFICATION

AGENCY: NWC, Code 3355

CONTACT: L. Brauer
AV 437-7455

STATUS: Development

USER: Navy/AF, Marines

ASSY DWG: X1155AS626

PARTS LIST: PLX1155AS626

SPEC: XAS-4622.

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: Fuel Air Explosive BLU-96/B

USE: Fuel Air Explosive

LOCATION: Base of Warhead

BALLISTIC LEVELS:

ROTATION: Not applicable

SETBACK:

VELOCITY:

CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: FSU- 13/8
Safety-Arming Device

6-11

G-4

0470

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Arming wire activated
during launch

SECOND SAFETY:

Dynamic Air Pressure

OTHER SAFETY:

Electric energy required at
beginning of arming sequence.
Also, parallel electronic timer.

DELAY:

SAFE/ARM CONDITION:

Armed only when tear strip removed
and gag rod released

FUNCTIONING DATA

MODE(S):

TYPE:

CHARACTERISTICS:

TARGET:

SENSITIVITY:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH: 5.4 in (13.72 cm)

CROSS SECTION: 3.0 in (7.62 cm)

INTRUSION:

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Plus or minus 16V, Weapon
Power Supply

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER: None

DETONATORS: 2 (Mk 96)

LEAD: None

BOOSTER: None

OTHER:

REMARKS

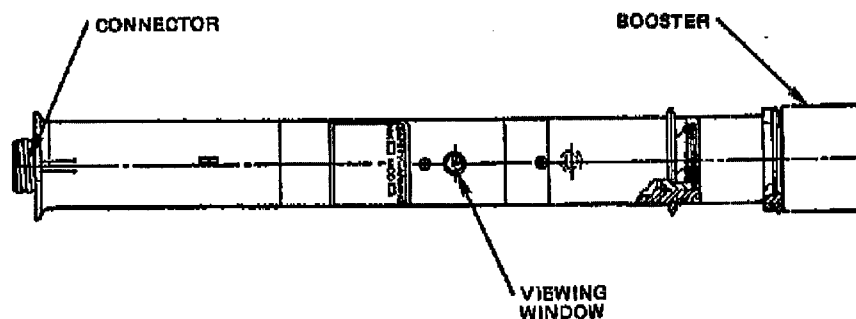
The FSU-13/B uses an external TOD to provide a firing signal.

CHAPTER: 6 SERIES: N
DESIGNATION: FSU-13/B
Safety-Arming Device

6-12

6-5

0471

**IDENTIFICATION**

AGENCY: NWC, Code 3351
CONTACT: R. Yost
AV 437-7332
STATUS: Procurement Std
USER: Navy
ASSY DWG: 2204848
PARTS LIST: DL533586
SPEC: WS 3806
NSN:
PRIOR NOMENCLATURE: EX-28 S-A
REPLACES:

GENERAL

MUNITION: Standard, AEGIS Missiles
RIM-66/-67
USE: HE
LOCATION: Forward end of warhead
BALLISTIC LEVELS:
ROTATION: Not applicable
SETBACK:
VELOCITY:
CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: MK 17 Mod 0
Safety-Arming Device

6-13

0472

6-6

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch latch activated by
electrical solenoid

SECOND SAFETY:

Acceleration

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Proximity or Impact

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET: Surface and Air

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 2.62 lb (1188.4 gm)

TOTAL LENGTH: 14.698 in (37.33 cm)

CROSS SECTION: 1.625 in (4.13 cm)

INTRUSION:

THREAD SIZE:

OTHER:

Hermetically sealed

POWER SUPPLY:

28 VDC from missile battery power

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER:

DETONATORS: Mk 71 Mod 0 (2)

LEAD: Mk 8 Mod 0, Mk 16 Mod 0

BOOSTER: Mk 53 Mod 0 (supplied
separately)

OTHER:

REMARKS

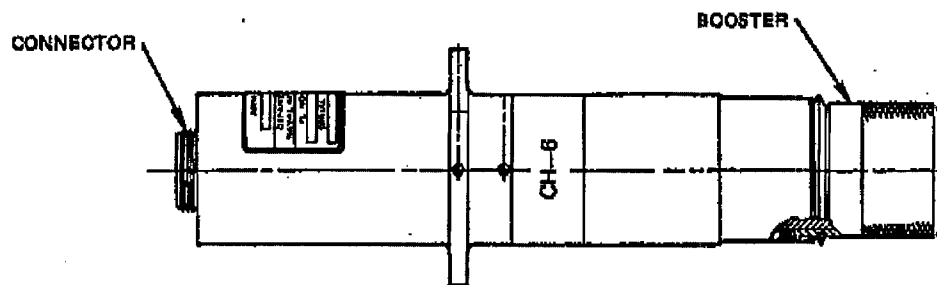
Fits into Warhead Mk 51 Mod 1, and Mk 90 Mod 0.

CHAPTER: 6 SERIES: N
DESIGNATION: MK 17 Mod 0
Safety-Arming Device

0473

6-14

G-7



IDENTIFICATION

AGENCY: NWC, Code 3351
 CONTACT: R. Yost
 AV 437-7332
 STATUS: Procurement Std
 USER: Navy, AF
 ASSY DWG: 67A85F151
 PARTS LIST: DL67A85F151
 SPEC: AS 1306
 NSN:
 PRIOR NOMENCLATURE: EX 29 Mod 0
 REPLACES:

GENERAL

MUNITION: Standard Arm AGM-78 and
 AGM-88 HARM Missiles
 USE: HE
 LOCATION: Exercise Head
 BALLISTIC LEVELS:
 ROTATION: Not applicable
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 6
 DESIGNATION: MK 29 Mod 0
 Arming-Firing Device

0474

6-15
G-8

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch latch activated by
electrical solenoid

SECOND SAFETY:

Acceleration

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Command Destruct

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET: Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 1.438 lb (652.3 gm)

TOTAL LENGTH: 8.11 in (20.6 cm)

CROSS SECTION: 1.625 in (4.13 cm)

INTRUSION:

THREAD SIZE:

OTHER:

Hermetically Sealed

POWER SUPPLY:

28 VDC Missile Battery

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER:

DETONATORS: Mk 71 Mod 0 (2)

LEAD: Mk 8 Mod 0
Mk 9 Mod 0

BOOSTER: Mk 38 Mod 1

OTHER:

REMARKS

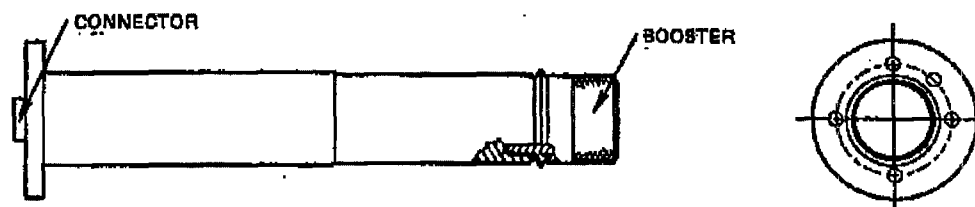
The Mk 29 Mod 1 with a revised mounting flange is used on the Harm Program.

CHAPTER: 6 SERIES: N
DESIGNATION: MK 29 Mod 0
Arming-Firing Device

0475

6-16

6-9



IDENTIFICATION

AGENCY: NWC, Code 3351
CONTACT: R. Emerson
AV 437-7333
STATUS: Procurement Std
USER: Navy, AF, Marines
ASSY DWG: 917AS3000
PARTS LIST: DL917AS3000
SPEC: AS 137B
NSN:
PRIOR NOMENCLATURE:
REPLACES:

GENERAL

MUNITION: Sparrow AIM-7F,
7H Seasparrow RIM-7F
USE: HE
LOCATION: Forward end of warhead
BALLISTIC LEVELS:
ROTATION: Not applicable
SETBACK:
VELOCITY:
CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: MK 33 Mod 0
Safety-Arming Device

0476

6-17

G-10

ARMING DATA

FIRST SAFETY:

Launch latch activated by
electrical solenoid

SECOND SAFETY:

Acceleration

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Proximity, Impact

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET: Air

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 1.8 lb (816.5 gm)

TOTAL LENGTH: 9.425 in (23.9 cm)

CROSS SECTION: 1.625 in (4.13 cm)

INTRUSION:

THREAD SIZE:

OTHER:

Hermetically Sealed

POWER SUPPLY:

-28 VDC from Missile Power

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER:

DETONATORS: Mk 71 Mod 0 (2)

LEAD: Mk 8 Mod 0, Mk 16 Mod 0

BOOSTER: Mk 38 Mod 1

OTHER:

REMARKS

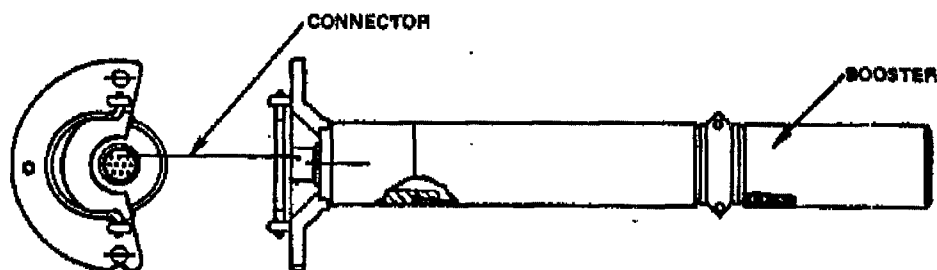
Mounts to the Mk 71 Mod 0 Warhead.

CHAPTER: 6 SERIES: N
DESIGNATION: MK 33 Mod 0
Safety-Arming Device

6-18

0477

6-11

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: NWC, Code 3351
CONTACT: G. Stefan
AV 437-7341
STATUS: Procurement Std
USER: Navy, AF
ASSY DWG: 67A85F200
PARTS LIST: DL67A85F200
SPEC: AS 1315
NSN:
PRIOR NOMENCLATURE:
REPLACES:

GENERAL

MUNITION: Standard Arm Missile AGM-78
USE: HE
LOCATION: Forward end of warhead
BALLISTIC LEVELS:
ROTATION: Not applicable
SETBACK:
VELOCITY:
CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: MK 34 Mod 1
Safety-Arming Device

0478

6-19

G-12

ARMING DATA

FIRST SAFETY:

Launch latch activated by
electrical solenoid

SECOND SAFETY:

Acceleration

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Proximity, Impact

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET: Surface

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 2.316 lb (1050.5 gm)

TOTAL LENGTH: 12.908 in (32.8 cm)

CROSS SECTION: 2,000 in (5.08 cm)

INTRUSION:

THREAD SIZE:

OTHER:

Hermetically Sealed

POWER SUPPLY:

28 VDC from Missile Power

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER:

DETONATORS: Mk 71 Mod 0 (2)

LEAD: Mk 8 Mod 0, Mk 16 Mod 0

BOOSTER: Mk 43 Mod 0

OTHER:

REMARKS

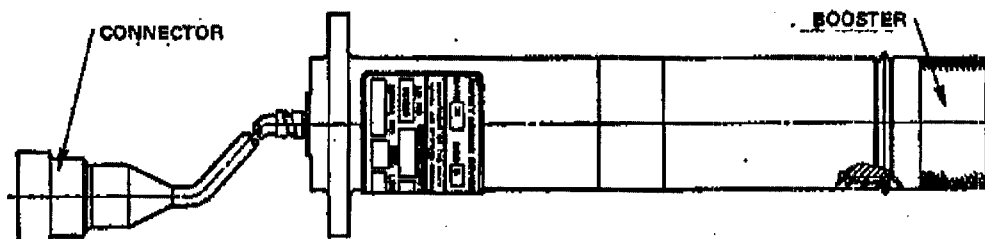
Mechanism will commit-to-arm in 1000 to 2000 feet, arms at end missile
boost. Fits into Mk 73 Mod 0 Warhead.

CHAPTER: 6 SERIES: N
DESIGNATION: MK 34 Mod 1
Safety-Arming Device

6-20

0479

A-2

MIL-HDBK-145
1 October 1980**IDENTIFICATION**

AGENCY: NWC, Code 3351
CONTACT: G. Stefan
AV 437-7341
STATUS: Procurement Std
USER: Navy, AF, Marines
ASSY DWG: 533605
PARTS LIST:
SPEC: AS 1302
NSN:
PRIOR NOMENCLATURE:
REPLACES:

GENERAL

MUNITION: SPARROW AIM-7E
USE: HE
LOCATION: Forward end of warhead
BALLISTIC LEVELS:
ROTATION: Not applicable
SETBACK:
VELOCITY:
CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: MK 35 Mod 0
Safety-Arming Device

0480

6-21

A-3

MIL-HDBK-145
1 October 1980

MIL-HDBK-145 ■ 9999970 0119881 818 ■

ARMING DATA

FIRST SAFETY:

Launch latch activated by
electrical solenoid

SECOND SAFETY:

acceleration

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Proximity

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET: Air

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 1.61 lb (730.3 gm)

TOTAL LENGTH: 7.872 in (19.99 cm)

CROSS SECTION:

INTRUSION:

THREAD SIZE:

OTHER:

Hermetically Sealed

POWER SUPPLY:

28 VDC from Missile Power

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER:

DETONATORS: Mk 71 Mod 0 (2)

LEAD: Mk 8 Mod 0, Mk 16 Mod 0

BOOSTER: Mk 38 Mod 1

OTHER:

REMARKS

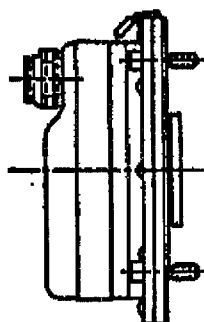
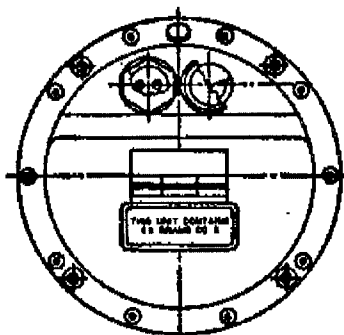
Fits into Warhead Mk 38. Arms in boost, 800 to 1000 feet.

CHAPTER: 6 SERIES: N
DESIGNATION: MK 35 Mod 0
Safety-Arming Device

6-22

0481

A-4

**IDENTIFICATION**

AGENCY: NWC, Code 3352
CONTACT: H. Berry
AV 437-7332
STATUS: Procurement Std.
USER: Navy, AF, Marines
ASSY DWG: 366AS100
PARTS LIST: DL 366AS100
SPEC: AS 2356
NSN:
PRIOR NOMENCLATURE:
REPLACES:

GENERAL

MUNITION: Guided Weapon, WALLEYE II,
AGM-62
USE: HE
LOCATION: Base of Warhead
BALLISTIC LEVELS:
ROTATION:
SETBACK:
VELOCITY: Classified
CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: FMU- 94/B
GM Impact Fuze

0482

6-23

A-5

ARMING DATA

FIRST SAFETY:

Lanyard and weapon power

SECOND SAFETY:

Air pressure

OTHER SAFETY:

Launch Latch
Power

DELAY:

SAFE/ARM CONDITION:

Viewing windows

FUNCTIONING DATA

MODE(S): Impact

TYPE: Electric

CHARACTERISTICS:

35 ms delay or inst. selectable
prior to launch

TARGET: Surface

SENSITIVITY:

100 to 200 g.

PHYSICAL DATA

WEIGHT: 5.0 lb (2270 gm)

TOTAL LENGTH: 3.8 in (9.65 cm)

CROSS SECTION: 7.0 in (17.78 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

28 VDC from missile

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 71 Mod 0 (2)
BBU-22/B (2)

LEAD: Mk 19-0 (2)

BOOSTER: Mk 44-0

OTHER:

REMARKS

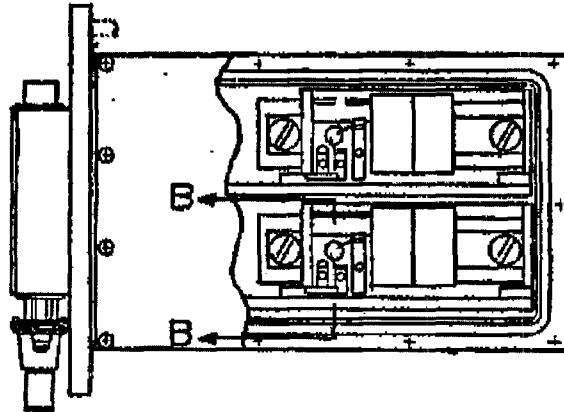
Pressure Probe FZU-11/B is part of fuze system. Fuze Triggering Device Mk 4 Mod 0 initiates explosive train. Delay or instantaneous selection made prior to launch of weapon. The FZU-12/B switch provides instantaneous override of delay if warhead starts to deform excessively.

CHAPTER: 6 SERIES: N
DESIGNATION: FMU- 94/B
GM Impact Fuze

6-24

0483

A-6

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCE-M

CONTACT: C. Fritsch
AV 880-2392

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9235300

PARTS LIST:

SPEC: MIL-S-50200

NSN:

PRIOR NOMENCLATURE: XM100E1

REPLACES: XM32E6, XM32

GENERALMUNITION: Hawk Guided Missile
MIM-23B

USE: Warhead, HE M155

LOCATION: Base of Warhead

BALLISTIC LEVELS:

ROTATION: None

SETBACK: 15 g

VELOCITY: 762 m/s

CREEP: 40 g

SERIES: A CHAPTER: 6
DESIGNATION: M100
Safety-Arming Device

0484

6-25

A-7

MIL-HDBK-145
1 October 1980

ARMING DATA**FIRST SAFETY:**

setback, 5 g non arm, 9.5 arm

SECOND SAFETY:

Boost time - classified

OTHER SAFETY:

None

DELAY:

Classified

SAFE/ARM CONDITION:

Yes, Visual and Elec

FUNCTIONING DATA

MODE(S): See XM821 TDD

TYPE: See XM 818E1

CHARACTERISTICS:

TARGET: Air-Aircraft

SENSITIVITY:

N/A

PHYSICAL DATA

WEIGHT: 2.0 lb (907.2 gm)

TOTAL LENGTH: 6 in (15.24 gm)

CROSS SECTION: 1.75 x 3.25 in

INTRUSION: 5.13 in (13.03 cm) depth
1.75 x 3.25

THREAD SIZE: None

OTHER:

POWER SUPPLY:

40 V.D.C.

EXPLOSIVE TRAIN

S&A DEVICE: Item is S&A

PRIMER: None

DETONATORS: T20E1

LEAD: 820 mg RDX 2 each

BOOSTER: In warhead

OTHER:

REMARKS

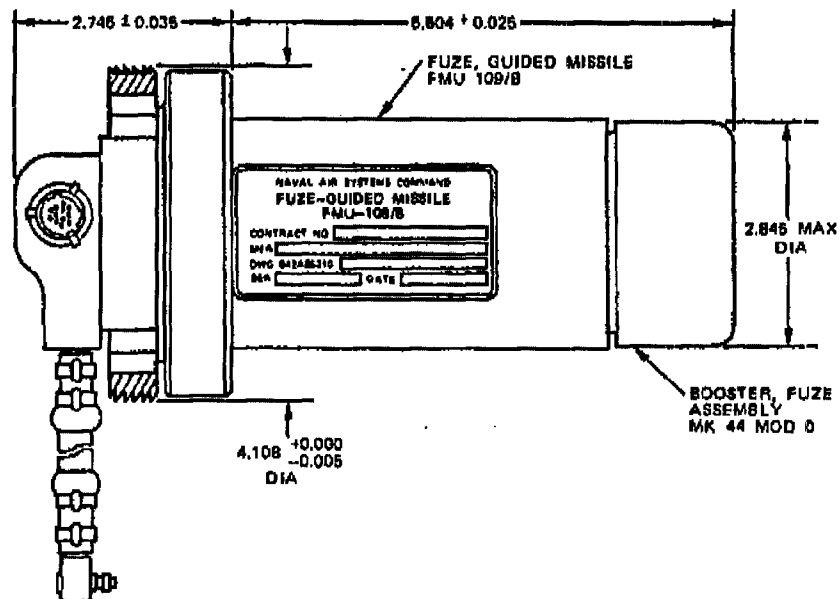
Contains dual accelerometers, circuits and explosive trains.

CHAPTER: -6 SERIES: A
DESIGNATION: M100
Safety-Arming Device

0485

6-26

A-8

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: NWC, Code 3354
 CONTACT: J. Eaton
 AV 437-7230
 STATUS: Procurement Std
 USER: Navy, AF
 ASSY DWG: 642AS5310
 PARTS LIST: DL 642AS5310
 SPEC: AS 2361 Part II
 NSN:
 PRIOR NOMENCLATURE:
 REPLACES:

GENERAL

MUNITION: Guided Missile HARPOON
 USE: HE
 LOCATION: Base of Warhead
 BALLISTIC LEVELS:
 ROTATION:
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 6
 DESIGNATION: FMU-109/B
 GM Impact Fuze

MIL-HDBK-145.
1 October 1980.

MIL-HDBK-145 ■ 999970 0119887 236 ■

ARMING DATA

FIRST SAFETY:

Lanyard and/or weapon power

SECOND SAFETY:

Air pressure

OTHER SAFETY:

Rotor Lever Lock

DELAY:

Classified

SAFE/ARM CONDITION:

Viewing window

FUNCTIONING DATA

MODE(S): Impact

TYPE: Electric

CHARACTERISTICS:

14-ms pyrotechnic delay or inst.

TARGET: Surface

SENSITIVITY:

100 to 200 g

PHYSICAL DATA

WEIGHT: 6.5 lb (2951 gm)

TOTAL LENGTH: 7.94 in (20.17 cm)

CROSS SECTION: 2.910 in (7.39 cm)

INTRUSION: 5.2 in (13.2 cm)

THREAD SIZE: 4.25-10 Buttress

OTHER:

POWER SUPPLY:

28 VDC from missile

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 71-0 (2)
Mk 85-0 (2)

LEAD: Mk 9-0 (4)

BOOSTER: Mk 44-0

OTHER:

REMARKS

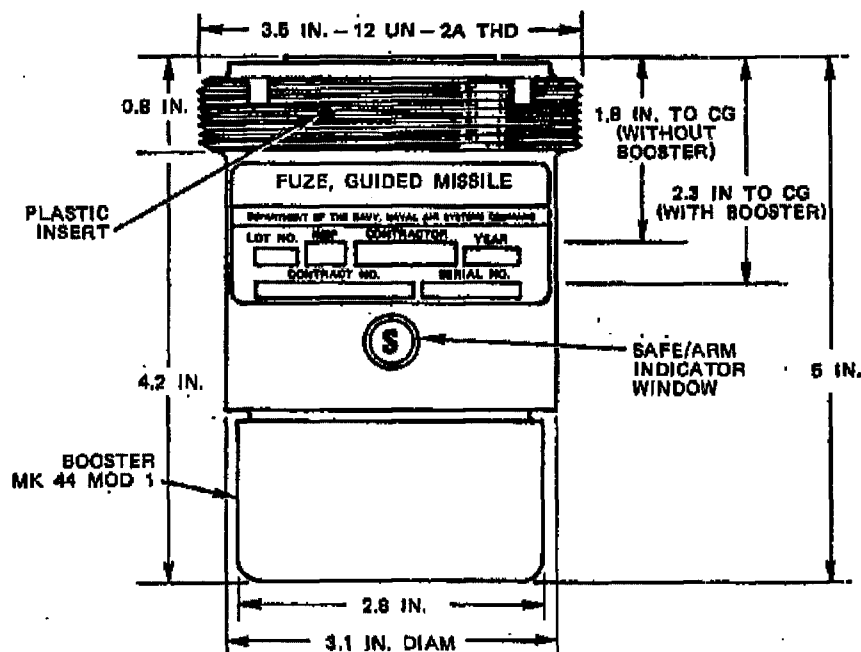
Pressure Probe FZU-30/B is part of the fuze system. Fuze Triggering Device Mk 4 Mod 0 initiates explosive train.

CHAPTER: 6 SERIES: N
DESIGNATION: FMU-109/B
GM Impact Fuze

6-28

0487

A-10



IDENTIFICATION

AGENCY: NWC, Code 3351

CONTACT: H. Berry
AV 437-7332

STATUS: Development

USER: Navy, AF, Marines

ASSY DWG: 704AS2100

PARTS LIST: DL 704AS2100

SPEC: AS 3428

NSN:

PRIOR NOMENCLATURE: FMU-111(XCL-1)/B

REPLACES:

GENERAL

MUNITION: Guided Missile
AGM-88, HARM

USE: HE

LOCATION: Base of Warhead

BALLISTIC LEVELS:

ROTATION:

SETBACK:

VELOCITY: Classified

CREEP:

SERIES: N CHAPTER: 6

DESIGNATION: FMU-111/B
GM Proximity Fuze

A-11

6-29

0488

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch Latch Solenoid
activated by missile power

SECOND SAFETY:

Acceleration

OTHER SAFETY:

Viewing window

DELAY:

1000 to 5000 ft.

SAFE/ARM CONDITION:

Visual Indicator

FUNCTIONING DATA

MODE(S): Proximity, Impact backup

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET:

SENSITIVITY:

100 to 200 g triggering device

PHYSICAL DATA

WEIGHT: 3.6 lb (1634 gm)

TOTAL LENGTH: 4.9 in (12.45 cm)

CROSS SECTION: 3.1 in (7.87 cm)

INTRUSION: 4.2 in (10.67 cm)

THREAD SIZE: 3.5-12 UN-2A

OTHER:

POWER SUPPLY:

28 VDC from missile

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 71-0 (2)

LEAD: Mk 12-1 (2), Mk 13-1 (2)

BOOSTER: Mk 44-1

OTHER:

REMARKS

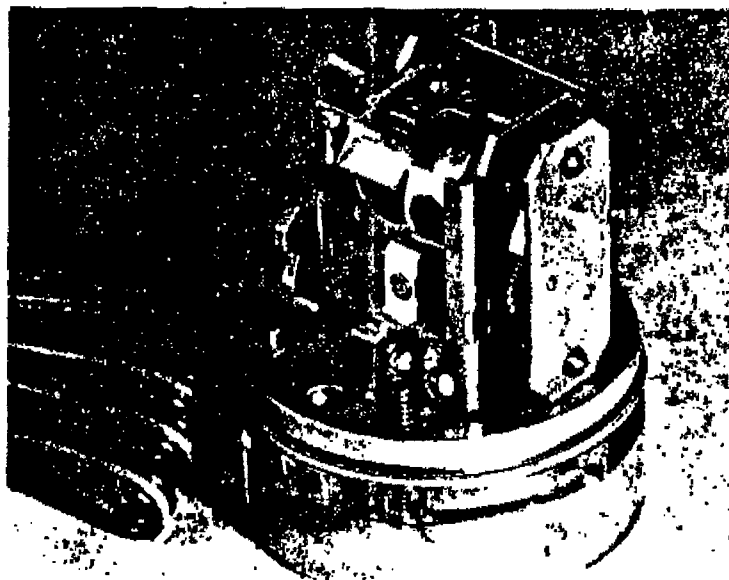
The FMU-129/B is an inert version of the FMU-111/B fuze.
Commit to arm occurs between 500 and 1000 ft.

CHAPTER: 6 SERIES: N
DESIGNATION: FMU-111/B
GM Proximity Fuze

0489

6-30

A-12



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-M
CONTACT: R. McKissick
AV 880-5484
STATUS: Procurement Std
USER: Army
ASSY DWG: 9231500
PARTS LIST: DL 9231500
SPEC: MIL-S-14799
NSN: 1336-01-050-8869
PRIOR NOMENCLATURE: XM114, XM812
REPLACES: None

GENERAL

MUNITION: TOW Guided Missile,
BGM-71A
USE: Warhead, HEAT, M207
LOCATION: Base of warhead
BALLISTIC LEVELS:
ROTATION: None
SETBACK: 390 g Launch, 21 g Boost
VELOCITY: 330 m/s
CREEP:

SERIES: A CHAPTER: 6
DESIGNATION: M114
Safety-Arming Device

6-31

0490

A-13

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch Signal actuating piston
actuator

SECOND SAFETY:

Setback, 10 g non arm, 19 g arm

OTHER SAFETY:

Boost, 300 to 400 millisec at 21 g

DELAY:

292 to 396 ms
(ambient & 104 deg F)

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): PIBD

TYPE: Electric, Mechanical

CHARACTERISTICS:

50 micro sec funct time,
funct up to 65 degrees obliq.

TARGET: Ground-Tank

SENSITIVITY:

Classified

PHYSICAL DATA

WEIGHT: 0.16 lb (72.57 gm)

TOTAL LENGTH: 2.06 in (5.23 cm)

CROSS SECTION: 1.75 in (4.44 cm)

INTRUSION: 0.125 in (0.32 cm) depth
dia 1.50 (3.81 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Thermal Battery; Wound Springs for
Rotor and Escapement

EXPLOSIVE TRAIN

S&A DEVICE: Item is S&A

PRIMER: None

DETONATORS: M48 Elec

LEAD: None

BOOSTER: In warhead

OTHER:

REMARKS

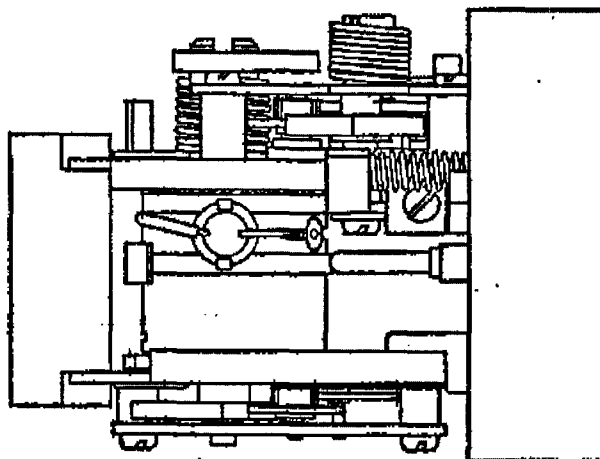
XM114 S&A was previously part of XM812 fuzing system. Crush switch, 9225133, consisting of 4.50 x 4.80 in dia. ogive and inner cones is part of M207 warhead. Previous graze element and M106 primer are now eliminated.

CHAPTER: 6 SERIES: A
DESIGNATION: M114
Safety-Arming Device

0491

6-32

A-14

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, ORDAR-LCN-M

CONTACT: R. McKissick
AV 880-5484

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9220961

PARTS LIST: 9220961

SPEC: MIL-S-14992

NSN: 1336-01-050-8877

PRIOR NOMENCLATURE: XM118, XM815

REPLACES: None

GENERAL

MUNITION: Dragon Guided Missile
FGM-77G, MAW

USE: WHD, HEAT M225

LOCATION: Base of warhead

BALLISTIC LEVELS:

ROTATION: 6 rps

SETBACK: 300 g (nominal)

VELOCITY: 96 m/s

CREEP:

SERIES: A CHAPTER: 6
DESIGNATION: M118
Safety-Arming Device

0492

6-33

A-1

ARMING DATA

FIRST SAFETY:

Elec Launch Signal actuating
piston actuator releasing
setback weight

SECOND SAFETY:

setback, 160 g non arm, 200 arm

OTHER SAFETY:

None

DELAY:

407 to 560 m
(ambient & 140 deg F)

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): PIBD

TYPE: Electric, Mechanical

CHARACTERISTICS:

60 to 80 microsec funct time
Funct up to 60 degrees obliq.

TARGET: Ground-Tank

SENSITIVITY:

Insensitive to 1/8 in plywood
Functions 3/4 in plywood, 76 m/s

PHYSICAL DATA

WEIGHT: 0.19 lb (86.2 gm)

TOTAL LENGTH: 2.33 in (5.91 cm)

CROSS SECTION: 1.75 in (4.44 cm)

INTRUSION: 0.125 in (.318 cm) depth
1.52 in (3.86 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Thermal Battery wound
springs for rotor and escapement

EXPLOSIVE TRAIN

S&A DEVICE: Item is S&A

PRIMER: None

DETONATORS: T20E1 Elec

LEAD: 183 mg CH-6; 9220893

BOOSTER: In warhead

OTHER:

REMARKS

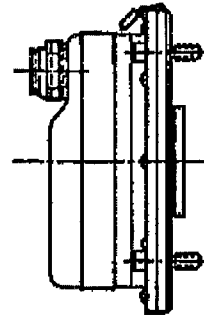
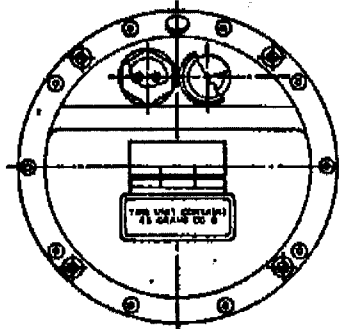
XM118 S&A was previously part of the SM815 fuze. 5.0 x 4.0 in ogive and inner cone crush switch, 9233178, now part of M225 WHD.

CHAPTER: 6 SERIES: A
DESIGNATION: M118
Safety-Arming Device

6-34

0493

B-2

**IDENTIFICATION**

AGENCY: NWC, Code 3352
CONTACT: H. Berry
AV 437-7332
STATUS: Procurement Std
USER: Navy, Marines, AF
ASSY DWG: SK 366AS130
PARTS LIST:
SPEC:
NSN:
PRIOR NOMENCLATURE:
REPLACES:

GENERAL

MUNITION: Guided Weapon, WALLEYE II
USE: HE
LOCATION: Base of Warhead
BALLISTIC LEVELS:
ROTATION: Free Fall
SETBACK:
VELOCITY:
CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: FMU-125/B
GM Impact Fuze

0494

6-35

B-3

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Lanyard and weapon power

SECOND SAFETY:

Air pressure

OTHER SAFETY:

Launch Latch
Power

DELAY:

SAFE/ARM CONDITION:

Viewing window

PHYSICAL DATA

WEIGHT: 5.0 lb (2270 gm)

TOTAL LENGTH: 3.8 in (9.65 cm)

CROSS SECTION: 7.0 in (17.78 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

28 VDC from weapon

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 71-0 (2)
BBU-22/B (2)

LEAD: Mk 19-0 (2)

BOOSTER: Mk 44-0

OTHER:

FUNCTIONING DATA

MODE(S): Impact

TYPE: Electric

CHARACTERISTICS:

35 ms or inst. selectable prior
to launch

TARGET: Surface

SENSITIVITY:

100 to 200 g

REMARKS

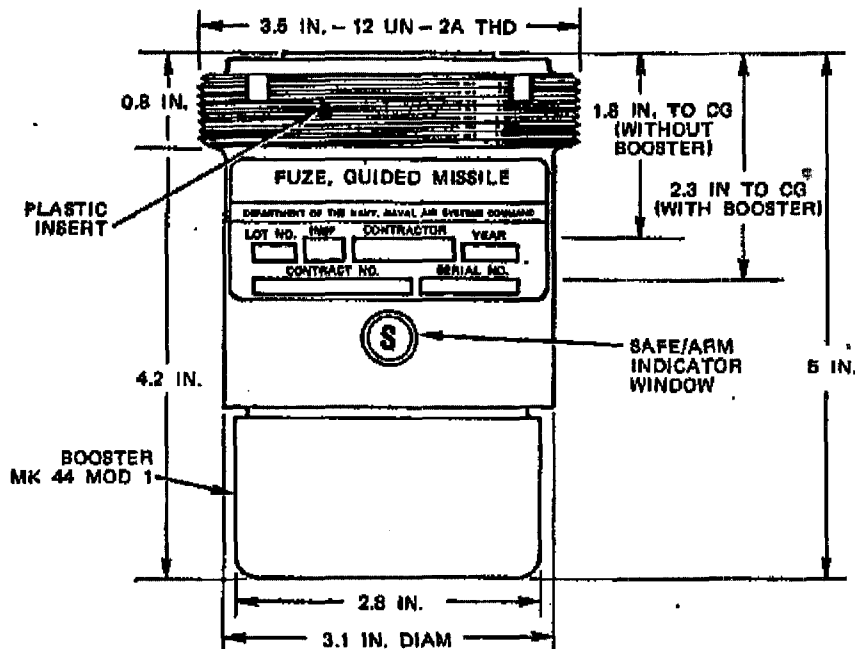
Pressure Probe FZU-11/B is part of the fuze system. Fuze Triggering Device Mk 4 Mod 0 initiates explosive train. FZU-12/B switch provides instantaneous override of delay setting if warhead starts to deform excessively.

CHAPTER: 6 SERIES: N
DESIGNATION: FMU-125/B
GM Impact Fuze

6-36

0495

8-4



IDENTIFICATION

AGENCY: NWC, Code 3351

CONTACT: H. Berry
AV 437-7332

STATUS: Development

USER: Navy, AF, Marines

ASSY DWG: X704AS2360

PARTS LIST:

SPEC: AS 3428

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: HARM AGM-88 Missile

USE: Training

LOCATION: Base of Warhead

BALLISTIC LEVELS:

ROTATION: Not applicable

SETBACK:

VELOCITY:

CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: FMU-129/B
GM Impact Fuze

6-37

0496

8-5

ARMING DATA

FIRST SAFETY:

Launch latch solenoid
activated by missile power

SECOND SAFETY:

Acceleration

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

Visual Indicator
(more: inert fuze)

FUNCTIONING DATA

MODE(S): Proximity and/or Impact

TYPE: Electric

CHARACTERISTICS:

Instantaneous

TARGET: Surface

SENSITIVITY:

100-200 g Fuze Triggering Device

PHYSICAL DATA

WEIGHT: 3.6 lb (1633 gm)

TOTAL LENGTH: 4.90 in (12.45 cm)

CROSS SECTION:

INTRUSION: 4.2 in (10.67 cm)

THREAD SIZE: 3.5-12UN-2A

OTHER:

POWER SUPPLY:

28 VDC from Missile Power

EXPLOSIVE TRAIN

S&A DEVICE: Out-of-Line Expl Train

PRIMER: Inert

DETONATORS: Inert

LEAD:

BOOSTER: Inert

OTHER:

REMARKS

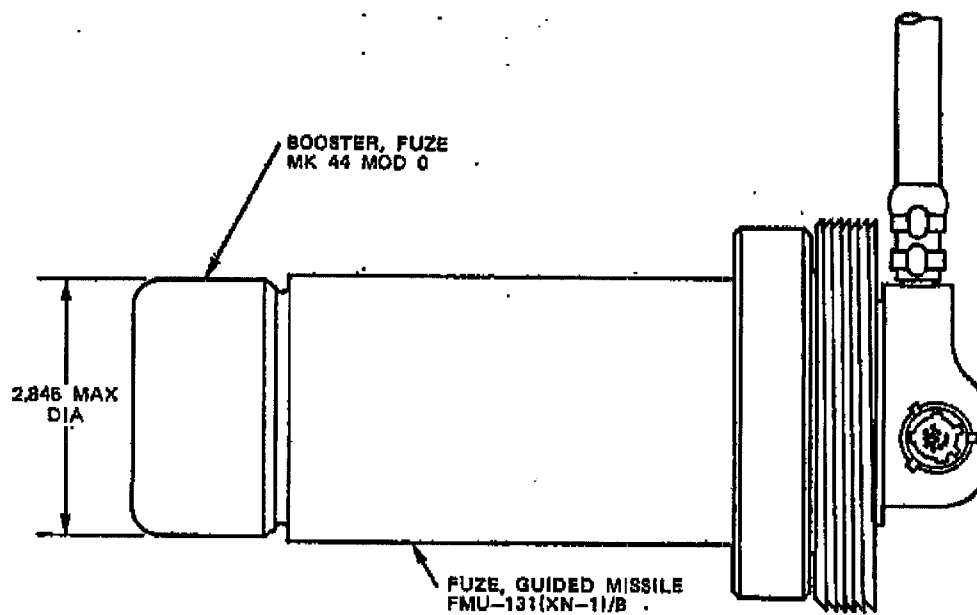
This fuze is for TM missiles only. Arming and functioning data is same as FMU-111/B fuze.

CHAPTER: 6 SERIES: N
DESIGNATION: FMU-129/B
GM Impact Fuze

6-38

0497

B-6



IDENTIFICATION

AGENCY: NWC, Code 3354
 CONTACT: R. Smith
 AV 437-7229
 STATUS: Development
 USER: Navy, AF
 ASSY DWG: SK 1186AS200
 PARTS LIST: DL SK1186AS200
 SPEC: AS-2361
 NSN:
 PRIOR NOMENCLATURE:
 REPLACES:

GENERAL

MUNITION: Guided Missile,
 TOMAHAWK BGM-109B
 USE: HE
 LOCATION: Base of Warhead
 BALLISTIC LEVELS:
 ROTATION:
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 6
 DESIGNATION: FMU-131/B
 GM Impact Fuze

6-39

0498

B-7

MIL-HDBK-145
7 October 1980

ARMING DATA

FIRST SAFETY:

Weapon power

SECOND SAFETY:

Air pressure

OTHER SAFETY:

Rotor Lever Lock

DELAY:

Classified

SAFE/ARM CONDITION:

Viewing window

PHYSICAL DATA

WEIGHT: 6.8 lb (3087 gm)

TOTAL LENGTH: 7.9 in (20.07 cm)

CROSS SECTION: 2.91 in (7.39 cm)

INTRUSION: 5.2 in (13.21 cm)

THREAD SIZE: 4.25-10 Buttfress

OTHER:

POWER SUPPLY:

28 VDC from missile

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 85-0 (2)
Mk 71-0 (2)

LEAD: Mk 9-0 (4)

BOOSTER: Mk 44 Mod 0

OTHER:

FUNCTIONING DATA

MODE(S): Impact

TYPE: Electric

CHARACTERISTICS:

14-ms pyrotechnic delay

TARGET: Surface

SENSITIVITY:

350 to 450 g

REMARKS

Pyrotechnic - actuated Dual Air Valve, FZU-38(XN-1)/B is part of fuzing system. Fuze inertia switch initiates explosive train. FMU-138/B is the same as the FMU-131/B except air valve attachment is different (right angle).

CHAPTER: 6 SERIES: N
DESIGNATION: FMU-131/B
GM Impact Fuze

0499

6-40

8-8

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY:
CONTACT:

STATUS:
USER:
ASSY DWG:
PARTS LIST:
SPEC:
NSN:
PRIOR NOMENCLATURE:
REPLACES:

GENERAL

MUNITION:

USE:

LOCATION:
BALLISTIC LEVELS:
ROTATION:
SETBACK:
VELOCITY:

CREEP:

0500

B-9

6-41

SERIES: AF CHAPTER: 6
DESIGNATION: FMU-132/B
GM Impact Fuze



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH:

CROSS SECTION:

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

FUNCTIONING DATA

MODE(S):

TYPE:

CHARACTERISTICS:

TARGET:

SENSITIVITY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

REMARKS

CHAPTER: 6 SERIES: AF
DESIGNATION: FMU-132/B
GM Impact Fuze

B-10

6-42

0501

IDENTIFICATION

AGENCY:
CONTACT:

STATUS:
USER:
ASSY DWG:
PARTS LIST:
SPEC:
NSN:
PRIOR NOMENCLATURE:
REPLACES:

GENERAL

MUNITION:

USE:

LOCATION:
BALLISTIC LEVELS:
ROTATION:
SETBACK:
VELOCITY:

CREEP:

SERIES: AF CHAPTER: 6
DESIGNATION: FMU-133/B
GM Impact Fuze

6-43

0502

B-11

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

FUNCTIONING DATA

MODE(S):

TYPE:

CHARACTERISTICS:

TARGET:

SENSITIVITY:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH:

CROSS SECTION:

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

REMARKS

CHAPTER: 6 - SERIES: AF
DESIGNATION: FMU-133/B
GM Impact Fuze

0503

6-44

B-12

IDENTIFICATION

AGENCY:
CONTACT:
STATUS:
USER:
ASSY DWG:
PARTS LIST:
SPEC:
NSN:
PRIOR NOMENCLATURE:
REPLACES:

GENERAL

MUNITION:
USE:
LOCATION:
BALLISTIC LEVELS:
ROTATION:
SETBACK:
VELOCITY:
CREEP:

SERIES: AF CHAPTER: 6
DESIGNATION: FMU-137/B
Safety-Arming Device

0504

6-45

B-13

ARMING DATA FIRST SAFETY: SECOND SAFETY: OTHER SAFETY: DELAY: SAFE/ARM CONDITION:	PHYSICAL DATA WEIGHT: TOTAL LENGTH: CROSS SECTION: INTRUSION: THREAD SIZE: OTHER: POWER SUPPLY:
FUNCTIONING DATA MODE(S): TYPE: CHARACTERISTICS: TARGET: SENSITIVITY:	EXPLOSIVE TRAIN S&A DEVICE: PRIMER: DETONATORS: LEAD: BOOSTER: OTHER:

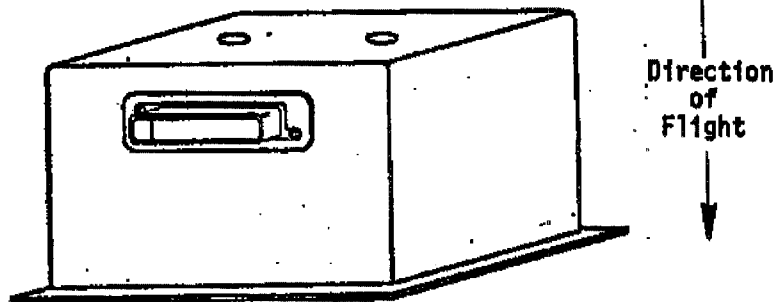
REMARKS

CHAPTER: 6 SERIES: AF
DESIGNATION: FMU-137/B
Safety-Arming Device

6-46

0505

B-14



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: C. Dunham
AV 880-3137

STATUS: Procurement Std

USER: Army

ASSY DWG: 9311100

PARTS LIST: 9311100

SPEC: MIL-S-63257

NSN: Not separate item

PRIOR NOMENCLATURE: XM131

REPLACES: None

GENERAL

MUNITION: Patriot Guided Missile
XMIM-104

USE: XM249E1 Warhead Section

LOCATION: Base of warhead

BALLISTIC LEVELS:

ROTATION: None

SETBACK: 12 g

VELOCITY: Supersonic, Classified

CREEP:

SERIES: A CHAPTER: 6
DESIGNATION: XM143
Safety-Arming Device

0506

6-47

C-1

ARMING DATA

FIRST SAFETY:

Firing Signal actuated
solenoid launch latches

SECOND SAFETY:

Setback, 4 g non arm, 8 arm

OTHER SAFETY:

Boost, 3.5 sec at 12 g

DELAY:

500-1000 m delay arming

SAFE/ARM CONDITION:

Yes, windows and electronic
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): See Remarks

TYPE: Electronic

CHARACTERISTICS:

See XM818

TARGET: Air-Aircraft

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 6.01 lb (2.272 kg)

TOTAL LENGTH: 3.25 in (8.26 cm)

CROSS SECTION: 5.0 x 5.0 in.

INTRUSION: None

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Missile Power, 28 V DC

EXPLOSIVE TRAIN

S&A DEVICE: Item is S&A

PRIMER: None

DETONATORS: 9279861, 1 watt 1 amp

LEAD: 1100 mg Comp A-5 Class 1

BOOSTER: In warhead

OTHER:

REMARKS

Command and self destruct modes are accomplished by S&A. Proximity
function is by XM818 signal to S&A.

CHAPTER: 6 SERIES: A
DESIGNATION: XM143
Safety-Arming Device

6-48

0507

C-2

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: DRC-PM-CFE

CONTACT: K. Brunette
AV 746-3210

STATUS: Procurement Std

USER: Army

ASSY DWG: 10234613

PARTS LIST:

SPEC: MIS-19272

NSN: 1336-01-017-4030

PRIOR NOMENCLATURE: Mk 13 Mod 1

REPLACES: Mk 13 Mod 1

GENERAL

MUNITION: Ground to Air Intercept
Missile, MIM-72
(Chaparral)

USE: Warhead, HE, M250

LOCATION: Forward end of warhead

BALLISTIC LEVELS:

ROTATION: None

SETBACK: 30 g est

VELOCITY:

CREEP:

SERIES: A CHAPTER: 6
DESIGNATION: M145
Safety-Arming Device

0508

6-49

C-3

MIL-HDBK-145
1 October 1980

ARMING DATA**FIRST SAFETY:**

Launch signal activating
solenoid rotor latch

SECOND SAFETY:

Setback Hg non arm,
6.5 arm

OTHER SAFETY:

Boost 1.23 to 1.66 sec at 25g

DELAY:

183 to 335 m delay arming

SAFE/ARM CONDITION:

Yes
Meets MIL-STD-1316B

FUNCTIONING DATA

MODE(S): See M817 TOD

TYPE: See M817 TOD

CHARACTERISTICS:

See M817 TOD

TARGET: Air-Aircraft

SENSITIVITY:**PHYSICAL DATA**

WEIGHT: 1.40 lb (635.0 gm)

TOTAL LENGTH: 7.02 in (17.83 cm)

CROSS SECTION: 1.625 (4.13 cm)

INTRUSION:

THREAD SIZE: 2 1/8-16UNF-2A

OTHER:

Hermetically sealed

POWER SUPPLY:

Thermal Battery in Missile,
28 v DC

EXPLOSIVE TRAIN**S&A DEVICE:**

PRIMER: None

DETONATORS: Mk 71 Mod 0, 2 ea

LEAD: Mk 8 Mod 0, Mk 16 Mod 0,
Mk 14 Mod 0

BOOSTER:**OTHER:****REMARKS**

Same as Mk 13 Mod 0. Similar to Mk 13 Mod 2 except length.

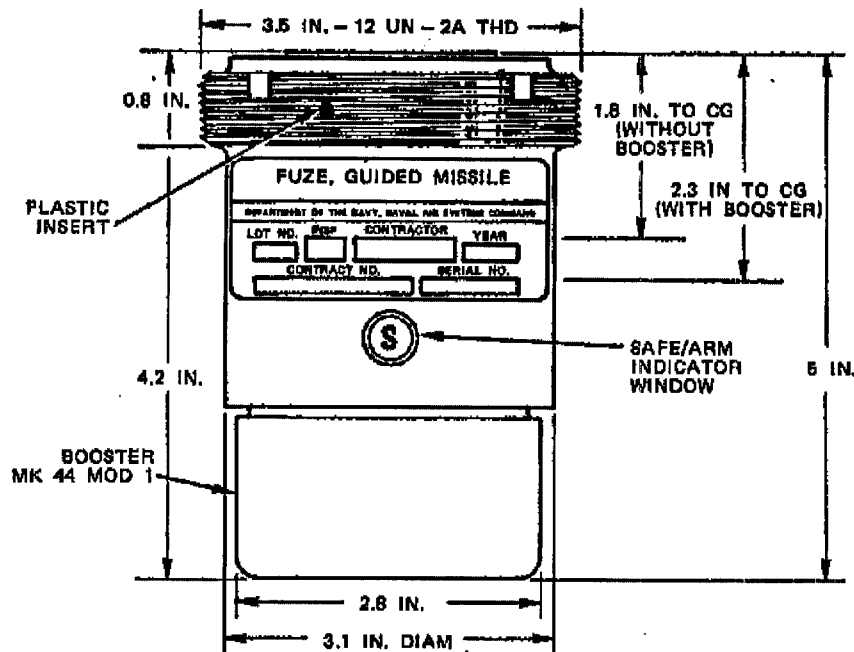
CHAPTER: 6 SERIES: A

DESIGNATION: M145

0509 Safety-Arming Device

C-4

6-50



IDENTIFICATION

AGENCY: NWC, Code 3351
 CONTACT: H. Berry
 AV 437-7332
 STATUS: Procurement Std
 USER: Navy AF, Marines
 ASSY DWG: 293AS100
 PARTS LIST: DL 293AS100
 SPEC: AS 1377
 NSN:
 PRIOR NOMENCLATURE: EX-330 Mod 1
 REPLACES:

GENERAL

MUNITION: Guided Missile
 AGM-45 Shrike
 USE: HE
 LOCATION: Base of Warhead
 BALLISTIC LEVELS:
 ROTATION:
 SETBACK:
 VELOCITY:
 CREEP:

SERIES: N CHAPTER: 6
 DESIGNATION: MK 330 Mod 2
 GM Impact Fuze

0510

6-51

C-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch Latch Solenoid
activated by missile power

SECOND SAFETY:

Acceleration

OTHER SAFETY:

DELAY:

2,935 to 5,830 ft

SAFE/ARM CONDITION:

Viewing window

FUNCTIONING DATA

MODE(S): Proximity, Impact Backup

TYPE: Electric

CHARACTERISTICS:

TARGET: Surface

SENSITIVITY:

100 to 200 g

PHYSICAL DATA

WEIGHT: 3.6 lb (1634 gm)

TOTAL LENGTH: 4.9 in (12.45 cm)

CROSS SECTION: 3.1 in (7.87 cm)

INTRUSION: 4.2 in (10.67 cm)

THREAD SIZE: .35-12 UN-2A

OTHER:

POWER SUPPLY:

28 VDC from missile

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: Mk 71 Mod 0 (4)

LEAD: Mk 12-1 (2), Mk 13-1 (2)

BOOSTER: Mk 44 Mod 0

OTHER:

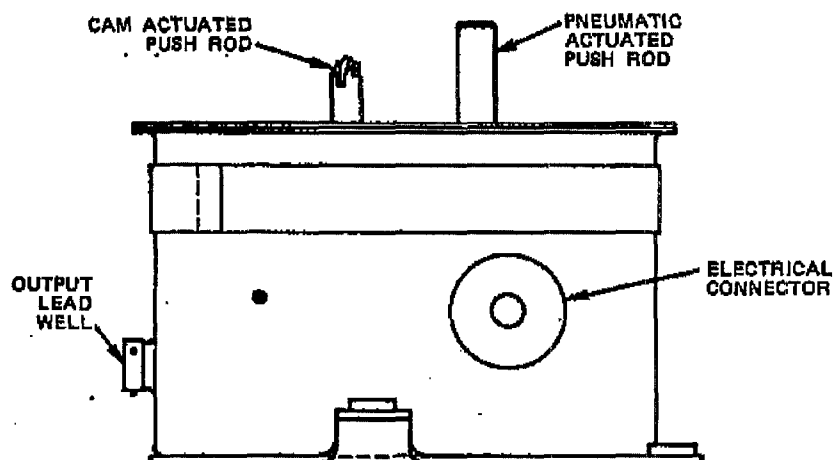
REMARKS

CHAPTER: 6 SERIES: N
DESIGNATION: MK 330 Mod 2
GM Impact Fuze

0511

6-52

C-6



IDENTIFICATION

AGENCY: NWC, Code 3352
CONTACT: O. Lawless
AV 437-7416
STATUS: Procurement Std
USER: Navy
ASSY DWG: 67A84E168
PARTS LIST: DL 67A84E168
SPEC: AS 1389
NSN: BE1336-00-466-9852
PRIOR NOMENCLATURE: EX-334 Mod 0
REPLACES:

GENERAL

MUNITION: Guided Missile
PHOENIX AIM-54A
USE: HE
LOCATION: Base of Warhead
BALLISTIC LEVELS:
ROTATION:
SETBACK:
VELOCITY:
CREEP:

SERIES: N CHAPTER: 6
DESIGNATION: MK 334 Mod 0
GM Impact Fuze

0512

6-53

C-7

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pullrod and weapon power

SECOND SAFETY:

Rocket motor pressure

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

Viewing window

FUNCTIONING DATA

MODE(S): Proximity, Impact

TYPE: Electric

CHARACTERISTICS:

Inst.

TARGET: Air Targets

SENSITIVITY:

1000 g

PHYSICAL DATA

WEIGHT: 4.5 lb (2043 gm)

TOTAL LENGTH: 5.0 in (12.7 cm)

CROSS SECTION: 6.4 in (16.3 cm)

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

100 VDC from missile; Mk 19-0
Fuze Arming Actuator (Rocket
motor pressure)

EXPLOSIVE TRAIN

S&A DEVICE: Mk 334 Mod 0

PRIMER:

DETONATORS: Mk 71-0 (2)

LEAD: Mk 9-0 (2), Mk 22-0 (2)

BOOSTER: Mk 60 Mod 0

OTHER:

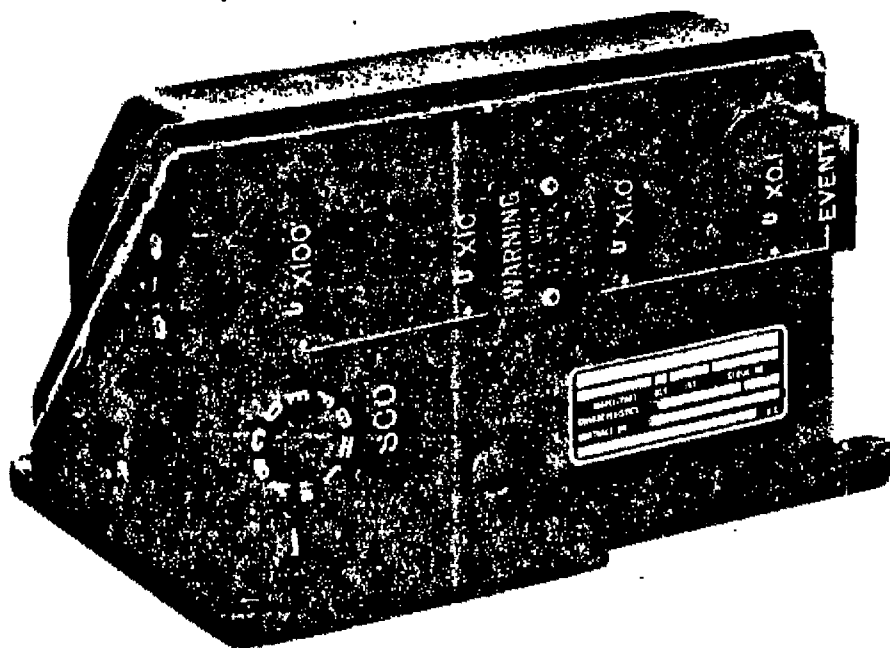
REMARKS

CHAPTER: 6 SERIES: N
DESIGNATION: MK 334 Mod 0
GM Impact Fuze

0513

6-54

C-8



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCE-M

CONTACT: A. King
AV 880-3970

STATUS: Procurement Std

USER: Army

ASSY DWG: 9251881

PARTS LIST:

SPEC: MIL-F-50823

NSN: 1336-00-057-1743

PRIOR NOMENCLATURE: XM811E4

REPLACES:

GENERAL

MUNITION: Ground to ground
missile, MGM-52

USE: Warhead, GM, HE, M251

LOCATION: Nose of warhead

BALLISTIC LEVELS:

ROTATION: 3 rps

SETBACK: 12 g

VELOCITY: 487.7 m/s

CREEP: 0 g

SERIES: A CHAPTER: 6
DESIGNATION: M811
GM ET Fuze

0514

6-55

C-9

ARMING DATA

FIRST SAFETY:

Setback, 8.8 g non arm,
14 arm

SECOND SAFETY:

Boost, 0.5 to 1.1 sec at
14 g

OTHER SAFETY:

Good guidance signal
initiating Electronic Timer

DELAY:

Until 1 sec before set time

SAFE/ARM CONDITION:

No
Waiver for MIL-STD-1316B

FUNCTIONING DATA

MODE(S): Time, settable

TYPE: Electronic

CHARACTERISTICS:

11.1 to 199.9 sec x 0.1 sec incr
No impact backup

TARGET: Ground-personnel

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 7.70 lb (3493 gm)

TOTAL LENGTH: 7.25 in (18.42 cm)

CROSS SECTION: 5.00 x 5.55 in

INTRUSION: None

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Ammonia battery in fuze,
8.3v DC

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: T20E, Elec, 2 ea

LEAD: 0.25 gm RDX, 2 ea

BOOSTER:

OTHER:

REMARKS

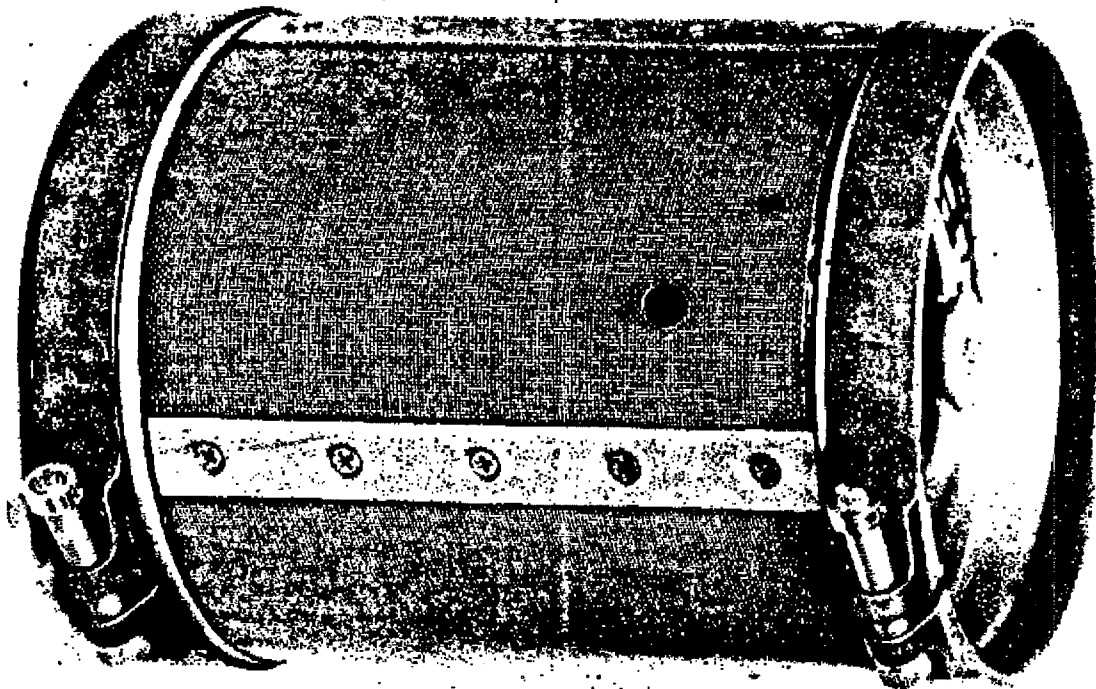
Training fuze is XM816, 9206336.
Must not arm at 8.8 g for 10 sec.

CHAPTER: 6 SERIES: A
DESIGNATION: M811
GM ET Fuze

6-56

0515

C-14

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ERADCOM, DELHO-I-EC

CONTACT: J. Antel
AV 290-2701

STATUS: Procurement Std

USER: Army

ASSY DWG: 11716476

PARTS LIST: 11716476

SPEC: MIL-T-50597

NSN: 1390-00-556-5163

PRIOR NOMENCLATURE: XM817

REPLACES: Mk 15, Mk 44, Mk 322

GENERAL

MUNITION: Chapparral Guided Missile
MIM-72

USE: Warhead HE M250

LOCATION: Base of WH Guidance sec

BALLISTIC LEVELS:

ROTATION: None

SETBACK: 20 g

VELOCITY: Supersonic

CREEP: N/A

SERIES: A CHAPTER: 6

DESIGNATION: M817
Target Detecting Device

0516

6-57

C-11

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

See M145 S&A

SECOND SAFETY:

See M145 S&A

OTHER SAFETY:

See M145 S&A

DELAY:

See M145 S&A

SAFE/ARM CONDITION:

See M145 S&A

FUNCTIONING DATA

MODE(S): Proximity, PD

TYPE: Electronic, RF

CHARACTERISTICS:

SD on Comparison Voltage
Impact element in
guidance section

TARGET: Air-Aircraft

SENSITIVITY:

Classified

PHYSICAL DATA

WEIGHT: 9.5 lb (4.309 kg)

TOTAL LENGTH: 6.143 in (15.60 cm)

CROSS SECTION: 4.92 in (12.50 cm)

INTRUSION: TDD is part of missile
structure

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Thermal Battery PS413, 11716488

EXPLOSIVE TRAIN

S&A DEVICE: M145 S&A

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

REMARKS

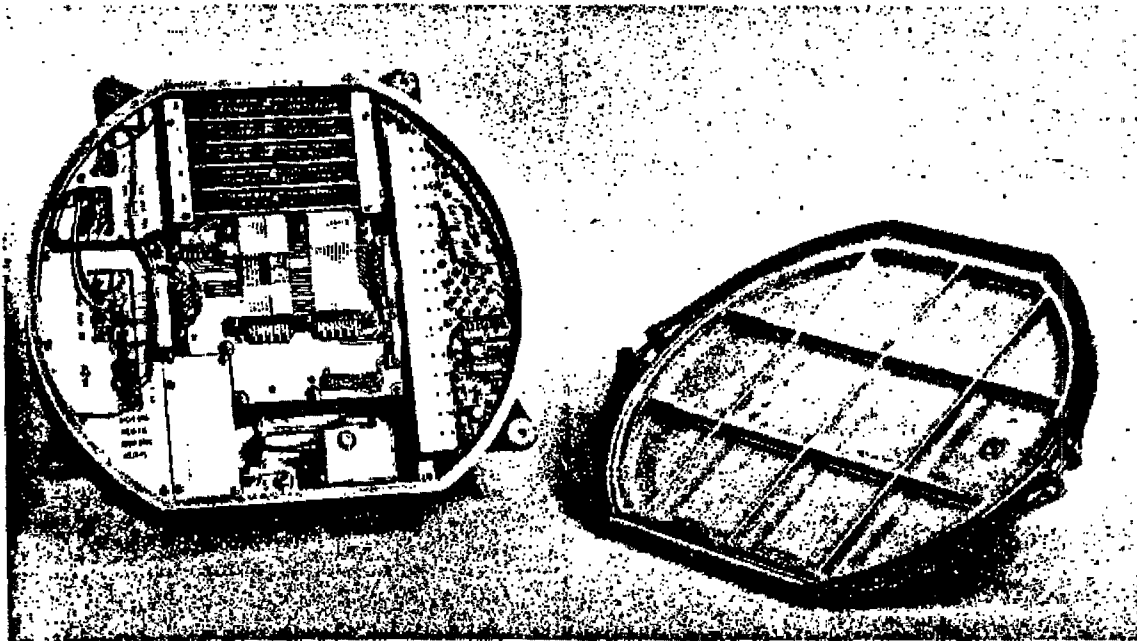
M145 S&A is very similar to Mk 13 Mod 1 sidewinder S&A previously used.

CHAPTER: 6 SERIES: A
DESIGNATION: M817
Target Detecting Device

0517

6-58

C-12

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ERADCOM, DELHD-I-EC
CONTACT: J. Dent
AV 290-2610
STATUS: Development
USER: Army
ASSY DWG: 11712629
PARTS LIST: 11712630
SPEC: MIL-F-60966, MI-CP-15035803
NSN: Not assigned
PRIOR NOMENCLATURE: XM818
REPLACES: None

GENERAL

MUNITION: Patriot Guided Missile
XMIM-104
USE: Warhead XM248E1 and
Warhead Section XM249E1
LOCATION: Base of Warhead of Nose
BALLISTIC LEVELS:
ROTATION: None
SETBACK: 40 g
VELOCITY: Classified
CREEP: Classified

SERIES: A CHAPTER: 6
DESIGNATION: XM818E1
GM Proximity Fuze

0518

6-59

C-13

MIL-HDBK-145
7 October 1980

ARMING DATA

FIRST SAFETY:

Late enable via
guidance

SECOND SAFETY:

See XM143 S&A

OTHER SAFETY:

See XM143 S&A

DELAY:

Variable delay per
guidance command

SAFE/ARM CONDITION:

See XM143 S&A

FUNCTIONING DATA

MODE(S): Proximity

TYPE: Electronic, radar

CHARACTERISTICS:

Classified

TARGET: Air-Aircraft

SENSITIVITY:

Classified

PHYSICAL DATA

WEIGHT: 17.5 lb (7938 kg)*

TOTAL LENGTH: 4.25 in (11.43 cm)

CROSS SECTION: 13.75 in (34.93cm)**

INTRUSION: N/A

THREAD SIZE: N/A

OTHER:

POWER SUPPLY:

28 V.D.C. from missile

EXPLOSIVE TRAIN

S&A DEVICE: XM143

PRIMER: None

DETONATORS: See XM143

LEAD: See XM143

BOOSTER:

OTHER:

REMARKS

*Without cables and antennas.

**Envelope diameter

CHAPTER: 6 SERIES: A
DESIGNATION: XM818E1
GM Proximity Fuze

6-60

C-14

0519

IDENTIFICATION

AGENCY: MICOM, DRCPM-HDE

CONTACT: R. Masucci
AV 746-6176

STATUS: Development

USER: Army, Marines

ASSY DWG: 13007555

PARTS LIST:

SPEC: MIS-29216

NSN: Not assigned

PRIOR NOMENCLATURE: None

REPLACES: None

GENERAL

MUNITION: Laser Guided Anti Tank
Missile for Helicopter,
HELLFIRE

USE: Warhead, GM, HEAT, XM265

LOCATION: Nose and Base of warhead

BALLISTIC LEVELS:

ROTATION: None

SETBACK: 24 g

VELOCITY: Classified

CREEP: Classified

SERIES: A CHAPTER: 6
DESIGNATION: XM820
GM Impact Fuze

6-61

0520

D-1

MIL-HDBK-145
1 October 1980

ARMING DATA FIRST SAFETY: Delay Launch Latch, on rotor and setback weight SECOND SAFETY: Setback: 7.5 g non arm, 10 arm; weight and rotor OTHER SAFETY: Boost, 1.34 to 1.81 sec at 18 g nominal for rotor DELAY: 150 to 300 m SAFE/ARM CONDITION: Yes	PHYSICAL DATA WEIGHT: 0.70 lb (317.5 gm) TOTAL LENGTH: 2.0 in (6.45 cm) CROSS SECTION: 3.52 in (8.94 cm) INTRUSION: None None THREAD SIZE: None OTHER:
FUNCTIONING DATA MODE(S): PIBD TYPE: Electric, Mechanical CHARACTERISTICS: PD (No graze) Dual ogival crush switch TARGET: Ground-Tank, Hard Target SENSITIVITY: Not funct 1/8 in plywood 0 degrees obliq. all funct 1.0 in plywood 0 degree obliq.	POWER SUPPLY: Missile Power, 28 plus or minus 4 V DC EXPLOSIVE TRAIN S&A DEVICE: Item is S&A, EX-100 Type PRIMER: None DETONATORS: Mk 96-0 Elec LEAD: Mk 8-0 BOOSTER: 40.8 gm PBXN-5 in warhead OTHER: PBXN-5 Precision Initiator Coupler (PIC) in warhead
REMARKS	

CHAPTER: 6 SERIES: A
DESIGNATION: XMB20
GM Impact Fuze

0521

6-62

D-2

IDENTIFICATION

AGENCY: MICOM, DRCPM-HAE
CONTACT: J. Cole
AV 746-2577
STATUS: Development
USER: Army, Marines
ASSY DWG: Integral with Guidance
PARTS LIST:
SPEC: With guidance
NSN: Not assigned
PRIOR NOMENCLATURE: None
REPLACES: None

GENERAL

MUNITION: Ground to Air Intercept
Missile
MIM-23, Improved Hawk
USE: Warhead, HE, M155
LOCATION: Nose, with Guidance
BALLISTIC LEVELS:
ROTATION: None
SETBACK: 40 g
VELOCITY: Classified
CREEP: Classified

SERIES: A CHAPTER: 6
DESIGNATION: M821
Target Detecting Device

6-63

0522

D-3

MIL-HDBK-145
1 October 1980

MIL-HDBK-145 ■ 9999970 0119923 017 ■

ARMING DATA

FIRST SAFETY:

See M100 S&A

SECOND SAFETY:

See M100 S&A

OTHER SAFETY:

Guidance input just prior intercept
(not to S&A)

DELAY:

See M100 S&A

SAFE/ARM CONDITION:

See M100 S&A

FUNCTIONING DATA

MODE(S): Proximity, SD

TYPE: Electric

CHARACTERISTICS:

SD command, loss of power
or rear lock

TARGET: Air-Aircraft, Missile

SENSITIVITY:

PHYSICAL DATA

WEIGHT: Integral w/Guidance

TOTAL LENGTH: Integral w/Guidance

CROSS SECTION: Integral w/Guidance

INTRUSION: Integral w/ Guidance

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Missile Power 59V DC

EXPLOSIVE TRAIN

S&A DEVICE: M100

PRIMER: See M100

DETONATORS: See M100

LEAD: See M100

BOOSTER: See M100

OTHER:

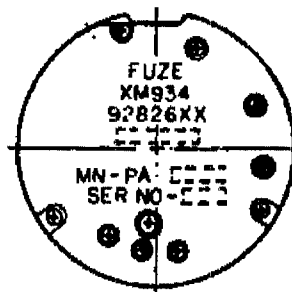
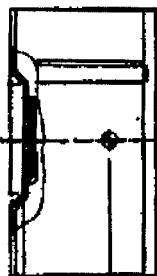
REMARKS

CHAPTER: 6 SERIES: A
DESIGNATION: M821
Target Detecting Device

6-64

0523

D-4



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCN-M

CONTACT: B-A. Kadish
AV 880-6473

STATUS: Procurement Std

USER: Army Marines

ASSY DWG: 9282701

PARTS LIST: 9282701

SPEC: MIL-F-48863

NSN: None

PRIOR NOMENCLATURE: None

REPLACES: M814

GENERAL

MUNITION: Stinger Guided Missile
FIM-92

USE: Warhead HE, M258

LOCATION: 2.9 in aft of warhead nose

BALLISTIC LEVELS:

ROTATION: 12 rps

SETBACK: 32 g min

VELOCITY: 670 m/s

CREEP:

SERIES: A CHAPTER: 6
DESIGNATION: M934
GM BD Fuze

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Launch signal, umbilical retraction

SECOND SAFETY:

Setback, 22 g non arm, 32 arm

OTHER SAFETY:

Cont boost, 22 ms min. at 32 g
Launch motor separation
Flight motor ignition

DELAY:

1.0 sec, 43 to 55 m

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): BD, SD

TYPE: Electric

CHARACTERISTICS:

After penetration - variable delay
based on closing vel, Hard tgt
immediate, S.D. - 13-17 sec

TARGET:

SENSITIVITY:

0.375 in 2024 Al, 80 degrees obliq,
76 to 975 m/s, closing vel

PHYSICAL DATA

WEIGHT: 0.235 lb (106.6 gm)

TOTAL LENGTH: 2.495 in (6.34 cm)

CROSS SECTION: 2.497 in (6.34 cm)

INTRUSION: 2.495 in (6.34 cm) depth
2.497 in (6.34 cm) dia

THREAD SIZE: None

OTHER:

POWER SUPPLY:

Missile Thermal Battery,
+ and - 20 VDC

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: PA-500 Elec

LEAD: 500 mg PBXN-5

BOOSTER: 10 gm RDX, PBX

OTHER:

REMARKS

CHAPTER: 6 SERIES: A
DESIGNATION: M934
GM BD Fuze

0525

6-66

D-6

CHAPTER 7

S
M
A
L
L

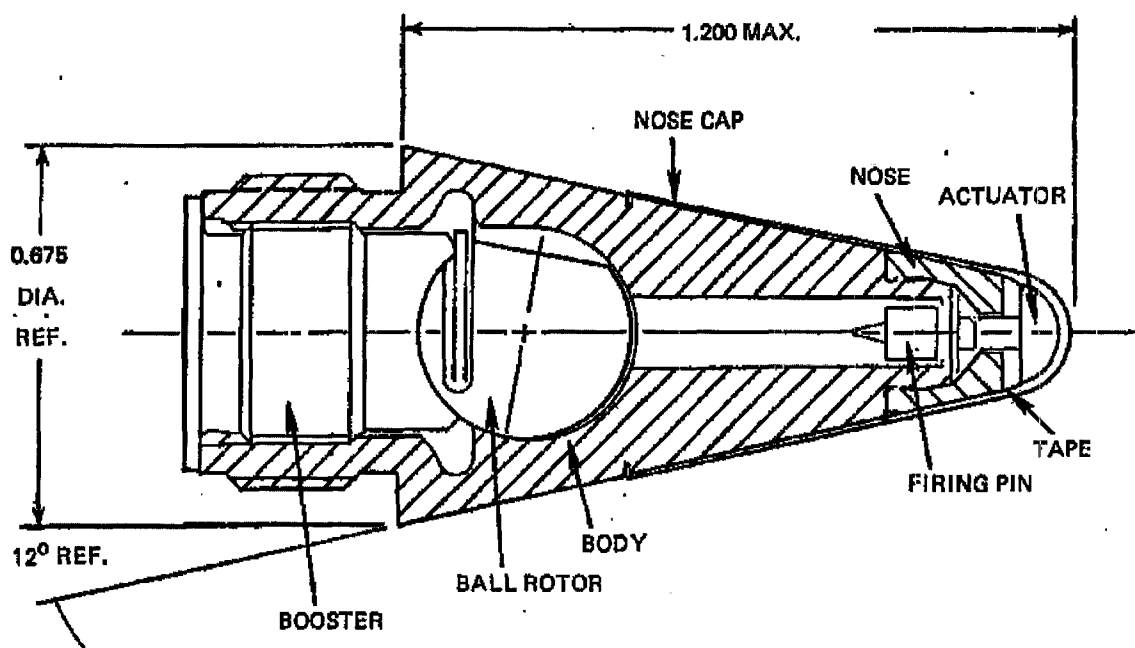
C
A
L

7-1

0526

D-7





IDENTIFICATION

AGENCY: Eglin AFB, ADTC/SD3
 CONTACT: S. Slotkin
 AV 872-8186
 STATUS: Development
 USER: AF
 ASSY DWG: 383250
 PARTS LIST:
 SPEC: SP 785043
 NSN:
 PRIOR NOMENCLATURE: Cimp Fuze
 REPLACES: M505A3

GENERAL

MUNITION: Projectile, 20mm
 M61A1 Gun System

USE: HEI

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 2,030 rps

SETBACK: 124,000 g

VELOCITY: 3,710 fps

CREEP: 76 g gun, 140 g hs a/c

SERIES: AF CHAPTER: 7
 DESIGNATION: FMU-128/8
 PD Fuze

7-3

D-8

0527

ARMING DATA

FIRST SAFETY:

Spin

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PD, Delay after Impact

TYPE: Mechanical

CHARACTERISTICS:

Delay Time: 100-270 ms

TARGET: Air Targets

SENSITIVITY:

Target .063 to .090 in
2024T3 Alum., 0 degree
to 80 degrees obliquity

PHYSICAL DATA

WEIGHT: 0.0614 lb (27.86 gm)

TOTAL LENGTH: 1.525 in (3.87 cm)

CROSS SECTION: 0.678 in (1.72 cm)

INTRUSION: 0.325 in (.83 cm)

THREAD SIZE: .5625-32UNS-2A

OTHER:

POWER SUPPLY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS: M47

LEAD:

BOOSTER: T42

OTHER:

REMARKS

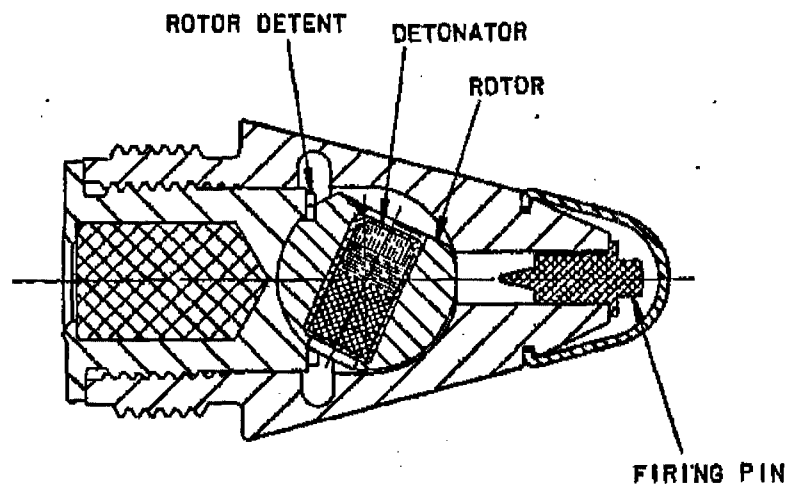
CHAPTER: 7 SERIES: AF
DESIGNATION: FMU-128/B
PD Fuze

7-4

0528

D-9



**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-SCA-CF
CONTACT: F. Luke
AV 880-3352
STATUS: Procurement Std
USER: Army, Navy, AF, Marines
ASSY DWG: 7258863
PARTS LIST: 7258863
SPEC: MIL-F-46580
NSN: 1305-01-050-8840
PRIOR NOMENCLATURE: M505A1E3
REPLACES: M505A1

GENERAL

MUNITION: Projectile for 20mm Guns,
M39A3, M61A1, GAU-4, Mk 22,
M168 & M197; and 30mm GAU-8
USE: HEI M56A3 and M97A2, HEIT M242
M210 & M246; HEI PGU-13/B
LOCATION: Nose
BALLISTIC LEVELS:
ROTATION: 2030 rps
SETBACK: 124,000 g
VELOCITY: 1030.2 m/s
CREEP: 75 g gun, 140 g hs a/c

0529

7-5
0-10SERIES: A
DESIGNATION:
PD FuzeCHAPTER: 7
M505A3

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Ball Rotor w/C Shaped Detent
Spin 670 rps non arm, 830 arm

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

10-40 ft Delay Arming

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PD

TYPE: Mechanical

CHARACTERISTICS:

Funct time less than 50 micro sec

TARGET: Gnd-Light Targets; Aircraft

SENSITIVITY:

.040 2024 AL, 70 degrees obliq.
3000 fps, 20mm Gun

PHYSICAL DATA

WEIGHT: 0.75 oz (21.38 gm)

TOTAL LENGTH: 1.23 in (3.12 cm)

CROSS SECTION: 0.67 in (1.70 cm)

INTRUSION: depth 0.37 in (0.94 cm)
dia 0.50 in (1.27 cm)

THREAD SIZE: 9/16-32NS-2A mod

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: Ball rotor

PRIMER: None

DETONATORS: M57A2 Stab

LEAD: None

BOOSTER: 390 mg HMX or RDX

OTHER:

REMARKS

M505 was T196E4. M505 A1 differed from M505A3 by cantilevered spring across detonator cavity in ball. XM528 was M505A1E1.

CHAPTER: 7 SERIES: A

DESIGNATION: M505A3

PD Fuze

0530

7-6

0-11

IDENTIFICATION

AGENCY: Eglin AFB, AD/SD3E

CONTACT: K. Johnson, Lt.
AV 872-8186

STATUS: Development

USER: AF

ASSY DWG: 28115952 (Hnyw1)

PARTS LIST:

SPEC: DS 30046 (Hnyw1)

NSN: Not assigned

PRIOR NOMENCLATURE:

REPLACES: M505A3

GENERAL

MUNITION: Projectile for 30 mm gun
GAU-8

USE: HEI, PGU-13/B

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 115,000 rpm

SETBACK: 71,700 g

VELOCITY: 1036 mps

CREEP: 33 g (gun), 57 g (hs a/c)

SERIES: AF

CHAPTER: 7

DESIGNATION:

M505A3E2

PD Fuze

7-7

0531

D-12

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Ball rotor w/ c-shaped detent.
Spin 670 rps nonarm, 830 arm

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

10-30 m

SAFE/ARM CONDITION:

No
Not meet MIL-STD-1316A

FUNCTIONING DATA

MODE(S): PD

TYPE: Mechanical

CHARACTERISTICS:

Functioning Delay
10 in

TARGET: Ground - Light Targets

SENSITIVITY:

PHYSICAL DATA

WEIGHT: 0.75 oz (21.38 gm)

TOTAL LENGTH: 1.19 in (3.02 gm)

CROSS SECTION: 0.67 in (1.70 cm)

INTRUSION: 0.37 in (0.94 cm) depth
0.50 in (1.27 cm) dia

THREAD SIZE: 9/16-32UNS-2A mod

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: Ball Rotor

PRIMER: Cal .22 short rim fire

DETONATORS: M57A2 Stab

LEAD: None

BOOSTER: 390 mg HMX or RDX

OTHER:

REMARKS

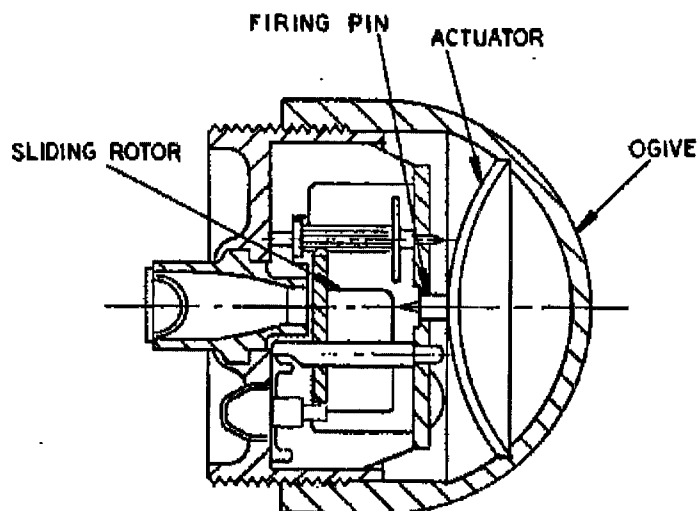
Fuze is M505A3 modified by addition of firing pin & cal .22 short further shortened.
On impact, cal .22 functions and forces FP into detonator causing fuze functioning delay.

CHAPTER: 7 SERIES: AF
DESIGNATION: M505A3E2
PD Fuze

0532

7-8

0-13

MIL-HDBK-145
1 October 1980**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-SCA-CF

CONTACT: F. Luke, L. Ghazi
AV 880-3352

STATUS: Procurement Std

USER: Army, Navy, AF, Marines

ASSY DWG: 92887860

PARTS LIST:

SPEC: MIL-F-50864

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERALMUNITION: Grenade for 40mm Launcher
M75 & M129 & MG Mk 19-1 for
Hel1 & Lt. Naval craft.

USE: Cartridge, HE Dual Purpose, M430

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 200 rps

SETBACK: 65,000 g

VELOCITY: 366 m/s

CREEP:

SERIES: A
DESIGNATION:
PIBD FuzeCHAPTER: 7
M549

0533

7-9
D-14

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback 15,000 g (est) non arm,
22,500 arm

SECOND SAFETY:

Spin 50 rps non arm, 150 arm

OTHER SAFETY:

Delay timer

DELAY:

18 to 36 m

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PIBD, Graze

TYPE: Mechanical

CHARACTERISTICS:

Spitback
SQ

TARGET: Ground-Personnel, Armor

SENSITIVITY:

1/4 in armor, 87 degrees obliq
244 m/s

PHYSICAL DATA

WEIGHT: 2.05 oz (58.2 gm)

TOTAL LENGTH: 1.47 in (3.73 cm)

CROSS SECTION: 1.60 in (4.06 cm)

INTRUSION: 0.37 in (0.94 cm)
Spitback

THREAD SIZE: 1 15/32-24UNS-2A

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M59 Stab

LEAD: None

BOOSTER: None
Spitback: 310 mg RDX

OTHER:

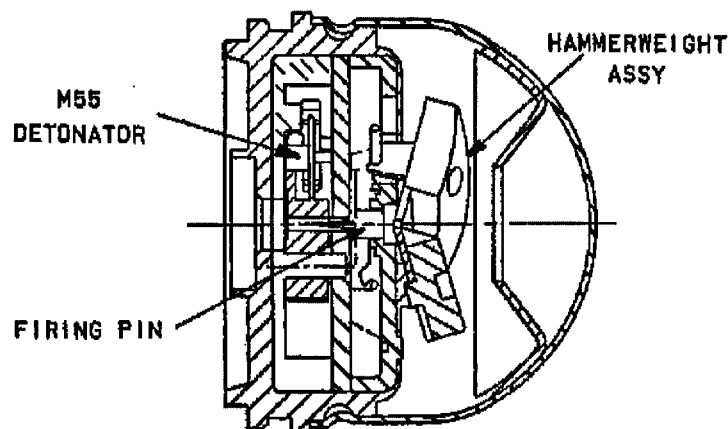
REMARKS

CHAPTER: 7 SERIES: A
DESIGNATION: M549
PIBD Fuze

7-10

E-1

0534



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-SCA-CF

CONTACT: F. Luke
AV 880-3352

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 8886349

PARTS LIST: 8886349

SPEC: MIL-F-50869

NSN: Not separate issue

PRIOR NOMENCLATURE: See Remarks

REPLACES: None

GENERAL

MUNITION: Grenade for 40mm M79 and
M203 (M16 and M16A1 Rifle)
Launchers

USE: Cartridge, HE Dual Purpose, M433

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 63 rps

SETBACK: 18,000 g

VELOCITY: 76 m/s

CREEP:

SERIES: A
DESIGNATION: M550
PIBD Fuze

CHAPTER: 7

0535

7-11
E-2

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 3500 g non arm, 6500 arm

SECOND SAFETY:

Spin, 25 rps non arm, 50 arm

OTHER SAFETY:

Delay escapement

DELAY:

14 to 27 m delay arming

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PIBD, Graze

TYPE: Mechanical

CHARACTERISTICS:

SQ spitback

TARGET: Ground-Material and Personnel

SENSITIVITY:

87 degrees obliq. on ground

PHYSICAL DATA

WEIGHT: 1.87 oz (53.0 gm)

TOTAL LENGTH: 1.39 in (3.53 cm)

CROSS SECTION: 1.59 in (4.04 cm)

INTRUSION: .357 in (.91 cm)

THREAD SIZE: None

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M55 Stab

LEAD: None

BOOSTER: 330 mg RDX

OTHER:

REMARKS

Replaced M551 and 406 (with M433).

CHAPTER: 7 SERIES: A

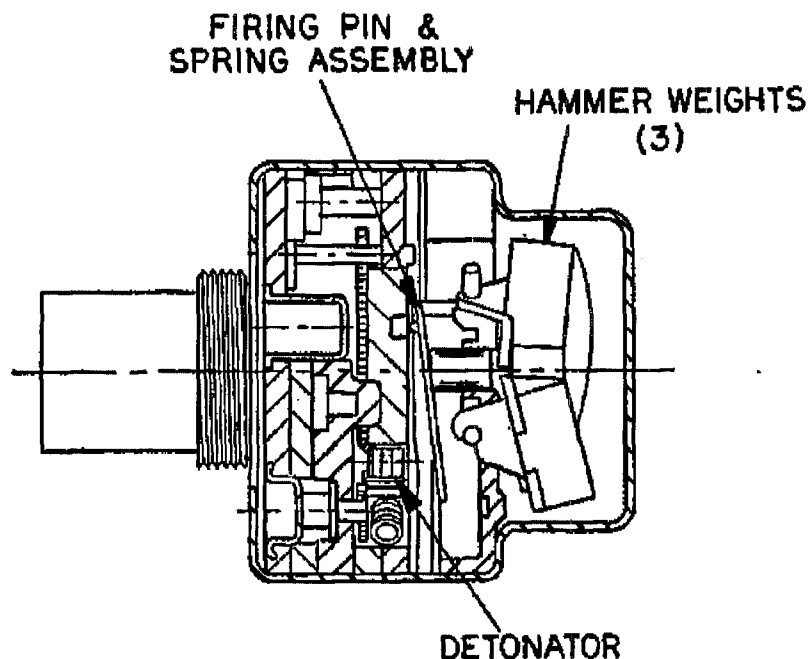
DESIGNATION: M550

PIBD Fuze

0536

7-12

E-3

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-SCA-CF

CONTACT: F. Luke
AV 880-3352

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 8862121

PARTS LIST: 8862121

SPEC: MIL-F-60988

NSN: Not separate issue

PRIOR NOMENCLATURE: T359

REPLACES: None

GENERALMUNITION: Grenade for 40mm M79 or
M203 (attached M16 or M16A1
Rifle) Grenade LaunchersUSE: Cartridge HE M406, HE M386,
and Practice M407A1

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 63 rps

SETBACK: 18,000 g

VELOCITY: 76 m/s

CREEP:

SERIES: A
DESIGNATION:
PD FuzeCHAPTER: 7
M551

7-13

0537

E-4

ARMING DATA

FIRST SAFETY:

Setback, 3500 g non arm, 6500 arm

SECOND SAFETY:

Spin, 25 rps non arm, 50 arm

OTHER SAFETY:

None

DELAY:

14 to 27 m delay arming

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PD, Graze

TYPE: Mechanical

CHARACTERISTICS:

SQ

TARGET: Ground-Personnel

SENSITIVITY:

87 degrees obliq. with Ground

PHYSICAL DATA

WEIGHT: 1.83 oz (52.0 gm)

TOTAL LENGTH: 1.818 in (4.62 cm)

CROSS SECTION: 1.325 in (3.37 cm)

INTRUSION: depth 0.663 in (1.68 cm)
dia 0.51 in (1.30 cm)

THREAD SIZE: 5/8-32NS-2A

OTHER:

POWER SUPPLY:

Loaded spring for rotor and
firing pin

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: None

DETONATORS: M55 Stab

LEAD: 130 mg RDX, 8876218

BOOSTER: 2.81 gm RDX (M386 and M406)
.38 gm RDX (M407A1)

OTHER:

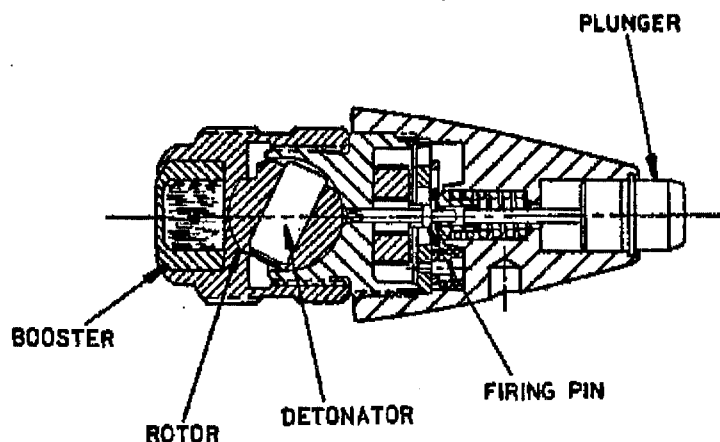
REMARKS

CHAPTER: 7 SERIES: A
DESIGNATION: M551
PD Fuze

7-14

0538

E-5



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-SCA-CF

CONTACT: F. Luke
AV 880-3352

STATUS: Procurement Std

USER: Army

ASSY DWG: 10551759

PARTS LIST: 10551759

SPEC: VTL 1305-093

NSN: Not assigned

PRIOR NOMENCLATURE: German

REPLACES: XM580

GENERAL

MUNITION: Projectile for 20mm Gun
M139 (Interim VRFW)USE: Cartridge, HEIT, M599
(Proj. M600)

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 1500 rps

SETBACK: 96,000 g

VELOCITY: 1066.8 m/s

CREEP: 68 g

SERIES: A
DESIGNATION:
PD SD Fuze

CHAPTER: 7

M594



MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Spin, SD Mechanism, 1000
rps non arm, 1250 arm

SECOND SAFETY:

Spin, unwinding ribbon,
500 rps non arm, 1000 arm

OTHER SAFETY:

None

DELAY:

6 to 10m delay arming

SAFE/ARM CONDITION:

No

FUNCTIONING DATA

MODE(S): PD, SD

TYPE: Mechanical

CHARACTERISTICS:

SQ, SD 4-7 sec by spin decay
(SD 930 to 970 rps)

TARGET: Air, Light Targets

SENSITIVITY:

.040 in 2024 Alum.
70 degrees obliquity,
1067 m/s

PHYSICAL DATA

WEIGHT: .0464 lb (21.1 gm)

TOTAL LENGTH: 1.774 in (4.51 cm)

CROSS SECTION: 0.715 in (1.82 cm)

INTRUSION: depth 0.69 in (1.75 cm)
dia maj thread

THREAD SIZE: M15 x .75 - 6g

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: Unwinding ribbon

PRIMER: None

DETONATORS: XM1231 Stab

LEAD: None

BOOSTER: HMX, 10551762

OTHER:

REMARKS

The XM580, replaced by this fuze, was also a German design.

CHAPTER: 7 SERIES: A
DESIGNATION: M594
PD SD Fuze

0540

7-16
E-7

IDENTIFICATION

AGENCY: DRCPM-FVS-SEA

CONTACT: K. Pitko
AV 273-1857

STATUS: Development

USER: Army

ASSY DWG: 11731326

PARTS LIST:

SPEC: MIL-F-In Preparation

NSN: None assigned

PRIOR NOMENCLATURE: XM714

REPLACES: XM594

GENERAL

MUNITION: Projectile for 20mm Gun,
M139, Interim VRFW

USE: Cartridge, HEI-T, M599

LOCATION: Nose of Projectile

BALLISTIC LEVELS:

ROTATION: 1500 rps

SETBACK: 96,000 g

VELOCITY: 1066.8 m/s

CREEP: 68 g

SERIES: A CHAPTER: 7
DESIGNATION: XM755
PD SD Fuze

0541

- 7-17



ARMING DATA

FIRST SAFETY:

Setback, 2000 g non arm,
2500 arm

SECOND SAFETY:

Spin, 200 rps non arm,
800 arm

OTHER SAFETY:

None

DELAY:

10 to 100 m

SAFE/ARM CONDITION:

No
Meets MIL-STD-1316B

PHYSICAL DATA

WEIGHT: 0.51502 (14.6 gm)

TOTAL LENGTH: 1.42 in (3.61 cm)

CROSS SECTION: 0.718 in (1.82 cm)

INTRUSION: 0.295 in (0.75 cm)

THREAD SIZE: 9/16-32UNS-2A

OTHER:

POWER SUPPLY:

Loaded piston spring

EXPLOSIVE TRAIN

S&A DEVICE: Porous air restrictor

PRIMER: None

DETONATORS: Stab. 11731341

LEAD: None

BOOSTER: 285 mg HMX 11731329

OTHER:

FUNCTIONING DATA

MODE(S): PD SD Graze

TYPE: Mechanical

CHARACTERISTICS:

SQ, SD at 6 to 19 sec

TARGET: Air-Aircraft

SENSITIVITY:

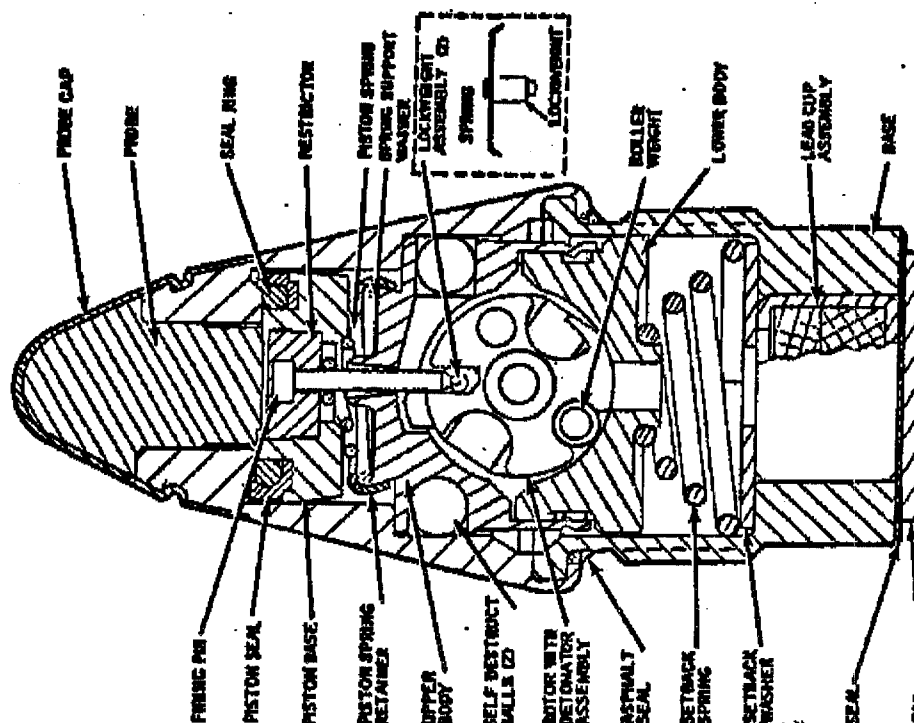
REMARKS

XM 756 is same as XM755 except that thread is M15 x .75-6g instead of the 9/16-32UNS-2A of the XM 755. The XM756 was previously the XM714E1, 11731326.

CHAPTER: 7 SERIES: A
DESIGNATION: XM755
PD SD Fuze

0342

7-18



IDENTIFICATION

AGENCY: TARRADCOM, DRCPM-FVS-SEA

CONTACT: K. Pitko
AV 273-1857

STATUS: Development

USER: Army

ASSY DWG: 11820583

PARTS LIST:

SPEC: MIL-F- In preparation

NSN: Not yet assigned

PRIOR NOMENCLATURE: XM714E2

REPLACES: M505A3

GENERAL

MUNITION: Projectile for 20mm Gun,
M197, HelicopterUSE: Cartridge, HE1, M56A3,
XM242, XM246

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 2050 rps

SETBACK: 128,000 g

VELOCITY: 1036.3 m/s

CREEP: 68g

SERIES: A
DESIGNATION: XM757
PD SD Fuze

CHAPTER:

ARMING DATA

FIRST SAFETY:

Setback, 2000 g non arm, 2500 arm

SECOND SAFETY:

Spin, 200 rps non arm, 800 arm

OTHER SAFETY:

None

DELAY:

10 to 100m

SAFE/ARM CONDITION:

No
Waiver for MIL-STD-1316A

FUNCTIONING DATA

MODE(S): PD, SD, Graze

TYPE: Mechanical

CHARACTERISTICS:

SQ, SD at 3000 m, Graze

TARGET: Ground-Light Targets

SENSITIVITY:

.040 in, 2024 T3 Alum.
70 degrees obliq.
152 to 1036 m/s

PHYSICAL DATA

WEIGHT: 0.63 oz (17.75 gm)

TOTAL LENGTH: 1.418 in (3.60 cm)

CROSS SECTION: 0.66 in (1.68 cm)

INTRUSION: depth .515 in (1.31 cm)
dia 0.50 in (1.27 cm)

THREAD SIZE: 9/16-32UNS-2A (mod)

OTHER:

POWER SUPPLY:

Loaded Piston Spring

EXPLOSIVE TRAIN

S&A DEVICE: Porous air restrictor

PRIMER: None

DETONATORS: Stab, 11731341

LEAD: None

BOOSTER: 285 mg HMX

OTHER:

REMARKS

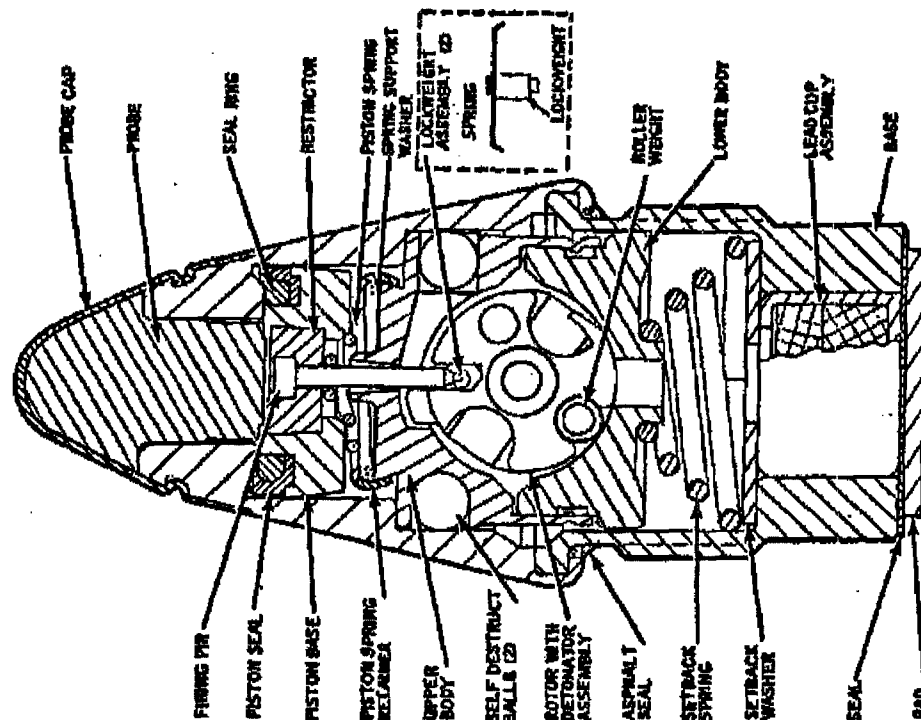
Same as M758 (XM714E5) except has 9/16-32UNS thread instead of 15mm x 1mm.
XM722 was similar model for use with M56 series proj. in VADS.

CHAPTER: 7 SERIES: A
DESIGNATION: XM757
PD SD Fuze

7-20

0544

E-11

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: TARRADCOM, DRCPM-FVS-SEA

CONTACT: K. Pitko
AV 273-1857

STATUS: Development

USER: Army

ASSY DWG: 11820609

PARTS LIST:

SPEC: MIL-F- In preparation

NSN: Not yet assigned

PRIOR NOMENCLATURE: XM714E5

REPLACES: KZB 335 (Derlikon)

GENERAL

MUNITION: Projectile for 25mm Gun,
XM242, Bushmaster, for
IFV XM2, and CFV XM-3

USE: Cartridge, HEI-T, M792

LOCATION: Nose

BALLISTIC LEVELS:

ROTATION: 1839 rps

SETBACK: 104,000 g

VELOCITY: 1097 m/s

CREEP: 63 g

0545

E-12

7-21

SERIES: A
DESIGNATION: PD SD FuzeCHAPTER: 7
M758

MIL-HDBK-145
7 October 1980

ARMING DATA

FIRST SAFETY:

Setback, 2000 g non arm, 2500 arm

SECOND SAFETY:

Spin, 200 rps non arm, 800 arm

OTHER SAFETY:

None

DELAY:

10 to 100 m

SAFE/ARM CONDITION:

No
Waiver for MIL-STD-1316A

FUNCTIONING DATA

MODE(S): PD, SD, Graze

TYPE: Mechanical

CHARACTERISTICS:

SQ, SD at 6 to 16 sec
Graze Macadam 80 - 90 deg obliq.

TARGET: Ground and Air

SENSITIVITY:

0.40 in 2024T3A1, 80 deg obliq.,
152 to 1097 m/s

PHYSICAL DATA

WEIGHT: 0.626 oz (17.76 gm)

TOTAL LENGTH: 1.418 in (3.60 cm)

CROSS SECTION: 0.660 in (1.68 cm)

INTRUSION: depth 0.511 in (1.30 cm)
dia 0.50 in (1.27 cm)

THREAD SIZE: M15 x 1 - 5'g

OTHER:

POWER SUPPLY:

Loaded Piston Spring

EXPLOSIVE TRAIN

S&A DEVICE: Porous air restrictor

PRIMER: None

DETONATORS: STAB, 11731341

LEAD: None

BOOSTER: 285 mg HMX, 11731329

OTHER:

REMARKS

Dummy Cartridge is XM794. Same as M757 (XM714E2) except that has 15mm
x 1mm thread instead of 9/16-32UNS.

CHAPTER: 7 SERIES: A
DESIGNATION: M75B
PD SD Fuze

7-22

0546

E-13

IDENTIFICATION

AGENCY: DRCPM-FVS-SEA
CONTACT: K. Pitko
AV 273-1857
STATUS: Development
USER: Army, Marines
ASSY DWG: In preparation
PARTS LIST:
SPEC: MIL-F-In preparation
NSN: Not assigned
PRIOR NOMENCLATURE: XM714E6
REPLACES: XM579

GENERAL

MUNITION: Projectile for 30mm Gun,
XM230, Mk 4 Aden and 553
defa, in adv attack Heli
USE: Cartridge, HE DP XM789
LOCATION: Nose and base of shell
BALLISTIC LEVELS:
ROTATION: 1175 rps (Aden)
SETBACK: 84,000 g (XM230)
VELOCITY: 825 m/s (Defa)
CREEP: 48 g

SERIES: A CHAPTER: 7
DESIGNATION: M759
PI BD Fuze

0547

7-23

E-14

MIL-HDBK-145
1 October 1980

ARMING DATA FIRST SAFETY: Setback, 2000 g non arm, 2500 arm SECOND SAFETY: Spin, 200 rps non arm, 800 arm OTHER SAFETY: None DELAY: 10 to 100 m SAFE/ARM CONDITION: No Waiver for MIL-STD-1316B	PHYSICAL DATA WEIGHT: 1.4102 (40 gm) TOTAL LENGTH: 1.879 in (4.77 cm) CROSS SECTION: 1.065 in (2.71 cm) INTRUSION: 0.449 (1.14 cm) THREAD SIZE: M24.5 x 1 -'6 g OTHER:
FUNCTIONING DATA MODE(S): PI BD, Graze TYPE: Mechanical CHARACTERISTICS: SQ, Spitback, No SD Graze, 85 degree obliquity TARGET: Ground-personnel & Lt Targets SENSITIVITY:	POWER SUPPLY: Loaded piston spring EXPLOSIVE TRAIN S&A DEVICE: Porous air restrictor PRIMER: None DETONATORS: Stab, 28113953 LEAD: Spitback, 28115309, 215mg PBXN-5 Typ 2 C1 2,60mg Typ 1 C1 3 BOOSTER: Spitback, PBXN-5 OTHER:
REMARKS	

CHAPTER: 7 SERIES: A
DESIGNATION: M769
PI BD Fuze
0548

7-24
F-1

CHAPTER 8

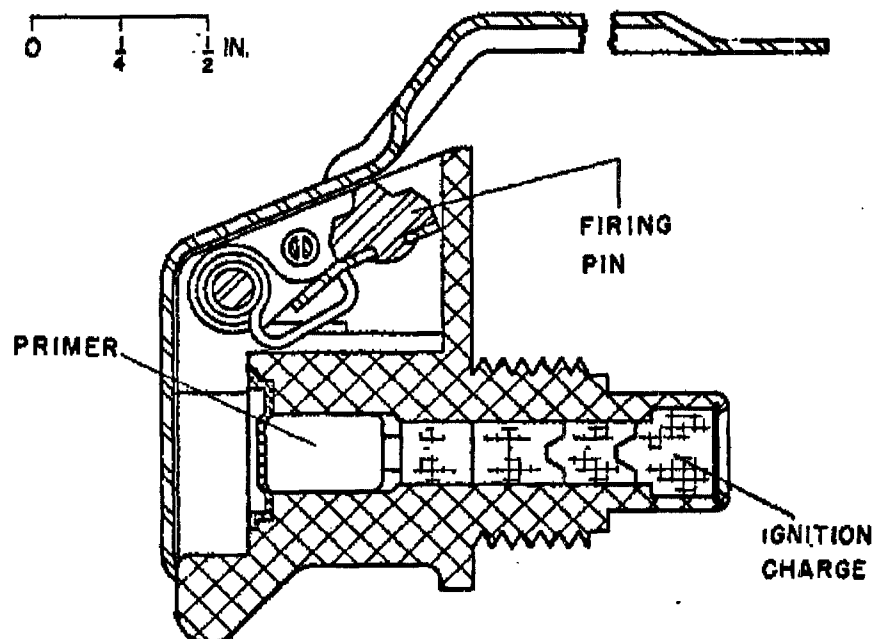
G
R
E
N
A
D
E
S

8-1

0549

F-2





IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-CLN-D

CONTACT: L. Burke
AV 584-3803

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 13-10-22

PARTS LIST: N/A

SPEC: MIL-F-10080, -10915

NSN: 1330-00-293-9516

PRIOR NOMENCLATURE: M201E1

REPLACES: M201

GENERAL

MUNITION: Hand Grenades

USE: Riot CN M7 & M7A1, CS M7A2 &
M7A3, Smoke HC AN-M8, Incend
TH-3 AN-M14, Col Smoke M18

LOCATION: Top of Grenade

BALLISTIC LEVELS:

ROTATION: Neg

SETBACK: Neg

VELOCITY: 25 m/s

CREEP: Neg

SERIES: A	CHAPTER: 8
DESIGNATION: M201A1	
Hand Grenade Fuze	

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull Ring of Safety Pin

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Time, Fixed

TYPE: Pyrotechnic

CHARACTERISTICS:

0.7 to 2.0 secs
Igniting Output

TARGET: Ground-Personnel

SENSITIVITY:

Not applicable

PHYSICAL DATA

WEIGHT: 0.16 lb (72.6 gm)

TOTAL LENGTH: 3.90 in (9.91 cm)

CROSS SECTION:

INTRUSION: 0.75 in (1.91 cm) depth
0.35 in (0.88 cm) dia

THREAD SIZE: 9/16-12UNC-1A

OTHER:

Straight Safety Lever

POWER SUPPLY:

Wound Striker Spring

EXPLOSIVE TRAIN

S&A DEVICE: None

PRIMER: M39A1 Perc

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: Starter: Si, Red Lead & Ti
Delay: Si & Red Lead
Igniter: Iron Oxide, Ti & Zr

REMARKS

M201A2, previously M201A1E1, same except has shorter lever and is used with Grenade, Hand, Riot, Pocket, CS, M58.

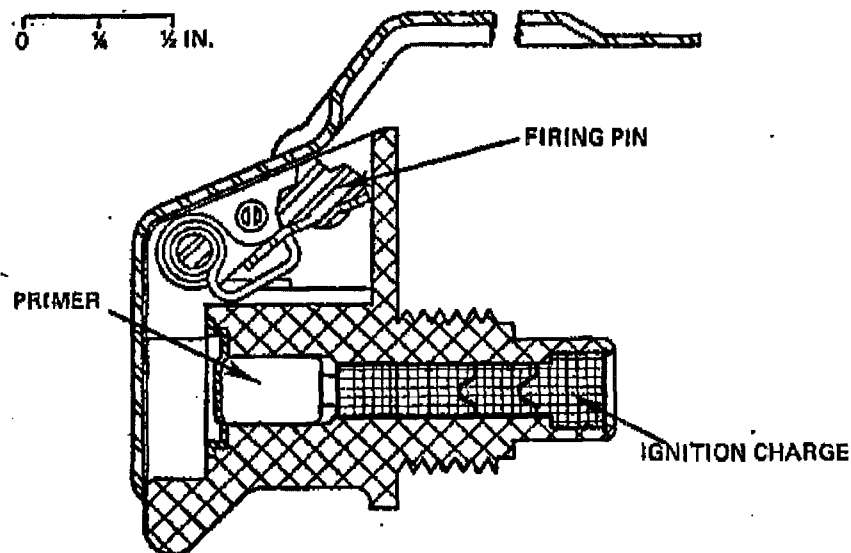
CHAPTER: 8 SERIES: A

DESIGNATION: M201A1

Hand Grenade Fuze

0551

8-4



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-CLN-D

CONTACT: L. Burke
AV 584-3803

STATUS: Development

USER: Army, Marines

ASSY DWG: In preparation

PARTS LIST: TDP 13-10-67

SPEC: MIL-F- In preparation

NSN: Not yet assigned

PRIOR NOMENCLATURE: M201A1

REPLACES: M201A1

GENERAL

MUNITION: Hand Grenade

USE: Riot CN M7A1, CS M7A2 and M7A3,
Smoke HC AN-M8, Incend TH-3
AN-M14, Col Smoke M18

LOCATION: Top of grenade

BALLISTIC LEVELS:

ROTATION: Neg

SETBACK: Neg

VELOCITY: 25 m/s

CREEP: Neg

SERIES: A CHAPTER: 8
DESIGNATION: M201A1E2
Hand Grenade Fuze

ARMING DATA

FIRST SAFETY:

Pull Ring of Safety Pin

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

Yes

PHYSICAL DATA

WEIGHT: 2.56 oz (72.6 gm)

TOTAL LENGTH: 3.90 in (9.90 cm)

CROSS SECTION:

INTRUSION: 0.75 in (1.91 cm) depth
0.35 in (0.88 cm) dia

THREAD SIZE: 9/16-12UNC-7A

OTHER:

Straight Safety Lever

POWER SUPPLY:

Wound Striker Spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M39A1 Perc

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: Starter: Zr, Red Iron Oxide,
Delay: Mn, Ba & Pb Chromate
Ignitor: Ti & K Perchlorate

FUNCTIONING DATA

MODE(S): Time, Fixed

TYPE: Pyrotechnic

CHARACTERISTICS:

0.7 to 2.0 sec
Igniting Output

TARGET: Ground-Personnel

SENSITIVITY:

Not applicable

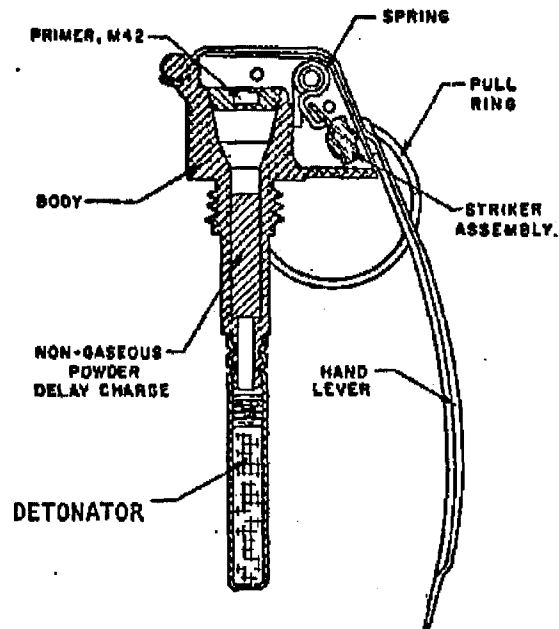
REMARKS

Similar to M201A1 except Primer, Delay, and Igniter contained in replaceable cartridge instead of being loaded directly in fuze body.

CHAPTER: 8 SERIES: A
DESIGNATION: M201A1E2
Hand Grenade Fuze

0553

8-6

**IDENTIFICATION**

AGENCY: ARRADCOM, DRDAR-LCU-SI

CONTACT: A. Novak
AV 880-3816

STATUS: Procurement Std

USER: Army

ASSY DWG: 7548570-3

PARTS LIST: PL 7548570-3

SPEC: MIL-F-13424

NSN: 1330-00-293-9517

PRIOR NOMENCLATURE:

REPLACES: M206A1

GENERAL

MUNITION: Hand Grenades

USE: Offensive, Mk 3A2 and
Hand-Rifle, Smoke, WP, M34

LOCATION: Top of Grenade

BALLISTIC LEVELS:

ROTATION: Neg

SETBACK: Neg

VELOCITY: 25 m/s

CREEP: Neg

SERIES: A
DESIGNATION: M206A2
Hand Grenade Fuze

CHAPTER: 8

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull Ring of Safety Pin

SECOND SAFETY:

Safety Clip on Lever of Mk 3A2

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

Yes, Position of Striker

FUNCTIONING DATA

MODE(S): Time, Fixed

TYPE: Pyrotechnic

CHARACTERISTICS:

4 to 5 sec, Detonating Output

TARGET: Ground-Personnel, Smoke

SENSITIVITY:

Not applicable

PHYSICAL DATA

WEIGHT: 2.60 oz (73.7 gm)

TOTAL LENGTH: 4.3 in (10.92 cm)

CROSS SECTION:

INTRUSION: depth 2.87 in (7.29 cm)
dia varies

THREAD SIZE: 9/16-12UNC-1A

OTHER:

Straight Safety Lever

POWER SUPPLY:

Wound Striker Spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M42 Perc

DETONATORS: 7548573, Lead Azide,
Lead Styphnate and RDX

LEAD: None

BOOSTER: None

OTHER: Delay: 1.296 gm Delay Comp
Type II, MIL-C-13739

REMARKS

Same as M204A2 except straight safety lever instead of curved. M206A1, 82-1-104, and M206A2 differ slightly in body construction. M206A1 used with Grenade, Hand, Smoke, M15 and offensive, Mk 3A1.

CHAPTER: 8 SERIES: A

DESIGNATION: M206A2

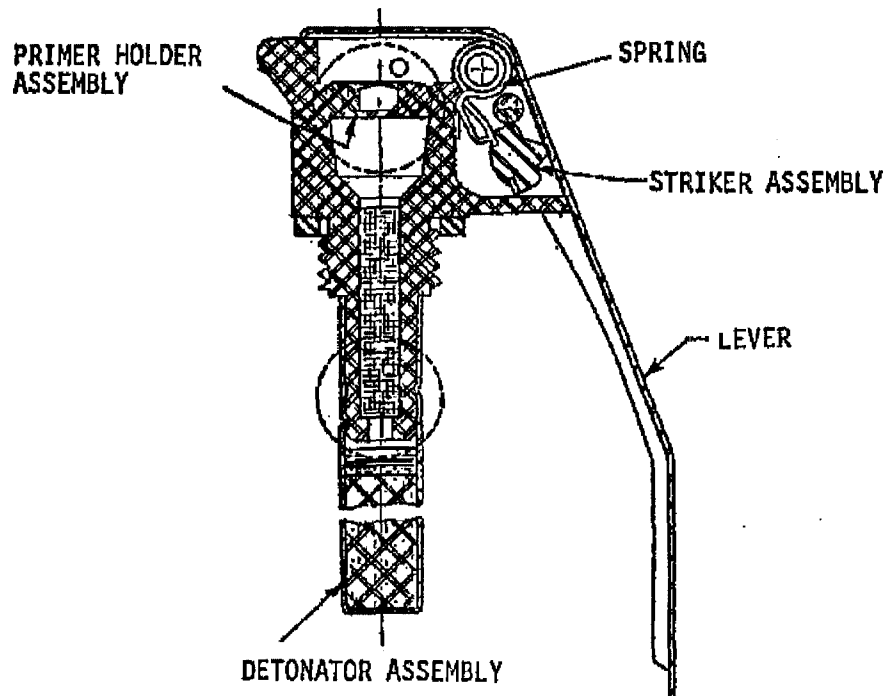
0555

Hand Grenade Fuze

F-8

8-8





IDENTIFICATION

AGENCY: ARRADCOM, ORDAR-LCU-SI

CONTACT: A. Novak
AV 880-3816

STATUS: Procurement Std

USER: Army Marines

ASSY DWG: 8822131

PARTS LIST: 8822131

SPEC: MIL-F-45437

NSN: 1330-00-182-3570

PRIOR NOMENCLATURE: T1011E2

REPLACES:

GENERAL

MUNITION: Hand Grenade

USE: Fragmentation, Delay,
M33 and M67

LOCATION: Top of Grenade

BALLISTIC LEVELS:

ROTATION: Neg

SETBACK: Neg

VELOCITY: 25 m/s

CREEP: Neg

SERIES: A CHAPTER: 8
DESIGNATION: M213
Hand Grenade Fuze

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull Ring of Safety Pin

SECOND SAFETY:

Safety Clip on Lever (with
M67 but not M33 Grenade)

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Time, Fixed

TYPE: Pyrotechnic

CHARACTERISTICS:

4 to 5 sec, Detonating Output

TARGET: Ground-Personnel

SENSITIVITY:

N/A

PHYSICAL DATA

WEIGHT: 2.5 oz (70.88 gm)

TOTAL LENGTH: 3.33 in (8.46 cm)

CROSS SECTION:

INTRUSION: 2.18 in (5.54 cm) depth
dia 0.54 in (1.36 cm) dia

THREAD SIZE: 5/8-11UNC-2A Mod

OTHER:

Bend in Safety Lever

POWER SUPPLY:

Wound Striker Spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M42 Perc

DETONATORS: 8822376

LEAD: None

BOOSTER: None

OTHER: Delay: 1.296 gm Delay,
Comp Type II, MIL-C-13739

REMARKS

Same as M228 Practice except Detonating not Igniting. Same as M215 except bend in lever. Similar to M204 and M206 except thread and diameter.

CHAPTER: 8 SERIES: A
DESIGNATION: M213
Hand Grenade Fuze

0557

8-10
F-10

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-CLN-D

CONTACT: L. Burke
AV 584-3803

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 13-10-40

PARTS LIST: N/A

SPEC: MIL-F-51376

NSN: 1330-00-079-0778

PRIOR NOMENCLATURE: XM227

REPLACES: None

GENERAL

MUNITION: Hand Grenade

USE: CS M47 and Colored Smoke M48

LOCATION: Top of Grenade.

BALLISTIC LEVELS:

ROTATION: Neg

SETBACK: Neg

VELOCITY: 25 m/s

CREEP: Neg

SERIES: A CHAPTER: 8
DESIGNATION: M227
Hand Grenade Fuze

8-11

F-11

0558

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull Ring of Safety Pin

SECOND SAFETY:

Sliding Latch

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Time, Fixed

TYPE: Pyrotechnic

CHARACTERISTICS:

0.1 to 0.9 sec, Igniting Output

TARGET: Ground-Personnel, Signal

SENSITIVITY:

Not Applicable

PHYSICAL DATA

WEIGHT: 2.22 oz (62.94 gm)

TOTAL LENGTH: 2.50 in (6.35 cm)

CROSS SECTION: 0.635 in (1.61 cm)

INTRUSION: 2.125 in (5.40 cm) depth
.625 (1.58 cm) dia

THREAD SIZE: 1 1/4-16UNC-2A

OTHER:

Curved Safety Lever

POWER SUPPLY:

Compressed Arming Spring
Compressed Firing Pin Spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M118 Stab

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: Starter: Si, Red Lead & Ti
Delay: Si & Red Lead
Igniter: Iron Oxide, Ti & Zr

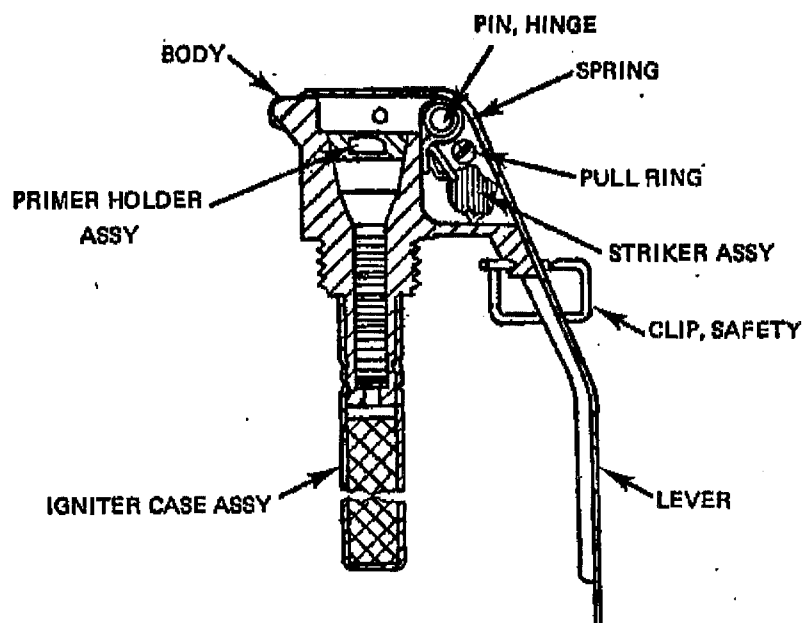
REMARKS

CHAPTER: 8 SERIES: A
DESIGNATION: M227
Hand Grenade Fuze

0559

8-12

F-12



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-SI

CONTACT: A. Novak
AV 880-3816

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 9235210

PARTS LIST: 9235210

SPEC: MIL-F-14943

NSN: 1330-00-168-5502

PRIOR NOMENCLATURE: XM228

REPLACES: None

GENERAL

MUNITION: Hand Grenade

USE: Practice, Delay, M69

LOCATION: Top of Grenade

BALLISTIC LEVELS:

ROTATION: Neg

SETBACK: Neg

VELOCITY: 25 m/s

CREEP: Neg

SERIES: A CHAPTER: 8
DESIGNATION: M228
Hand Grenade Fuze

0560

8-13

F-13



ARMING DATA

FIRST SAFETY:

Pull Ring of Safety Pin

SECOND SAFETY:

Safety Clip on Lever,
New Models

OTHER SAFETY:

None

DELAY:

None

SAFE/ARM CONDITION:

Yes

FUNCTIONING DATA

MODE(S): Time, Fixed

TYPE: Pyrotechnic

CHARACTERISTICS:

4 to 5 sec, Igniting Output

TARGET: Ground-Practice

SENSITIVITY:

Not applicable

PHYSICAL DATA

WEIGHT: 2.57 oz (72.86 gm)

TOTAL LENGTH: 3.33 in (8.46 cm)

CROSS SECTION:

INTRUSION: 2.18 in (5.54 cm) depth
dia 0.54 in (1.36 cm) dia

THREAD SIZE: 5/8-11UNC-2A mod

OTHER:

Bend in Safety Lever

POWER SUPPLY:

Wound Striker Spring

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M42 Perc

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: Delay: 1.296 gm Delay Comp
Type II, MIL-C-13739
Igniter: 9235948

REMARKS

M228 is practice version of M213 which is used with M67 and M33 Fragmentation Grenade. Same as M213 except is Igniting not Detonating.

CHAPTER: 8 SERIES: A
DESIGNATION: M228
Hand Grenade Fuze

8-14

0561

F-14

CHAPTER 9

M
I
S
C

0562

9-1

G-1



IDENTIFICATION

AGENCY: Ogden ALC/MMWRAE
CONTACT: H. Ogilvie
STATUS: Procurement Std
USER: AF, Navy, Marines
ASSY DWG: AF736323-10
PARTS LIST:
SPEC: N/A
NSN: N/A
PRIOR NOMENCLATURE: N/A
REPLACES: N/A

GENERAL

MUNITION: Used in basic form with
all LUU 2 series flares
USE: Illumination
LOCATION: N/A
BALLISTIC LEVELS:
ROTATION: N/A
SETBACK:
VELOCITY:
CREEP:

SERIES: AF
DESIGNATION: LUU
Timer

CHAPTER: 9
2B/B

0563

9-3
6-2

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

SECOND SAFETY:

Arming knob requiring
more than 20 lb pull force

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 0.697 lb (316 gm)

TOTAL LENGTH: 2.69 in (6.83 cm)

CROSS SECTION: 4.63 in (11.75 cm)

INTRUSION: 1.38 in (3.49 cm)

THREAD SIZE:

OTHER:

Mechanical pawls extend
outside cross-sec when cocked

POWER SUPPLY:

N/A

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S): Time Delay

TYPE: Mechanical

CHARACTERISTICS:

Spring driven timer

TARGET:

SENSITIVITY:

REMARKS

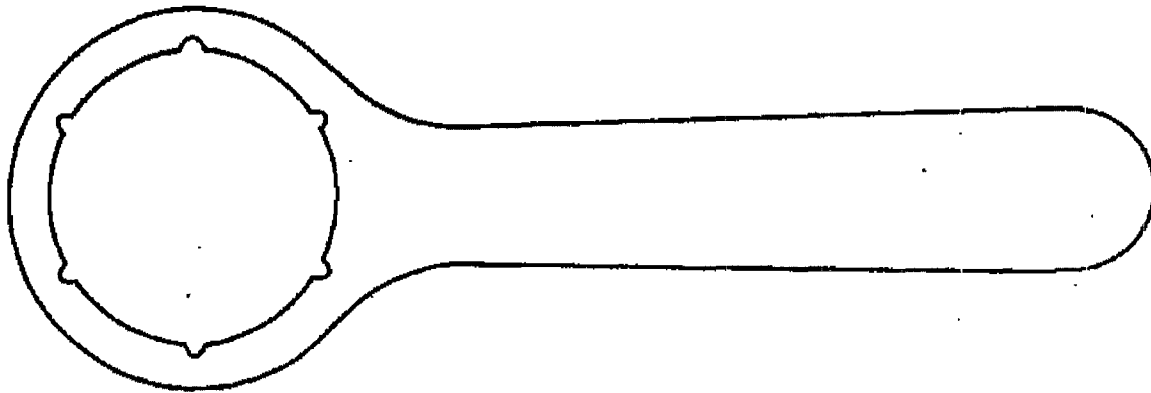
Timer is set to A/C separation distance (time). Lanyard attached to rack solenoid and timer knob; upon release lanyard pulls timer knob which starts timer after scheduled delay time, timer retracts pawls, a conical spring then ejects timer, cover, and chute from flare. Force of chute opening initiates Expl. Train.

CHAPTER: 9 SERIES: AF
DESIGNATION: LUU 2B/B
Timer

9-4

0564

6-3

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-SCF-A

CONTACT: G. Staton
AV 880-4649, -5630

STATUS: Procurement Std

USER: Army

ASSY DWG: 7676038

PARTS LIST:

SPEC:

NSN: 1290-00-767-6038

PRIOR NOMENCLATURE: T42

REPLACES: None

GENERAL

MUNITION: Fuzes for Projectiles for
81 mm Mortar, M1 and M29A1USE: M84 A1 and M84A1E1
Time Fuzes

LOCATION: N/A

BALLISTIC LEVELS:

ROTATION: N/A

SETBACK:

VELOCITY:

CREEP:

SERIES: A
DESIGNATION: M 25
Fuze Setter

CHAPTER: 9

0565

G-4

9-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

N/A

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 0.50 lb (226.8 gm)

TOTAL LENGTH: 10.0 in (25.4 cm)

CROSS SECTION: 3.25 in (8.26 cm)

INTRUSION: N/A

THREAD SIZE: None

OTHER:

Thickness:
3/8 in (0.95 cm)

POWER SUPPLY:

N/A

FUNCTIONING DATA

MODE(S): N/A

TYPE: Manual

CHARACTERISTICS:

Engages ribs on time ring.
Time graduations on fuze.

TARGET: N/A

SENSITIVITY:

EXPLOSIVE TRAIN

S&A DEVICE: N/A

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

REMARKS

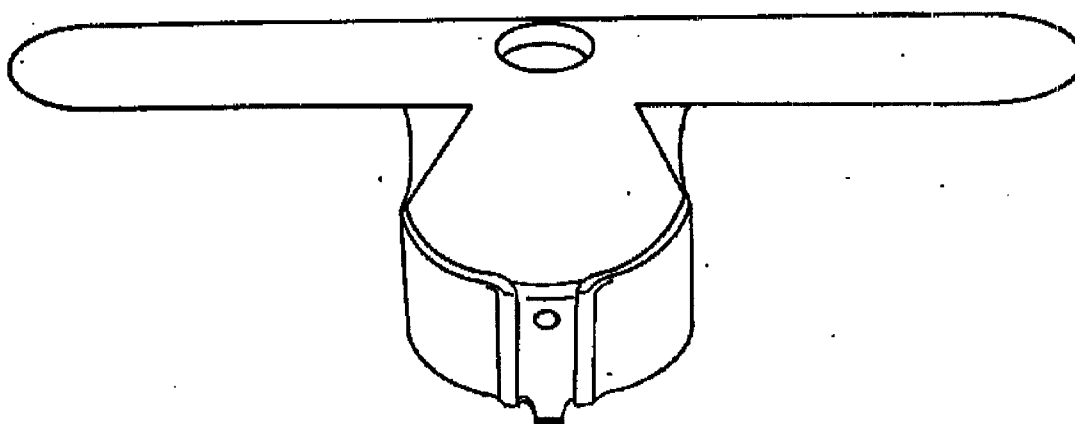
M27 can be used as a substitute.

CHAPTER: 9 SERIES: A
DESIGNATION: M 25
Fuze Setter

9-6

6-5

0566



IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-SCF-A

CONTACT: G. Staton
AV 880-4649, -5630

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 7647761

PARTS LIST:

SPEC: -

NSN: 1290-00-764-7761

PRIOR NOMENCLATURE: T40

REPLACES: M14, M25

GENERAL

MUNITION: Fuzes for Projectiles for
105 & 155 mm & 8 in How,
81 mm and 4.2 in mortarsUSE: M54, M55, M77 Time; M67 MT;
M500 & M501 MTSQ, & M728 &
M732 Prox fuzes

LOCATION: N/A

BALLISTIC LEVELS:

ROTATION: N/A

SETBACK:

VELOCITY:

CREEP:

SERIES: A CHAPTER: 9
DESIGNATION: M 27
Fuze Setter

ARMING DATA

FIRST SAFETY:

N/A

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 2.0 lb (907.2 gm)

TOTAL LENGTH: 8.0 in (20.32 cm)

CROSS SECTION: 2.5 in (6.35 cm)

INTRUSION:

THREAD SIZE:

OTHER:

Thickness:
2.75 in (6.99 cm)

POWER SUPPLY:

N/A

EXPLOSIVE TRAIN

S&A DEVICE: N/A

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S):

TYPE: Manual

CHARACTERISTICS:

Fits over fuze ogive

TARGET:

SENSITIVITY:

REMARKS

M14 can be used as substitute.

CHAPTER: 9 SERIES: A

DESIGNATION: M 27

Fuze Setter

9-8

0568

6-7

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-SCF-A

CONTACT: G. Staton, J. Casper
AV 880-4649, -5630

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: SK 87038

PARTS LIST:

SPEC:

NSN: 1290-00-078-4367

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION: Fuzes for Projectiles for
105, 155 mm, and 8 in
How and 4.2 in MortarUSE: M564, M565, and M548
MT Fuzes

LOCATION: N/A

BALLISTIC LEVELS:

ROTATION: N/A

SETBACK:

VELOCITY:

CREEP:

SERIES: A CHAPTER: 9
DESIGNATION: M 34
Fuze Setter

0569

9-9
6-8

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

N/A

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH:

CROSS SECTION:

INTRUSION:

THREAD SIZE: None

OTHER:

POWER SUPPLY:

N/A

EXPLOSIVE TRAIN

S&A DEVICE: N/A

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S):

TYPE: Manual

CHARACTERISTICS:

TARGET:

SENSITIVITY:

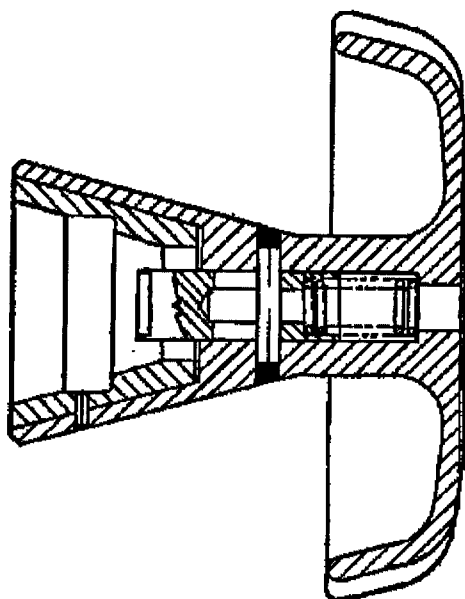
REMARKS

CHAPTER: 9 SERIES: A
DESIGNATION: M 34
Fuze Setter

0570

9-10

6-9



IDENTIFICATION

AGENCY: ARRADCOM, ORDAR-LCN-T

CONTACT: T. Hayes
AV 880-2644

STATUS: Procurement Std

USER:

ASSY DWG: 11729019

PARTS LIST: PL 11729019

SPEC: SQ 11729019

NSN: 1290-00-201-3507

PRIOR NOMENCLATURE: None

REPLACES: None

GENERAL

MUNITION: Fuzes for Projectiles for
155 mm and 8 in How and 4.2
in MortarUSE: M577 & M582 Mech Time
& SQ Fuzes

LOCATION: Front of Fuze

BALLISTIC LEVELS:

ROTATION: N/A

SETBACK:

VELOCITY:

CREEP:

SERIES: A
DESIGNATION: M 35
Fuze Setter

CHAPTER: 9

9-11

G-10

0571

ARMING DATA

FIRST SAFETY:

SECOND SAFETY:

N/A

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 0.272 lb (123.3 gm)

TOTAL LENGTH: 2.4375 in (6.19 cm)

CROSS SECTION: 3.25 in (8.26 cm)

INTRUSION:

THREAD SIZE: None

OTHER:

POWER SUPPLY:

None

EXPLOSIVE TRAIN

S&A DEVICE: N/A

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S): N/A

TYPE: Manual

CHARACTERISTICS:

Engages slot in nose of fuze. Rotated until digital display of required time shows in ogival window

TARGET: N/A

SENSITIVITY:

N/A

REMARKS

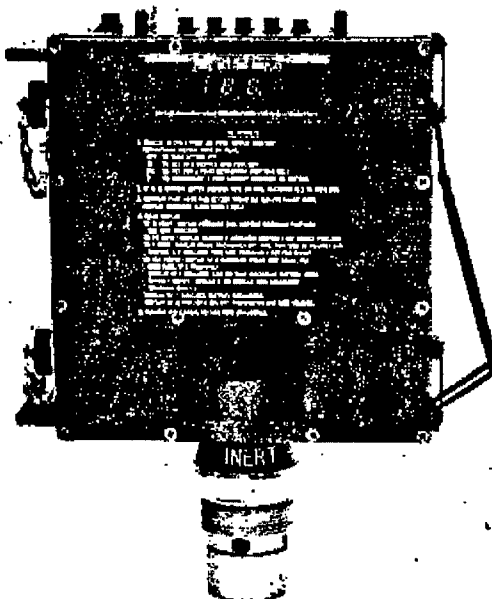
Screwdriver or ten cent US Coin may be used in place of M35 in emergency.

CHAPTER: 9 SERIES: A
DESIGNATION: M 35
Fuze Setter

0572

9-12

G-11



IDENTIFICATION

AGENCY: ERADCOM, DELHD-DE-OT

CONTACT: N. Doctor
AV 290-2650

STATUS: Procurement Std

USER: Army, Marines

ASSY DWG: 11711372

PARTS LIST: 11711372

SPEC: MIL-F-48701

NSN: 1290-01-038-2035

PRIOR NOMENCLATURE: XM36E1

REPLACES: None

GENERAL

MUNITION: Fuzes for Projectiles for
155 mm & 8 in How &
4.2 in MortarUSE: M587 and M724 Elec Time and
XM744 Training Fuzes

LOCATION: Nose of fuze

BALLISTIC LEVELS:

ROTATION: N/A

SETBACK: N/A

VELOCITY: N/A

CREEP: N/A

SERIES: A CHAPTER: 9
 DESIGNATION: M 36
 Fuze Setter

0573

9-13

6-12

ARMING DATA

FIRST SAFETY:

N/A

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 6.75 lb (3068 gm)

TOTAL LENGTH: 7.53 in (19.13 cm) high

CROSS SECTION: 8.16 in (20.72 cm) wide

INTRUSION: 2.61 in (6.63 cm) deep

THREAD SIZE: None

OTHER:

POWER SUPPLY:

NiCad Rechargeable Battery
dwg 11711328, 6 vdc

EXPLOSIVE TRAIN

S&A DEVICE: None

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S):

TYPE: Electronic

CHARACTERISTICS:

Sets fuze for 0.2 to 199.9 sec time
in 0.1 sec incr, or PD functioning

TARGET: N/A

SENSITIVITY:

Accuracy of setting fuze combination
is 0.100 sec over entire
range

REMARKS

Setter is set manually with thumbwheel. Checks circuits and displays setting. Can interrogate previously set fuze. M36E1 Setter has same characteristics, except that it weighs 5.75 lb and is 9.0 in (22.86 cm) x 3.75 in (9.53 cm) x 4.30 in (10.92 cm).

CHAPTER: 9 SERIES: A
DESIGNATION: M 36
Fuze Setter

9-14

0574

A-2

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-LCU-SE

CONTACT: W. Ritchie
AV 880-4830

STATUS: Development

USER: Army

ASSY DWG: 9252773, 9279048

PARTS LIST:

SPEC: MIL-F-63145, MIL-T-48320

NSN: 1375-01-021-0606

PRIOR NOMENCLATURE: XM63

REPLACES: None

GENERAL

MUNITION: Demolition Charge

USE: Firing Device for Blasting Cap

LOCATION: Remote

BALLISTIC LEVELS:

ROTATION: None

SETBACK: None

VELOCITY: None

CREEP: None

SERIES: A CHAPTER: 9

DESIGNATION: XM122
Firing Device, Demolition

A-3

9-15

0575

ARMING DATA	PHYSICAL DATA
FIRST SAFETY: Safe-arm switch on receiver	WEIGHT: 1.40 lb (6.35 gm) TOTAL LENGTH: 4.0 in (10.2 cm) CROSS SECTION: 4x4 in (10.2x10.2 cm) INTRUSION: Not applicable
SECOND SAFETY: Delay timer	THREAD SIZE: None
OTHER SAFETY: None	OTHER: Above data for receiver, incl battery
DELAY: 5 to 8 minute delay arming	POWER SUPPLY: BA3202 1.5v, Receiver 9296723 18v, Transmitter
SAFE/ARM CONDITION: Yes	EXPLOSIVE TRAIN S&A DEVICE: PRIMER: None DETONATORS: Blasting Caps (in Demolition charge) LEAD: None BOOSTER: None OTHER:
FUNCTIONING DATA MODE(S): Command TYPE: Electric, RF CHARACTERISTICS: Coded transmission, 1.3 sec funct. time, max TARGET: Ground-Pers, Hard Target SENSITIVITY: Not applicable	

REMARKS

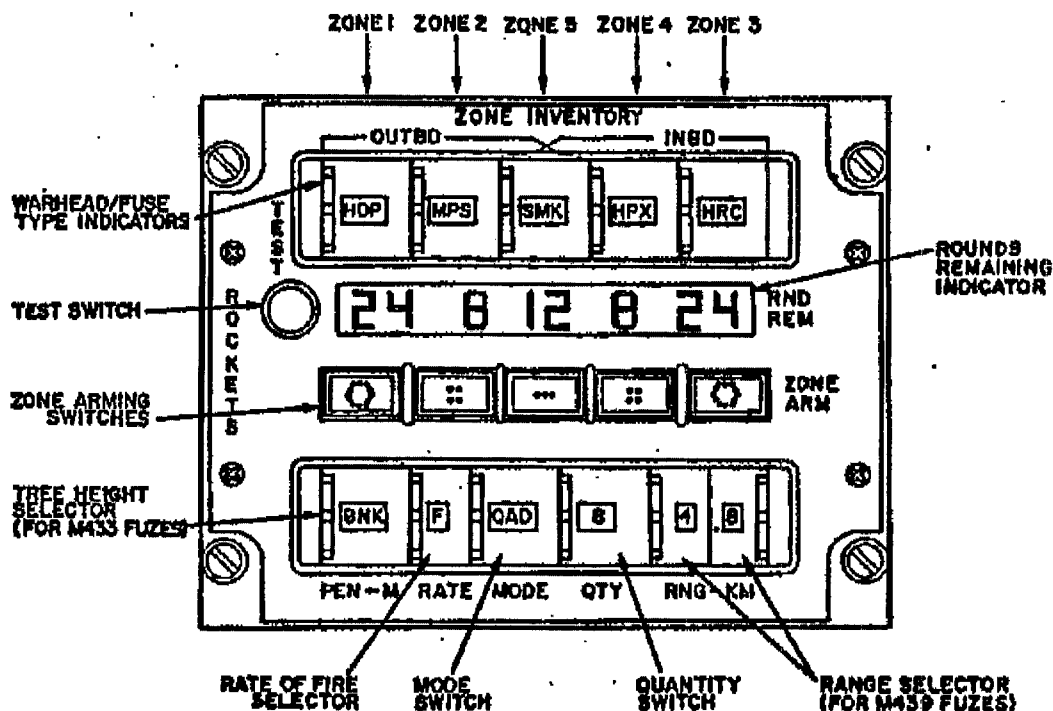
Transmitter is 4.25 lb (1928 gm), 11.0 in (27.9 cm) long, 2.60 in (6.60 cm) wide and 2.65 in (6.73 cm) high incl battery. Receiver can function five M6 or one of any other model blasting caps. Max distance between transmitter and receiver is 1 km. XM63 Firing Device was similar but larger.

CHAPTER: 9 **SERIES:** A
DESIGNATION: XM122
Firing Device, Demolition

9-16

0576

A-4



IDENTIFICATION

AGENCY: DRCPM/CO

CONTACT: M. Ryam
AV 693-0942

STATUS: Procurement Std

USER: Army

ASSY DWG: See Remarks

PARTS LIST:

SPEC: - 209-947-282(Be11)

NSN: See Remarks

PRIOR NOMENCLATURE: XM132 & XM40

REPLACES: XM132

GENERAL

MUNITION: Fuzes for warheads for
2.75 in FFAR in COBRAUSE: M433 MO and M439 ET
Fuzes

LOCATION: See Remarks

BALLISTIC LEVELS:

ROTATION: N/A

SETBACK:

VELOCITY:

CREEP:

SERIES: A CHAPTER: 9
DESIGNATION: XM138
Rocket Mgmt Subsystem

0577

9-17

A-5

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

N/A

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT: 16.86 lb (7.65 kg)

TOTAL LENGTH: 9 in (22.9 cm)

CROSS SECTION: 4.25 in (10.80 cm) high

INTRUSION: 5.5 in (13.97 cm) wide

THREAD SIZE: none

OTHER:

POWER SUPPLY:

Aircraft 28 vdc

EXPLOSIVE TRAIN

S&A DEVICE: N/A

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

FUNCTIONING DATA

MODE(S):

TYPE: Electronic

CHARACTERISTICS:

Selects PD, Bunker, or Forest Pen
(10-45 m in incr of 5 m) for M433.Selects range, 100 m - 6 km in
incr of 100 m form M439

TARGET: N/A

SENSITIVITY:

N/A

REMARKS

Also selects type of warhead (5 choices), number of rounds, rate of fire and mode.
Indicates rounds remaining. DRAWINGS: Display 9324106, Operational Station Units:
9324105, Interface with aircraft: 9324104. NSN: Subsystem : 1090-01-077-8939,
Display: 1090-01-077-8947, Operations Station: 1090-01-077-8938.
One unit located in cockpit and Four units located at outboard stations.

CHAPTER: 9 SERIES: A

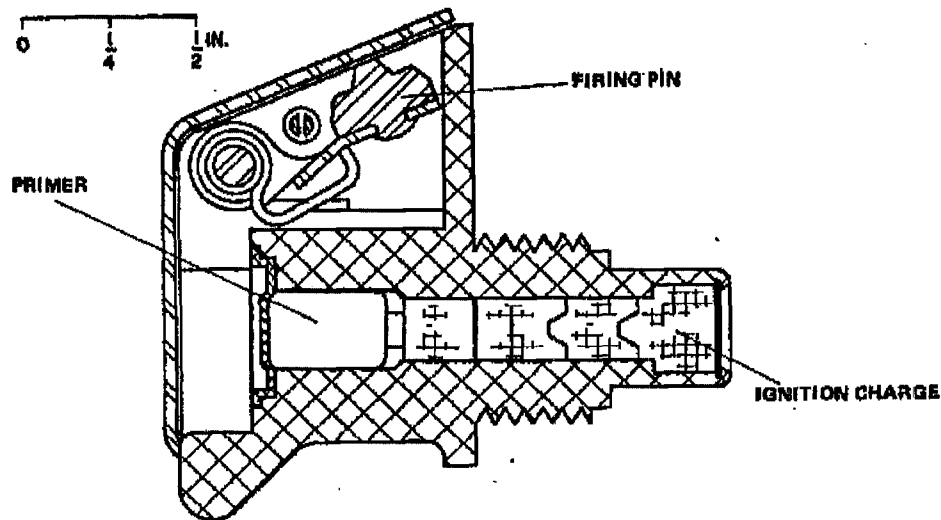
DESIGNATION: XM138

Rocket Mgmt Subsystem

9-18

0578

A-6

MIL-HDBK-145
1 October 1980

IDENTIFICATION

AGENCY: ARRADCOM, DRDAR-CLN-D

CONTACT: L. Burke
AV 584-3803

STATUS: Procurement Std

USER: Army

ASSY DWG: 36-7-36

PARTS LIST:

SPEC: MIL-F-10080

NSN:

PRIOR NOMENCLATURE: M207

REPLACES: M207

GENERAL

MUNITION: Floating Smoke Pot

USE: Pot, HC, M4A2

LOCATION: Top

BALLISTIC LEVELS:

ROTATION: None

SETBACK: None

VELOCITY: None

CREEP: None

0579

A-7

9-19

SERIES: A CHAPTER: 9
DESIGNATION: M207A1
Floating Smoke Pot Fuze

MIL-HDBK-145
1 October 1980

ARMING DATA

FIRST SAFETY:

Pull ring of safety pin

SECOND SAFETY:

None

OTHER SAFETY:

None

DELAY:

No delay arming

SAFE/ARM CONDITION:

Yes

PHYSICAL DATA

WEIGHT: 2.402 (68.0 gm)

TOTAL LENGTH: 1.50 (3.81 cm)

CROSS SECTION:

INTRUSION: 0.72 in (1.83 cm)

THREAD SIZE: 9/16-12UNC-1A

OTHER:

POWER SUPPLY:

Wound striker spring

FUNCTIONING DATA

MODE(S): Time, fixed

TYPE: Pyrotechnic

CHARACTERISTICS:

1.2 to 2.0 sec
Igniting output

TARGET: Marine-Screening

SENSITIVITY:

Not applicable

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER: M39A1 Perc

DETONATORS: None

LEAD: None

BOOSTER: None

OTHER: Starter: Si, Red Lead & Ti
Delay: Silicon & Red Lead
Igniter: Iron Oxide, Ti & Zr

REMARKS

Similar to M208 except different primer, delay and igniter. Same as M201A1 except shorter handle and chain on pull ring of safety.

CHAPTER: 9 SERIES: A

DESIGNATION: M207A1

Floating Smoke Pot Fuze

0580

9-20

A-8

MIL-HDBK-145
1 October 1980Appendix A
Computer Printouts

This appendix contains combinations of data on each fuze in MIL-HDBK-145. Related elements have been grouped together and arranged in columns to provide a quick comparison of specific fuze characteristics. The data was gathered and arranged by computer and is identical with that contained under corresponding elements on the data sheets. Tabularized data is not limited to the selections appearing in this appendix. Appendix B describes how authorized users can acquire similarly formatted data on virtually any element. In addition to listings by fuze number, printouts can be sorted by data element. The various element groupings contained in this appendix are listed below.

Group	Elements	Page
Cognizance	Agency, Contact, Phone	A-2
Documentation	Assembly Drawing, Parts List, Specification	A-7
Procurement	National Stock Number, Prior Nomenclature, Replaces	A-12
Ballistics	Rotation, Setback, Velocity	A-17
Functioning	Mode, Type, Target	A-22
Size	Weight, Total Length, Cross Section	A-27
Fit	Intrusion, Thread Size	A-32

A-1

0581

A-9

0582

A-10

A-2

FOUR NUMBER:	AGENCY:	200	210	210
MK 1 MODS 0, 1	NSWC, CODE G43		W. PICKLER	AV 290-1663
MK 1 MOD 1	NSWC, CODE 3351		R. YOST	AV 437-7332
LJU 2B/B	OGDEN ALC/MMWRAE		H. OGILVIE	-
MK 3 MOD 5	NSWC, CODE 3355		J. JANSON	AV 437-7310
WOU- 4A/A	ARRADCOM, DRDAR-LCN-M		A. ZACHARIN	AV 880-6477
FSU- 9A/B	NSWC, CODE 3355		R. LEACH	AV 437-7493
FSU- 10/A	NSWC, CODE 3352		M. TYLER	AV 437-7414
FSU- 13/B	NSWC, CODE 3355		L. BRAUER	AV 437-7455
MK 13 MOD 2	NSWC, CODE 3351		C. MERZALS	AV 437-7332
MK 17 MOD 0	NSWC, CODE 3351		R. YOST	AV 437-7332
BLU- 24/B	OO-ALC/MMWRAE		W. MORGAN	AV 458-7056
M 25	ARRADCOM, DRDAR-SCF-A		G. STATON	AV 880-4649, -5630
M 27	ARRADCOM, DRDAR-SCF-A		G. STATON	AV 880-4649, -5630
MK 29 MOD 5	NSWC, CODE G44		R. NIEMEYER	AV 290-2750
MK 29 MOD 0	NSWC, CODE 3351		R. YOST	AV 437-7332
MK 30 MOD 5	NSWC, CODE G44		R. NIEMEYER	AV 290-2750
MK 31 MOD 2	NSWC, CODE G44		G. WARDEN	AV 290-1995
MK 33 MOD 0	NSWC, CODE 3351		R. EMERSON	AV 437-7333
M 34	ARRADCOM, DRDAR-SCF-A		G. STATON, J. CASPER	AV 880-4649, -5630
MK 34 MOD 1	NSWC, CODE 3351		G. STEFAN	AV 437-7341
M 35	ARRADCOM, DRDAR-LCN-T		T. HAYES	AV 880-2644
MK 35 MOD 0	NSWC, CODE 3351		G. STEFAN	AV 437-7341
M 36	ERADCOM, DELHD-DE-OT		N. DOCTOR	AV 290-2650
FZU- 39/B	EGLIN AFB, ADTC/SD3		N. BROWN	AV 872-8186
MK 42 MODS 1 AND 3	NSWC, CODE G44		R. LEARY	AV 290-1995
MK 43 MOD 0	NSWC, CODE G44		A. CLARKE	AV 290-1713
MK 51 MOD 5	NSWC, CODE G44		G. WARDEN	AV 290-1995
MK 54 MODS 0-2	NSWC, CODE G44		D. JENSEN	AV 290-2792
FNU- 54A/B	OO-ALC/MMWRAE		F. SHIFFRAN	AV 458-7804
M 56	ARRADCOM, DRDAR-LCU-SA		D. DEVINE	AV 880-6305
FMI- 56D/B	OO-ALC/MMWRAE		R. MUEHLESTEIN	AV 458-7056
EX 60	NSWC, CODE G44		K. LLOYD	AV 290-1713
EX 61	NSWC, CODE G44		K. LLOYD	AV 290-1713
M 62A2	ARRADCOM, DRDAR-LCN-T		M. SULDWEY	AV 880-2958
SUU- 64/SUU- 65	EGLIN AFB, ADTC/SD3		R. GIORDANO	AV 872-8186
M 65A1E1	ARRADCOM, DRDAR-LCN-T		W. MORGAN	AV 880-5344
MK 71 MODS 11-16	NSWC, CODE G44		C. KNISELY	AV 290-1972
MK 72 MODS 16-17	NSWC, CODE G44		C. KNISELY	AV 290-1972
MK 73 MODS 12-13	NSWC, CODE G44		C. KNISELY	AV 290-1972
FNU- 74/B	NSWC, CODE G43		W. PICKLER	AV 290-1663
M 74	ARRADCOM, DRDAR-LCU-SM		R. RESCH, I. McKECHNIE	AV 880-5348
M 75	ARRADCOM, DRDAR-LCU-SM		R. RESCH, S. POLANSKI	AV 880-5348
FNU- 81/B	OO-ALC/MMWRAE		R. MUEHLESTEIN	AV 458-7056
MK 83 MOD 0	NSWC, CODE G44		G. WARDEN	AV 290-1995
FNU- 83/B	NSWC, CODE G44		A. MONACH	AV 290-1977
M 84A1	ARRADCOM, DRDAR-LCN-T		W. MORGAN	AV 880-5344
M 84A1E1	ARRADCOM, DRDAR-LCN-T		W. MORGAN	AV 880-5344
IM 84	ARRADCOM, DRDAR-LCU-SM		J. REHKAMP	AV 880-5459
FNU- 88/B	NSWC, CODE G44		J. ABELL	AV 290-1545
MK 90 MOD 1	NSWC, CODE G44		G. KLAMM	AV 290-1970

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A-3

FUZE NUMBER:	AGENCY:	200
MK 91 MOD 1	NSWC, CODE G44	
M 91A2	ARRADCOM, DRDAR-LCN-T	
BLD- 91/B	ARRADCOM, DRDAR-LCU-SM	
MK 92 MOD 1	NSWC, CODE G44	
MLD- 92/B	ARRADCOM, DRDAR-LCU-SM	
MK 93 MOD 0	NSWC, CODE G43	
FMD- 94/B	NWC, CODE 3352	
FMD- 95/B	NSWC, CODE G43	
BLU- 97/B	EGLIN AFB, ADTC/SD3	
FMD- 98/B	ERADCOM, DELHD-I-EC	
ML00	ARRADCOM, DRDAR-LCE-M	
FMD-109/B	NWC, CODE 3354	
FMD-110/B	EGLIN AFB, ADTC/SD3	
FMD-111/B	NWC, CODE 3351	
FMD-112/B	EGLIN AFB, AD/SD3	
FMD-113/B	EGLIN AFB, ADTC/SD3	
ML1A	ARRADCOM, DRDAR-LCN-M	
FMD-117/B	NSWC, CODE G44	
ML18	ARRADCOM, DRDAR-LCN-M	
XM122	ARRADCOM, DRDAR-LCU-SE	
FMD-123/B	EGLIN AFB, ADTC/SD3	
FMD-124/B	EGLIN AFB, ADTC/SD3	
FMD-125/B	NWC, CODE 3352	
FMD-128/B	EGLIN AFB, ADTC/SD3	
FMD-129/B	NWC, CODE 3351	
FMD-136/B	EGLIN AFB, ADTC-SD3	
FMD-131/B	NWC, CODE 3354	
XM131	ARRADCOM, DRDAR-LCU-SM	
XM132	ARRADCOM, DRDAR-LCU-SM	
FMD-132/B	-	
FMD-133/B	-	
FMD-136/B	NSWC, CODE G44	
FMD-137/B	-	
XM138	DRCPN/CO	
FMD-139/B	NWC/CL, CODE 3355	
XM143	ARRADCOM, DRDAR-LCN-M	
ML45	DRG-PH-CPE	
ML47	PMTC, CODE 2141	
ML48E1	PMTC, CODE 2141	
ML50	PMTC, CODE 2141	
MK 181 MOD 0-3	NSWC, CODE G43	
MK 188 MOD 0, 1	NSWC, CODE G43	
MK 191 MOD 0, 1	NSWC, CODE G43	
MK 193 MOD 0	NSWC, CODE G43	
M201A1	ARRADCOM, DRDAR-CLN-D	
M201A1E2	ARRADCOM, DRDAR-CLN-D	
M206A2	ARRADCOM, DRDAR-LCU-SI	
M207A1	ARRADCOM, DRDAR-CLN-D	
M213	ARRADCOM, DRDAR-LCU-SI	
M219A1	ARRADCOM, DRDAR-LCE-M	

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210

G. KLANN	AV 290-1970
M. SOLOWEY	AV 880-2958
J. BERZINS	AV 880-6236
G. KLANN	AV 290-1970
J. BERZINS	AV 880-6236
F. KLOGE	AV 290-2570
H. BERRY	AV 437-7332
W. PICKLER	AV 290-1663
O. FOLEY	AV 872-2896
J. STRONG	AV 290-2701
C. FRITSCH	AV 880-2392
J. EATON	AV 437-7230
E. SMITH	AV 872-8186
H. BERRY	AV 437-7332
A. TWBBS, CAPT.	AV 872-8186
E. SMITH	AV 872-8186
R. MCKISSICK	AV 880-5484
L. BURKHARDT	AV 290-2970
R. MCKISSICK	AV 880-5484
W. RITCHIE	AV 880-4830
E. SMITH	AV 872-8186
E. SMITH	AV 872-8186
H. BERRY	AV 437-7332
S. SLOTRIM	AV 872-8186
H. BERRY	AV 437-7332
J. JOHNSON	AV 872-3054
R. SMITH	AV 437-7229
J. ROSAMILA	AV 880-5694
J. ROSAMILA	AV 880-5694
J. ABELL	AV 290-1545
M. ETAM	AV 693-0942
L. BRAUER	AV 437-7455
C. DUNHAM	AV 880-3137
K. BRUNETTE	AV 746-3210
R. VILLERS	AV 351-6424
R. VILLERS	AV 351-6424
R. VILLERS	AV 351-6424
F. KLOGE	AV 290-2570
F. KLOGE	AV 290-2570
F. KLOGE	AV 290-2570
F. KLOGE	AV 290-2570
L. BURKE	AV 584-3803
L. BURKE	AV 584-3803
A. NOVAK	AV 880-3816
L. BURKE	AV 584-3803
A. NOVAK	AV 880-3816
A. KING	AV 880-3970

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1 October 1980

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FUZE NUMBER:	AGENCY:	200	210	210
M223	ARRADCOM, DRDAR-LCU-SS		F. ULRICH	AV 880-5469
M224	ARRADCOM, DRDAR-LCU-SS		S. GORDON	AV 880-3240
M227	ARRADCOM, DRDAR-CLN-D		L. BURKE	AV 584-3803
M228	ARRADCOM, DRDAR-LCU-SI		A. NOVAK	AV 880-3816
KN230	ARRADCOM, DRDAR-LCN-M		A. ZACHARIN	AV 880-6477
NR 310 MOD 0	NWC, CODE 3351		H. BERRY	AV 245-7332
NR 312 MOD 0,1	NWC, CODE 3351		H. BERRY	AV 245-7332
NR 312 MOD 2	NWC, CODE 3351		H. BERRY	AV 245-7332
NR 312 MOD 3	NWC, CODE 3351		H. BERRY	AV 245-7332
NR 328 MOD 0	NWC, CODE 3351		H. BERRY	AV 245-7332
NR 330 MOD 2	NWC, CODE 3351		H. BERRY	AV 437-7332
NR 330 MOD 0	NWC, CODE 3351		H. BERRY	AV 245-7332
NR 330 MOD 1	NWC, CODE 3351		H. BERRY	AV 245-7332
NR 334 MOD 0	NWC, CODE 3352		O. LAWLESS	AV 437-7416
NR 339 MOD 0,1	NSWC, CODE G44		J. POTTS	AV 290-1981
NR 342 MOD 1	NSWC, CODE G44		A. MUNACH	AV 290-1970
NR 343 MOD 0	NSWC, CODE G44		C. BRIGGS	AV 290-1663
NR 344 MOD 0	NSWC, CODE G44		J. ABELL	AV 290-1545
NR 344 MOD 1	NSWC, CODE G44		J. ABELL	AV 290-1545
NR 346 MOD 0	NSWC, CODE G44		A. MUNACH	AV 290-1970
NR 349 MOD 1	NSWC, CODE G44		A. MUNACH	AV 290-1970
NR 352 MOD 2	NWC, CODE 335		R. BIGUERA	AV 437-7426
NR 357 MOD 1	NSWC, CODE G44		C. KNISELY	AV 290-1972
NR 360 MOD 0 & 1	NSWC, CODE G44		C. KNISELY	AV 290-1972
NR 376 MOD 0	NSWC, CODE G44		J. ABELL	AV 290-1545
NR 379 MODS 0, 1	NSWC, CODE G44		D. JENSEN	AV 290-2792
NR 383 MOD 0	NWC, CODE 3351		H. BERRY	AV 245-7332
NR 384 MOD 0	NSWC, CODE G44		D. JENSEN	AV 290-2792
NR 387 MODS 0-2	NSWC, CODE G44		G. KLAMM	AV 290-1970
NR 392 MOD 0	NSWC, CODE G44		R. LEARY	AV 290-1995
NR 393 MOD 0	NSWC, CODE G44		R. LEARY	AV 290-1995
NR 395 MODS 0, 1	NSWC, CODE G44		D. JENSEN	AV 290-2792
NR 396 MOD 0	NSWC, CODE G44		D. JENSEN	AV 290-2792
NR 399 MOD 0	NSWC, CODE G44		R. LEARY	AV 290-1995
NR 400	NSWC, CODE G44		G. KLAMM	AV 290-1970
EX 402	NSWC, CODE G44		K. LLOYD	AV 290-1713
NR 403 MOD 0	NSWC, CODE G44		A. MUNACH	AV 290-1970
NR 404 MOD 0	NSWC, CODE G44		C. KNISELY	AV 290-1972
NR 407 MOD 1	NSWC, CODE G44		R. LEARY	AV 290-1995
NR 411 MOD 0	NSWC, CODE G44		R. NIEMEYER	AV 290-2750
M412A1	ARRADCOM, DRDAR-LCU-SI		J. BRACEY	AV 880-6472
NR 413 MOD 0	NSWC, CODE G44		R. NIEMEYER	AV 290-2750
NR 415 MOD 0	NSWC, CODE G44		R. NIEMEYER	AV 290-2750
EX 416	NSWC, CODE G43		W. PICKLER	AV 290-1663
EX 417 MOD 0	NSWC, CODE G44		C. KNISELY	AV 290-1972
EX 418 MOD 0	NSWC, CODE G44		C. KNISELY	AV 290-1972
M423 ALT	ARRADCOM, DRDAR-LCN-M		A. ZACHARIN	AV 880-6477
M427 ALT	ARRADCOM, DRDAR-LCN-M		A. ZACHARIN	AV 880-6477
M429	ERADCOM, DELHD-I-EC		J. STRONG	AV 290-2701
M431	ARRADCOM, DRDAR-LCN-M		A. ZACHARIN	AV 880-6477

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FUZE NUMBER:	AGENCY:	200	210	210
M433	ARRADCOM, DRDAR-LCN-M		A. JANUSHEVICH	AV 880-4909
M434	ARRADCOM, DRDAR-LCU-ST		J. BRACEY	AV 880-4872
M438	ARRADCOM, DRDAR-LCN-M		A. ZACHARIN	AV 880-6477
M439	ARRADCOM, DRDAR-LCN-M		A. JANUSHEVICH	AV 880-4909
M440	ARRADCOM, DRDAR-LCN-M		A. ZACHARIN	AV 880-6477
M442	ARRADCOM, DRDAR-LCN-M		A. ZACHARIN	AV 880-6477
XM443	ERADCOM, DELHD-D-OE-ES		R. GOODMAN	AV 290-2440
XM444	ERADCOM, DELHD-D-OE-ES		R. GOODMAN	AV 290-2440
XM445	ERADCOM, DELHD-D-OE-S		R. GOODMAN	AV 290-2440
M446	ARRADCOM, DRDAR-LCN-M		A. ZACHARIN	AV 880-6477
M505A3	ARRADCOM, DRDAR-SCA-CF		F. LUKE	AV 880-3352
M505A3E2	BGLIN AFB, AD/SD3E		K. JOHNSON, LT.	AV 872-8186
M509A2	ARRADCOM, DRDAR-LCU-CV		J. JULIANIO	AV 880-6376
M509A2E1	ARRADCOM, DRDAR-LCN-T		W. HOLLEY	AV 880-6378
M530A1	ARRADCOM, DRDAR-LCN-T		W. HOLLEY	AV 880-6378
M534A1	ARRADCOM, DRDAR-LCN-T		R. NOBLE	AV 880-5344
M539	ARRADCOM, DRDAR-LCN-T		E. BISSON	AV 880-6375
M549	ARRADCOM, DRDAR-SCA-CF		F. LUKE, L. GHAZI	AV 880-3352
M550	ARRADCOM, DRDAR-SCA-CF		F. LUKE	AV 880-3352
M551	ARRADCOM, DRDAR-SCA-CF		F. LUKE	AV 880-3352
M564	ARRADCOM, DRDAR-LCN-T		D. TARAVELLA	AV 880-3174
M565	ARRADCOM, DRDAR-LCN-T		D. TARAVELLA	AV 880-3174
M567	ARRADCOM, DRDAR-LCN-T		F. MCCANN	AV 880-3060
M571	ARRADCOM, DRDAR-LCN-T		D. TARAVELLA	AV 880-3174
M577	ARRADCOM, DRDAR-LCN-T		E. CHESKY	AV 880-2908
M578A1	ARRADCOM, DRDAR-LCN-T		R. NOBLE	AV 880-5344
M582	ARRADCOM, DRDAR-LCN-T		E. CHESKY	AV 880-2908
M587	ERADCOM, DELHD-D-OE-ET		N. DOCTOR	AV 290-2650
M594	ARRADCOM, DRDAR-SCA-CF		F. LUKE	AV 880-3352
M603	ARRADCOM, DRDAR-LCU		J. MEYER	AV 880-2575
M605	ARRADCOM, DRDAR-LCU		J. MEYER	AV 880-2575
M606	ARRADCOM, DRDAR-LCU		J. MEYER	AV 880-2575
M607	ARRADCOM, DRDAR-LCH		S. GLASSMAN	AV 880-3903
M692/731	ARRADCOM, DRDAR-LCU-SM		S. GLASSMAN	AV 880-3903
M718/741 PROJ	ARRADCOM, DRDAR-LCU-SM			
M724	ERADCOM, DELHD-D-OE-ET		N. DOCTOR	AV 290-2650
M732	ERADCOM, DELHD-I-EC		M. JACOBS	AV 290-2680
M734	ERADCOM, DELHD-I-ED		D. BRIGGMAN	AV 290-2430
XM737	ARRADCOM, DRDAR-LCU-SS		J. MAZZEL	AV 880-5355
XM738 (FRONT)	MICOM, DRSHI-OT		W. ZECHER	AV 746-1245
XM738 (REAR)	MICOM, DRSHI-OT		W. ZECHER	AV 746-1245
M739	ARRADCOM, DRDAR-LCN-T		R. NITZSCHE	AV 880-4270
M740	ARRADCOM, DRDAR-LCN-T		K. SHAFFER	AV 880-2019
XM741	ERADCOM, DELHD-D-OE-EW		D. BRIGGMAN	AV 290-2430
XM742	ARRADCOM, DRDAR-LCN-T		P. WELDON	AV 880-2155
XM745	ERADCOM, DELHD-D-OE-EW		D. BRIGGMAN	AV 290-2430
XM747E2	ARRADCOM, DRDAR-LCN-T		L. POST	AV 880-4216
XM748	ARRADCOM, DRDAR-LCN-T		L. POST	AV 880-4216
XM750	MEADCOM, DRME-NS		B. GABRIEL, JR.	AV 354-4272
XM751	ARRADCOM, DRDAR-LCN-T		F. MCCANN	AV 880-3060

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PUZE NUMBER:	AGENCY:	200	210	210
XM754	MICOM, DRCPM-VIC		B. BROWN	AV 746-1756, -2371
XM755	DRCPM-FVS-SEA		K. PITKO	AV 273-1857
XM757	TARRADCOM, DRCPM-FVS-SEA		K. PITKO	AV 273-1857
M758	TARRADCOM, DRCPM-FVS-SEA		K. PITKO	AV 273-1857
M759	DRCPM-FVS-SEA		K. PITKO	AV 273-1857
XM762	ARRADCOM, DRDAR-LCN-T		F. WELDON	AV 880-2155
XM763	ARRADCOM, DRDAR-LCN-T		R. SHAPPER	AV 880-2019
XM764	ARRADCOM, DRDAR-LCN-T		E. BISSON	AV 880-6375
XM765	ARRADCOM, DRDAR-LCN-T		E. BISSON	AV 880-6375
M811	ARRADCOM, DRDAR-LCE-M		A. KING	AV 880-3970
M817	ERADCOM, DELHD-I-EG		J. ANTEL	AV 290-2701
XM818E1	ERADCOM, DELHD-I-EG		J. DENT	AV 290-2610
XM820	MICOM, DRCPM-HDE		R. MASUCCI	AV 746-6176
M821	MICOM, DRCPM-HAE		J. COLE	AV 746-2577
M904E4	NSWC, CODE G44		J. ABELL	AV 290-1545
M934	ARRADCOM, DRDAR-LCN-M		B-A. KADISH	AV 880-6473
XM935	ARRADCOM, DRDAR-LCN-T		F. MCCANN	AV 880-3060

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PUZE NUMBER:	ASSY DWG:	240	PARTS LIST:	250	SPEC:	260
MK 1 MODS 0, 1	GA 2428145		LD 549587		WS 4995	
MK 1 MOD 1	657417		LD 268027		OS 11690	
LUU 28/B	AF736323-10				N/A	
MK 3 MOD 5	3300100		DL 3300100		AF-3356-78-4	
WOU- 4A/A	65C11046		65C11046		MIL-F-50542	
FSD- 9A/B	X1155AS426		PLX1155AS426		IAS-4622	
FSD- 10/A	1137AS200		DL1137AS200		IAS-5002	
FSD- 13/B	X1155AS626		PLX1155AS626		IAS-4622	
MK 13 MOD 2	639AS1130		DL639AS1130		AS 2994	
MK 17 MOD 0	2204848		DL533586		WS 3806	
BLU- 24/B	65F12271				MIL-A-2550, PD ATW-114	
M 25	7676038					
M 27	7647761					
MK 29 MOD 5	2502059		PL 2502059		MIL-F-18699 (NORD)	
MK 29 MOD 0	67A85F151		DL67A85F151		AS 1306	
MK 30 MOD 5	2501615		PL 2501615		WS 12048	
MK 31 MOD 2	CA 399148		LD 284619		OS 3429	
MK 33 MOD 0	917AS3000		DL917AS3000		AS 1378	
M 34	SK 87038					
MK 34 MOD 1	67A85F200		DL67A85F200		AS 1315	
M 35	11729019		PL 11729019		SQ 11729019	
MK 35 MOD 0	533605				AS 1302	
M 36	11711372		11711372		MIL-F-48701	
FZU- 39/B	777577		DL 777577		SP 777577	
MK 42 MODS 1 AND	32512087		DL 2512087		WS 14927	
MK 43 MOD 0	CA 2421506		LD 549764		WS 6057	
MK 51 MOD 5	CA 1475145		LD 299218		OS 3891	
MK 54 MODS 0-2	490100		LD 166745		WS 14161	
FNU- 54A/B	68E6400				68E6400/B	
M 56	SEE REMARKS				SEE REMARKS	
FNU- 56D/B	744000		DL 744000		744000	
EX 60	5510310				XWS 16699(GP)	
EX 61	5258395				XWS 16699(GP)	
M 62A2	886414		886414		MIL-F-60043, 60044	
SUU- 64/SUU- 65	777444		NOT APPLICABLE		SUU-64 AND SUU-65	
M 65A1E1	IN PREP				MIL-F- IN PREPARATION	
MK 71 MODS 11-16	1310844 & 1310845		LD 292324 & LD 292325		OS 8004 (MODS 11 & 12)	
MK 72 MODS 16-17	2512218(16) & 2512219(17)		2512218(16) & 2512219(17)		WS 13934	
MK 73 MODS 12-13	2512220(12) & 2512221(13)		2512220(12) & 2512221(13)		WS 14370	
FNU- 74/B	68A85D		PL 68A85D98		AS 1911	
M 74	SEE REMARKS				SEE REMARKS	
M 75	SEE REMARKS				MIL-S-63302, MIL-M-63305	
FNU- 81/B	6806759-10		DL 6806759-10		CP 6759	
MK 83 MOD 0	CA 1362373		LD 284 899			
FNU- 83/B	68A85F67		PL 68A85F67		AS 1910	
M 84A1	9232784				MIL-F-14715, 14716	
M 84A1E1	9311300				MIL-F-63088, -63089	
XM 84	TO BE ASSIGNED				NOT YET PREPARED	
FNU- 88/B	488AS100		PL 488AS100		AS 2592	
MK 90 MOD 1	2429154		LD 292436		WS 7645	

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FUZE NUMBER:	ASSY DWG:	240	PARTS LIST:	250	SPEC:	260
HK 91 MOD 1	2501729		PL 2501729		WS 1996	
M 91A2	8837308		-		MIL-F-20405, -20423	
BLU- 91/B	SEE REMARKS		-		MIL- IN PREPARATION	
HK 92 MOD 1	2499716		PL 2499716		WS 1997	
BLU- 92/B	SEE REMARKS		-		MIL- IN PREPARATION	
HK 93 MOD 0	GA 2429055		LD 549965		WS 6711	
FNU- 94/B	366AS100		DL 366AS100		AS 2356	
FNU- 95/B	367AS140		PL 367AS140		AS 2513	
BLU- 97/B	-		-		-	
FNU- 98/B	11004808		11004808		MIL-F-60971	
M100	9235300		-		MIL-S-50200	
FNU-109/B	642AS5310		DL 642AS5310		AS 2361 PART II	
FNU-110/B	727728		DL 727728		SP 727728	
FNU-111/B	704AS2100		DL 704AS2100		AS 3428	
FNU-112/B	728020		-		SP728020	
FNU-113/B	727272		DL 717171		SP 727272	
M114	9231500		DL 9231500		MIL-S-14799	
FNU-117/B	790AS500		PL 790AS500		AS 3290	
M118	9220961		9220961		MIL-S-14992	
INL22	9252773, 9279048		-		MIL-F-63145, MIL-T-48320	
FNU-123/B	-		-		-	
FNU-124/B	1270A1		PL 1270A1		ED-DP-9	
FNU-125/B	SK 366AS130		-		SP 785043	
FNU-128/B	383250		-		AS 3428	
FNU-129/B	X704AS2360		-		SP747878A	
FNU-130/B	CONTRACTOR DWG. IMF-200-605		-		AS-2361	
FNU-131/B	SK 1186AS200		DL SK1186AS200		MIL-S- UNKNOWN, MIL-M- UNKNOWN	
INL31	SEE REMARKS		-		MIL-S- UNKNOWN MIL-M- UNKNOWN	
INL32	SEE REMARKS		-		-	
FNU-132/B	-		-		-	
FNU-133/B	-		-		AS 2507	
FNU-136/B	1260AS100		1260AS100		209-947-282(BELL)	
FNU-137/B	SEE REMARKS		-		-	
INL38	-		-		MIL-S-63257	
FNU-139/B	-		-		MIS-19272	
INL43	9311100		9311100		MIL-A-14731A	
M145	10234613		-		MIL-A-14711A	
M147	9218504		9218509		MIL-A-14996	
M148E1	9272263		9272263		OS 1402933	
M150	9238938		9238938		-	
HK 181 MOD 0-3	GA657740(MOD 3)		LD 175354 (MOD 3)		MOD 0, OS7690; MOD 1, OS11448	
HK 188 MOD 0, 1	GA657678(MOD 0)		LD 175380		OS 8918	
HK 191 MOD 0, 1	(SEE REMARKS SECTION)		(SEE REMARKS SECTION)		MIL-F-10080, -10915	
HK 193 MOD 0	1800507		LD 486298(MOD 0)		-	
M201A1	13-10-22		N/A		MIL-F- IN PREPARATION	
M201A1E2	IN PREPARATION		TDP 13-10-67		MIL-F-13424	
M206A2	7548570-3		PL 7548570-3		MIL-F-10080	
M207A1	36-7-36		-		MIL-F-45437	
M213	8822131		8822131		MIL-F-50454	
M219A1	9207971		9207971		-	

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FUZE NUMBER:	ASSY DWG:	240
M223	9215350	
M224	9211057	
M227	13-10-40	
N228	9235210	
IM230	NOT YET ASSIGNED	
MK 310 MOD 0	1479066	
MK 312 MOD 0,1	1584138 AND 1886115	
MK 312 MOD 2	2186301	
MK 312 MOD 3	GS2186301	
MK 328 MOD 0	-	
MK 330 MOD 2	293AS100	
MK 330 MOD 0	2226966	
MK 330 MOD 1	2186355	
MK 334 MOD 0	67A84E168	
MK 339 MOD 0,1	479AS100	
MK 342 MOD 1	2511237	
MK 343 MOD 0	2428355	
MK 344 MOD 0	2421417	
MK 344 MOD 1	2512316	
MK 346 MOD 0	2424046	
MK 349 MOD 1	2500176	
MK 352 MOD 2	67A90D001	
MK 357 MOD 1	5177421	
MK 360 MOD 0 & 1	2429026(0) & 5177422(1)	
MK 376 MOD 0	LD 2499578	
MK 379 MODS 0, 1	2512188	
MK 383 MOD 0	-	
MK 384 MOD 0	2502116	
MK 387 MODS 0-2	2500607 (MOD 0)	
MK 392 MOD 0	2512330	
MK 393 MOD 0	2512434	
MK 395 MODS 0, 1	2512190	
MK 396 MOD 0	2506736	
MK 399 MOD 0	2512724	
MK 400	2512165	
EX 402	2500153	
MK 403 MOD 0	2513219	
MK 404 MOD 0	2513306	
MK 407 MOD 1	5177549	
MK 411 MOD 0	5177470	
M412A1	9243295	
MK 413 MOD 0	5177560	
MK 415 MOD 0	5177568	
EX 416	-	
EX 417 MOD 0	5467652	
EX 418 MOD 0	5178407	
M423 ALT	9254708-1	
M427 ALT	9254708-2	
M429	11705900	
M431	9224063	

PARTS LIST:	250
9215350	
9211057	
N/A	
9235210	
-	
LD 475841	
LD 495642 AND 521586	
LD 521592	
LD 533594	
IL2204328	
DL 293AS100	
DL 2226966	
LM 2186355	
DL 67A84E168	
FL 479AS100	
DL 2511237	
LD 549668	
LD 549680	
PL 2512316	
LD 548713	
DL 2500176	
DL 67H90D001	
PL 5177421	
550013(0) & 5177422(1)	
PL 2499578	
DL 2512188	
DL 67A87F101	
PL 2502116	
DL 2500607 (MOD 0)	
DL 2512330	
DL 2512434	
DL 2512190	
DL 2506736	
DL 2512724	
DL 2512165	
DL 2500153	
DL 2513219	
DL 2513306	
DL 5177549	
DL 5177470	
-	
PL 5177560	
PL 5177568	
-	
5467652	
5178407	
9254708-1	
9254708-2	
11705900	
9224063	

SPEC:	260
MIL-F-50950A	
AEI-367	
MIL-F-51376	
MIL-F-14943	
MIL-F NOT YET ASSIGNED	
058178	
OS 9626 AND WS 1631	
WS 1631	
WS 3804	
WS 3786	
AS 1377	
WS 2137.	
-	
AS 1389	
AS 2671	
WS 5405	
AS 1093	
WS 5893	
AS 2677	
WS 5394	
WS 13524	
AS-1379	
OD 28654	
OD 28655 (ASSY PROC)	
AS 1099	
WS 12052	
AS 1636	
WS 12052	
WS 13078	
WS 13927	
WS 13929	
WS 13598	
WS 13598	
WS 14104	
WS 14374	
WS 14157	
WS 14369	
WS 14631	
WS 18888	
WS 18488	
MIL-F-50407, MIL-F-50415	
WS 18894	
WS 18966	
-	
WS 19609	
WS 19610	
MIL-F-50253	
MIL-F-50253	
MIL-F-60952	
MIL-F-50253	

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FUZE NUMBER:	ASSY DWG:	240	PARTS LIST:	250	SPEC:	260
M433	9260701		PL 9260701		MIL-F-63281	
M434	9240931		-		MIL-F-50407, MIL-F-50220	
M438	9259262		9259262		MIL-F-48065	
M439	9260704 AND 9298307		PL 9260704		MIL-F-48877	
M440	9271602		9271602		MIL-F-48067	
M442	9298733		-		MIL-F-50541	
XM443	UNKNOWN		-		NOT ASSIGNED	
XM444	UNKNOWN		-		NOT ASSIGNED	
XM445	11730940		11730940		HD(D) F-00009	
M446	9326094		9326094		MIL-F-50541	
M505A3	7258863		7258863		MIL-F-46580	
M505A3E2	28115952 (HNYWL)		-		DS 30046 (HNYWL)	
M509A2	9323857		SAME		MIL-F-63270, -63271	
M509A2E1	NOT AVAILABLE		-		NOT AVAILABLE	
M530A1	10980600, 10980592		-		MIL-F-60912	
M534A1	8860724		8860724		MIL-F-46485, -46488	
M539	9204364		-		MIL-F-48026, -48033	
M549	92887860		-		MIL-F-50864	
M550	8886349		8886349		MIL-F-50869	
M551	8862121		8862121		MIL-F-60988	
M564	10534285		PL 10534285		MIL-F-14854	
M565	10522991		PL 10522991		MIL-F-14848	
M567	9246242		9246242		MIL-F-50945, -50988	
M571	10551670		10551670		MIL-F-14805	
M577	9236500		PL 9236500		MIL-F-50983	
M578A1	9323961		9323961		MIL-F-60041, -60042	
M582	9236701		9236701		MIL-F-48880	
M587	11711435		11711435		MIL-F-48700	
M594	10551759		10551759		VTL 1305-093	
M603	73-9-55		73-9-55		MIL-F-11247	
M605	7548284		7548284		MIL-F-12774	
M606	9220396		-		MIL-F-45061E	
M607	8833783		8833783		MIL-F-45429, MIL-F-45430	
M692/731	SEE REMARKS		-		MIL-M-48186	
M718/741 PROJ	SEE REMARKS		-		MIL-S-48747, MIL-E-63241	
M724	11711268		11711268		MIL-F-48702	
M732	11716451		11716451		MIL-F-50596	
M734	11723100		11723100		MIL-F-50828	
XM737	9298267		-		MIL-F-63082	
XM738 (FRONT)	KD 88864 MOD.		-		MIL-F- IN PREPARATION	
XM738 (REAR)	11733501 MOD		-		MIL-F- IN PREPARATION	
M739	9258605		PL 9258606		MIL-F-48277	
M740	9307468 (FUZE MODULE)		-		MIL-F-63232 (FUZE MODULE)	
XM741	11723140		11723140		MIL-F-50828	
XM742	NONE GOVERNMENT		-		NONE	
XM745	F 11737000		PL 11737000		MIL-F- IN PREPARATION	
XM747E2	9331823		-		IN PREPARATION	
XM748	IN PREPARATION		-		IN PREPARATION	
XM750	13220E9836		-		MIL-F- NOT ASSIGNED (MOLS 1025)	
XM751	NOT ASSIGNED		-		MIL-F- UNKNOWN	

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FUZE NUMBER:	ASSY DWG:	240
XM754	11571995	
XM755	11731326	
XM757	11820583	
M758	11820609	
M759	IN PREPARATION	
XM762	IN PREPARATION	
XM763	IN PREPARATION	
XM764	IN PREPARATION	
XM765	12526354 (HNTWL)	
M811	9251881	
M817	11716476	
XM818E1	11712629	
IM820	13007555	
M821	INTEGRAL WITH GUIDANCE	
M904E4	333AS102	
M934	9282701	
XM935	9255258	

PARTS LIST:	250
-	
-	
-	
-	
-	
-	
-	
-	
11716476	
11712630	
-	
PL 333AS102	
9282701	
9255258	

SPEC:	260
MIL-F- NOT YET ASSIGNED	
MIL-F-IN PREPARATION	
MIL-F- IN PREPARATION	
MIL-F- IN PREPARATION	
MIL-F-IN PREPARATION	
IN PREPARATION	
IN PREPARATION	
MIL-F-50823	
MIL-T-50597	
MIL-F-60966, MI-CP-15035803	
MIS-29216	
WITH GUIDANCE	
AS 2669	
MIL-F-48863	
MIL-F-50945, -50988	

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FUZE NUMBER:		MSN:	270	PRIOR NOMENCLATURE:	280	REPLACES:	290
MK	1 MODS 0, 1	-		EX-1 MOD 0		-	
MK	1 MOD 1	8T-1375-705-3057		NOTS MODEL 1000		MK 2 MOD 1 AF	
LJU	2B/B	N/A		N/A		N/A	
MK	3 MOD 5	-		XM436		MK 3 MOD 4	
WDO-	4A/A	ISSUED WITH WARHEAD		-		NONE	
FSU-	9A/B	NOT ASSIGNED		FMU-126/B		FMU-126/B	
FSU-	10/A	-		-		MK 334 MOD 0	
FSU-	13/B	-		-		-	
MK	13 MOD 2	1336-01-017-4030-V259		EX-28 S-A		MK 13 MOD 0	
MK	17 MOD 0	-		-		-	
BLU-	24/B	-		-		-	
M	25	1290-00-767-6038		T42		NONE	
M	27	1290-00-764-7761		T40		M14, M25	
MK	29 MOD 5	1390-00-448-5750		XP-14A		-	
MK	29 MOD 0	-		EX 29 MOD 0		-	
MK	30 MOD 5	1390-00-449-1817		XP-15A, XP-16A		-	
MK	31 MOD 2	-		-		MK 31 MODS 0 AND 1	
MK	33 MOD 0	-		-		-	
M	34	1290-00-078-4367		-		-	
MK	34 MOD 1	-		-		-	
M	35	1290-00-201-3507		NONE		NONE	
MK	35 MOD 0	-		-		NONE	
M	36	1290-01-038-2035		XM36E1		NONE	
FZU-	39/B	-		NONE		NONE	
MK	42 MODS 1 AND 3-	-		-		MK 18 SAFETY DEVICE	
MK	43 MOD 0	-		M20E1		M20	
MK	51 MOD 5	-		-		MODS 0-4	
MK	54 MODS 0-2	1390-00-917-4158		-		MK 46	
FMU-	54A/B	1325-00-613-0484		-		-	
M	56	NOT A SEPARATE ITEM		XM622, XM34 MINE		NONE	
FMU-	56D/B	-		-		-	
EX	60	-		EX-406 FUZE		-	
EX	61	-		EX-406 FUZE		-	
M	62A2	1390-01-054-5109		-		M62, M62A1	
SUB-	64/SUU- 65	NOT APPLICABLE		NOT APPLICABLE		NOT APPLICABLE	
M	65A1E1	NOT ASSIGNED		NONE		M65A1	
MK	71 MODS 11-16	-		-		MODS 9 AND 10	
MK	72 MODS 16-17	1390-00-230-2141 (17)		-		MODS 12-15 BY 17	
MK	73 MODS 12-13	1390-00-361-2355 (MOD 13)		-		MODS 10 AND 11	
FMU-	74/B	-		EX-2		-	
M	74	1345-01-076-3497 (MINE)		GVDMS		NONE	
M	75	1345-01-078-4104 (MINE)		GVDMS		NONE	
FMU-	81/B	-		-		-	
MK	83 MOD 0	-		-		MK 28, MK 31 MOD 2	
FMU-	83/B	1325-00-151-4372		EX-377		NONE	
M	84A1	1390-00-471-8665		778, M84		M84	
M	84A1E1	NOT YET ASSIGNED		M84A1E1		M84A1	
IN	84	NOT YET ASSIGNED		STORMS		NONE	
FMU-	88/B	-		-		NONE	
MK	90 MOD 1	1390-00-246-5749		EX 52		MK 90 MOD 0	

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FUZE NUMBER:	NSN:	270
MK 91 MOD 1	1390-00-003-5362	
M 91A2	1390-00-857-2989	
BLU- 91/B	NOT SEPARATE ISSUE	
MK 92 MOD 1	1390-00-147-2986	
BLU- 92/B	NOT SEPARATE ISSUE	
MK 93 MOD 0	-	
FMU- 94/B	-	
FMU- 95/B	-	
BLU- 97/B	-	
FMU- 98/B	NOT YET ASSIGNED	
M100	-	
FMU-109/B	-	
FMU-110/B	-	
FMU-111/B	-	
FMU-112/B	NOT ASSIGNED	
FMU-113/B	-	
M114	1336-01-050-8869	
FMU-117/B	-	
M118	1336-01-050-8877	
XM122	1375-01-021-0606	
FMU-123/B	-	
FMU-124/B	-	
FMU-125/B	-	
FMU-128/B	-	
FMU-129/B	-	
FMU-130/B	-	
FMU-131/B	-	
XM131	NOT ASSIGNED	
XM132	NOT ASSIGNED	
FMU-132/B	-	
FMU-133/B	-	
FMU-136/B	-	
FMU-137/B	-	
XM138	SEE REMARKS	
FMU-139/B	-	
XM143	NOT SEPARATE ITEM	
M145	1336-01-017-4030	
M147	1325-00-926-4082-F387	
M148E1	1325-00-491-6562-F392	
M150	1325-00-143-7145-F390	
MK 181 MOD 0-3	-	
MK 188 MOD 0, 1	-	
MK 191 MOD 0, 1	-	
MK 193 MOD 0	-	
M201A1	1330-00-293-9516	
M201A1E2	NOT YET ASSIGNED	
M206A2	1330-00-293-9517	
M207A1	-	
M213	1330-00-182-3570	
M219A1	1330-01-058-1643	

PRIOR NOMENCLATURE:	280
EX 53	
T93	
NONE	
EX 54	
NONE	
M414A1	
-	
FMO-143A/B	
-	
XM100E1	
-	
FMU-111(XCL-1)/B	
NONE	
"SAFE" FUZE	
XM114, XM812	
-	
XM118, XM815	
XM63	
-	
-	
CIMP FUZE	
-	
IMPACT MECH FUZE	
NONE	
NONE	
-	
NONE	
XM132 & XM40	
-	
XM131	
MK 13 MOD 1	
T46E	
T45E	
T46E	
T2023E1	
EX-109	
XR-85	
XW-128A	
M201E1	
M201A1	
-	
M207	
T1011E2	
XM915, T1029	

REPLACES:	290
MK 91 MOD 0	
M91, M91A1	
NONE	
MK 92 MOD 0	
NONE	
-	
FMU-74/B	
-	
M414A1, M429, MK 93	
XM32E6, XM32	
FMU-56A/B	
-	
NONE	
MK 344, MK 376	
NONE	
NONE	
-	
-	
M505A3	
-	
POTENTIAL FOR M904/M905	
NONE	
NONE	
-	
NONE	
XM132	
-	
NONE	
MK 13 MOD 1	
-	
-	
EX-110	
M201	
M201A1	
M206A1	
M207	
-	
M219	

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PUZE NUMBER:	NSM:	270	PRIOR NOMENCLATURE:	280	REPLACES:	290
M223	1330-01-052-4928		XM223		NONE	
M224	NOT ASSIGNED		XM224		XM218	
M227	1330-00-079-0778		XM227		NONE	
M228	1330-00-168-5582		XM228		NONE	
XM230	NOT YET ASSIGNED		NONE		NONE	
MK 310 MOD 0	-		-		-	
MK 312 MOD 0,1	-		-		SERV(BULLPOP) RTE(BULLDOG)	
MK 312 MOD 2	-		-		SERV RTE (BULLDOG, BULLPOP)	
MK 312 MOD 3	-		-		-	
MK 328 MOD 0	-		-		-	
MK 330 MOD 2	-		EX-330 MOD 1		-	
MK 330 MOD 0	-		-		-	
MK 330 MOD 1	-		-		-	
MK 334 MOD 0	8E1336-00-466-9852		EX-334 MOD 0		-	
MK 339 MOD 0,1	-		EX 66 MOD 0		MK 339 MOD 0	
MK 342 MOD 1	1390-00-451-8695		-		-	
MK 343 MOD 0	-		EX-343		M-173, M-918	
MK 344 MOD 0	1325-00-918-7053		-		M990 SERIES	
MK 344 MOD 1	1325-00-009-0348		-		MK 344 MOD 0	
MK 346 MOD 0	1325-00-937-0982		WOX-138B		M132 SERIES	
MK 349 MOD 1	1390-00-351-2743-(N251)		EX 349, MK 349-0		-	
MK 352 MOD 2	-		-		MK 188 MOD 0	
MK 357 MOD 1	-		-		MK 357 MOD 0	
MK 360 MOD 0 & 1	-		-		-	
MK 376 MOD 0	1325-00-106-6136		-		M990 SERIES	
MK 379 MODS 0, 1	1390-00-488-0970		-		-	
MK 383 MOD 0	-		-		-	
MK 384 MOD 0	1390-00-147-5898		-		-	
MK 387 MODS 0-2	NEVER PROCURED		MK 174		MK 174 MODS 0-2	
MK 392 MOD 0	-		-		-	
MK 393 MOD 0	1390005637712		-		-	
MK 395 MODS 0, 1	1390-00-032-1666		-		-	
MK 396 MOD 0	1390-00-032-1669		-		-	
MK 399 MOD 0	-		-		MK 30-5 PDF AND BDF	
MK 400	NONE		EX-400		-	
EX 402	-		-		-	
MK 403 MOD 0	1390-00-293-4340		MK 392 MOD 0		MK 349-1 (MT), MK 29-5 (PD)	
MK 404 MOD 0	-		EX-404		MK 91 & 92	
MK 407 MOD 1	-		MK 407 MOD 0		MK 399-0 AND 407-0	
MK 411 MOD 0	-		EX-411		MK 396 (ILLUM ONLY)	
M412A1	NOT ASSIGNED		M412E1		M412	
MK 413 MOD 0	-		EX 413		MK 384 (ILLUM ONLY)	
MK 415 MOD 0	-		EX-415		-	
EX 416	-		-		-	
EX 417 MOD 0	N/A		NONE		MK 72 MOD 17	
EX 418 MOD 0	N/A		NONE		MK 73 MOD 13	
M423 ALT	1340-00-764-9640		M423		M423	
M427 ALT	1340-00-933-1946		M427		M427, MK 178	
M429	1340-00-926-9301		XM429		NONE	
M431	NONE ASSIGNED		XM431		M423	

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FUZE NUMBER:	HSN:	270	PRIOR NOMENCLATURE:	280	REPLACES:	290
M433	1340-00-180-9195		XM433E1		M423, M427, M440, M431	
M434	NONE ASSIGNED		-		NONE	
M438	NOT YET ASSIGNED		XM438		NONE	
M439	NONE ASSIGNED		XM439		M436, M442, M446	
M440	1340-00-021-6516		MOD M423		M423	
M442	NOT YET ASSIGNED		-		XM436, WDU-4A/A	
XM443	NOT ASSIGNED		NONE		M436, 442, 446, XM439	
XM444	NOT ASSIGNED		NONE		SEE REMARKS	
XM445	NOT YET ASSIGNED		NONE		NONE	
M446	NOT YET ASSIGNED		XM446		M436, WDU-4A/A	
M505A3	1305-01-050-8840		M505A1E3		M505A1	
M505A3E2	NOT ASSIGNED		-		M505A3	
M509A2	-		M509A1, T208		M509A1	
M509A2E1	NOT ASSIGNED		NONE		M509A1, M509A2	
M530A1	1390-01-054-5173		T278E8, T343		M530	
M534A1	1390-00-228-8381		L19 BRITISH		-	
M539	1390-00-058-1349		-		-	
M549	-		-		-	
M550	NOT SEPARATE ISSUE		SEE REMARKS		NONE	
M551	NOT SEPARATE ISSUE		T359		NONE	
M564	1390-00-889-2044		T197E1		SEE REMARKS	
M565	1390-00-889-2104		T275E1		M562	
M567	1390-00-182-3029		96 DUTCH, XM567E2		M524A6, M526, M519	
M571	-		XM571E3		NONE	
M577	1390-00-805-0692		XP577		M548, M565	
M578A1	1390-00-182-3132		M578		-	
M582	1390-00-169-5864		XM582		M564, M548	
M587	1390-01-062-4574		XM587E2		M548, M564, M582	
M594	NOT ASSIGNED		GERMAN		XM580	
M603	1345-00-028-5078		T17E2		T7 M600	
M605	1345-01-050-2601		-		M6A1	
M606	-		T1202		NONE	
M607	1345-00-069-3061 AND -077-2187		T1200E2		NONE	
M592/731	SEE REMARKS		XM67/72 AP MINES		NONE	
M718/741 PROJ	SEE REMARKS		XM70/73 AT MINES		NONE	
M724	1390-01-068-3936		XM724		M565, M548, M577	
M732	1390-01-020-0096		M514A1E4, XM583		M728, M514A1	
M734	NOT YET ASSIGNED		XM734		M525A1, XM935	
XM737	NOT ASSIGNED		NONE		NONE	
XM738 (FRONT)	NOT ASSIGNED		NONE		NONE	
XM738 (REAR)	NOT ASSIGNED		NONE		NONE	
M739	1390-00-574-7705		M572E2		M557, M572, M51A5	
M740	UNKNOWN		NONE		NONE	
XM741	NOT YET ASSIGNED		NONE		SEE REMARKS	
XM742	NONE		NONE		M571	
XM745	NOT YET ASSIGNED		NONE		M734/XM741 PRACTICE HE AMMO	
XM747E2	NOT YET ASSIGNED		NONE		M739 PRACTICE USE	
XM748	NOT YET ASSIGNED		NONE		M739 PRACTICE USE	
XM750	NOT YET ASSIGNED		NONE		NONE	
XM751	NOT YET ASSIGNED		NONE		M734, XM741, XM745 HE AMMO	

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FUZE NUMBER:	NSN:	270	PRIOR NOMENCLATURE:	280	REPLACES:	290
XM754	NOT YET ASSIGNED		NONE		NONE	
XM755	NONE ASSIGNED		XM714		XM594	
XM757	NOT YET ASSIGNED		XM714E2		NS05A3	
M758	NOT YET ASSIGNED		XM714E5		KZB 335 (OERLIKON)	
M759	NOT ASSIGNED		XM714E6		XM579	
XM762	NOT YET ASSIGNED		XM753		MS77, 582, 587, 724	
XM763	NOT ASSIGNED		NONE		NONE	
XM764	NOT ASSIGNED		-		DM781, XM765	
XM765	NOT ASSIGNED		DM781		DM 781	
M811	1336-00-057-1743		XM811E4		-	
M817	1390-00-556-5163		XM817		NK 15, NK 44, NK 322	
XM818E1	NOT ASSIGNED		XM818		NONE	
XM820	NOT ASSIGNED		NONE		NONE	
M821	NOT ASSIGNED		NONE		NONE	
M904E4	1325-00-689-4062		T709E4		M904E1 AND E2, M103	
M934	NONE		NONE		M814	
XM935	NOT YET ASSIGNED		-		MS25A1, M717	

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FUZE NUMBER:		NOTATION:	311	SETBACK:	312	313
MK	1 MODS 0, 1	FREE FALL	-	-	-	-
MK	1 MOD 1	NOT APPLICABLE	-	-	-	-
LUU	2B/B	N/A	-	-	-	-
MK	3 MOD 5	NOT APPLICABLE	-	-	-	-
WDU-	4A/A	10 RPS	40 G	594 M/S ROCKET	-	-
FSU-	9A/B	FREE FALL	-	-	-	-
FSU-	10/A	NOT APPLICABLE	-	-	-	-
FSU-	13/B	NOT APPLICABLE	-	-	-	-
MK	13 MOD 2	NOT APPLICABLE	-	-	-	-
MK	17 MOD 0	NOT APPLICABLE	-	-	-	-
BLU-	24/B	67 RPS	-	-	-	-
M	25	N/A	-	-	-	-
M	27	N/A	-	-	-	-
MK	29 MOD 5	208 RPS	14,500 G	2,600 FPS	-	-
MK	29 MOD 0	NOT APPLICABLE	-	-	-	-
MK	30 MOD 5	338 RPS	20,600 G	2,700 FPS	-	-
MK	31 MOD 2	254 RPS	15,000 G	2,650 FPS	-	-
MK	33 MOD 0	NOT APPLICABLE	-	-	-	-
M	34	N/A	-	-	-	-
MK	34 MOD 1	NOT APPLICABLE	-	-	-	-
M	35	N/A	-	-	-	-
MK	35 MOD 0	NOT APPLICABLE	-	-	-	-
M	36	N/A	N/A	N/A	-	-
MK	42 MODS 1 AND	3338 RPS	20,600 G	2,700 FPS	-	-
MK	43 MOD 0	FREE-FALL	-	-	-	-
MK	51 MOD 5	338 RPS	20,600 G	2,700 FPS	-	-
MK	54 MODS 0-2	338 RPS	21,000 G	2,700 FPS	-	-
FNU-	54A/B	FREE FALL	-	-	-	-
M	56	NONE	20,000 G	60 M/S	-	-
FNU-	56D/B	FREE FALL	-	-	-	-
EX	60	20 RPS	7,500 G	2,030 FPS	-	-
EX	61	20 RPS	7,500 G	2,030 FPS	-	-
M	62A2	6280 RPS	234 G	259 M/S	-	-
SUU-	64/SUU- 65	50 RPS	FREE FALL	-	-	-
M	65A1E1	NONE	3,320 G	138 M/S MAX	-	-
MK	71 MODS 11-16	208 RPS	15,500 G	2,600 FPS (792.5 MPS)	-	-
MK	72 MODS 16-17	338 RPS	20,600 G	2,700 FPS (822.9 MPS)	-	-
MK	73 MODS 12-13	254 RPS	14,500 G	2,650 FPS (807.7 MPS)	-	-
FNU-	74/B	NONE	-	-	-	-
M	74	53 RPS	N/A	20 M/S	-	-
M	75	53 RPS	N/A	20 M/S	-	-
FNU-	81/B	FREE FALL	-	-	-	-
MK	83 MOD 0	254 RPS	15,000 G	2,650 FPS	-	-
FNU-	83/B	NONE	-	75 TO 300 KIAS	-	-
M	84A1	NONE	7070 G	249.6 M/S	-	-
M	84A1E1	NONE	NOT DETERMINED	NOT DETERMINED	-	-
M	84	NONE	NONE	NONE	-	-
FNU-	88/B	FREE FALL	-	550 KIAS	-	-
MK	90 MOD 1	208 RPS	NONE	2,600 FPS (792 MPS)	-	-
MK	91 MOD 1	254 RPS	14,500 G	2,650 FPS (807.7 MPS)	-	-

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PUZE NUMBER:	ROTATION:	331	SETBACK:	332	333
N 91A2	237 RPS		7500 G		498.3 M/S
BLD- 91/B	FLETTNER ROTOR		NEGLECTIBLE		200 TO 700 KNOTS
HK 92 MOD 1	338 RPS		20,600 G		2,700 FPS
BLD- 92/B	FLETTNER ROTOR		NEGLECTIBLE		200 TO 700 KNOTS
HK 93 MOD 0	40 RPS		65 G		2200 FPS (670.5 MPS)
FNU- 94/B	-		-		CLASSIFIED
FNU- 95/B	FREE FALL		-		-
FNU- 98/B	(ZONI) 50 RPS		65 G		1116 M/S WITH HIGH
M100	NONE		15 G		762 M/S
FNU-110/B	FREE FALL		-		-
FNU-111/B	-		-		CLASSIFIED
FNU-112/B	FREE FALL		-		-
FNU-113/B	FREE FALL		-		-
M114	NONE		390 G LAUNCH, 21 G BOOST		330 M/S
FNU-117/B	FREE FALL		-		550 KIAS
M118	6 RPS		300 G (NOMINAL)		96 M/S
KM122	NONE		NONE		NONE
FNU-123/B	FREE FALL		-		-
FNU-124/B	FREE FALL		-		-
FNU-125/B	FREE FALL		-		-
FNU-128/B	2,030 RPS		124,000 G		3,710 FPS
FNU-129/B	NOT APPLICABLE		-		-
FNU-130/B	FREE FALL		-		-
KM131	NEG		NEG		NEG
KM132	NEG		NEG		NEG
FNU-136/B	50 RPS		65 G		2900 FPS (884 MPS)
KM138	N/A		-		-
KM143	NONE		12 G		SUPERSONIC, CLASSIFIED
M145	NONE		30 G EST		-
M147	FREE FALL		-		-
M148K1	FREE FALL		-		-
M150	FREE FALL		-		-
HK 181 MOD 0-3	10 RPS		25 G		594 MPS ROC
HK 188 MOD 0, 1	50 RPS		70 G		2900 FPS (884 MPS)
HK 191 MOD 0, 1	50 RPS		70 G		2200 FPS (670.5 MPS)
HK 193 MOD 0	50 RPS		70 G		2200 FPS (670.5 MPS)
M201A1	NEG		NEG		25 M/S
M201A1E2	NEG		NEG		25 M/S
M206A2	NEG		NEG		25 M/S
M207A1	NONE		NONE		NONE
M213	NEG		NEG		25 M/S
M219A1	45 RPS		NONE		610 M/S (AIRCRAFT)
M223	215 RPS		15,000 G		759 M/S
M224	45 RPS		NONE		360 M/S (AIRCRAFT)
M227	NEG		NEG		25 M/S
M228	NEG		NEG		25 M/S
KM230	10 RPS		25 G		700 M/S ROCKET
HK 310 MOD 0	NOT APPLICABLE		-		-
HK 312 MOD 0, 1	NOT APPLICABLE		-		-
HK 312 MOD 2	NOT APPLICABLE		-		-

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BUZE NUMBER:	ROTATION:	331	SETBACK:	332	333
NK 328 MOD 0	NOT APPLICABLE	-	-	-	-
NK 330 MOD 0	NOT APPLICABLE	-	-	-	-
NK 330 MOD 1	NOT APPLICABLE	-	-	-	-
NK 339 MOD 0,1	FREE FALL	-	-	-	MACH 2
NK 342 MOD 1	254 RPS	13,800 G	-	-	FPS M/S
NK 343 MOD 0	FREE FALL	-	-	-	-
NK 344 MOD 0	FREE FALL	-	-	-	-
NK 346 MOD 0	FREE FALL	-	-	-	-
NK 349 MOD 1	208 RPS	12,800 G	-	-	2,600 FPS
NK 352 MOD 2	10 RPS	25 G	-	-	-
NK 357 MOD 1	208 RPS	15,500 G	-	-	2,600 FPS (792.5 MPS)
NK 360 MOD 0 & 1	254 RPS	14,500 G	-	-	2,650 FPS
NK 376 MOD 0	FREE FALL	-	-	-	550 KIAS
NK 379 MODS 0, 1	208 RPS	12,800 G	-	-	2,600 FPS
NK 384 MOD 0	208 RPS	12,800 G	-	-	2,600 FPS
NK 387 MODS 0-2	262 RPS	30 G	-	-	1700 FPS
NK 392 MOD 0	208 RPS	12,800 G	-	-	2,600 FPS
NK 393 MOD 0	254 RPS	14,500 G	-	-	2,650 FPS
NK 395 MODS 0, 1	254 RPS	14,500 G	-	-	2,650 FPS
NK 396 MOD 0	254 RPS	14,500 G	-	-	2,650 FPS
NK 399 MOD 0	254 RPS	14,500 G	-	-	2,650 FPS
NK 400	254 RPS	14,500 G	-	-	2,650 FPS
EX 402	408 RPS	20,900 G	-	-	3,034 FPS
NK 403 MOD 0	208 RPS	12,800 G	-	-	2,600 FPS
NK 404 MOD 0	SEE REMARKS	SEE REMARKS	-	-	SEE REMARKS
NK 407 MOD 1	408 RPS	20,900 G	-	-	3,034 FPS
NK 411 MOD 0	254 RPS	14,500 G	-	-	2,650 FPS
N412A1	NEGLECTIBLE	3640 G	-	-	144.8 M/S
NK 413 MOD 0	208 RPS	12,800 G	-	-	2,600 FPS
NK 415 MOD 0	254 RPS	14,500 G	-	-	2,650 FPS
EX 417 MOD 0	SEE REMARKS	SEE REMARKS	-	-	SEE REMARKS
EX 418 MOD 0	254 RPS	14,500 G	-	-	2,650 FPS (807.7 MPS)
N423 ALT	10 RPS	25 G	-	-	594 M/S ROCKET
N427 ALT	10 RPS	40 G	-	-	826 M/S WITH
N429	10 RPS	25 TO 40 G	-	-	594 M/S ROCKET
N431	10 RPS	25 G	-	-	594 M/S ROCKET
N433	10 RPS	25 G	-	-	594 M/S ROCKET
N434	NEGLECTIBLE	-	-	-	114 M/S
N438	10 RPS	25 G	-	-	594 M/S ROCKET
N439	10 RPS	25 G	-	-	549 M/S ROCKET
N440	10 RPS	25 - 40 G	-	-	594 M/S ROCKET
N442	10 RPS	40 G	-	-	549 M/S ROCKET
IN443	10 RPS	25 G	-	-	549 M/S ROCKET
IN444	40 RPS	65 G	-	-	844 M/S ROCKET
IN445	12 RPS	100 G	-	-	1000 M/S
N446	10 RPS	40 G	-	-	549 M/S ROCKET
N505A3	2030 RPS	124,000 G	-	-	1030.2 M/S
N505A3E2	115,000 RPM	71,700 G	-	-	1036 MPS
N509A2	NONE	40,000 G	-	-	1173.4 M/S
N509A2E1	NEGLECTIBLE	60,000 G	-	-	1173 M/S

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FUZE NUMBER:	ROTATION:	331	SETBACK:	332	333
M530A1	NONE		9400 G		213.3 M/S
M534A1	400 RPS		12,800 G		731.5 M/S
M539	120 RPS		30,000 G		682.7 M/S
M549	200 RPS		65,000 G		366 M/S
M550	63 RPS		18,000 G		76 M/S
M551	63 RPS		18,000 G		76 M/S
M564	500 RPS		18,000 G		762.0 M/S
M565	500 RPS		18,000 G		762.0 M/S
M567	32 RPS		10,000 G		268 M/S
M571	435 RPS		16,400 G		822.9 M/S
M577	500 RPS		30,000 G		914.4 M/S
M578A1	400 RPS		12,800 G		731.5 M/S
M582	500 RPS		30,000 G		914.4 M/S
M587	500 RPS		30,000 G		1005.8 M/S
M594	1500 RPS		96,000 G		1066.8 M/S
M603	NONE		NONE		NONE
M605	NONE		NONE		NONE
M606	NONE		NONE		NONE
M607	NONE		NONE		NONE
M692/731	275 RPS		17,000 G		838 M/S
M718/741 PROJ	265 RPS		15,000 G		792 M/S
M724	500 RPS		30,000 G		1005.8 M/S
M732	50 RPS TO 360 RPS		1600 G TO 20,000 G		100 M/S TO 1000 M/S
M734	10 RPS		7,000 G		242 M/S
XM737	383 RPS		23,000 G		494 M/S
XM738 (FRONT)	10 RPS		4000 G		213 M/S
XM738 (REAR)	10 RPS		4000 G		213 M/S
M739	500 RPS		30,000 G		1000 M/S
M740	30 RPS		9000 G		609.6 M/S
XM741	32 RPS		10,000 G		268 M/S
XM742	500 RPS		30,000 G		823 M/S
XM745	10 RPS		10,000 G		320 M/S (L16/A2)
XM747E2	500 RPS		25,000 G		914 M/S
XM748	100 RPS		5,000 G		85 M/S
XM750	NONE		55 G		122 M/S
XM751	32 RPS		10,000 G		268 M/S
XM754	10 RPS		8000 G		283 M/S
XM755	1500 RPS		96,000 G		1066.8 M/S
XM757	2050 RPS		128,000 G		1036.3 M/S
M758	1839 RPS		104,000 G		1097 M/S
M759	1175 RPS (ADEN)		84,000 G (XM230)		825 M/S (DEFA)
XM762	500 RPS		30,000 G		915 M/S
XM763	NEGLECTIBLE		38,000 G		1173 M/S
XM764	NEGLECTIBLE		50,000 G		1150 M/S
XM765	NEGLECTIBLE		50,000 G		M/S
M811	3 RPS		12 G		487.7 M/S
M817	NONE		20 G		SUPERSONIC
XM818E1	NONE		40 G		CLASSIFIED
XM820	NONE		24 G		CLASSIFIED
M821	NONE		40 G		CLASSIFIED

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<u>FUZE NUMBER:</u>	<u>ROTATION:</u>	<u>331</u>	<u>SETBACK:</u>	<u>332</u>	<u>333</u>
M904E4	FREE FALL				
M934	12 RPS		32 G MIN	670 M/S	
M935	10 RPS		7000 G	242 M/S	

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FUZE NUMBER:		MODE(S):	500	TYPE:	510	TARGET:	530
MK	1 MODS 0, 1	IMPACT, SQ (HARD TGT)		MECHANICAL		SURFACE, ARMOR	
MK	1 MOD 1	RADAR SHUT DOWN		ELECTRIC PRIMER		AIR AND SURFACE	
LOU	2B/B	TIME DELAY		MECHANICAL		-	
MK	3 MOD 5	PROXIMITY, IMPACT		ELECTRIC		AIR	
WOU-	4A/A	TIME, FIXED		MECHANICAL		GROUND-PERSONNEL, LIGHT MAT.	
FSU-	9A/B	PROXIMITY		ELECTRIC		SURFACE	
FSU-	10/A	PROXIMITY, AND/OR IMPACT		ELECTRIC		AIR	
FSU-	13/B	-		-		-	
MK	13 MOD 2	PROXIMITY, CONTACT		ELECTRIC		AIR	
MK	17 MOD 0	PROXIMITY OR IMPACT		ELECTRIC		SURFACE AND AIR	
BLU-	24/B	FIRE ON SPIN DECAY		MECHANICAL		JUNGLE PENETRATION	
M	25	N/A		MANUAL		N/A	
M	27	-		MANUAL		-	
MK	29 MOD 5	PD, SQ SELECT		MECHANICAL		SURFACE TARGETS	
MK	29 MOD 0	COMMAND DESTRUCT		ELECTRIC		SURFACE	
MK	30 MOD 5	PD, SQ SELECT		MECHANICAL		SURFACE TARGETS	
MK	31 MOD 2	BD		MECHANICAL		SURFACE	
MK	33 MOD 0	PROXIMITY, IMPACT		ELECTRIC		AIR	
M	34	-		MANUAL		-	
MK	34 MOD 1	PROXIMITY, IMPACT		ELECTRIC		SURFACE	
M	35	N/A		MANUAL		N/A	
MK	35 MOD 0	PROXIMITY		ELECTRIC		AIR	
M	36	-		ELECTRONIC		N/A	
FZU-	39/B	PROXIMITY (300 TO 3000 FT)		ELECTRONIC, PULSE DOPPLER RADAR		GROUND	
MK	42 MODS 1 AND 3	DELAY ARMING		-		-	
MK	43 MOD 0	PROXIMITY (RF)		ELECTRIC		SURFACE	
MK	51 MOD 5	TIME, SETTABLE		MECHANICAL, JUNGLES ESCAPEMENT		-	
MK	54 MODS 0-2	SQ		MECHANICAL		-	
FNU-	54A/B	IMPACT		MECHANICAL		SURFACE	
M	56	INFLUENCE, AD, SD		MECHANICAL, ELECTRONIC		GROUND-TANK/VEHICLE	
FNU-	56D/B	PROXIMITY		ELECTRONIC, PULSE DOPPLER RADAR		SURFACE	
EX	60	PROXIMITY/PD		RF		AIR TARGETS	
EX	61	PROXIMITY/PD		RF		SURFACE	
M	62A2	BD		MECHANICAL, INERTIAL		GROUND, FORTIFICATIONS	
SUU-	64/SUU- 65	SEE REMARKS		SEE REMARKS		AREA	
M	65A1E1	TIME, SETTABLE		PYROTECHNIC		NONE, ILLUMINATION	
MK	71 MODS 11-16	PROXIMITY, PD		ELECTRIC RF		AIR AND SURFACE	
MK	72 MODS 16-17	PROXIMITY, PD		ELECTRIC RF		AIR AND SURFACE	
MK	73 MODS 12-13	PROXIMITY, PD		ELECTRIC - RF		AIR AND SURFACE	
FNU-	74/B	IMPACT, SHORT STANDOFF		MECHANICAL		SURFACE	
M	74	TRIP LINE, AD, SD		MECHANICAL, ELECTRONIC		GROUND-PERSONNEL	
M	75	INFLUENCE, AD, SD		MAGNETIC, MECHANICAL, ELX.		GROUND-TANK, VEHICLE	
FNU-	81/B	IMPACT		ELECTRONIC		SURFACE	
MK	83 MOD 0	BD		ELECTRIC		SURFACE	
FNU-	83/B	TIME, SETTABLE		MECHANICAL (PIN LEVER - 50 B/S)		-	
M	84A1	TIME, SETTABLE		PYROTECHNIC		GROUND, ILLUMINATION	
M	84A1E1	TIME, SETTABLE		PYROTECHNIC		GROUND-ILLUM & SCREENING	
EX	84	REMOTE, ACOUSTIC W/IR OR RF		SEE REMARKS		GROUND-TANK, VEHICLE	
FNU-	88/B	IMPACT, SUPERQUICK		MECHANICAL		ANTI-PERSONNEL, ANTIMATERIAL	
MK	90 MOD 1	PROXIMITY, PD		PASSIVE IR		AIR TARGETS	

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FUZE NUMBER:	MODE(S):	500	TYPE:	510	TARGET:	530
MK 91 MOD 1	PROXIMITY, PD		PASSIVE IR		AIR TARGETS	
M 91A2	BD		MECHANICAL, INERTIAL		GROUND, TANK	
BLU- 91/B	INFLUENCE, SD		MAGNETIC		GRD-TANK, VEHICLE	
MK 92 MOD 1	PROXIMITY, PD		PASSIVE IR		AIR TARGETS	
BLU- 92/B	TRIP LINE, AD, SD		MECHANICAL, ELECTRONIC		GROUND-PERSONNEL	
MK 93 MOD 0	-		RF ELECTRONIC		GROUND	
FMU- 94/B	IMPACT		ELECTRIC		SURFACE	
FMU- 95/B	IMPACT, SHORT STANDOFF		MECHANICAL, PIEZOELECTRIC		SURFACE	
BLU- 97/B	IMPACT OMNI DIRECTION		MECHANICAL, PIEZOELECTRIC		GROUND, ARMOR, MATERIAL	
FMU- 98/B	PROXIMITY, PD		ELECTRONIC, RF		GROUND-PERSONNEL	
M100	SEE XM821 TOD		SEE XM 818E1		AIR-AIRCRAFT	
FMU-109/B	IMPACT		ELECTRIC		SURFACE	
FMU-110/B	PROXIMITY		ELECTRONIC, PULSE DOPPLER RADAR		SURFACE	
FMU-111/B	PROXIMITY, IMPACT BACKUP		ELECTRIC		-	
FMU-112/B	IMPACT & SHORT DELAY		ELECTRONIC		GROUND - ALL TARGETS	
FMU-113/B	PROXIMITY, IMPACT		CW DOPPLER/GRUSH		SURFACE	
M114	P1BD		ELECTRIC, MECHANICAL		GROUND-TANK	
FMU-117/B	IMPACT, DELAY		ELECTRIC		SURFACE	
M118	P1BD		ELECTRIC, MECHANICAL		GROUND-TANK	
XM122	COMMAND		ELECTRIC, RF		GROUND-PERS, HARD TARGET	
FMU-123/B	PROXIMITY		ELECTRONIC, PULSE DOPPLER RADAR		SURFACE	
FMU-124/B	IMPACT, DELAY		ELECTRIC		SURFACE, HARD TARGET	
FMU-125/B	IMPACT		ELECTRIC		SURFACE	
FMU-128/B	PD, DELAY AFTER IMPACT		MECHANICAL		AIR TARGETS	
FMU-129/B	PROXIMITY AND/OR IMPACT		ELECTRIC		SURFACE	
FMU-130/B	IMPACT & DELAY AFTER IMPACT		MECHANICAL		GROUND TARGETS	
FMU-131/B	IMPACT		ELECTRIC		SURFACE	
XM131	TRIP LINE, SD		MECHANICAL, ELECTRONIC		GROUND-PERSONNEL	
XM132	INFLUENCE, SD		MAGNETIC		GRD-TANK VEHICLE	
FMU-132/B	-		-		-	
FMU-133/B	-		-		-	
FMU-136/B	TIME, SETTABLE		MECHANICAL		A/C PROTECTION DECOY	
FMU-137/B	-		-		-	
XM138	-		ELECTRONIC		N/A	
FMU-139/B	-		-		-	
XM143	SEE REMARKS		ELECTRONIC		AIR-AIRCRAFT	
M145	SEE M817 TOD		SEE M817 TOD		AIR-AIRCRAFT	
M147	-		-		-	
M148E1	-		-		-	
M150	-		-		-	
MK 181 MOD 0-3	PI		MECHANICAL		ARMORED VEHICLES	
MK 188 MOD 0, 1	PI		MECHANICAL		GROUND	
MK 191 MOD 0, 1	BD, DELAY-.005 SEC		PYROTECHNIC (LEAD STYPHATE)		CONCRETE, STEEL PLATE	
MK 193 MOD 0	TIME		MECHANICAL		-	
M201A1	TIME, FIXED		PYROTECHNIC		GROUND-PERSONNEL	
M201A1E2	TIME, FIXED		PYROTECHNIC		GROUND-PERSONNEL	
M206A2	TIME, FIXED		PYROTECHNIC		GROUND-PERSONNEL, SMOKE	
M207A1	TIME, FIXED		PYROTECHNIC		MARINE-SCREENING	
M213	TIME, FIXED		PYROTECHNIC		GROUND-PERSONNEL	
M219A1	IMPACT		MECHANICAL		GROUND-PERSONNEL	

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FUZE NUMBER:	MODE(S):	500	TYPE:	510	TARGET:	530
M223	IMPACT		MECHANICAL, INERTIAL		GROUND-PERSONNEL, MATERIEL	
M224	DELAY AFTER IMPACT		MECHANICAL, FLUIDIC		GROUND-PERSONNEL	
M227	TIME, FIXED		PYROTECHNIC		GROUND-PERSONNEL, SIGNAL	
M228	TIME, FIXED		PYROTECHNIC		GROUND-PRACTICE	
M230	IMPACT		MECHANICAL		GROUND-PERSONNEL, MATERIEL	
MK 318 MOD 0	IMPACT		PYROTECHNIC		GROUND	
MK 312 MOD 0,1	IMPACT		PYROTECHNIC		GROUND	
MK 312 MOD 2	PROXIMITY		PYROTECHNIC		GROUND	
MK 312 MOD 3	PROXIMITY, IMPACT		PYROTECHNIC		GROUND	
MK 328 MOD 0	PROXIMITY OR IMPACT		ELECTRIC		GROUND	
MK 330 MOD 2	PROXIMITY, IMPACT BACKUP		ELECTRIC		SURFACE	
MK 330 MOD 0	PROXIMITY, IMPACT		ELECTRIC		GROUND	
MK 330 MOD 1	PROXIMITY, DELAY		ELECTRIC		GROUND	
MK 334 MOD 0	PROXIMITY, IMPACT		ELECTRIC		AIR TARGETS	
MK 339 MOD 0,1	TIME, SETTABLE		MECHANICAL		SURFACE	
MK 342 MOD 1	TIME, SETTABLE		MECH, JUNGHANS ESCAPEMENT		AIR, GROUND TARGETS	
MK 343 MOD 0	IMPACT OR 0.27-SEC DELAY		MECHANICAL		GROUND	
MK 344 MOD 0	IMPACT/DELAY		ELECTRIC		SURFACE	
MK 344 MOD 1	IMPACT/DELAY		ELECTRIC		SURFACE	
MK 346 MOD 0	LONG DELAY		MECHANICAL TIME		SURFACE	
MK 349 MOD 1	TIME, SETTABLE		MECHANICAL, JUNGHANS ESCAPEMENT		-	
MK 352 MOD 2	PD		MECHANICAL		GROUND, PERSONNEL	
MK 357 MOD 1	PROXIMITY, PD		ELECTRICAL - CVT-RF		GROUND TARGETS	
MK 360 MOD 0 & 1	PROXIMITY, PD		ELECTRICAL - CVT-RF		GROUND TARGETS	
MK 376 MOD 0	IMPACT/DELAY		ELECTRIC		SURFACE	
MK 379 MODS 0, 1	DELAY ARMING		MECHANICAL		-	
MK 383 MOD 0	PROXIMITY, IMPACT		ELECTRIC		SURFACE	
MK 384 MOD 0	PROXIMITY, IMPACT		MECHANICAL		-	
MK 387 MODS 0-2	PROXIMITY, IMPACT		ELECTRIC		SURFACE	
MK 392 MOD 0	TIME, SETTABLE		MECHANICAL		-	
MK 393 MOD 0	MT/PD		MECHANICAL		AIR, GROUND TARGETS	
MK 395 MODS 0, 1	DELAY ARMING		MECHANICAL		-	
MK 396 MOD 0	DELAY ARMING		MECHANICAL		-	
MK 399 MOD 0	PD OR DELAY, SELECTABLE		MECHANICAL		SURFACE SUPERSTRUCTURE, PERS	
MK 400	PROXIMITY, PD		PASSIVE INFRARED		AIR TARGETS	
EX 402	PROXIMITY, PD		ELECTRONIC, RF		AIR, SURFACE TARGETS	
MK 403 MOD 0	MT/PD		MECHANICAL		AIR, SURFACE TARGETS	
MK 404 MOD 0	PROXIMITY, PI		ELECTRIC - PASSIVE INFRARED		AIR TARGETS	
MK 407 MOD 1	PD OR DELAY, SELECTABLE		MECHANICAL		SURFACE SUPERSTRUCTURE, PERS	
MK 411 MOD 0	DELAY ARMING		MECHANICAL		-	
M412A1	PI PD, GRAZE		ELECTRIC		GROUND-TANK, LT FORT.	
MK 413 MOD 0	DELAY ARMING		MECHANICAL		-	
MK 415 MOD 0	TIME, SETTABLE		MECHANICAL		ILLUMINATION	
EX 416	PRECISION TIME, SETTABLE		ELECTRONIC		SURFACE AND ILLUM.	
EX 417 MOD 0	PROXIMITY/PI		ELECTRIC RF		AIR AND SURFACE	
EX 418 MOD 0	PROXIMITY/PI		ELECTRIC RF		AIR AND SURFACE	
M423 ALT	PD, GRAZE		MECHANICAL		GROUND-PERSONNEL, MATERIEL	
M427 ALT	PD, GRAZE		MECHANICAL		GND-PERSONNEL, LIGHT MATERIEL	
M429	PROXIMITY, PD		ELECTRONIC, CW RF DOPPLER		GND-PERS	
M431	PD		MECHANICAL		GRD - PERSONNEL, LT MAT	

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FUZE NUMBER:	MODE(S):	500	TYPE:	510	TARGET:	530
M433	PD, DELAY PENETRATION, SELECT		ELECTRIC, R-C		GROUND-PERSONNEL, BUNKERS	
M434	BD, GRAZE		MECHANICAL		GROUND-INCENDIARY	
M438	PBBD, GRAZE		ELECTRONIC, MECHANICAL		GRD-TANK VEHICLE PERSONNEL	
M439	TIME, SETTABLE		ELECTRIC, R-C		GND-PERSONNEL, LIGHT MATERIEL	
M440	PD OR DELAY, SELECTABLE		MECHANICAL		GROUND-PERSONNEL, BUNKER	
M442	TIME, FIXED		PIROTECHNIC		ILLUMINATION	
XM443	TIME, SETTABLE		ELECTRONIC, DIGITAL		GROUND-VARIOUS	
XM444	PROX, PD, DLY, SELECTABLE		ELECTRONIC, RF CW		GND-PERSONNEL, LIGHT MATERIEL	
XM445	TIME, REMOTE SETTABLE		ELECTRONIC, MNOS DIGITAL		GND-PERS, LT, MAT, & TANK	
M446	TIME, FIXED		PIROTECHNIC		GROUND-SCREENING	
M505A3	PD		MECHANICAL		GND-LIGHT TARGETS; AIRCRAFT	
M505A3E2	PD		MECHANICAL		GROUND - LIGHT TARGETS	
M509A2	PBBD		ELECTRIC		GROUND-TANK	
M509A2E1	PBBD, GRAZE		ELECTRIC, MECHANICAL		GROUND-TANK	
M530A1	PBBD, GRAZE		ELECTRIC, MECHANICAL		GROUND-TANK, PERSONNEL	
M534A1	BD		MECHANICAL, INERTIAL		GROUND-TANK, SCREENING	
M539	PBBD, GRAZE		MECHANICAL, ELECTRIC		GROUND-TANK, PERSONNEL	
M549	PBBD, GRAZE		MECHANICAL		GROUND-PERSONNEL, ARMOR	
M550	PBBD, GRAZE		MECHANICAL		GROUND-MATERIEL AND PERSONNEL	
M551	PD, GRAZE		MECHANICAL		GROUND-PERSONNEL	
M564	PD OR TIME, SETTABLE		MECHANICAL, JONCHANS ESCAPEMENT		GROUND-PERSONNEL	
M565	TIME, SETTABLE		MECHANICAL, JONCHANS ESCAPEMENT		GROUND, PERSONNEL	
M567	PD OR DELAY, SELECTABLE		MECHANICAL, PYROTECHNIC DELAY		GROUND-PERSONNEL, SPOTTING	
M571	MUZZLE OR TIME, SETTABLE		MECHANICAL, POPOVICH ESCAPEMENT		GROUND-PERSONNEL	
M577	TIME OR PD, SETTABLE		MECHANICAL		GROUND-PERSONNEL	
M578A1	BD		MECHANICAL, INERTIAL		GROUND-TANK, PERSONNEL	
M582	TIME AND PD, SETTABLE		MECHANICAL		GND-PERSONNEL, LIGHT TARGETS	
M587	TIME AND IMPACT, SETTABLE		ELECTRONIC, MECHANICAL		GROUND-PERSONNEL, MATERIEL	
M594	PD, SD		MECHANICAL		AIR, LIGHT TARGETS	
M603	PRESSURE		MECHANICAL		GROUND-TANK	
M605	PRESSURE OR TRIP WIRE		MECHANICAL		GROUND, PERSONNEL	
M606	PRESSURE		MECHANICAL		GROUND-TANK	
M607	TILT ROD OR PRESSURE		MECHANICAL		GROUND, TANK	
M692/731	TRIP LINE, AD, SD		MECHANICAL, ELECTRONIC		GROUND-PERSONNEL	
M718/741 PROJ	INFLUENCE, AD, SD		MAGNETIC		GROUND-TANK/VEHICLE	
M724	TIME AND IMPACT, SETTABLE		ELECTRONIC		GND-PERS, TANKS, VEHICLES	
M732	PROXIMITY, PD		ELECTRONIC, RF CW		GROUND-PERSONNEL, MATERIEL	
M734	PROX, NEAR BURST, OR DELAY		ELECTRONIC, MECHANICAL		GND-PERSONNEL AND MATERIEL	
XM737	IMPACT AND SD		MECHANICAL, PIROTECHNIC		GROUND-PERSONNEL	
XM738 (FRONT)	PBBD, GRAZE		ELECTRIC, MECHANICAL		GND-FORTIFICATION, VEHICLES	
XM738 (REAR)	BD DELAY, GRAZE		MECHANICAL		GROUND-FORT, AND LT TARGETS	
M739	PD OR DELAY, SELECTABLE		MECHANICAL		GROUND-PERSONNEL, VEHICLES	
M740	PBBD		ELECTRIC, MECHANICAL		GROUND-TANK	
XM741	PROX, MB, PD, OR DELAY		ELECTRONIC, MECHANICAL		GND-PERSONNEL, LIGHT MATERIEL	
XM742	TIME, SETTABLE		ELECTRONIC		GROUND-PERSONNEL	
XM745	PD		MECHANICAL		GROUND-PRACTICE	
XM747E2	PD		MECHANICAL		NONE - INDIRECT FIRE PRACTICE	
XM748	PD		MECHANICAL		NONE - INDIRECT FIRE PRACTICE	
XM750	TIME, SETTABLE, PD AND DELAY		ELECTRONIC, MECHANICAL		GROUND-NINE CLEARANCE	
XM751	PD ONLY		MECHANICAL		GROUND-PRACTICE	

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FUZE NUMBER:	MODE(S):	500	TYPE:	510	TARGET:	530
XM754	FIBD, GRAZE		ELECTRIC, MECHANICAL		GROUND-ARMOR	
XM755	PD SD GRAZE		MECHANICAL		AIR-AIRCRAFT	
XM757	PD, SD, GRAZE		MECHANICAL		GROUND-LIGHT TARGETS	
M758	PD, SD, GRAZE		MECHANICAL		GROUND AND AIR	
M759	PI BD, GRAZE		MECHANICAL		GROUND-PERSONNEL & LT TARGETS	
XM762	TIME, PD		ELECTRONIC		GROUND-PERSONNEL, MATERIEL	
XM763	PI BD GRAZE		ELECTRIC		GND-TANK/PERS HARD TGT	
XM764	PI BD, GRAZE		ELECTRIC, MECHANICAL		GROUND - TANK	
XM765	PI BD, GRAZE		ELECTRIC, MECHANICAL		GROUND-TANK	
M811	TIME, SETTABLE		ELECTRONIC		GROUND-PERSONNEL	
M817	PROXIMITY, PD		ELECTRONIC, RF		AIR-AIRCRAFT	
XM818E1	PROXIMITY		ELECTRONIC, RADAR		AIR-AIRCRAFT	
XM820	FIBD		ELECTRIC, MECHANICAL		GROUND-TANK, HARD TARGET	
M821	PROXIMITY, SD		ELECTRIC		AIR-AIRCRAFT, MISSILE	
M904E4	IMPACT, DELAY		MECHANICAL/PYRO		SURFACE	
M934	BD, SD		ELECTRIC			
XM935	PD OR DELAY, SELECTABLE		MECHANICAL, PYROTECHNIC		GROUND-PERSONNEL	

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FUZE NUMBER:		WEIGHT:	600	TOTAL LENGTH:	610	CROSS SECTION:	620
MK	1 MODS 0, 1	.23 LB (104 GM)		1.714 IN (4.35 CM)		1.418 IN (3.6 CM)	
MK	1 MOD 1	2.5 LB (1134 GM)		3.084 IN (7.83 CM)		-	
LAU	2B/B	0.697 LB (316 GM)		2.69 IN (6.83 CM)		4.63 IN (11.75 CM)	
MK	3 MOD 5	0.81 LB (368 GM)		2.4 IN (6.096 CM)		-	
WDE-	4A/A	0.82 LB (373 GM)		3.30 IN (8.38 CM)		2.55 IN (6.48 CM)	
FSU-	9A/B	2.0 LB (907.2 GM)		5.31 IN (13.49 CM)		3.0 IN (7.62 CM)	
FSU-	10/A	4.4 LB (1995.8 GM)		7.0 IN (17.78 CM)		-	
FSU-	13/B	-		5.4 IN (13.72 CM)		3.0 IN (7.62 CM)	
MK	13 MOD 2	1.40 LB (635 GM)		7.109 IN (18.2 CM)		1.500 IN (4.13 CM)	
MK	17 MOD 0	2.62 LB (1188.4 GM)		14.698 IN (37.33 CM)		1.625 IN (4.13 CM)	
BLU-	24/B	-		2.2 IN (5.59 CM)		1.24 IN (3.15 CM)	
M	25	0.50 LB (226.8 GM)		10.0 IN (25.4 CM)		3.25 IN (8.26 CM)	
M	27	2.0 LB (907.2 GM)		8.0 IN (20.32 CM)		2.5 IN (6.35 CM)	
MK	29 MOD 5	1.49 LB (676 GM)		4.14 IN (10.5 CM)		2.99 IN (7.57 CM)	
MK	29 MOD 0	1.438 LB (652.3 GM)		8.11 IN (20.6 CM)		1.625 IN (4.13 CM)	
MK	30 MOD 5	1.38 LB (640 GM)		4.57 IN (11.6 CM)		2.41 IN (6.1 CM)	
MK	31 MOD 2	1.58 LB (717 GM)		4.67 IN (11.9 CM)		1.38 IN (3.5 CM)	
MK	33 MOD 0	1.8 LB (816.5 GM)		9.425 IN (23.9 CM)		1.625 IN (4.13 CM)	
M	34	-		-		-	
MK	34 MOD 1	2.316 LB (1050.5 GM)		12.908 IN (32.8 CM)		2.000 IN (5.08 CM)	
M	35	0.272 LB (123.3 GM)		2.4375 IN (6.19 CM)		4.25 IN (8.26 CM)	
MK	35 MOD 0	1.61 LB (730.3 GM)		7.872 IN (19.99 CM)		-	
M	36	6.75 LB (3068 GM)		7.53 IN (19.13 CM) HIGH		8.16 IN (20.72 CM) WIDE	
FZU-	39/B	4.0 LB (1814.4 GM)		5.21 IN (13.23 CM)		6.20 IN (15.75 CM)	
MK	42 MODS 1 AND	3.225 LB (102 GM)		0.946 IN (2.4 CM)		1.48 IN (3.76 CM)	
MK	43 MOD 0	6 LB (2724 GM)		11.75 IN (29.85 CM)		4.5 IN (11.43 CM)	
MK	51 MOD 5	1.3 LB (589 GM)		4.54 IN (11.8 CM)		2.4 IN (6.1 CM)	
MK	54 MODS 0-2	0.76 LB (345 GM)		2.5 IN (6.35 CM)		1.37 IN (3.48 CM)	
FNU-	54A/B	3.6 LB (1633 GM)		6.0 IN (15.24 CM)		3.0 IN (7.62 CM)	
M	56	INTEGRAL WITH MINE		1.55 IN (3.94 CM)		2.57 IN (6.53 CM)	
FNU-	56D/B	6.0 LB (272.2 GM)		15.0 IN (38.1 CM)		3.0 IN (7.62 CM)	
EX	60	1.3 LB (590 GM)		1.5 IN (3.81 CM)		4 IN (10.16 CM)	
EX	61	1.0 LB (454 GM)		1.5 IN (3.81 CM)		4 IN (10.16 CM)	
M	62A2	1.27 LB (576.1 GM)		3.56 IN (9.05 CM)		1.79 IN (4.54 CM)	
SUU-	64/SUU- 65	LESS THAN 14 LBS		15.2 IN (38.6 CM)		3.55 IN (9.0 CM)	
M	65A1E1	0.74 LB (335.7 GM)		2.54 IN (6.45 CM)		2.28 IN (5.79 CM)	
MK	71 MODS 11-16	5.6 LB (2542 GM)		9.2 IN (23.1 CM)		3.3 IN (8.4 CM)	
MK	72 MODS 16-17	2.85 LB (1293 GM)		7.96 IN (20.2 CM)		2.4 IN (6.1 CM)	
MK	73 MODS 12-13	4.3 LB (1950 GM)		9.8 IN (24.9 CM)		2.7 IN (6.9 CM)	
FNU-	74/B	2.0 LB (907.18 GM)		5.0 IN (12.7 CM)		4.25 IN (10.8 CM) BASE	
M	74	0.21 LB (97.0 GM)		1.39 IN (3.53 CM)		1.17 IN (2.97 CM)	
M	75	0.22 LB (99.8 GM) S&A		1.39 IN (3.53 CM)		1.17 IN (2.97 CM)	
FNU-	81/B	11 LB (4990 GM)		11 IN (27.94 CM)		2.85 IN (7.24 CM)	
MK	83 MOD 0	1.52 LB (690 GM)		3.166 IN (7.99 CM)		1.875 IN (4.8 CM)	
FNU-	83/B	2.1 LB (952.5 GM)		5.5 IN (13.97 CM)		2.5 IN (6.35 CM)	
M	84A1	1.82 LB (825.6 G)		3.85 IN (9.78 CM)		3.00 IN (7.62 CM)	
M	84A1E1	1.93 LB (875.4 GM)		3.85 IN (9.78 CM)		3.00 IN (7.62 CM)	
XM	84	35 LB (15.876 GM)		TO BE DETERMINED		TO BE DETERMINED	
FNU-	88/B	5 OZ (140 GM)		4.63 IN (11.75 CM)		1.5 IN (3.8 CM)	
MK	90 MOD 1	5.2 LB (2359 GM)		8.6 IN (21.8 CM)		3.3 IN (8.38 CM)	

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PUZE NUMBER:	WEIGHT:	600	TOTAL LENGTH:	610	CROSS SECTION:	620
MK 91 MOD 1	3.2 LB (2359 GM)		9.3 IN (23.6 CM)		2.7 IN (6.86 CM)	
M 91A2	1.40 LB (635 G)		4.21 IN (10.69 CM)		1.84 IN (4.68 CM)	
BLU- 91/B	0.22 LB (100 GM) S&A		1.75 IN (4.45 CM)		1.168 IN (2.97 CM)	
MK 92 MOD 1	2.8 LB (1271 GM)		7.6 IN (19.3 CM)		2.4 IN (6.1 CM)	
BLU- 92/B	0.22 LB (100 GM) S&A		1.75 IN (4.45 CM)		1.17 IN (2.97 CM)	
MK 93 MOD 0	2.6 LB (1180 GM)		9.184 IN (23.327 CM)		2.980 IN (7.5692 CM)	
FMU- 94/B	5.0 LB (2270 GM)		3.8 IN (9.65 CM)		7.0 IN (17.78 CM)	
FMU- 95/B	2.0 LB (907.18 GM)		5.0 IN (12.7 CM)		4.25 IN (10.8 CM) BASE	
BLU- 97/B	-		-		-	
FMU- 98/B	0.804 LB (364.9 GM)		6.12 IN (15.54 CM)		1.93 IN (4.91 CM)	
M100	2.0 LB (907.2 GM)		6 IN (15.24 CM)		1.75 x 3.25 IN	
FMU-109/B	6.3 LB (2951 GM)		7.94 IN (20.17 CM)		2.910 IN (7.39 CM)	
FMU-110/B	7.25 LB (3289 GM)		13.35 IN (33.9 CM)		6.2 IN (15.75 CM)	
FMU-111/B	3.6 LB (1634 GM)		4.9 IN (12.45 CM)		3.1 IN (7.87 CM)	
FMU-112/B	4.5 LB (2041 GM)		7.25 IN (18.42 CM)		3.0 IN (7.62 CM)	
FMU-113/B	7.5 LB (3402 GM)		13.52 IN (34.34 CM)		5.5 IN (13.97 CM)	
M114	0.16 LB (72.57 GM)		2.06 IN (5.23 CM)		1.75 IN (4.44 CM)	
FMU-117/B	4.3 LB (1950 GM)		8.5 IN (21.6 CM)		3.5 IN (9.03 CM)	
M118	0.19 LB (86.2 GM)		2.33 IN (5.91 CM)		1.75 IN (4.44 CM)	
XM122	1.40 LB (6.35 GM)		4.0 IN (10.2 CM)		4x4 IN (10.2x10.2 CM)	
FMU-123/B	16 LB (7258 GM)		18 IN (45.72 CM)		8.0 IN (20.32 CM)	
FMU-124/B	3.6 LB (1633 GM)		8 IN (20.3 CM)		3 IN (7.62 CM)	
FMU-125/B	5.0 LB (2270 GM)		3.8 IN (9.65 CM)		7.0 IN (17.78 CM)	
FMU-128/B	0.0614 LB (27.86 GM)		1.525 IN (3.87 CM)		0.678 IN (1.72 CM)	
FMU-129/B	3.6 LB (1633 GM)		4.90 IN (12.45 CM)		-	
FMU-130/B	10 LB (4536 GM)		11.83 IN (30.048 CM)		3.5 IN (8.89 CM)	
FMU-131/B	6.8 LB (3087 GM)		7.9 IN (20.07 CM)		2.91 IN (7.39 CM)	
XM131	0.22 LB (99.8 GM) S&A		1.75 IN (4.45 CM)		1.17 IN (2.97 CM)	
XM132	0.22 LB (99.8 GM) S&A		1.75 IN (4.45 CM)		1.17 IN (2.97 CM)	
FMU-132/B	-		-		-	
FMU-133/B	-		-		-	
FMU-136/B	1.45 LB (204 GM)		2.928 IN (7.40 CM)		1.5 IN (3.81 CM)	
FMU-137/B	-		-		-	
XM138	16.86 LB (7.65 KG)		9 IN (22.9 CM)		4.25 IN (10.80 CM) HIGH	
FMU-139/B	-		-		-	
XM143	5.01 LB (2.272 KG)		3.25 IN (8.26 CM)		5.0 x 5.0 IN	
M145	1.40 LB (635.0 GM)		7.02 IN (17.83 CM)		1.625 (4.13 CM)	
M147	-		7.8 IN (19.8 CM)		-	
M148E1	-		6.8 IN (17.27 CM)		2.84 IN (7.21 CM)	
M150	0.91 LB (411 GM)		7.9 IN (20.1 CM)		-	
MK 181 MOD 0-3	0.82 LB (372 GM)		3.365 IN (8.5471 CM)		1.95 IN (2.24 CM)	
MK 188 MOD 0, 1	.75 LB (340.5 GM)		5.11 IN (12.979 CM)		2.970 IN (7.54 CM)	
MK 191 MOD 0, 1	3 LB (1362 GM)		5.260 IN (13.3604 CM)		2.50 IN (6.35 CM)	
MK 193 MOD 0	2 LB (908 GM)		3.160 IN (8.0264 CM)		3.125 IN (7.9375 CM)	
M201A1	0.16 LB (72.6 GM)		3.90 IN (9.91 CM)		-	
M201A1E2	2.56 OZ (72.6 GM)		3.90 IN (9.90 CM)		-	
M206A2	2.60 OZ (73.7 GM)		4.3 IN (10.92 CM)		-	
M207A1	2.402 (68.0 GM)		1.50 (3.81 CM)		-	
M213	2.5 OZ (70.88 GM)		3.33 IN (8.46 CM)		-	
M219A1	.053 LB (24.00 GM)		0.842 IN (2.14 CM)		1.01 IN (2.56 CM)	

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FUZE NUMBER:	WEIGHT:	600	TOTAL LENGTH:	610	CROSS SECTION:	620
M223	0.025 LB (11.31 GM)		1.3 (3.30 CM)		1.0 (2.54 CM)	
M224	0.055 LB (25.0 GM)		0.78 IN (1.98 CM)		1.01 IN (2.57 CM)	
M227	2.22 OZ (62.94 GM)		2.50 IN (6.35 CM)		0.635 IN (1.61 CM)	
M228	2.57 OZ (72.86 GM)		3.33 IN (8.46 CM)		-	
XM230	.116 LB (52.8 GM)		0.60 IN (1.52 CM)		2.208 IN (5.61 CM)	
MK 310 MOD 0	3.0 LB (1361 GM)		7.398 IN (18.8 CM)		-	
MK 312 MOD 0,1	5.5 LB (2495 GM)		6.852 IN (17.4 CM)		-	
MK 312 MOD 2	5.5 LB (2495 GM)		6.852 IN (17.4 CM)		-	
MK 312 MOD 3	5.5 LB (2495 GM)		6.8 IN (17.27 CM)		-	
MK 328 MOD 0	5.0 LB (2268 GM)		3.8 IN (9.65 CM)		-	
MK 330 MOD 2	3.6 LB (1634 GM)		4.9 IN (12.45 CM)		3.1 IN (7.87 CM)	
MK 330 MOD 0	3.6 LB (1633 GM)		4.90 IN (12.45 CM)		-	
MK 330 MOD 1	3.6 LB (1633 GM)		4.90 IN (12.45 CM)		-	
MK 334 MOD 0	4.5 LB (2043 GM)		5.0 IN (12.7 CM)		6.4 IN (16.3 CM)	
MK 339 MOD 0,1	3.75 LB (1700 GM)		6.75 IN (17.15 CM)		3.75 IN (9.53 CM)	
MK 342 MOD 1	1.4 LB (640 GM)		4.58 (11.6 CM)		2.4 IN (6.1 CM)	
MK 343 MOD 0	1.25 LB (567 GM)		6.0 IN (15.24 CM)		2.75 IN (6.98 CM)	
MK 344 MOD 0	4.3 LB (1950 GM)		8.5 IN (21.59 CM)		4.25 IN (10.8 CM)	
MK 344 MOD 1	4.3 LB (1950 GM)		8.5 IN (21.59 CM)		4.25 IN (10.8 CM)	
MK 346 MOD 0	1.4 LB (635 GM)		6.1 IN (15.49 CM)		2.0 IN (5.08 CM)	
MK 349 MOD 1	2.28 LB (1035 GM)		4.31 IN (10.95 CM)		2.98 IN (7.57 CM)	
MK 352 MOD 2	0.5 LB (14.174 GM)		3.027 IN (7.688 CM)		1.695 IN (4.30 CM)	
MK 357 MOD 1	3.6 LB (1633 GM)		8.88 IN (22.5 CM)		3.3 IN (8.38 CM)	
MK 360 MOD 0 & 1	3.8 LB (1725 GM)		8.77 IN (22.3 CM)		2.73 IN (6.93 CM)	
MK 376 MOD 0	4.3 LB (1950 GM)		8.5 IN (21.59 CM)		4.25 IN (10.8 CM)	
MK 379 MODS 0, 1	1.57 LB (712 GM)		5.6 IN (14.22 CM)		2.0 IN (5.08 CM)	
MK 383 MOD 0	7.0 LB (3175 GM)		3.1 IN (7.87 CM)		-	
MK 384 MOD 0	.83 LB (378 GM)		2.2 IN (5.59 CM)		2.0 IN (5.08 CM)	
MK 387 MODS 0-2	2.3 LB (1044 GM)		8.77 IN (22.28 CM)		2.39 IN (6.07 CM)	
MK 392 MOD 0	1.25 LB (567 GM)		4.5 IN (11.43 CM)		3.0 IN (7.62 CM)	
MK 393 MOD 0	1.5 LB (681 GM)		6.0 IN (15.24 CM)		2.4 IN (6.1 CM)	
MK 395 MODS 0, 1	1.5 LB (681 GM)		5.74 IN (14.56 CM)		2.0 IN (5.08 CM)	
MK 396 MOD 0	.77 LB (349 GM)		2.5 IN (6.35 CM)		2.0 IN (5.08 CM)	
MK 399 MOD 0	2.64 LB (1199 GM)		6 IN (15.24 CM)		2.4 IN (6.1 CM)	
MK 400	2.1 LB (953 GM)		5.7 IN (14.48 CM)		2.4 IN (6.10 CM)	
EX 402	2.0 LB (907 GM)		5.7 IN (14.48 CM)		2.42 IN (6.15 CM)	
MK 403 MOD 0	1.25 LB (567 GM)		4.5 IN (10.9 CM)		3 IN (7.5 CM)	
MK 404 MOD 0	2.1 LB (953 GM)		5.7 IN (14.52 CM)		2.4 IN (6.1 CM)	
MK 407 MOD 1	2.1 LB (953 GM)		6 IN (15.2 CM)		2.4 IN (4.5 CM)	
MK 411 MOD 0	.97 LB (441 GM)		3.5 IN (8.89 CM)		2.75 IN (6.99 CM)	
M412A1	0.154 LB (69.85 GM)		1.86 IN (4.72 CM)		1.29 IN (3.28 CM)	
MK 413 MOD 0	1.0 LB (450 GM)		3 IN (7.62 CM)		3.38 IN (8.58 CM)	
MK 415 MOD 0	1.4 LB (635.6 GM)		6 IN (15.24 CM)		2.4 IN (6.1 CM)	
EX 416	2.1 LB		-		-	
EX 417 MOD 0	2.10 LB (952.6 GM)		5.97 IN (15.2 CM)		2.4 IN (6.1 CM)	
EX 418 MOD 0	1.88 LB (852.6 GM)		5.97 IN (15.2 CM)		2.4 IN (6.1 CM)	
M423 ALT	0.75 (340.2 GM)		4.03 IN (10.24 CM)		1.75 IN (4.44 CM)	
M427 ALT	0.75 LB (340.2 GM)		4.04 IN (10.26 CM)		1.75 IN (4.44 CM)	
M429	0.94 LB (426.4 GM)		5.91 IN (15.01 CM)		1.89 IN (4.80 CM)	
M431	9.73 OZ (275.8 GM)		4.617 IN (11.73 CM)		1.755 IN (4.46 CM)	

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FUZE NUMBER:	WEIGHT:	600	TOTAL LENGTH:	610	CROSS SECTION:	620
M433	1.80 LB (816.5 GM)		5.75 IN (14.60 CM)		1.69 IN (4.29 CM)	
M434	0.154 LB (69.85 GM)		1.86 IN (4.72 CM)		1.29 IN (3.28 CM)	
M438	0.25 LB (113.4 GM)		3.75 IN (9.53 CM)		1.375 IN (3.49 CM)	
M439	0.24 LB (108.9 GM)		2.75 IN (6.99 CM)		1.50 IN (3.81 CM)	
M440	1.656 LB (751.2 GM)		5.046 IN (12.82 CM)		1.75 IN (4.45 CM)	
M442	0.70 LB (318.0 GM)		3.87 IN (9.83 CM)		2.55 IN (6.48 CM)	
XM443	UNKNOWN		4.70 IN (11.94 CM)		2.75 IN (6.99 CM)	
XM444	UNKNOWN		8.0 IN (20.32 CM)		1.59 IN (4.04 CM)	
XM445	2.2 LB (1000 GM)		8.10 IN (20.57 CM)		3.27 IN (8.30 CM)	
M446	0.70 LB (318.0 GM)		3.87 IN (9.83 CM)		2.55 IN (6.48 CM)	
M505A3	0.75 OZ (21.38 GM)		1.23 IN (3.12 CM)		0.67 IN (1.70 CM)	
M505A3E2	0.75 OZ (21.38 GM)		1.19 IN (3.02 CM)		0.67 IN (1.70 CM)	
M509A2	0.31 LB (140.6 GM)		1.96 IN (4.98 CM)		1.35 IN (3.43 CM)	
M509A2E1	0.4 LB (180 GM) APPROX		1.96 IN (4.98 CM)		1.35 IN (3.43 CM)	
M530A1	0.30 LB (136.1 GM)		1.963 IN (4.99 CM)		1.35 IN (3.43 CM)	
M534A1	1.007 LB (456.8 GM)		4.870 IN (12.37 CM)		2.09 IN (5.31 CM)	
M539	0.62 LB (281 GM)		2.093 IN (5.32 CM)		2.20 IN (5.58 CM)	
M549	2.05 OZ (58.2 GM)		1.47 IN (3.73 CM)		1.60 IN (4.06 CM)	
M550	1.87 OZ (53.0 GM)		1.39 IN (3.53 CM)		1.59 IN (4.04 CM)	
M551	1.83 OZ (52.0 GM)		1.818 IN (4.62 CM)		1.325 IN (3.37 CM)	
M564	2.14 LB (971 GM)		5.97 IN (15.15 CM)		2.41 IN (6.10 CM)	
M565	2.05 LB (929.9 GM)		5.27 IN (13.38 CM)		2.41 IN (6.10 CM)	
M567	1.30 LB (589.7 GM)		5.97 IN (15.16 CM)		2.40 IN (6.10 CM)	
M571	1.50 LB (680.4 GM)		5.287 IN (13.43 CM)		2.41 IN (6.12 CM)	
M577	1.41 LB (639.6 GM)		5.28 IN (13.41 CM)		2.41 IN (6.12 CM)	
M578A1	1.876 LB (851 GM)		4.50 IN (11.42 CM)		1.68 IN (4.27 CM)	
M582	1.51 LB (684.9 GM)		5.82 IN (14.78 CM)		2.41 IN (6.13 CM)	
M587	1.81 LB (821.0 GM)		5.97 IN (15.16 CM)		2.41 IN (6.13 CM)	
M594	.0464 LB (21.1 GM)		1.774 IN (4.51 CM)		0.715 IN (1.82 CM)	
M603	1.56 OZ (44.1 GM)		1.18 IN (3.00 CM)		1.14 IN (2.90 CM)	
M605	0.38 LB (170.1 GM)		7.14 IN (17.53 CM)		1.75 IN (4.45 CM)	
M606	2.43 LB (1102.2 GM)		2.7 IN (6.86 CM)		10.0 IN (225.4 CM)	
M607	0.53 LB (240.4 GM)		3.75 (9.52 CM)		2.83 (7.19 CM)	
M692/731	0.94 LB (426.4 GM)		2.59 IN (6.58 CM)		P18 SHAPED	
M718/741 PROJ	0.44 LB (200.8 GM) SEA		1.4 IN (3.5 CM)		1.2 IN (3.0 CM)	
M724	1.69 LB (766.6 GM)		5.268 IN (13.38 CM)		2.415 IN (6.13 CM)	
M732	1.76 LB (798.3 GM)		5.97 IN (15.16 CM)		2.42 IN (6.14 CM)	
M734	0.50 LB (226.8 GM)		3.713 IN (9.43 CM)		1.935 IN (4.91 CM)	
XM737	0.2 LB (90.7 GM)		0.54 IN (1.37 CM)		0.65 IN (1.65 CM)	
XM738 (FRONT)	0.20 LB (90.7 GM)		2.10 (5.33 CM)		1.250 (3.175 CM)	
XM738 (REAR)	0.18 LB (81.6 GM)		1.53 IN (3.89 CM)		1.25 (3.18 CM)	
M739	1.43 LB (647.7 GM)		5.97 IN (15.16 CM)		2.41 IN (6.13 CM)	
M740	4.2 LB (1.90 KG) FUZE MODULE		3.50 IN (8.89 CM)		3.0 IN (7.62 CM)	
XM741	1.10 LB (499.0 GM)		6.083 IN (15.45 CM)		2.41 IN (6.12 CM)	
XM742	1.28 LB (580.6 GM)		5.26 IN (12.23 CM)		2.115 IN (5.37 CM)	
XM745	0.50 LB (226.8 GM)		3.713 IN (9.43 CM)		1.935 IN (4.91 CM)	
XM747E2	1.50 LB (680.4 GM)		5.97 IN (15.16 CM)		2.41 IN (6.10 CM)	
XM748	1.50 LB (680.4 GM)		5.97 IN (15.16 CM)		2.41 IN (6.10 CM)	
XM750	7.0 LB (3.175 KG)		8.42 IN (21.39 CM)		5.125 IN (13.03 CM)	
XM751	0.50 LB (226.8 GM)		4.71 IN (11.96 CM)		1.935 IN (4.91 CM)	

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A-31

FUZE NUMBER:	WEIGHT:	600	TOTAL LENGTH:	610	CROSS SECTION:	620
XM754	0.20 LB (90.7 GM)		2.10 (5.33 CM)		1.25 (3.18 CM)	
XM755	0.51502 (14.6 GM)		1.42 IN (3.61 CM)		0.718 IN (1.82 CM)	
XM757	0.63 OZ (17.75 GM)		1.418 IN (3.60 CM)		0.66 IN (1.68 CM)	
M758	0.626 OZ (17.76 GM)		1.418 IN (3.60 CM)		0.660 IN (1.68 CM)	
M759	1.4102 (40 GM)		1.879 IN (4.77 CM)		1.065 IN (2.71 CM)	
XM762	1.50 LB (680.4 GM)		5.27 IN (13.39 CM) (A)		2.41 IN (6.12 CM)	
IM763	0.40 LB (181.4 GM)		1.92 IN (4.88 CM)		1.36 IN (3.45 CM)	
XM764	0.40 LB (181.4 GM)		1.98 IN (5.03 CM)		1.57 IN (4.00 CM)	
IM765	0.32 LB (144 GM)		1.98 IN (5.03 CM)		1.57 IN (4.0 CM)	
MS11	7.70 LB (3493 GM)		7.25 IN (18.42 CM)		5.00 X 5.55 IN	
MS17	9.5 LB (4.309 KG)		6.143 IN (15.60 CM)		4.92 IN (12.50 CM)	
XM818E1	17.5 LB (7938 KG)*		4.25 IN (11.43 CM)		13.75 IN (34.93CM)**	
XM820	0.70 LB (317.5 GM)		2.0 IN (6.45 CM)		3.52 IN (8.94 CM)	
MS21	INTEGRAL W/GUIDANCE		INTEGRAL W/GUIDANCE		INTEGRAL W/GUIDANCE	
M9D4EA	2.1 LB (953 GM)		9.4 IN (23.8 CM)		2.5 IN (6.4 CM)	
M934	0.235 LB (106.6 GM)		2.495 IN (6.34 CM)		2.497 IN (6.34 CM)	
XM935	0.57 LB (258.6 GM)		3.58 IN (9.09 CM)		1.951 IN (4.94 CM)	

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FUZE NUMBER:		630	630	THREAD SIZE:	640
NK	1 MODS 0, 1	-	-	-	-
NK	1 MOD 1	-	-	-	-
LUU	2B/B	1.38 IN (3.49 CM)	-	-	-
NK	3 MOD 5	-	-	-	-
WOU-	4A/A	NONE	-	-	NONE
FSU-	9A/B	5.31 IN (13.49 CM)	-	-	NONE
FSU-	10/A	-	-	-	NONE
FSU-	13/B	-	-	-	2 1/8-16UN-2A
NK	13 MOD 2	-	-	-	-
NK	17 MOD 0	-	-	-	-
BLU-	24/B	-	-	-	NONE
M	25	N/A	-	-	NONE
M	27	-	-	-	1.70-14NS-1
NK	29 MOD 5	0.81 IN (2.04 CM)	-	-	-
NK	29 MOD 0	-	-	-	1.70-14NS-1
NK	30 MOD 5	0.81 IN (2.0 CM)	-	-	1.5-12NF-3(LH)
NK	31 MOD 2	4.67 IN (11.9 CM)	-	-	-
NK	33 MOD 0	-	-	-	NONE
M	34	-	-	-	NONE
NK	34 MOD 1	-	-	-	-
M	35	-	-	-	NONE
NK	35 MOD 0	-	-	-	NONE
M	36	2.61 IN (6.63 CM) DEEP	-	-	NOT APPLICABLE
F2U-	39/B	.23 IN (.58 CM)	-	-	-
NK	42 MODS 1 AND 3	-	-	-	3.5-12 UN-2A
NK	43 MOD 0	6.75 IN (17.15)	-	-	1.70-14NS-1
NK	51 MOD 5	0.803 IN (2.0 CM)	-	-	1.375-20NS-2(LH)
NK	54 MODS 0-2	1.5 IN (3.8 CM)	-	-	NONE
FNU-	54A/B	-	-	-	2-12NS-1A
M	56	1.685 IN (4.28 CM)	-	-	-
FNU-	56D/B	6.0 IN (16.24 CM)	-	-	1.5-12NF-1A (LH)
EX	60	-	-	-	NOT APPLICABLE
EX	61	-	-	-	2-20UNS-1A
M	62A2	DEPTH 3.31 IN (8.40 CM)	-	-	2.65-10NS
SUB-	64/SOU- 65	FLOSH WITH BULKHEAD	-	-	2.0-12M-2
M	65ALE1	0.48 IN (1.22 CM) DEPTH	-	-	2.35-10NS-2A
NK	71 MODS 11-16	5.11 IN (12.9 CM)	-	-	NONE
NK	72 MODS 16-17	4.23 IN (10.7 CM)	-	-	NONE
NK	73 MODS 12-13	5.1 IN (13.0 CM)	-	-	2-12M-2(LH)
FNU-	74/B	-	-	-	-
M	76	1.39 IN (3.53 CM) DEPTH	-	-	2.4-18NS-1A
M	75	1.39 IN (3.53 CM)	-	-	2.4-18UNS-1A
FNU-	81/B	8.5 IN (21.59 CM)	-	-	NONE
NK	83 MOD 0	3.146 IN (7.99 CM)	-	-	-
FNU-	83/B	0.5 IN (1.27 CM)	-	-	2.65-10UNS-2A
M	84A1	0.60 IN (1.52 CM)	-	-	-
M	84ALE1	DEPTH 0.60 IN (1.52 CM)	-	-	-
IM	84	TO BE DETERMINED	-	-	-
FNU-	88/B	-	-	-	-
NK	90 MOD 1	5.2 IN (13.2 CM)	-	-	-

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FUZE NUMBER:	630	630	THREAD SIZE:	640
MK 91 MOD 1	5.1 IN (13.0 CM)	-	2.35-10NS-2A	
M 91A2	3.31 IN (8.41 CM) DEPTH	1.38 IN (3.51 CM) DIA	1.5-12UNF-1A (LH)	
BLU- 91/B	DEPTH 1.75 IN (4.45 CM)	DIA 1.168 IN (2.97 CM)	NONE	
MK 92 MOD 1	4.1 IN (10.4 CM)	-	2-12UN-2A	
BLU- 92/B	1.75 IN (4.45 CM) DEPTH	1.17 IN (2.97 CM) DIA	NONE	
MK 93 MOD 0	2.984 IN (7.57936 CM)	-	2-12 UN-2A	
FMU- 94/B	-	-	-	
FMU- 95/B	-	-	-	
BLU- 97/B	-	-	-	
FMU- 98/B	0.90 (2.29 CM) DEPTH,	MAJOR DIA OF THREADS	1 7/16-16UNS-2A	
M100	5.13 IN (13.03 CM) DEPTH	1.75 X 3.25	NONE	
FMU-109/B	5.2 IN (13.2 CM)	-	4.25-10 BUTTRESS	
FMU-110/B	7.2 IN (18.29 CM)	-	3.50-12UNS-2A	
FMU-111/B	4.2 IN (10.67 CM)	-	3.5-12 UN-2A	
FMU-112/B	7.25 IN (18.42 CM)	-	3.5-12UNS-2A CLOSURE RING	
FMU-113/B	7.0 IN (17.78 CM)	-	3.5-12UNS-2A	
M114	0.125 IN (0.32 CM) DEPTH	DIA 1.50 (3.81 CM) DIA	NONE	
FMU-117/B	7.5 IN (19.05 CM)	-	3.5-12	
M118	0.125 IN (.318 CM) DEPTH	1.52 IN (3.86 CM) DIA	NONE	
XM122	NOT APPLICABLE	-	NONE	
FMU-123/B	-	-	3.5-12UNS-2A	
FMU-124/B	-	-	3.5-12UNS-2A	
FMU-125/B	-	-	-	
FMU-128/B	0.325 IN (.83 CM)	-	.5625-32UNS-2A	
FMU-129/B	4.2 IN (10.67 CM)	-	3.5-12UN-2A	
FME-130/B	DIA 2.83 IN (7.188 CM)	LENGTH 6.9 IN (24.714 CM)	3.5-12UNS-2A	
FMU-131/B	5.2 IN (13.21 CM)	-	4.25-10 BUTTRESS	
XM131	DEPTH 1.75 IN (4.45 CM)	DIA 1.17 IN (2.97 CM)	NONE	
XM132	1.75 IN (4.45 CM) DEPTH	1.17 IN (2.97 CM) DIA	NONE	
FMU-132/B	-	-	-	
FMU-133/B	-	-	-	
FMU-136/B	INTERNAL TO CHAFF THREAD	-	N/A	
FMU-137/B	-	-	-	
XM138	5.5 IN (13.97 CM) WIDE	-	NONE	
FMU-139/B	-	-	-	
XM143	NONE	-	NONE	
M145	-	-	2 1/8-16UNF-2A	
M147	7.8 IN (19.8 CM)	-	3.5-12	
M148E1	7.2 IN (18.29 CM)	-	3.5-12	
M150	-	-	3.5-12UN	
MK 181 MOD 0-3	1.230 IN (3.1242 CM) DEPTH	1.165 IN (2.96 CM) DIA	1.4375-16UNS-2A	
MK 188 MOD 0, 1	3.215 IN (8.17 CM) DEPTH	1.650 IN (4.19 CM) DIA	2-12UN-2A	
MK 191 MOD 0, 1	5.26 IN (13.36 CM)	-	2.375-12UN-2A	
MK 193 MOD 0	3.160 IN (8.0264 CM)	-	3.125-12 UN-2A	
M201A1	0.75 IN (1.91 CM) DEPTH	0.35 IN (0.88 CM) DIA	9/16-12UNC-1A	
M201A1E2	0.75 IN (1.91 CM) DEPTH	0.35 IN (0.88 CM) DIA	9/16-12UNC-1A	
M206A2	DEPTH 2.87 IN (7.29 CM)	DIA VARIES	9/16-12UNC-1A	
M207A1	0.72 IN (1.83 CM)	-	5/8-11UNC-2A MOD	
M213	2.18 IN (5.54 CM) DEPTH	DIA 0.54 IN (1.36 CM) DIA	NONE	
M219A1	0.842 IN (2.14 CM) DEPTH	1.01 IN (2.57 CM) DIA		

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63D

DIA 1.01 IN (2.57 CM)
.625 (1.58 CM) DIA
DIA 0.54 IN (1.36 CM) DIA
2.208 IN (5.61 CM) DIA

X .75 IN (1.9 CM) DEEP

2.0 IN (5.08 CM) DIA
2.00 IN (5.08 CM) DIA

1.75 IN (4.45 CM) DIA

0.80 IN (2.03 CM) DIA

1.827 IN (4.64 CM) DIA
1.75IN(4.45CM) DIA SLEEVE
MAJOR DIA OF THREAD
MAJOR DIA OF THREADS
MAJOR DIA OF THREADS
MAJOR DIA OF THREADS

640

ROME
NONE
1 1/4-16UNC-2A
5/8-11UNC-2A MOD
NONE
SEX REMARKS
-
3.5-12UN-2A
3.5-12UN-2A
-
3.5-12 UN-2A
3.5-12UN-2A
3.5-12UN-2A
-
1.70-14MS-1
-
3.5-12
3.5-12
2.0-12UN-2A
-
1.70-14MS-1
1.4375-16 UN-2A
2.65-10UNS-2A
2.35-10UNS-2A
3.5-12
-
2.65-10NS
-
2.65-10NS
2-12UN-2A
1.7-14
-
2-12UN-2A
2.35-10NS
2.35-10NS
2-12UN-2A
2-12UN-2A
-
2-12UNS-1A
1.7-14UNS-1A
2-12UN-2A
2.12-UN-2A
2.35-10NS-2A
-
NONE
2.65-10NS-2A
2-12UN-2A
2-12 NS
2.0-12N-2
-
2.0-12N-2
1 7/16-16UNS-2A
1 7/16-16UNS-2A
1 7/16-16UNS-2A
1 7/16-16UNS-2A

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FUZE NUMBER:	630	630	THREAD SIZE:	640
M433	0.75 IN (1.91 CM) DEPTH,	MAJOR DIA OF THREADS	1 7/16-16UNS-2A	
M434	0.51 IN (1.30 CM) DEPTH	0.80 IN (2.03 CM) DIA	NONE	
M438	3.75 IN (9.53 CM) DEPTH	1.375 IN (3.49 CM) DIA	NONE	
M439	2.75 IN (6.99 CM)	-	NONE - INDEX SLOTS	
M440	.90 IN (2.29 CM) DEPTH	MAJOR DIA OF THREADS	1 7/16-16UNS-2A	
M442	NONE	-	NONE	
XM443	0.85 IN (2.16 CM)	-	2.55 IN (6.48 CM)	
XM444	0.76 IN (1.88 CM)	-	1 7/16-16UNS-2A	
XM445	3.78 IN (9.60 CM)	-	M48 X 2.0 - 6 G	
M446	NONE	-	NONE	
M505A3	DEPTH 0.37 IN (0.94 CM)	DIA 0.50 IN (1.27 CM)	9/16-32UNS-2A MOD	
M505A3E2	0.37 IN (0.94 CM) DEPTH	0.50 IN (1.27 CM) DIA	9/16-32UNS-2A MOD	
M509A2	1.96 IN (4.98 CM) DEPTH	1.26 IN (3.20 CM) DIA	NONE	
M509A2E1	1.96 IN (4.98 CM) DEPTH	1.26 IN (3.20 CM) DIA	NONE	
M530A1	1.96 IN (4.98 CM) DEPTH	1.26 IN (3.20 CM) DIA	NONE	
M534A1	4.38 IN (11.13 CM) DEPTH	1.17 IN (4.27 CM) DIA	1.8-12UNS-2A (LH)	
M539	2.00 IN (5.08 CM) DEPTH	2.00 IN (5.08 CM) DIA	NONE	
M549	0.37 IN (0.94 CM)	SPITBACK	1 15/32-24UNS-2A	
M550	.357 IN (.91 CM)	-	NONE	
M551	DEPTH 0.663 IN (1.68 CM)	DIA 0.51 IN (1.30 CM)	5/8-32UNS-2A	
M564	2.22 IN (5.63 CM) DEPTH	1.73 IN (4.40 CM) DIA	2-12UNS-1A	
M565	1.52 IN (3.85 CM) DEPTH	1.65 IN (4.18 CM) DIA	2-12UNS-1A	
M567	2.20 IN (5.58 CM) DEPTH	1.70 IN (4.32 CM) DIA	2-12UNS-1A	
M571	1.50 IN (3.81 CM) DEPTH	1.81 IN (4.60 CM) DIA	1.9-16UNS-1A	
M577	DEPTH 1.51 IN (3.84 CM)	DIA 1.66 IN (4.18 CM)	2-12UNS-1A	
M578A1	4.08 IN (10.36 CM) DEPTH	1.68 IN (4.27 CM) DIA	1.8-12UNS-2A (LH)	
M582	2.06 IN (5.23 CM) DEPTH	1.73 IN (4.40 CM) DIA	2-12UNS-1A	
M587	2.21 IN (5.61 CM) DEPTH	1.71 IN (4.34 CM) DIA	2.0-12UNS-1A	
M594	DEPTH 0.69 IN (1.75 CM)	DIA MAJ THREAD	M15 X .75 - 6G	
M603	DEPTH 1.18 IN (3.00 CM)	DIA 1.14 IN (2.90 CM)	NONE	
M605	4.17 IN (10.60 CM) DEPTH	0.80 IN (2.03 CM) DIA	5/8-11UNC-1A	
M606	DEPTH VARYING	DIA VARYING	NONE	
M607	0.25 IN (.64 CM)	-	3/4-12NS-2A	
M692/731	N/A	-	NONE	
M718/741 PROJ	1.4 IN (3.5 CM)	-	NONE	
M724	1.51 IN (3.84 CM) DEPTH	1.66 IN (4.22 CM) DIA	2-12UNS-1A	
M732	2.21 IN (5.61 CM) DEPTH	1.79 IN (4.55 CM) DIA	2.0-12UNS-1A	
M734	DEPTH 1.11 IN (2.82 CM)	DIA 1.19 IN (3.03 CM)	1.5-12UNF-1A	
XM737	0.50 IN (1.27 CM)	0.65 IN (1.65 CM)	NONE	
XM738 (FRONT)	2.10 (5.33 CM) DEPTH	1.25 (3.175 CM) DIA	NONE	
XM738 (REAR)	1.53 (3.89 CM) DEPTH	1.25 (3.18 CM) DIA	NONE	
M739	2.21 IN (5.61 CM)	1.73 IN (4.40 CM)	2-12UNS-1A	
M740	3.5 IN (8.89 CM)	DIA 3.0 IN (7.62 CM)	NONE	
XM741	DEPTH 2.20 IN (5.59 CM)	DIA 1.74 IN (4.42 CM)	2-12UNS-1A	
XM742	1.50 IN (3.81 CM)	-	1.9-16UNS-1A	
XM745	1.11 IN (2.82 CM)	DIA 1.19 IN (3.03 CM)	1.5-12UNF-1A	
XM747E2	DEPTH 2.21 IN (5.61 CM)	DIA 1.73 IN (4.40 CM)	2-12UNS-1A	
XM748	DEPTH 2.21 IN (5.61 CM)	DIA 1.73 IN (4.40 CM)	2-12UNS-1A	
XM750	NONE	-	NONE	
XM751	2.125 IN (5.40 CM) DEPTH	1.407 IN (3.57 CM) DIA	1.5-12UNF-1A	

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FUZE NUMBER:	630
XM754	2.10 (5.33 CM)
XM755	0.295 IN (0.75 CM)
XM757	DEPTH .515 IN (1.31 CM)
M758	DEPTH 0.511 IN (1.30 CM)
M759	0.449 (1.14 CM)
XM762	1.51 IN (3.84 CM) DEPTH
XM763	1.67 IN (4.24 CM)
XM764	1.98 IN (5.03 CM) DEPTH
XM765	1.98 IN (5.03 CM) DEPTH
M811	NONE
M817	TDD IS PART OF MISSILE
XM818E1	N/A
XM820	NONE
M821	INTEGRAL W/ GUIDANCE
M904E4	5.13 IN (14.5 CM)
M934	2.495 IN (6.34 CM) DEPTH
XM935	1.10 IN (2.79 CM) DEPTH

630
-
DIA 0.50 IN (1.27 CM)
DIA 0.50 IN (1.27 CM)
-
1.65 IN (4.18 CM) (A) DIA
1.26 IN (3.20 CM)
1.57 IN (4.00 CM) DIA
1.57 IN (4.0 CM) DIA
-
STRUCTURE
-
NONE
-
-
2.497 IN (6.34 CM) DIA
1.13 IN (2.87 CM) DIA

640
1.25 (3.18 CM)
9/16-32UNS-2A
9/16-32UNS-2A (MOD)
M15 X 1 - 5 G
M24.5 X 1 - 6 G
2-12UNS-1A
NONE
NONE
NONE
NONE
NONE
NONE
N/A
NONE
NONE
2.0-12 UNS-1
NONE
1.5-12ONE-1A

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Appendix B

Use of Computer Data Base

This volume was produced using a computerized data base containing all of the basic specifications for production standard and development Army, Air Force, and Navy fuzes. Some data on obsolescent, or terminated fuzes is also contained in the data base. The data base and all programs dealing with its use reside on a Control Data Corporation (CDC) Model 6500 Computer System located at the Naval Surface Weapons Center (NSWC), White Oak, Silver Spring, Maryland 20910.

In addition to programs required for production of this manual, several programs have been written for general use of military and industrial members of the fuze community. These programs have been designed to make revised fuze data available to users in advance of formal changes or revisions to the Manual. In addition, it is possible to search the data base for specific characteristics so that comparisons may be made.

Use of this computer capability is restricted and is limited to authorized activities/persons. Remote communication is by way of any 110, 300, or 1200 based interactive terminal. Computer dial-up instructions will be provided to each authorized user. It is recommended that the terminal have a line width of 132 characters.

PROG1

PROG1 allows the user to obtain a current copy of selected fuze data sheets. These will appear on the terminal in a format similar to that in the manual. Any revised data incorporated in the data base since the last publication will appear on the printout.

PROG2

PROG2 produces a listing of up to 3 characteristics for each fuze on the data base. The user has the option of sorting the listing by any of the characteristics or by fuze number. This program allows comparison of all similar fuze data.

PROG3

PROG3 produces a list of fuze numbers having one to three identical characteristics.

ELEMENT NUMBERS

To facilitate data processing, each characteristic found on the data sheets has been assigned an element number. This number associates the data on file with its corresponding characteristic. File organization for a typical fuze is shown in Figure B-1. When using PROG2 or PROG3 the user simply enters the element number

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corresponding to the desired data. The computer then searches through the file compiling a list of fuze numbers and examining the specified element numbers as directed by the user.

A number of characteristics require several lines on the data sheet these are handled as multiple entries on the data file. Table B-1 lists each fuze characteristic appearing on the data sheet, the corresponding element number, maximum number of lines allocated for each element, and whether or not data is standardized throughout the catalog.

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100 HK 1 Mods 0, 1
 110 Bomblet Fuzing System
 120 1A
 130 3
 140 N
 200 NSWC, Code 043
 210 W. Pickler
 210 AV 290-1663
 220 Procurement Std
 230 Navy, Air Force
 240 OA 2428145
 250 LD 549587
 280 EX-1 Mod 0
 300 ROCKEYE II Mk 20-4 CBU
 310 HE and AP
 320 Base of Mk 118-0 Bomblet
 401 Air velocity discriminating vane
 401 (no-arm speed, 130 KIAS)
 410 Out-of-line explosive train
 430 Viewing window
 500 Impact
 510 Mechanical
 520 One-second arming time
 530 Surface, Armor
 600 .23 lb (104 gm)
 610 1.714 in (4.35 cm)
 620 1.418 in (3.6 cm)
 700 None
 820 Mk 94 Mod 0 (2)
 820 Mk 92 Mod 0 (Electric)
 840 Tetryl
 900 The Mk 1 has mechanically armed, electrically initiated base fuze and
 900 piezoelectric, impact sensing nose element. Base has arming vane, angular velocity
 900 discriminating sensing device, and friction drive arming feature. An out-of-line
 900 rotor has electric detonator shorted in the safe position. Base has an inertia
 900 initiated firing train which acts as a back-up to the nose sensing element.
 100 HK 1 Mod 1
 110 Arming-Firing Device
 120 1A
 130 6
 140 N
 200 NWC/CL, Code 3351
 210 R. Yost
 220 Procurement Std.
 230 Navy
 240 657417
 250 LD 268027
 260 OS 11690
 270 BT-1375-705-3057
 280 NOTS Model 1000

Figure B-1. Data File Organization

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Table B-1

Fuze Characteristics and Element Numbers

Characteristic	Element	Max. No. Lines	Standardized
Designation	100	1	NO
	110	1	NO
Date of Last Revision	115	1	YES
Handbook	120	1	YES
Chapter	130	1	YES
Series	140	1	YES
Identification	-	-	-
Agency	200	1	NO
Contact	210	2	NO
Status	220	1	YES
User	230	1	NO
Assy Dwg	240	1	NO
Parts List	250	1	NO
Spec	260	1	NO
NSN	270	1	NO
Prior Nomenclature	280	1	NO
Replaces	290	1	NO
General	-	-	-
Munition	300	3	NO
Use	310	3	NO
Location	320	1	NO
Ballistic Levels	-	-	-
Rotation	331	1	NO
Setback	332	1	NO
Velocity	333	3	NO
Creep	334	1	NO

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Table B-1 (Continued)
Fuze Characteristics and Element Numbers

Characteristic	Element	Max. No. Lines	Standardized
Arming Data	-	-	-
First Safety	401	3	NO
Second Safety	410	3	NO
Other Safety	420	3	NO
Delay	426	2	NO
Safe/Arm Condition	430	2	NO
Functioning Data	-	-	-
Mode(s)	500	1	NO
Type	510	1	NO
Characteristics	520	4	NO
Target	530	1	NO
Sensitivity	540	2	NO
Physical Data	-	-	-
Weight	600	1	NO
Total Length	610	1	NO
Cross Section	620	1	NO
Intrusion	630	2	NO
Thread Size	640	1	NO
Other	650	2	NO
Power Supply	700	3	NO
Explosive Train	-	-	-
S&A Device	800	2	NO
Primer	810	1	NO
Detonators	820	2	NO
Lead	840	2	NO
Booster	850	3	NO
Other	860	3	NO
Remarks	900	5	NO

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A number of characteristics have been standardized, that is, data appearing in these elements must conform to a predetermined list of entries. This facilitates data handling and comparisons. For example, under element 130, only single digits 1 through 10, corresponding to chapter number are permitted.

USING PROG1, 2, and 3

GENERAL

As indicated, dial up instructions will be supplied to each user following appropriate authorization. The user may access the computer via commercial phone, Autovon, Navy Laboratory Computer Network (NALCON), or Advanced Research Project Agency Network (ARPANET).

PROMPTS

Following log-on the user will respond to three different prompts from the computer.

1. "RECOVER SYSTEM:" will be printed immediately after log-on, and the user must respond with "-PROG1", "-PROG2", or "-PROG3" followed by a carriage return. (All characters within quotation marks are typed.)

2. Following completion or termination of a program, the computer will prompt the user with a slash, "/" in the left-hand column. Another program may be initiated ("-PROG1", "-PROG2", or "-PROG3") or the user may log off by typing "BYE".

3. Within each program the computer will ask for information needed for data processing. This may be an element number, fuze number or specific data. When the computer is ready to accept your data, it will prompt you with a question mark, "?" in the left-hand column.

A carriage return sends your instruction or data to the computer and the computer acts on this information. Always wait for the prompt, "/" or "?" to appear in the left-hand column before entering any more information.

PROGRAM ABORT

If you respond to a "?" prompt with a carriage return and no data, the program will abort and you will have to start over. You will receive a message "FATAL COBOL ERROR - RUN TERMINATED" followed by a "/" prompt, respond to this with "-PROG1", "-PROG2", "-PROG3", or log-off with "BYE".

PROCEDURE FILE EMPTY

Occasionally the program will not execute and you will receive a message "PROCEDURE FILE EMPTY". Simply type "GET,PROG1", "GET,PROG2", or "GET,PROG3" as required. Respond to the next "/" with "-PROG1", "-PROG2", or "-PROG3".

USING PROG1

Figure B-2 shows a typical run for PROG1. All user responses have been underlined for illustration. Note that the terminal should have a line width of at least 84 characters for proper data playback.

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/-PROG1

ENTER 3-DIGIT FUZE NO.
INCLUDE ANY LEADING SPACES.

? 29

IS THIS THE ONE YOU WANT? (YES OR NO)
FUZE NO: MK 29 Mod 5

? NO

IS THIS THE ONE YOU WANT? (YES OR NO)
FUZE NO: MK 29 Mod 0

? YES

DATA IS RECORDED ON OUTFILE
ANY MORE DATA? (YES OR NO)

? YES

ENTER 3-DIGIT FUZE NO.
INCLUDE ANY LEADING SPACES.

? 914

NO DATA ON FUZE NO. 914
TRY AGAIN AS DIRECTED.

ENTER 3-DIGIT FUZE NO.
INCLUDE ANY LEADING SPACES.

? 904

IS THIS THE ONE YOU WANT? (YES OR NO)
FUZE NO: M904E4

? YES

DATA IS RECORDED ON OUTFILE
ANY MORE DATA? (YES OR NO)

? NO

EXECUTE.

/COPY,OUTFILE

.

.

.

.

/BYE

721C LOG OFF 15.38.00.
721C SRU 11.555 UNTS.

Figure B-2. Example of PROG1

1. The program is begun by typing "-PROG1" followed by a carriage return.
2. A pause of a few seconds will be noted as the computer retrieves the program and the necessary data. It will respond with a message requesting the fuze number. This is the one to three digit number following M, FMU-, or Mk designation. It is important to note that all fuze numbers have been aligned in the data file. Three columns have been allowed for fuze numbers. This means a space must be typed

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ahead of 2 digit numbers and 2 spaces ahead of one digit numbers. If this is not done, proper data will not be found. In the example we have selected the Mk 29 Mod 0. This simply requires typing a space, 29, and a carriage return.

3. Several fuze numbers are used more than once. In this case, data is available on the Mk 29 Mod 5. The computer goes through the data base, stopping at the first 29 it comes to, points out the complete designation and asks whether or not this is the one you want. Since we want the Mod 0, we type "NO" in response to the question and the computer searches for the next 29.

4. Once the right designation is found the user responds "YES" and the computer proceeds to put all of the Mk 29 Mod 0 data into proper format. Note that data is not printed out at this time. It is placed into a separate file called "OUTFILE" which is copied at the end of the program.

5. When the data is compiled, the computer asks if there are any more fuzes to be formatted, to which the user responds "YES" or "NO".

6. If the answer is "YES" the user enters the next fuze number. In this example, the 914 does not exist on the data base, and the computer returns a suitable message and gives the user the opportunity to enter another number. Here, 904 is entered and the second fuze is formatted.

7. The program is terminated with "NO" in response to "ANY MORE DATA?".

8. Following completion of the program, OUTFILE contains data sheets for each fuze formatted each sheet is 132 lines long or 66 lines for each page. The file may be played back over the terminal by typing "COPY,OUTFILE" after the "/".

9. When all data has been printed, the computer will print the message "END OF INFORMATION ENCOUNTERED" and type a "/" on the next line. The user may initiate another program or log off ("BYE").

USE OF PROG2

PROG2 may be used to produce a tabular listing of one to three characteristics for each fuze. The listings appearing in Appendix A are representative of PROG2 capability. The fuze number always appears in the left-hand column. This is followed by one to three data columns. The user may select the way in which the listings are sorted. Data may be sorted by fuze number in which case the lowest fuze number appears first. Data may also be sorted in order of priority by the first second and third data columns.

The table of contents is a good example of a data sort. Here the volume, chapter, and series are listed for each fuze. They are divided in order by respective chapter and again by series. Within each series the fuzes are listed numerically.

Data extracted by the program is collected in a file called OUTFILE and may be printed out following program execution by typing in "COPY,OUTFILE". The format of output data requires 132 columns and therefore restricts the use of the program to terminals having this capacity. The output format has carriage control characters and is divided into 50-fuze pages with repeating column headings. This format enables data to be printed out on a high-speed line printer at NSWC. In lieu of

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adequate terminal capacity, authorized users may order special printouts from NSWC by submitting data requirements described below.

Figure B-3 shows an example of PROG2. All user supplied information has been underlined for illustration. In this example a listing of assembly drawings, parts lists, and specification is to be produced.

/-PROG2

ENTER UP TO 3 ELEMENT NUMBERS IN
IN ORDER OF IMPORTANCE AS REQUESTED.
ENTER MOST IMPORTANT ELEMENT (3-DIGITS):
? 240
ENTER 2ND MOST IMPORTANT ELEMENT (999 IF NONE):
? 250
ENTER 3RD MOST IMPORTANT ELEMENT (999 IF NONE):
? 260
PRIMARY SORT ON FUZE NO.? (YES OR NO)
? YES
SUPPRESS FUZE NOS. WITH NO DATA? (YES OR NO)
? NO

* * * SUMMARY OF DATA SELECTIONS * * *

1ST SORT ON ELEMENT.....240
2ND SORT ON ELEMENT.....250
3RD SORT ON ELEMENT.....260
PRIME SORT ON FUZE?.....YES
SUPPRESS BLANK DATA?....NO

HANG IN THERE!

DATA IS READY.
ANY MORE SORTS? (YES OR NO)
? NO
E N D C O B O L S O R T

Figure B-3. Example of PROG2

1. The program is initiated by typing "-PROG2" immediately after "RECOVER SYSTEM:" at log in or in response to "/".

2. The computer responds with instructions requesting the user to enter three data element numbers in order of sort priority. The data will appear in the second, third, and fourth columns of the final listing in order as they are entered. Element numbers are selected from those listed in Table B-1. In the event only one or two characteristics are desired the user may type in "999" in response to the second and third request for element number. Normally the computer selects the first line of data for the selected element. To obtain data for elements having more than one line of data, enter the element number two or three times.

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3. The fourth query by the computer enables the user to select the manner in which data is sorted. To have the data sorted by fuze, type "YES". "NO" will cause data to be sorted by the first, second, and third elements selected. This corresponds to the second, third, and fourth column on the final printout. In many cases, particularly when printing out multi-line data elements, it doesn't make sense to sort by data and "YES" should be selected. The user should carefully consider what information is to be extracted from the printout. If it is desired that all fuzes having common data should be grouped, then "NO" should be the response, and the computer will sort by data.

4. The last option allows the user to eliminate listings for fuzes having no data under any of the three specified elements.

5. Following the user's response to the 5 computer queries, the machine will respond with a summary of the selections. It will then pause for a few seconds while data is being assembled and sorted. When data is ready, a message will be printed, and the user will be queried for any more sorts. "NO" causes program termination. "YES" repeats the program as often as desired.

USE OF PROG3

PROG3 produces a quick listing of fuze numbers having a common set of characteristics. The user selects one, two, or three elements and types in the corresponding data for each element. The computer searches the data and returns the list of fuzes which match. Care must be taken to enter data precisely as it appears in the data file. This is accomplished by finding a fuze data sheet the manual which has the same data.

An example of PROG3 is shown in Figure B-4. All user supplied information has been underlined for illustration. In the example all of the fuzes having HE use and impact mode were found.

1. The program is initiated by typing "-PROG3" immediately after "RECOVER SYSTEM:" at log in or in response to "/".

2. The user then enters one to three element numbers and corresponding data to be searched. The data must be typed exactly as it appears in the data file. Find an example of the desired data on one of the data sheets in the manual and copy it. It is not necessary to observe the distinction between upper and lower case letters.

If only one or two characteristics are desired type 999 in response to the request for the next element number.

3. When all of the element numbers and corresponding data have been entered, the computer will respond with a summary of your selections. This will be followed by a list of fuzes matching these characteristics and the total number of fuzes found.

4. The user may terminate the program by responding to the last question with "NO". "YES" enables additional lists to be produced.

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/-PROG3
ENTER 1ST ELEMENT NO.
? 310
ENTER 1ST ELEMENT DATA
? HE
ENTER 2ND ELEMENT NO.
? 500
ENTER 2ND ELEMENT DATA
? IMPACT
ENTER 3RD ELEMENT NO.
? 999

LIST OF ALL FUZES HAVING:

- A. ELEMENT 310
EQUAL TO: HE
- B. ELEMENT 500
EQUAL TO: IMPACT

NK 31 MOD 2
FMU- 81/B
NK 83 MOD 0
FMU- 94/B
FMU-109/B
FMU-125/B
FMU-131/B
NK 310 MOD 0
NK 312 MOD 0 AND
NK 344 MOD 0
NK 376 MOD 0

011 FUZES TOTAL
END OF SEARCH
ANY MORE SEARCHES? (YES OR NO)
? NO
EXECUTE.

Figure B-4. Example of PROG3.

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Appendix C

Data Sheet Instructions and Definitions

The data sheet utilized in MIL-HDBK-145 has a specific format to facilitate computer utilization. Space restrictions have been imposed which are largely a function of the total amount of space available and the average amount of data contained in each element. Figure C-1 is a data sheet showing the data items, their computer element number and the number of lines and spaces available. Activities submitting new or revised data sheets should adhere to these space limitations. Excess information may be located in the remarks section. New data sheets may be submitted using copies of the blank form at the end of this section. An explanation of each data item as it appears on the data sheet follows:

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SAMPLE FORMAT

ILLUSTRATION GOES HERE

(See remarks section for further explanation of data sheet)

IDENTIFICATION	GENERAL
AGENCY: (200) 1x27	MUNITION: (300) 3x27
CONTACT: (210) 2x28	
STATUS: (220) 1x27	USE: (310) 2x22
USER: (230) 1x28	LOCATION: (320) 1x27
ASSY 3ND: (240) 1x27	BALLISTIC LEVELS:
PARTS LIST: (250) 1x28	ROTATION: (331) 1x25
SPEC: (260) 1x31	RETBACK: (332) 1x25
NSN: (270) 1x32	VELOCITY: (333) 3x25
PRIOR NOMENCLATURE: (280) 1x17	
REPLACES: (290) 1x27	CREEP: (334) 1x25
	SERIES: (440) 1x2 CHAPTER: (430) 1x2
	DESIGNATION: 100 1x18
	(110) 1x30

Figure C-1. Data Sheet Format (1 of 2)

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MIL-HDBK-120 1x3 115 1x17	
ARMING DATA FIRST SAFETY: 401 2x35 SECOND SAFETY: 410 2x35 OTHER SAFETY: 420 2x35 DELAY: 424 2x35 SAFE/ARM CONDITION: 430 2x35	PHYSICAL DATA WEIGHT: 408 1x29 TOTAL LENGTH: 410 1x23 CROSS SECTION: 420 1x22 INTRUSION: 430 2x24 THREAD SIZE: 440 1x24 OTHER: 450 2x35
FUNCTIONING DATA MODE(S): 500 1x28 TYPE: 510 1x31 CHARACTERISTICS: 520 4x35 TARGET: 530 1x29 SENSITIVITY: 540 2x35	POWER SUPPLY: 700 2x35 EXPLOSIVE TRAIN SIA DEVICE: 800 2x25 PRIMER: 810 1x29 DETONATORS: 820 2x25 LEAD: 840 2x21 BOOSTER: 850 2x20 OTHER: 860 2x30
REMARKS 900 3x84 Element numbers and data sizes are listed next to each element name. Each element number is circled. Data sizes are shown as num. no. of lines times num. no. of characters on each line.	
CHAPTER: 130 SERIES: 140 DESIGNATION: 100 1x18 110 1x30	

Figure C-1. Data Sheet Format (2 of 2)

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100 Designation - Fuze Number (FMU-xx).

110 Fuze Type (Time Fuze).

FUZE ILLUSTRATION - Final art size not to exceed 5(H) x 7(W) inches. Cutaway line drawings preferred.

120 Military Handbook Number 145 or 146 (See Introduction).

130 Chapter (1 thru 10).

140 Series (Army, Air Force, Marine Corps, and Navy).

IDENTIFICATION

200 Agency - Name and code of cognizant agency (may not be developer).

210 Contact - Name (first initial and last name and AUTOVON number of cognizant engineer).

220 Status - Procurement Standard (fuze authorized for procurement), Obsolescent (fuze authorized for use, but not planned for procurement), Terminated (cancellation of fuze development), and Obsolete (fuze not permitted for service use. Use only one of the underlined words for status).

230 User - Using Services (Army, Air Force, Marine Corps, Navy)

240 Assembly Drawing - top level assembly drawing number.

250 Parts List - Number of parts list.

260 Spec - top level procurement specification number.

270 NSN - National Stock Number.

280 Prior Nomenclature - previously used nomenclature for the same fuze such as experimental numbers and common description names.

290 Replaces - list model numbers of fuzes which will not be produced as a result of this fuzes's introduction.

GENERAL

300 Munition - list types (e.g., projectile, grenades, mines, bombs, rockets, etc.). For projectiles, identify caliber and weapon systems firing the projectile.

310 Use - General use (HE, GP, Practice, etc.), including round designation.

320 Location - Location of the fuze on the weapon assembly (nose, base, mid-body, etc.).

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- 331 Rotation - Maximum the fuze can withstand and perform properly (rps).
- 332 Setback - Maximum acceleration the fuze can withstand and perform properly (g's).
- 333 Velocity - Maximum velocity (specify duration if known) the fuze can withstand and perform properly.
- 334 Creep - Maximum deceleration (during flight) that the fuze can withstand and perform properly.

ARMING DATA

- 401 First Safety - Specify first safety features and no-arm and all-arm levels. Examples are arming wire, spin, setback, creep, etc..
- 410 Second Safety - Specify second safety feature and no-arm and all-arm levels.
- 420 Other Safety - Specify and give appropriate information as given for first and second safeties.
- 426 Delay - Specify arming delay in terms of distance, time, turns, etc., as appropriate.
- 430 Safe/arm Condition - Mark yes if there is an external indication of the unarmed condition when the fuze is installed into the carrier.

FUNCTIONING DATA

- 500 Mode - PI - Point Initiating; PD - Point Detonating; BD - Base Detonating; SD - Self Destruct; Proximity; SQ - Superquick ; Delay after Impact, Time, or other.
- 510 Type - For each mode, tabulate the type of design such as electrical, mechanical, chemical, pyrotechnic or other.
- 520 Characteristics - For each mode, give pertinent unclassified performance data such as setting range and accuracy for time fuzes, time for delay fuzes, etc.
- 530 Target - Specify class of targets. For example, air targets, ground targets, light material targets, etc.
- 540 Sensitivity - Specify test criteria for each mode, other than proximity fuzes, for evaluating proper fuze initiation such as materials, thickness, impact obliquity and velocity. For example for a small caliber PD fuze: Target - .040 inch 2024T3 Aluminum plate at 0 to 80 degrees obliquity.

PHYSICAL DATA

- 600 Weight - in pounds (lb). Show equivalent in grams (gm) in parenthesis.
- 610 Total Length - in inches. Show equivalent in centimeters in parentheses.

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620 Cross Section - Maximum dimensions in cross-section (e.g., diameter) in English and metric units in parentheses.

630 Intrusion - Distance the fuze protrudes into the carrier on the first line and diameter on the second line in inches and centimeters in parentheses.

640 Thread Size - The basic thread size in conventional form (English units). Threads are male unless marked female and right-hand (RH) unless marked left-hand (LH).

650 Other - Specify other pertinent data such as c.g., polar and transverse moments of inertia in English and metric units (metric in parentheses).

POWER SUPPLY

700 Number, name designation, and type (Mk 40 Reserve Energizer). Assembly drawing and specification numbers are useful.

EXPLOSIVE TRAIN

800 Safety and Arming Device - Nomenclature and type of S & A.

810 Primer - Number and nomenclature or materials and weights.

820 Detonators - same as 810.

840 Lead - same as 810.

850 Booster - same as 810.

860 Other - same as 810 for relays and other pyro/explosive components not listed in 810 thru 850.

REMARKS

900 any additional comments or data.

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IDENTIFICATION

AGENCY:

CONTACT:

STATUS:

USER:

ASSY DWG:

PARTS LIST: -

SPEC:

NSN:

PRIOR NOMENCLATURE:

REPLACES:

GENERAL

MUNITION:

USE:

LOCATION:

BALLISTIC LEVELS:

ROTATION:

SETBACK:

VELOCITY:

CREEP:

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SERIES:
DESIGNATION:

CHAPTER:

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ARMING DATA

FIRST SAFETY:

SECOND SAFETY:

OTHER SAFETY:

DELAY:

SAFE/ARM CONDITION:

PHYSICAL DATA

WEIGHT:

TOTAL LENGTH:

CROSS SECTION:

INTRUSION:

THREAD SIZE:

OTHER:

POWER SUPPLY:

FUNCTIONING DATA

MODE(S):

TYPE:

CHARACTERISTICS:

TARGET:

SENSITIVITY:

EXPLOSIVE TRAIN

S&A DEVICE:

PRIMER:

DETONATORS:

LEAD:

BOOSTER:

OTHER:

REMARKS

CHAPTER: SERIES:
DESIGNATION:

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
SIR	SEE MK 139			
M 1	HAND GRENADE FUZE	146	10	
M 1	AT MINE FUZE	146	10	
M 1	ROCKET FUZE	146	10	
T 1	AT MINE FUZE	146	10	
T 1E4	ROCKET PD FUZE	146	5	A
EX 1 MOD 0	SEE MK 1 MOD 0			
MK 1 MODS 0, 1	BOMBLET FUZING SYSTEM	145	3	N
MK 1 MOD 1	ARMING-FIRING DEVICE	145	6	N
HIR 1	SEE MK 135			
PIR- 1	SEE MK 145 MOD 1			
M 2	BOMB IMPACT FUZE	146	2	A
M 2	MT FUZE	146	10	
M 2	PD FUZE	146	10	
M 2	ROCKET	146	10	
M 2A1	AP MINE FUZE	146	10	
T 2	ROCKET PD FUZE	146	10	
T 2	SEE M39			
T 2E1	SEE M204A1			
EX 2	SEE FMU-74/B			
MK 2 MOD 0	SAFETY-ARMING DEVICE	146	6	N
MK 2 MOD 9	BD FUZE	146	1	N
AIR- 2	SEE MK 137 MOD 2			
LUU 2B/B	TIMER	145	9	AF
NIR- 2	SEE MK 144			
PIR- 2	SEE MK 147 MOD 2			
M 3	PD FUZE	146	10	
M 3	ROCKET FUZE	146	10	
M 3A1	AP MINE FUZE	146	10	
T 3	ROCKET MT PD FUZE	146	10	
T 3	SEE XM26			
T 3E5	SEE AN-M103A1			
EX 3 MOD 2	SEE MK 5 MOD 2			
MK 3 MOD 5	SAFETY-ARMING DEVICE	145	6	N
MK 3 MOD 0,2	BD FUZE	146	1	N
AIR- 3	ROCKET PD FUZE	146	5	N
DDR- 3A	SEE MK 162 MOD 0			
FMU- 3/B	ROCKET PD SD FUZE	146	10	
HIR- 3	SEE MK 140			
PIR- 3	SEE MK 159 MOD 1			
M 4	AT MINE FUZE	146	10	
M 4A2	ROCKET PD FUZE	146	5	A
T 4	PD FUZE	146	10	
T 4	ROCKET PRACTICE FUZE	146	10	
T 4E2	SEE AN-M100A2, M101A2, M102A2			
MK 4 MOD 1	SAFETY-ARMING DEVICE	146	6	N
DDR- 4A	SEE MK 166 MOD 2			
WDU- 4A/A	WARHEAD, FUZE FOR	145	5	AF
M 5	TIME & SQ FUZE	146	1	A
M 5	HAND GRENADE FUZE	146	10	

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
M 5	ROCKET PD FUZE	146	10	
M 5	AP MINE FUZE	146	10	
T 5	BD FUZE	146	10	
MK 5 MOD 2	SAFETY-ARMING DEVICE	146	6	N
AIR- 5	SEE MK 147 MOD 1			
M 6	DUMMY FUZE	146	10	
M 6A1	MINE COMBINATION FUZE	146	4	A
M 6A4D	HAND GRENADE FUZE	146	8	A
T 6	BOMB FUZE	146	10	
T 6	SEE M38			
MK 6 MOD 1	SAFETY-ARMING DEVICE	146	6	N
M 7	HAND GRENADE FUZE	146	10	
M 7A1	MINE COMBINATION FUZE	146	4	A
T 7	BD FUZE	146	10	
MK 7 MOD 0,1	PD FUZE	146	1	N
MK 7 MOD 1	SAFETY-ARMING DEVICE	146	6	N
XP- 7A	BD FUZE	146	10	
AIR- 7	SEE MK 148			
BLU- 7A/B	BOMBLET, FUZE FOR	146	3	A
FMU- 7B/B	BOMB IMPACT FUZE	146	2	A
M 8	PD FUZE	146	1	A
M 8	RIFLE GRENADE FUZE	146	10	
T 8	ROCKET PD FUZE	146	10	
T 8	SEE M22, M68			
MK 8 MOD 0-6	BD FUZE	146	1	N
XR- 8	SEE MK 179 MOD 0			
AIR- 8	SEE MK 149 MOD 1			
FMU- 8/B	SEE FMU-30A/B			
PIR- 8	ROCKET BD FUZE	146	5	N
E 9R15	SEE M142A1			
E 9R22	SEE M157			
E 9R23,33	SEE M142A1			
M 9	AP MINE FUZE	146	10	
M 9	RIFLE GRENADE FUZE	146	10	
M 9	PD FUZE	146	1	A
T 9	BOMB FUZE	146	10	
T 9E5	SEE M45			
MK 9 MOD 0-3	BD FUZE	146	7	N
AIR- 9-1	ROCKET PD FUZE	146	5	N
FSU- 9A/B	SAFETY-ARMING DEVICE	145	2	N
PIR- 9	ROCKET BD FUZE	146	5	N
M 10	MINE COMBINATION FUZE	146	10	
M 10A3	MINE COMBINATION FUZE	146	4	A
T 10	PD FUZE	146	10	
T 10	SEE M107			
EX 10 MOD 1	SEE MK 6 MOD 1			
MK 10 MOD 0	SAFETY-ARMING DEVICE	146	6	N
MK 10	BD FUZE	146	1	A
FSU- 10/A	SAFETY-ARMING DEVICE	145	6	N
T 11	MT SQ FUZE	146	10	

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T 11	SEE M104			
M 12	AT MINE PRACTICE FUZE	146	4	A
T 12	SEE M43A4			
T 12E2	SEE M6A1			
MK 12 MOD 2,3	PD FUZE	146	7	N
MK 12 MOD 0	SAFETY-ARMING DEVICE	146	6	N
AIR- 12-1	ROCKET PD FUZE	146	5	N
T 13	TIME FUZE	146	10	
T 13E2	SEE M7A1			
MK 13 MOD 2	SAFETY-ARMING DEVICE	145	6	N
MK 13 MOD 0-7	BD FUZE	146	1	N
FSU- 13/B	SAFETY-ARMING DEVICE	145	6	N
M 14	FUZE SETTER	146	10	
T 14	SEE T1005			
T 14	SEE M54, M10A3			
EX 14 MOD 1	SEE MK 6 MOD 1			
MK 14 MOD 0	SAFETY-ARMING DEVICE	146	6	N
XP- 14A	SEE MK 29 MOD 5			
PIR- 14	ROCKET BD FUZE	146	5	N
T 15	MT FUZE	146	10	
MK 15 MOD 0	REAR FITTING SAFETY DEVICE	146	1	A
XP- 15A	SEE MK 30 MOD 5			
T 16	ROCKET PD FUZE	146	10	
T 16	SEE M48, M205			
XP- 16A	SEE MK 30 MOD 5			
T 17	ROCKET BD FUZE	146	10	
T 17	SEE M24, M67A3, M106, M603			
MK 17 MOD 0	SAFETY-ARMING DEVICE	145	6	N
MK 17 MOD 0-13	AUX DET FUZE	146	1	N
XP- 17A	BD FUZE	146	10	
E 18R1	SEE M2			
T 18	ROCKET PD FUZE	146	10	
T 18	AT MINE FUZE	146	10	
T 18	SEE M105			
T 18E2	SEE M57			
EX 18 MOD1	SEE MK 14 MOD 0			
MK 18 MOD 0-5	MT FUZE	146	1	N
L 19A3	BD FUZE	146	10	
T 19	ROCKET PD FUZE	146	10	
T 19	SEE M46			
MK 19 MOD 0-3	BD FUZE	146	1	N
XP- 19A	BD FUZE	146	10	
MK 19	SEE AN-MK 219			
PIR- 19	SEE MK 163 MOD 1			
M 20A2	BOOSTER	146	1	A
M 20E1	SEE MK 43 MOD 0			
T 20	PD FUZE	146	10	
T 20	ROCKET PD FUZE	146	10	
T 20	AT MINE PRACTICE FUZE	146	10	
EX 20	SEE MK 75 MOD 5			

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
MK 20 MOD 0-5	BD FUZE	146	1	N
XP- 20A	BD FUZE	146	10	
PIR- 20	SEE MK 164			
M 21A4	BOOSTER	146	1	A
T 21	MINE FUZE	146	10	
T 21	SEE M47, M108			
EX 21 MOD 0	SEE MK 12 MOD 0			
MK 21 MOD 0-3	BD FUZE	146	1	N
PIR- 21	SEE MK 165 MOD 0			
M 22	BOOSTER	146	1	A
M 22	FUZE SETTER	146	10	
T 22	PD FUZE	146	10	
T 22	SEE M111A2			
EX 22	SEE T279			
MK 22 MOD 4-6	MT FUZE	146	1	N
PIR- 22	ROCKET BD FUZE	146	5	N
M 23	BOOSTER	146	10	
M 23	FUZE SETTER	146	10	
T 23	DUMMY FUZE	146	10	
T 23E1	SEE M125A1			
EX 23	PROXIMITY FUZE	146	1	N
EX 23 MOD 1	SEE MK 10 MOD 0			
EX 23 MOD 1	SEE MK 13 MOD 0			
MK 23 MOD 0	BD FUZE	146	1	N
PIR- 23	ROCKET BD FUZE	146	5	N
E 24R1	SEE M196			
M 24	FUZE SETTER	146	9	A
M 24B1	BOOSTER	146	1	A
T 24	SEE M87			
T 24	SEE AN-M110A1			
XP- 24A	PD FUZE	146	10	
BLU- 24/B	BOMBLET FUZE	146	3	AF
M 25	FUZE SETTER	146	9	A
M 25	BOOSTER	146	1	A
T 25	PD FUZE	146	10	
T 25	BOMB FUZE	146	10	
T 26	ROCKET BD FUZE	146	10	
EX 25 MOD 0	SEE MK 330 MOD 0			
MK 25 MOD 3-5	MT FUZE	146	1	N
XP- 25A	MECHANICAL FUZE	146	10	
BLU- 25/B	BOMBLET, FUZE FOR	146	3	AF
M 26	FUZE SETTER	146	9	A
T 26	BOMB FUZE	146	10	
XM 26	MOVEMENT	146	6	A
EX 26	PROXIMITY FUZE	146	1	N
MK 26 MOD 0-2	PD FUZE	146	1	N
BLU- 26/B	SEE M219E1			
FMU- 26B/B	BOMB ET FUZE	146	2	AF
M 27	FUZE SETTER	146	9	A
T 27	BOMB BAROMETRIC FUZE	146	10	

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T 27	SEE M56			
MK 27 MOD 0,1	PD FUZE	146	7	A
FMU- 27/B	ROCKET PROXIMITY FUZE	146	10	
E 28	BOMB FUZE	146	2	A
M 28	FUZE SETTER	146	9	A
T 28	ROCKET PD FUZE	146	10	
T 28	SEE M52A2			
EX 28 MOD 0	SEE MK 17 MOD 0			
MK 28 MOD 0-18	BD FUZE	146	1	N
FMU- 28/B	ROCKET PROXIMITY FUZE	146	10	
E 29	BOMB FUZE	146	2	A
T 29	SEE M53A1			
T 29E2	SEE M149			
EX 29 MOD 0	SEE MK 28 MOD 0			
MK 29 MOD 5	PD FUZE	146	1	N
MK 29 MOD 0	ARMING-FIRING DEVICE	145	6	N
XS- 29A	SEE MK 175 MOD 0			
FMU- 29/B	BOMB LONG DELAY FUZE	146	10	
E 30	BOMB FUZE	146	2	A
M 30A1	SAFETY-ARMING DEVICE	146	6	A
T 30	ROCKET PD FUZE	146	10	
T 30	SEE M56			
MK 30 MOD 5	PD FUZE	145	1	N
FMU- 30A/B	MINE SEISMIC FUZE	146	4	AF
T 31	BOMB FUZE	146	10	
T 31E1A	SEE MK 170			
T 31E2	SEE M61			
MK 31 MOD 2	BD FUZE	146	1	N
FMU- 31/B	GM PROXIMITY FUZE	146	10	
T 32	SEE M118			
T 32	ROCKET PROXIMITY FUZE	146	10	
XM 32	SAFETY-ARMING DEVICE	146	6	A
XM 32E6	SAFETY-ARMING DEVICE	146	6	A
MK 32	PROXIMITY FUZE	146	10	
T 33	SEE M119			
EX 33 MOD 0	SEE MK 33 MOD 0			
MK 33 MOD 0	SAFETY-ARMING DEVICE	145	6	N
E 34R4	BOMB IMPACT FUZE	146	2	A
M 34	FUZE SETTER	145	9	A
T 34	BOMB FUZE	146	10	
T 34	SEE M69B2			
EX 34 MOD 1	SEE MK 34 MOD 1			
MK 34 MOD 1	SAFETY-ARMING DEVICE	145	6	N
MK 34 MOD 0,1	PD FUZE	146	7	N
M 35	FUZE SETTER	145	9	A
M 35	PD FUZE	146	10	
T 35	ROCKET PD FUZE	146	10	
T 35	SEE M121, M122			
T 35E7	SEE M124			
EX 35 MOD 0	SEE MK 34 MOD 0			

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
MK 35 MOD 0	SAFETY-ARMING DEVICE	145	6	N
MK 35 MOD 0	AUX DET FUZE	146	1	N
XP- 35A		146	10	
FMU- 35/B	BOMB LONG DELAY FUZE	146	2	AF
M 36	FUZE SETTER	145	9	A
M 36	PD FUZE	146	10	
M 36E1	SEE M36			
T 36	ROCKET PD FUZE	146	10	
T 36	SEE M79			
MK 36 MOD 0,1	BD FUZE	146	1	N
XR- 36	ROCKET BD FUZE	146	5	N
M 37A1	TIME & SQ FUZE	146	1	A
T 37	BOMB FUZE	146	10	
T 37	SEE M502A1			
E 38	BOMB IMPACT FUZE	146	2	A
M 38A1	BD FUZE	146	7	A
T 38	SEE M64,M123A1,M124A1,M125A1			
M 39A2	PD FUZE	146	1	A
T 39	PERCUSSION FUZE	146	10	
T 39	SEE M127			
T 39E1	SEE M138			
MK 39 MOD 0,1	BD FUZE	146	1	N
FZU- 39/B	PROXIMITY FUZE SENSOR	145	2	AF
E 40	BOMB IMPACT FUZE	146	2	A
M 40	PD FUZE	146	10	
T 40	PD FUZE	146	10	
MK 40	PROXIMITY FUZE	146	10	
E 41	BOMB IMPACT FUZE	146	2	A
T 41	PD FUZE	146	10	
T 41	SEE M132, M133, M134			
M 42A1	DUMMY FUZE	146	10	
T 42	BOMB FUZE	146	10	
T 42	PD FUZE	146	10	
MK 42 MODS 1 AND	REAR FITTING SAFETY DEVICE	145	1	N
MK 42	MT FUZE	146	1	N
E 43	BOMB IMPACT FUZE	146	2	A
M 43A4	MT FUZE	146	1	A
M 43	SAFETY-ARMING DEVICE	146	5	A
T 43	BOMB PROXIMITY FUZE	146	10	
MK 43 MOD 0	TARGET DETECTING DEVICE	145	2	N
MK 43	AUX DET FUZE	146	10	
BLU- 43/B	AP MINE, FUZE FOR	146	10	
FMU- 43/B	PROXIMITY FUZE	146	10	
M 44A2	SEE M43			
T 44	BOOSTER	146	1	A
MK 44 MOD 0-3	AUX DET FUZE	146	1	N
XM 44	ANTI-INSTRUSION DEVICE	146	4	A
BLU- 44/B	AP MINE, FUZE FOR	146	10	
M 45	PD FUZE	146	1	A
T 45	PERCUSSION FUZE	146	10	

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
MK 45	PROXIMITY FUZE	146	1	N
XP- 45A	BD FUZE	146	10	
M 46	PD FUZE	146	1	A
T 46	PERCUSSION FUZE	146	10	
MK 46	AUX DET FUZE	146	1	N
XV- 46	SEE EX 23			
CBU- 46	SEE FMU- 80/B			
M 47	PD FUZE	146	1	A
T 47	ROCKET BD FUZE	146	10	
T 47E1	SEE M70, M129			
MK 47	PROXIMITY FUZE	146	10	
M 48A3	PD FUZE	146	1	A
M 48A3E2	PD FUZE	146	1	A
T 48E2	SEE M70, M130A1			
MK 48 MOD 0-4	BD FUZE	146	1	N
T 49	DUMMY FUZE	146	10	
T 49E2	SEE M131A1			
XR- 49	SEE MK 180 MOD 0			
M 50	SEE M56			
T 50	PROXIMITY FUZE	146	10	
T 50	PD FUZE	146	10	
MK 50 MOD 0-8	MT FUZE	146	1	N
FMU- 50/B	BOMB IMPACT FUZE	146	3	AF
M 51	GM PIBD ELEMENT	146	6	A
M 51A5	PD FUZE	146	1	A
M 51A5-3	PD FUZE	146	1	A
T 51	SEE M71			
T 51E1	SEE M166E3			
MK 51 MOD 5	MT FUZE	145	1	N
XR- 51	ROCKET BD FUZE	146	5	N
FMU- 51/B	BOMB IMPACT FUZE	146	10	
M 52A2	PD FUZE	146	1	A
M 52A2E3	SEE XM717			
T 52	DUMMY FUZE	146	10	
MK 52 MODS 0-3	AUX DET FUZE	146	1	N
M 53A1	PD FUZE	146	1	A
T 53	PD FUZE	146	10	
T 53E1	SEE M152A1			
MK 53	PROXIMITY FUZE	146	1	N
M 54	TIME & SQ FUZE	146	1	A
T 54	SEE M74, M148			
MK 54 MODS 0-2	AUX DET FUZE	145	1	N
XP- 54A	ET FUZE	146	1	N
FMU- 54A/B	BOMB INERTIAL FUZE	145	2	AF
M 55A3	TIME & SQ FUZE	146	1	A
T 55	BD FUZE	146	10	
T 55	SEE AN-M128			
T 55E1	SEE AN-M145E1			
T 55E2	SEE AN-M146A1			
T 55E3	SEE AN-M147A1			

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
MK 55 MOD 0,1	AUX DET FUZE	146	1	N
M 56	AT MINE SUBSYSTEM, FUZE FOR	145	4	A
M 56	PD FUZE	146	7	A
T 56	SEE M72, M135A1, M136A1			
XP- 56A	BD FUZE	146	1	N
FMU- 56D/B	BOMB PROXIMITY FUZE	145	2	AF
FMU- 56A/B	BOMB PROXIMITY FUZE	146	2	AF
M 57	PD FUZE	146	1	A
T 57	BD FUZE	146	10	
MK 57 MOD 0-3	MT FUZE	146	1	N
XP- 57A	SEE MK 83 MOD 0			
FMU- 57A/B	BOMB PROXIMITY FUZE	146	2	AF
M 58	BD FUZE	146	1	A
T 58	BOMB FUZE	146	10	
EX 58	SEE MK 328			
MK 58	PROXIMITY FUZE	146	10	
XP- 58A	BD FUZE	146	1	N
FMU- 58/B	BOMB INERTIAL FUZE	146	10	
M 59	SEE M48A3			
T 59	BOMB FUZE	146	10	
T 59	BD FUZE	146	10	
MK 59	PROXIMITY FUZE	146	1	N
XP- 59	SEE EX 26			
M 60	BD FUZE	146	1	A
M 60B1	DUMMY PD FUZE			
T 60	BOMB FUZE	146	10	
EX 60	TARGET DETECTING DEVICE	145	1	N
MK 60 MOD 1	PROXIMITY FUZE	146	1	N
XP- 60	SEE MK 28 MOD 18			
FMU- 60/B	BOMB IMPACT FUZE	146	10	
M 61A2	MT FUZE	146	1	A
T 61	PD SD FUZE	146	10	
T 61	SEE M137			
EX 61	TARGET DETECTING DEVICE	145	1	N
MK 61 MOD 0-2	MT FUZE	146	1	N
XP- 61	SEE MK 80 MOD 0			
M 62A2	BD FUZE	145	1	A
T 62	PD SD FUZE	146	10	
T 62	BOMB FUZE	146	10	
MK 62 MOD 0,1	MT FUZE	146	1	N
M 63	DUMMY FUZE	146	10	
M 63	FUZE SETTER	146	10	
T 63	BOMB FUZE	146	10	
T 63E5	SEE M507			
XM 63	SEE XM122			
MK 63 MOD 0	MT FUZE	146	1	N
XP- 63A	BD FUZE	146	1	N
FMU- 63/B	BOMB IMPACT FUZE	146	2	AF
E 64	BOMB MT INITIATOR	146	2	A
M 64A1	PD FUZE	146	7	A

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T 64	PD FUZE	146	10	
T 64	SEE M144			
XM 64	FIRING DEVICE	146	9	A
MK 64 MOD 0-2	BD FUZE	146	1	A
XP- 64A	BD FUZE	146	1	N
FMU- 64/B	BOMB IMPACT FUZE	146	10	
SUU- 64/SUU- 65	SAFETY-ARMING DEVICE	145	2	AF
M 65A1E1	TIME FUZE	145	1	A
M 65A1	TIME FUZE	146	1	A
T 65	BOMB FUZE	146	10	
T 65	PD FUZE	146	10	
XB- 65A	BOMB IMPACT FUZE	146	2	N
FMU- 65/B	BOMB IMPACT FUZE	146	3	AF
M 66A2	BD FUZE	146	1	A
T 66	DUMMY FUZE	146	10	
T 66	SEE AN-M139A1			
EX 66 MOD 0	SEE MK 339 MOD 0			
MK 66 MOD 0	PD FUZE	146	1	N
XB- 66C	SEE MK 257 MOD 0			
FMU- 66/B	BOMB PROXIMITY FUZE	146	10	
M 67A3	MT FUZE	146	1	A
T 67	DUMMY FUZE	146	10	
T 67	SEE AN-M140A1			
FMU- 67/B	BOMB PROXIMITY FUZE	146	10	
M 68A1	BD FUZE	146	1	A
T 68	DUMMY FUZE	146	10	
T 68	SEE M156			
XP- 68A	BD FUZE	146	1	N
FMU- 68/B	BOMB IMPACT FUZE	146	2	AF
T 69	BOMB FUZE	146	10	
MK 69	PROXIMITY FUZE	146	1	N
XP- 69A,B	MT FUZE	146	1	N
FMU- 69/B	ROCKET PROXIMITY FUZE	146	10	
M 70	PD FUZE	146	1	A
T 70	BD FUZE	146	10	
T 70	SEE AN-M158, AN-M159			
XM 70	SEE M718 PROJ, MINE FOR	146	9	A
XP- 70A,B	MT FUZE	146	1	N
FMU- 70/B	BOMB IMPACT FUZE	146	2	AF
M 71	PD FUZE	146	7	A
T 71	SEE M155A1			
T 71E5	SEE M75			
MK 71 MODS 11-16	PROXIMITY FUZE	146	1	N
XP- 71A,B	MT FUZE	146	1	N
FMU- 71/B	GM PROXIMITY FUZE	146	6	AF
M 72	BD FUZE	146	1	A
T 72	BOMB FUZE	146	10	
XM 72	SEE M692 PROJ, MINE FOR			
XM 72	SEE M219A1 GRENADE FUZE			
MK 72 MODS 16-17	PROXIMITY FUZE	145	1	N

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
FMU- 72/B	BOMB IMPACT FUZE	146	2	AF
M 73	SEE M51A5			
T 73E12	SEE M516			
T 73	SEE M153, M516			
XM 73	SEE M718 PROJ, MINE FOR			
MK 73 MODS 12-13	PROXIMITY FUZE	145	1	N
FMU- 73/B	BOMB IMPACT FUZE	146	3	AF
M 74	AP MINE, FUZE FOR	145	4	A
M 74	PD FUZE	146	7	A
T 74E6	SEE M92			
XM 74	SEE M219A1 GRENADE FUZE			
MK 74 MOD 0,1	PROXIMITY FUZE	146	1	N
XB- 74B	BOMB LONG DELAY FUZE	146	2	N
FMU- 74/B	BOMB IMPACT FUZE	146	3	N
M 75	AT MINE, FUZE FOR	145	4	A
M 75	PD FUZE	146	7	A
T 75	PROXIMITY FUZE	146	10	
T 75E2	SEE M167			
XM 75	SEE XM230 GRENADE FUZE			
XM 75	HAND GRENADE IGNITER	146	8	A
MK 75 MOD 0-5	PROXIMITY FUZE	146	1	N
FMU- 75/B	GM IMPACT FUZE	146	10	
M 76	PD FUZE	146	10	
T 76	BOMB FUZE	146	10	
T 76E9	SEE M96			
MK 76 MOD 0,3	PROXIMITY FUZE	146	1	N
FMU- 76/B	BOMB PROXIMITY FUZE	146	10	
M 77	TIME & SQ FUZE	146	1	A
T 77	BOMB FUZE	146	10	
T 77	ANTI DISTURB FUZE	146	10	
FMU- 77/B	GM PROXIMITY FUZE	146	10	
M 78A1	CP FUZE	146	1	A
T 78	BOMB FUZE	146	10	
T 78	SEE M84			
MK 78 MOD 0-2	PD FUZE	146	7	N
XR- 78	ROCKET BD FUZE	146	5	N
FMU- 78/B	GM PI BD FUZE	146	10	
M 79	SEE M61A2			
T 79	MT SQ FUZE	146	10	
T 79E1	SEE M151E2			
XM 79	SAFETY-ARMING DEVICE	146	5	A
MK 79 MOD 0,1	PROXIMITY FUZE	146	1	N
XP- 79	SEE MK 81 MOD 0			
FMU- 79/B	BOMB PROXIMITY FUZE	146	10	
M 80	SEE M43A4			
T 80	BOMB FUZE	146	10	
T 80E9	SEE M97			
MK 80 MOD 0	PD FUZE	146	1	N
FMU- 80/B	BOMB TIME FUZE	146	10	
M 81A1	PD FUZE	146	1	A

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T 81	SEE M160, M161, M162			
MK 81 MOD 0	PD FUZE	146	7	N
FMU- 81/B	BOMB IMPACT FUZE	146	3	AF
M 82A1	PD FUZE	146	1	A
T 82	BOMB PROXIMITY FUZE	146	10	
T 82	SEE M85			
MK 82 MOD 0	AUX DET FUZE	146	1	N
FMU- 82/B	BOMB PROXIMITY FUZE	146	2	AF
M 83	CP FUZE	146	1	A
T 83	BOMB FUZE	146	10	
T 83	PD FUZE	146	10	
MK 83 MOD 0	BD FUZE	146	1	N
FMU- 83/B	DISPENSER MT FUZE	145	2	N
M 84A1	TIME FUZE	145	1	A
M 84A1E1	TIME FUZE	145	1	A
T 84	BOMB FUZE	146	10	
XM 84	AT/AV MINE, FUZE FOR	145	4	A
FMU- 84/B	GM TRAINING FUZE	146	10	
M 85	PD FUZE	146	1	A
T 85	SEE M171			
XR- 85	SEE MK 191 MOD 1			
FMU- 85/B	GM PROXIMITY FUZE	146	10	
M 86	SEE M91A2			
M 86E1	PD FUZE	146	1	A
T 86	BOMB FUZE	146	10	
T 86	SEE M86E1			
MK 86	MT FUZE	146	10	
FMU- 86/B	BOMB MT FUZE	146	10	
M 87	PD FUZE	146	10	
T 87	BOMB FUZE	146	10	
T 87	PD FUZE	146	10	
M 88	SEE M91A2			
T 88	BOMB FUZE	146	10	
T 88	SEE M77			
FMU- 88/B	BOMBLET IMPACT FUZE	145	3	N
M 89	PD FUZE	146	1	A
T 89	BOMB PROXIMITY FUZE	146	10	
T 89	PD FUZE	146	10	
MK 89MOD 0	AUX DET FUZE	146	1	N
M 90A1	PI FUZE	146	1	A
T 90E3	SAFETY-ARMING DEVICE	146	6	A
T 90	SEE M30A1			
XM 90	SAFETY-ARMING DEVICE	146	6	A
MK 90 MOD 1	PROXIMITY FUZE	146	1	N
FMU- 90/B	ROCKET PD FUZE	146	10	
M 91A2	BD FUZE	145	1	A
T 91E1	SEE M168E2			
MK 91 MOD 1	PROXIMITY FUZE	146	1	N
BLU- 91/B	AT MINE, FUZE FOR	145	4	AF
FMU- 91/B	TARGET DETECTING DEVICE	146	10	

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
M 92	PROXIMITY FUZE	146	10	
XM 92	SAFETY-ARMING DEVICE	146	1	A
MK 92 MOD 1	PROXIMITY FUZE	146	1	N
BLU- 92/B	AP MINE, FUZE FOR	145	4	AF
FMU- 92/B	PD FUZE	146	10	
M 93	PROXIMITY FUZE	146	10	
T 93	BOMB PROXIMITY FUZE	146	2	A
T 93E8	SAFETY-ARMING DEVICE	146	1	A
T 93	SEE M91			
MK 93 MOD 0	ROCKET PROXIMITY FUZE	145	5	N
FMU- 93/B	BOMB PROXIMITY FUZE	146	10	
M 94	PROXIMITY FUZE	146	10	
T 94	SEE M163, M164, M165			
FMU- 94/B	GM IMPACT FUZE	145	5	N
M 95	PROXIMITY FUZE	146	10	
T 95	SEE M142A1			
FMU- 95/B	BOMB IMPACT FUZE	145	3	N
M 96	PROXIMITY FUZE	146	10	
M 97A1	PROXIMITY FUZE	146	10	
BLU- 97/B	BOMBLET, FUZE FOR	145	3	AF
FMU- 97/B	PROXIMITY FUZE	146	10	
M 98	PROXIMITY FUZE	146	10	
FMU- 98/B	ROCKET PROXIMITY FUZE	145	5	A
M 99	PROXIMITY FUZE	146	10	
FMU- 99/B	DISPENSER MT FUZE	146	10	
M100	SAFETY-ARMING DEVICE	145	6	A
EX 100	SEE MK 176 MOD 1			
MK 100 MOD 0-2	ROCKET PD FUZE	146	5	N
AN-M100A2	BOMB IMPACT FUZE	146	2	N
FMU-100/B	BOMB IMPACT FUZE	146	10	
M101	ROCKET PI FUZE	146	10	
T101	TIME & SQ FUZE	146	10	
EX 101	SEE MK 183 MOD 0			
AN-M101A2	BOMB IMPACT FUZE	146	2	N
FMU-101/B	BOMB IMPACT FUZE	146	10	
T102	PD FUZE	146	10	
EX 102	SEE MK 177 MOD 1			
AN-M102A2	BOMB IMPACT FUZE	146	2	N
FMU-102/B	BOMB IMPACT FUZE	146	10	
T103	PD FUZE	146	10	
AN-M103A2	BOMB IMPACT FUZE	146	2	N
FMU-103/B	BOMBLET IMPACT FUZE	146	10	
T104	SAFETY-ARMING DEVICE	146	8	A
EX 104 MOD 0	ROCKET TIME FUZE	146	5	N
AN-M104	BOMB IMPACT FUZE	146	2	A
FMU-104/B	BOMBLET IMPACT FUZE	146	10	
M105	BOMB IMPACT FUZE	146	2	A
T105	SEE M78			
EX 105	SEE MK 178 MOD 2			
FMU-105/B	BOMB PROXIMITY FUZE	146	10	

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
M106A2	BOMB IMPACT FUZE	146	2	A
M107	BOMB MT FUZE	146	2	
EX 107	ROCKET TIME & SQ FUZE	146	5	N
FMU-107/B	BOMB MT FUZE	146	10	
M108	BOMB IMPACT FUZE	146	2	A
FMU-108/B	GM PROXIMITY FUZE	146	10	
M109	BOMB IMPACT FUZE	146	2	A
T109	PD FUZE	146	10	
XM109	BOMB MT INITIATOR	146	2	A
EX 109	SEE MK 184			
EX 109	SEE MK 188 MOD 1			
FMU-109/B	GM IMPACT FUZE	145	6	N
EX 110A	ROCKET MT FUZE	146	5	N
AN-M110A1	BOMB IMPACT FUZE	146	2	N
FMU-110/B	PROXIMITY FUZE	145	2	AF
M111A2	BOMB MT FUZE	146	2	A
EX 111	ROCKET PD FUZE	146	5	N
FMU-111/B	GM PROXIMITY FUZE	145	6	N
M112A1	BOMB IMPACT FUZE	146	2	N
T112	PD FUZE	146	10	
EX 112	SEE MK 182 MOD 0			
FMU-112/B	BOMB IMPACT FUZE	145	2	AF
M113A1	BOMB IMPACT FUZE	146	2	N
T113	PROXIMITY FUZE	146	10	
XB-113A	SEE MK 255 MOD 0			
FMU-113/B	BOMB PROXIMITY FUZE	145	2	AF
M114	SAFETY-ARMING DEVICE	145	6	A
M114A1	BOMB IMPACT FUZE	146	2	N
T114	PD FUZE	146	10	
FMU-114/B	BOMB IMPACT FUZE	146	10	
M115	BOMB IMPACT FUZE	146	2	N
T115	SEE M500			
FMU-115/B	BOMB TIME FUZE	146	10	
M116	BOMB IMPACT FUZE	146	2	N
T116	MT FUZE	146	10	
FMU-116/B	ROCKET DUMMY FUZE	146	10	
M117	BOMB IMPACT FUZE	146	2	N
T117	BD FUZE	146	10	
FMU-117/B	BOMB IMPACT FUZE	146	2	N
M118	SAFETY-ARMING DEVICE	145	6	A
M118	BOMB FUZE	146	1	A
T118	TIME & SQ FUZE	146	10	
M119	BOMB FUZE	146	10	
T119	SEE M89			
M120	BOOSTER	146	10	
T120	PD FUZE	146	10	
AN-M120A1	BOMB IMPACT FUZE	146	2	N
FMU-120/B	BOMB IMPACT FUZE	146	10	
M121	BOMB IMPACT FUZE	146	2	A
T121	DUMMY FUZE	146	10	

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
FMU-121/B	GM TRAINING DEVICE	146	10	
M122	BOMB FUZE	146	10	
M122	BOOSTER	146	10	
T122	PI FUZE	146	10	
XM122	FIRING DEVICE, DEMOLITION	145	9	A
FMU-122/B	BOMB PROXIMITY FUZE	146	2	AF
M123A1	BOMB LONG DELAY FUZE	146	2	N
T123	SEE M90			
FMU-123/B	BOMB PROXIMITY FUZE	145	2	AF
NOTS123	SEE MK 185			
M124	BOOSTER	146	1	A
M124A1	BOMB LONG DELAY FUZE	146	2	N
T124	PD FUZE	146	10	
FMU-124/B	BOMB IMPACT FUZE	145	2	AF
M125A1	BOOSTER	146	1	A
M125A1	BOMB LONG DELAY FUZE	146	2	N
T125	PD FUZE	146	10	
XB-125A	SEE MK256			
FMU-125/B	GM IMPACT FUZE	145	6	N
T126	DUMMY FUZE	146	10	
AN-M126A1	BOMB IMPACT FUZE	146	2	A
FMU-126/B	SEE FSU-9A/B			
M127	BOMB MT FUZE	146	2	A
T128	PD FUZE	146	10	
XM128	SEE XM74, XM75 DISPENSER			
XW128A	SEE MK 193 MOD 0			
AN-M128	BOMB IMPACT FUZE	146	2	A
FMU-128/B	PD FUZE	145	7	AF
NOTS128	SEE MK 189 MOD 1			
M129	BOMB IMPACT FUZE	146	2	N
T129	PD FUZE	146	10	
FMU-129/B	GM IMPACT FUZE	145	6	N
M130A1	BOMB MT FUZE	146	2	N
T130	PROXIMITY FUZE	146	10	
FMU-130/B	BOMB IMPACT FUZE	145	2	AF
M131A1	BOMB AD FUZE	146	2	N
T131	PI FUZE	146	10	
XM131	AP MINE SYSTEM, FUZE FOR	145	4	A
MK 131	ROCKET PD FUZE	146	5	N
FMU-131/B	GM IMPACT FUZE	145	6	N
M132	BOMB TIME FUZE	146	2	N
T132	PROXIMITY FUZE	146	10	
XM132	AT MINE SYSTEM, FUZE FOR	145	4	A
MK 132 MOD 0	ROCKET PD FUZE	146	5	N
FMU-132/B	GM IMPACT FUZE	145	6	AF
M133	BOMB TIME FUZE	146	2	N
MK 133	ROCKET PD FUZE	146	5	N
FMU-133/B	GM IMPACT FUZE	145	6	AF
M134	BOMB TIME FUZE	146	2	N
T134	DUMMY FUZE	146	10	

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
MK 134 MOD 0	ROCKET TIME FUZE	146	5	N
FMU-134/B	SEE FMU-109/B			
M135A1	BOMB MT FUZE	146	2	A
T135	PD FUZE	146	10	
MK 135	ROCKET PD FUZE	146	5	N
M136A1	BOMB MT FUZE	146	2	A
T136	BD FUZE	146	10	
MK 136	ROCKET PD FUZE	146	5	N
FMU-136/B	MT FUZE	145	5	N
M137	BOMB IMPACT FUZE	146	2	A
T137	BD FUZE	146	10	
MK 137 MOD 0-2	ROCKET PD FUZE	146	5	N
FMU-137/B	SAFETY-ARMING DEVICE	145	6	AF
M138	BOMB MT FUZE	146	2	N
T138	PD FUZE	146	10	
XM138	ROCKET MGMT SUBSYSTEM	145	9	A
FMU-138/B	SEE FMU-131/B			
WOX-138B	SEE MK 346 MOD 0			
T139	PD FUZE	146	10	
MK 139	ROCKET PD FUZE	146	5	N
AN-M139A1	BOMB IMPACT FUZE	146	2	N
FMU-139/B	BOMB IMPACT FUZE	145	2	N
T140	BD FUZE	146	10	
MK 140	BOMB HYDROSTATIC FUZE	146	2	N
AN-M140A1	BOMB IMPACT FUZE	146	2	N
T141	PROXIMITY FUZE	146	10	
MK 141 MOD 0	ROCKET PD FUZE	146	5	N
M142A1	BOMB IMPACT FUZE	146	2	A
T142	CP FUZE	146	10	
NOTS142B	SEE MK 190 MOD 0			
M143	BOMB TIME FUZE	146	10	
T143	BD FUZE	146	10	
XM143	SAFETY-ARMING DEVICE	145	6	A
M144	BOMB MT FUZE	146	2	A
T144	DUMMY FUZE	146	10	
MK 144	ROCKET PD FUZE	146	5	N
M145	SAFETY-ARMING DEVICE	145	6	A
MK 145 MOD 0,1	ROCKET PD FUZE	146	5	N
AN-M145A1	BOMB MT FUZE	146	2	N
T146	PD FUZE	146	10	
MK 146 MOD 1	ROCKET BD FUZE	146	5	N
AN-M146A1	BOMB MT FUZE	146	2	N
M147	ADAPTER BOOSTER	145	2	N
MK 147 MOD 0,1	ROCKET PD FUZE	146	5	N
AN-M147A1	BOMB MT FUZE	146	2	N
M148E1	ADAPTER BOOSTER	145	2	N
M148	BOMB IMPACT FUZE	146	2	A
T148	ROCKET PD FUZE	146	10	
MK 148	ROCKET PD FUZE	146	5	N
M149	BOMB IMPACT FUZE	146	2	A

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T149	SEE M95			
MK 149 MOD 0,1	ROCKET PD FUZE	146	5	N
M150	ADAPTER BOOSTER	145	2	N
M150A1	BOMB IMPACT FUZE	146	2	A
T150E2	PI FUZE	146	10	
M151E2	BOMB IMPACT FUZE	146	2	N
T151	PI FUZE	146	10	
M152A1	BOMB MT FUZE	146	2	N
T152	SEE M93			
MK 152	ROCKET PD FUZE	146	5	N
M153	BOMB MT FUZE	146	2	A
T153	MT SQ FUZE	146	10	
M154	BOMB IMPACT FUZE	146	10	
T154	CP FUZE	146	10	
MK 154 MOD 0,2,3	ROCKET PD FUZE	146	5	N
M155A1	BOMB MT FUZE	146	2	N
T155E2	PD FUZE	146	1	A
MK 155 MOD 0	ROCKET PD FUZE	146	5	N
M156	BOMB IMPACT FUZE	146	2	A
T156	ROCKET BD FUZE	146	10	
MK 156	ROCKET PD FUZE	146	5	N
M157	BOMB IMPACT FUZE	146	2	A
XM157	ARMING ASSEMBLY	146	8	A
MK 157 MOD 0-2	ROCKET BD FUZE	146	5	N
T158	ROCKET BD FUZE	146	10	
MK 158	ROCKET BD FUZE	146	5	N
AN-M158	BOMB IMPACT FUZE	146	2	N
MK 159 MOD 0,1	ROCKET BD FUZE	146	5	N
AN-M159	BOMB IMPACT FUZE	146	2	A
M160	BOMB IMPACT FUZE	146	2	N
T160E6	SEE M404			
MK 160	ROCKET BD FUZE	146	5	N
M161	BOMB IMPACT FUZE	146	2	N
T161	ROCKET BD FUZE	146	10	
MK 161 MOD 0	ROCKET BD FUZE	146	5	N
M162	BOMB IMPACT FUZE	146	2	N
T162	ROCKET PD FUZE	146	10	
MK 162 MOD 0	ROCKET BD FUZE	146	5	N
M163	BOMB IMPACT FUZE	146	2	N
T163	CP FUZE	146	10	
MK 163 MOD 0,1	ROCKET BD FUZE	146	5	N
M164	BOMB IMPACT FUZE	146	2	A
T164	PD FUZE	146	10	
MK 164	ROCKET BD FUZE	146	5	N
M165	BOMB IMPACT FUZE	146	2	N
T165E7	BD FUZE	146	1	A
MK 165 MOD 0	ROCKET BD FUZE	146	5	N
M166E3	BOMB PROXIMITY FUZE	146	2	A
T166	TIME FUZE	146	10	
MK 166 MOD 0-2	ROCKET BD SD FUZE	146	5	N

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
M167	BOMB IMPACT FUZE	146	2	N
T167	PD FUZE	146	10	
M168E2	BOMB PROXIMITY FUZE	146	2	A
T168	PI BD FUZE	146	10	
M169	BOMB IMPACT FUZE	146	2	N
M170	BOMB IMPACT FUZE	146	2	N
MK 170	ROCKET PROXIMITY FUZE	146	5	N
M171	BOMB IMPACT FUZE	146	2	N
T171	PROXIMITY FUZE	146	10	
M172	BOMB IMPACT FUZE	146	2	N
T172	SEE M504			
MK 172 MOD 0-2	ROCKET PROXIMITY FUZE	146	5	N
T173	PI FUZE	146	10	
MK 173 MOD 0-4	ROCKET PROXIMITY FUZE	146	5	N
AN-M173A1	BOMB IMPACT FUZE	146	2	A
M174	BOMB IMPACT FUZE	146	2	A
T174	BD FUZE	146	10	
MK 174 MOD 0-3	ROCKET PROXIMITY FUZE	146	5	N
M175	BOMB IMPACT FUZE	146	2	N
T175E3	CP FUZE	146	1	A
MK 175 MOD 0	SIGNAL HYDROSTATIC FUZE	146	9	N
M176	BOMB IMPACT FUZE	146	2	N
T176E3	SEE M506			
MK 176 MOD 0,1	ROCKET PD FUZE	146	5	N
T177E3	SEE M535			
MK 177 MOD 0,1	ROCKET PD FUZE	146	5	N
AN-M177	BOMB IMPACT FUZE	146	2	N
M178	BOMB IMPACT FUZE	146	2	N
T178E3	SEE M517			
MK 178 MOD 0-2	ROCKET PD FUZE	146	5	N
M179	BOMB IMPACT FUZE	146	2	N
T179	PROXIMITY FUZE	146	10	
MK 179 MOD 0	ROCKET BD FUZE	146	5	N
M180	BOMB IMPACT FUZE	146	2	N
T180	PROXIMITY FUZE	146	10	
MK 180 MOD 0	ROCKET BD FUZE	146	5	N
M181	BOMB IMPACT FUZE	146	2	N
T181	PROXIMITY FUZE	146	10	
MK 181 MOD 0-3	ROCKET PI FUZE	146	5	N
M182	BOMB IMPACT FUZE	146	2	N
T182	PROXIMITY FUZE	146	10	
MK 182 MOD 0	SIGNAL HYDROSTATIC FUZE	146	9	N
M183	BOMB IMPACT FUZE	146	2	N
T183E4	PD FUZE	146	1	A
MK 183 MOD 0	SIGNAL HYDROSTATIC FUZE	146	9	N
M184	BOMB IMPACT FUZE	146	2	N
T184E11	PD FUZE	146	1	A
MK 184	ROCKET PD FUZE	146	5	N
M185	BOMB IMPACT FUZE	146	2	N
T185E3	SEE M524A6			

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
MK 185	ROCKET PD FUZE	146	5	N
M186	BOMB IMPACT FUZE	146	2	N
T186	SEE M524A6			
M187	BOMB IMPACT FUZE	146	2	N
T187	PD FUZE	146	10	
M188	BOMB PROXIMITY FUZE	146	2	A
T188	PD PRACTICE FUZE	146	1	A
T188	SEE XM713			
MK 188 MOD 0, 1	ROCKET PD FUZE	145	5	N
M189	BOMB IMPACT FUZE	146	2	N
T189	PI FUZE	146	10	
MK 189 MOD 0,1	ROCKET PD FUZE	146	5	N
M190	BOMB IMPACT FUZE	146	2	N
T190	SEE M503			
MK 190 MOD 0	ROCKET PI BD FUZE	146	5	N
M191	BOMB IMPACT FUZE	146	2	N
T191E6	PD FUZE	146	1	A
MK 191 MOD 0, 1	ROCKET BD FUZE	145	5	N
M192	BOMB IMPACT FUZE	146	2	N
T192E1	SEE T191E6			
MK 192 MOD 0-2	ROCKET MT FUZE	146	5	N
M193	BOMB IMPACT FUZE	146	2	N
T193	PD FUZE	146	1	A
MK 193 MOD 0	ROCKET MT FUZE	145	5	N
M194	BOMB IMPACT FUZE	146	2	N
T194	PD FUZE	146	1	A
M195	BOMB IMPACT FUZE	146	2	N
T195E11	PD FUZE	146	7	A
M196	BOMB IMPACT FUZE	146	2	A
T196E4	SEE M505A3			
M197	BOMB IMPACT FUZE	146	10	
T197E1	SEE M564			
M198	BOMB MT FUZE	146	2	N
T198E1	PD FUZE	146	1	A
MK 198	ROCKET MT FUZE	146	5	N
T199E5	PD FUZE	146	1	A
M200A1	HAND GRENADE FUZE	146	10	
T200E16	PD FUZE	146	7	A
EX 200 MOD 4	BOMB IMPACT FUZE	146	2	N
M201A1	HAND GRENADE FUZE	145	8	A
M201A1E2	HAND GRENADE FUZE	145	8	A
M201A2	HAND GRENADE FUZE	146	8	A
T201E6	SEE T200E13			
M202	RIFLE GRENADE FUZE	146	10	
T202	PROXIMITY FUZE	146	1	A
M203	RIFLE GRENADE FUZE	146	10	
T203	SEE M86E1			
M204A2	HAND GRENADE FUZE	146	8	A
T204	PD FUZE	146	1	A
M205A2	HAND GRENADE FUZE	146	8	A

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T205	PD FUZE	146	10	
M206A2	HAND GRENADE FUZE	145	8	A
T206E4	PD FUZE	146	1	A
M207A1	FLOATING SMOKE POT FUZE	145	9	A
T207	PD FUZE	146	10	
T208	SEE M509			
T209E3	PI BD FUZE	146	1	A
M210	INCENDIARY FUZE	146	9	A
T210E2	PD FUZE	146	1	A
M211	RIFLE GRENADE FUZE	146	8	A
T211	PD FUZE	146	10	
M212	GRENADE FUZE	146	10	
T212	PD FUZE	146	1	A
M213	HAND GRENADE FUZE	145	8	A
T213	PD FUZE	146	10	
T214	ROCKET MT SQ FUZE	146	5	A
XM214	HAND GRENADE FUZE	146	10	
M215	HAND GRENADE FUZE	146	8	A
T215	SEE M511			
M216	PD FUZE			
T216	PD FUZE	146	1	A
M217	HAND GRENADE FUZE	146	8	A
T217	PD FUZE	146	10	
M218	BOMBLET TIME FUZE	146	3	A
T218	PD FUZE	146	10	
M219A1	GRENADE FUZE	145	3	A
M219	BOMBLET IMPACT FUZE	146	3	A
T219	PD SD FUZE	146	1	A
ANMK219	BOMB IMPACT FUZE	146	2	N
M220	BOMB TIME FUZE	146	2	A
T220	SEE M510			
T221	BD FUZE	146	1	A
XM221	GENERAL PURPOSE GRENADE FUZE	146	3	A
MK 221	BOMB IMPACT FUZE	146	2	N
T222	PI BD FUZE	146	1	A
XM222	GENERAL PURPOSE GRENADE FUZE	146	3	A
M223	GRENADE FUZE	145	3	A
T223	PD FUZE	146	10	
MK 223	BOMB IMPACT FUZE	146	2	N
M224	GRENADE FUZE	145	3	A
T224	PI BD FUZE	146	1	A
T225	SEE M515			
XM226	HAND GRENADE FUZE	146	8	A
M226	HAND GRENADE FUZE			
T226	SEE M513			
M227	HAND GRENADE FUZE	145	8	A
T227	SEE M514			
MK 227	BOMB IMPACT FUZE	146	2	N
M228	HAND GRENADE FUZE	145	8	A
T228	PD FUZE	146	1	A

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T228E1	SEE M520			
ANMK228	BOMB IMPACT FUZE	146	2	N
M229	GRENAD E FUZE	146	10	
T229	PD SD FUZE	146	10	
T230	PD FUZE	146	1	A
XM230	GRENAD E FUZE	145	3	A
MK 230 MOD 48	BOMB HYDROSTATIC FUZE	146	2	N
T231E3	PD FUZE	146	7	A
T232	DUMMY FUZE	146	10	
T233	PROXIMITY FUZE	146	10	
T234E2	PD SD FUZE	146	1	A
T235	PI BD FUZE	146	1	A
T236	PI BD FUZE	146	1	A
T237E1	SEE M508A1			
MK 237	BOMB LONG DELAY FUZE	146	10	
T238	TIME FUZE	146	7	A
MK 238	BOMB LONG DELAY FUZE	146	10	
T239	DUMMY FUZE	146	10	
T240	MT SQ FUZE	146	1	A
T241	PD FUZE	146	10	
T242	DUMMY FUZE	146	10	
T243	PD SD FUZE	146	10	
MK 243 MOD 0	BOMB IMPACT FUZE	146	2	N
T244	PD FUZE	146	1	A
MK 244 MOD 1	BOMB IMPACT FUZE	146	2	N
T245	PD FUZE	146	1	A
T246	PD FUZE	146	1	A
XM246 PROJ	SD FOR	146	7	A
T247	SEE M521			
MK 247 MOD 0	BOMB IMPACT FUZE	146	2	N
T248	PD FUZE	146	10	
T249	PD FUZE	146	10	
T250E1	MT SQ FUZE	146	1	A
T251	PD FUZE	146	10	
T252	MT FUZE	146	1	A
T253	PD FUZE	146	7	A
T254	PD FUZE	146	10	
T255	DUMMY FUZE	146	10	
MK 255 MOD 0	BOMB IMPACT FUZE	146	2	N
T256	TIME FUZE	146	10	
MK 256	BOMB MT FUZE	146	2	N
T257	BD FUZE	146	1	A
MK 257 MOD 0	BOMB PROXIMITY FUZE	146	2	N
T258	SEE T264E9			
T259E4	SEE T263E14			
T262	PD FUZE	146	7	A
T263E14	PD FUZE	146	7	A
T264E9	PD FUZE	146	7	A
T265	PD FUZE	146	1	A
T266	PROXIMITY FUZE	146	10	

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T267	PI BD FUZE	146	1	A
T268	PD SD FUZE	146	10	
T269	PD SD FUZE	146	10	
T270	PD SD FUZE	146	7	A
T271	PD SD FUZE	146	1	A
T272	PD SD FUZE	146	1	A
T273	PD SD FUZE	146	1	A
T274	ROCKET MT SQ FUZE	146	5	A
T275	SEE M562			
T275E1	SEE M565			
T276	PD SD FUZE	146	1	A
T277	PI BD FUZE	146	1	A
T278E8	SEE M530A1			
T279	PROXIMITY FUZE	146	1	N
T280	PI BD FUZE	146	1	A
T281	PD SD FUZE	146	10	
T282	ET SQ FUZE	146	1	A
T283	SEE XM587E1			
T284	MT SQ FUZE	146	1	A
T285	PD FUZE	146	1	A
T286E1	SEE M518			
T287	PD FUZE	146	1	A
T289	MT SQ FUZE	146	1	A
T290	TIME FUZE	146	10	
T291E3	PD FUZE	146	1	A
T292	PD FUZE	146	7	A
T293	PROXIMITY FUZE	146	1	A
T294	PROXIMITY FUZE	146	1	A
T295	ET SQ FUZE	146	10	
T296	BD FUZE	146	1	A
T297	PD FUZE	146	1	A
T298	PD FUZE	146	1	A
T299	BD FUZE	146	1	A
T300	BD SD FUZE	146	7	A
T301	BD FUZE	146	7	A
T302	MT SQ FUZE	146	1	A
T303	BD FUZE	146	1	A
MK 303 MOD 2	GM PROXIMITY FUZE	146	10	
MK 304 MOD 2	GM IMPACT FUZE	146	6	N
T305	PROXIMITY FUZE	146	1	A
T306	BD SD FUZE	146	7	A
T307	BD FUZE	146	7	A
T308	BD FUZE	146	7	A
T309	SEE M522			
MK 310 MOD 0	GM IMPACT FUZE	146	6	N
T311	PD FUZE	146	1	A
T312	PD FUZE	146	1	A
MK 312 MOD 0.1	GM IMPACT FUZE	146	6	N
MK 312 MOD 2	GM IMPACT FUZE	146	6	N
MK 312 MOD 3	GM IMPACT FUZE	146	6	N

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T313	PD FUZE	146	1	A
T314	PD FUZE	146	1	A
T315	PD FUZE	146	1	A
T316E1	SEE M543			
T317	MT FUZE	146	10	
T318	MT SQ FUZE	146	10	
T319	SEE M519			
T320	PD FUZE	146	7	A
T321	PD FUZE	146	7	A
T322	PD FUZE	146	7	A
EX 322	GM PROXIMITY FUZE	146	10	
T323	PD FUZE	146	7	A
T324	PI BD FUZE	146	1	A
T325	BD FUZE	146	1	A
T326	BD FUZE	146	1	A
T327E1	BD FUZE	146	1	A
MK 327 MOD 0	BOMB PROXIMITY FUZE	146	10	
T328	PD FUZE	146	7	A
MK 328 MOD 0	GM IMPACT FUZE	146	6	N
T329	PD SD FUZE	146	7	A
MK 330 MOD 2	GM IMPACT FUZE	145	6	N
MK 330 MOD 0	GM IMPACT FUZE	146	6	N
MK 330 MOD 1	GM IMPACT FUZE	146	6	N
T331	PD FUZE	146	1	A
T332	ROCKET MT FUZE	146	5	A
MK 334 MOD 0	GM IMPACT FUZE	145	6	N
T335	PROXIMITY FUZE	146	1	A
EX 335 MOD 0	ROCKET PROXIMITY FUZE	146	5	N
T336E7	SEE M525A1			
MK 336 MOD 0	MT FUZE	146	1	N
T337	BD FUZE	146	1	A
EX 337 MOD 0	PROXIMITY FUZE	146	1	N
T338	PD FUZE	146	1	A
EX 338	SEE MK 338 MOD 0			
MK 338 MOD 0	PROXIMITY FUZE	146	1	N
T339	PD FUZE	146	1	A
MK 339 MOD 0,1	DISPENSER MT FUZE	145	2	N
T341	TIME FUZE	146	10	
T342E1	SEE M543			
MK 342 MOD 1	MT FUZE	145	1	N
T343	SEE M530A1			
MK 343 MOD 0	BOMB IMPACT FUZE	145	2	N
T344	MT FUZE	146	10	
MK 344 MOD 0	BOMB IMPACT FUZE	145	2	N
MK 344 MOD 1	BOMB IMPACT FUZE	145	2	N
T345	MT FUZE	146	10	
T346E7	PD FUZE	146	7	A
MK 346 MOD 0	BOMB LONG DELAY FUZE	145	2	N
MK 347 MOD 0	BOMB IMPACT FUZE	146	2	N
MK 349 MOD 1	MT FUZE	146	1	N

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
MK 352 MOD 2	ROCKET PD FUZE	145	5	N
EX 353		146	10	
EX 354		146	10	
T355	MT FUZE	146	1	A
EX 355	PD FUZE	146	10	
EX 356		146	10	
MK 357 MOD 1	FUZE ADAPTER ASSY	146	1	N
MK 358	SEE MK 357 MOD 1			
T359	SEE M551			
MK 359	SEE MK 357 MOD 1			
MK 360 MOD 0 & 1	FUZE ADAPTER ASSY	145	1	N
MK 361	SEE MK 357 MOD 1			
MK 362	SEE MK 357 MOD 1			
T363	BD FUZE	146	7	A
MK 363 MOD 0	PD FUZE	146	1	N
T364	BD FUZE	146	7	A
EX 364	ROCKET TIME FUZE	146	10	
MK 365	SEE MK 357 MOD 1			
MK 366	SEE MK 357 MOD 1			
MK 367	SEE MK 357 MOD 1			
T368E2	SEE XM718			
EX 368	TARGET DETECTING DEVICE	146	10	
T369	SEE M563			
MK 369	SEE MK 357 MOD 1			
T370E1	PI BD FUZE	146	1	A
MK 370	SEE MK 357 MOD 1			
MK 371	SEE MK 357 MOD 1			
EX 372	HAND GRENADE FUZE	146	10	
EX 373	AUX DET FUZE	146	10	
MK 374 MOD 0	BOMB IMPACT FUZE	146	1	N
MK 375	SEE FMU-136			
MK 376 MOD 0	BOMB IMPACT FUZE	145	2	N
EX 377	SEE FMU-83/B			
MK 378 MOD 0, 1	ROCKET PROXIMITY FUZE	146	5	N
MK 379 MODS 0, 1	AUX DET FUZE	145	1	N
EX 380 MOD 0	PD FUZE	146	1	N
EX 382	SEE FMU-88/B			
MK 383 MOD 0	GM IMPACT FUZE	146	6	N
MK 384 MOD 0	AUX DET FUZE	146	1	N
MK 387 MODS 0-2	PROXIMITY FUZE	146	5	N
MK 392 MOD 0	MT FUZE	146	1	N
MK 393 MOD 0	MT FUZE	145	1	N
EX 394	HAND GRENADE FUZE	146	10	
MK 395 MODS 0, 1	AUX DET FUZE	145	1	N
MK 396 MOD 0	AUX DET FUZE	146	1	N
EX 397	PROXIMITY FUZE	146	10	
EX 398	GM CONTACT FUZE	146	10	
MK 399 MOD 0	PD FUZE	145	1	N
M400	ROCKET BD FUZE	146	5	A
MK 400	PROXIMITY FUZE	146	1	N

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
M401	ROCKET BD FUZE	146	5	A
MK 401	GM PROXIMITY FUZE			
M402A2	ROCKET PROXIMITY FUZE	146	5	N
EX 402	PROXIMITY FUZE	146	1	N
M403A2	ROCKET PROXIMITY FUZE	146	5	A
MK 403 MOD 0	MT PD FUZE	145	1	N
M404A2	ROCKET BD FUZE	146	5	A
MK 404 MOD 0	PROXIMITY FUZE	145	1	N
M405	SEE M404A2			
MK 405	SEE MK 339 MOD 0,1			
M406	ROCKET PI BD FUZE	146	5	A
EX 406	PROXIMITY FUZE			
M407	SEE MK 181 MOD 0-3			
MK 407 MOD 1	PD FUZE	145	1	N
M408E1	ROCKET PI BD FUZE	146	5	A
EX 408	PROXIMITY FUZE	146	10	
M409	ROCKET PI BD FUZE	146	5	A
EX 409	PROXIMITY FUZE	146	10	
M410	SEE M409			
EX 410	PROXIMITY FUZE	146	10	
M411	ROCKET MT FUZE	146	5	A
MK 411 MOD 0	AUX DET FUZE	145	1	N
M412A1	ROCKET PI BD FUZE	145	5	A
EX 412	PROXIMITY FUZE	146	10	
XM413	ROCKET PROXIMITY FUZE	146	5	A
MK 413 MOD 0	AUX DET FUZE	145	1	N
M414A1	ROCKET PROXIMITY FUZE	146	5	A
M415	ROCKET PD FUZE	146	5	A
MK 415 MOD 0	MT PD FUZE	145	1	N
XM416	ROCKET MT FUZE	146	5	A
EX 416	ET FUZE	145	1	N
M417	ROCKET PD FUZE	146	5	A
EX 417 MOD 0	PROXIMITY FUZE	145	1	N
M418	ROCKET MT FUZE	146	10	
EX 418 MOD 0	PROXIMITY FUZE	145	1	N
M419	ROCKET MT FUZE	146	10	
M420	SEE M421			
M421	ROCKET MT FUZE	146	5	A
XM422	ROCKET MT TRAINING FUZE	146	10	
M423 ALT	ROCKET PD FUZE	145	5	A
M423	ROCKET PD FUZE	146	5	A
XM424	SEE M411			
XM425	ROCKET PROXIMITY FUZE	146	5	A
XM426E4	ROCKET MT FUZE	146	5	A
M427 ALT	ROCKET PD FUZE	145	5	A
M427	ROCKET PD FUZE	146	5	A
XM428	SEE M414A1			
M429	ROCKET PROXIMITY FUZE	145	5	A
XM430	ROCKET PROXIMITY FUZE	146	10	
M431	ROCKET PD FUZE	145	5	A

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
XM432	ROCKET ET FUZE	146	5	A
M433	ROCKET MULTI-OPTION FUZE	145	5	A
M434	ROCKET BD FUZE	145	5	A
M435	SEE M423			
XM436	SEE WDU-4/A WARHEAD			
XM437	ROCKET FUZE	146	10	
M438	ROCKET PI BD FUZE	145	5	A
M439	ROCKET ET FUZE	145	5	A
M440	ROCKET PD FUZE	145	5	A
XM441	ROCKET BD FUZE	146	10	
M442	ROCKET PYRO TIME FUZE	145	5	A
XM443	ROCKET ET FUZE	145	5	A
XM444	ROCKET MULTI-OPTION FUZE	145	5	A
XM445	ROCKET ET FUZE	145	5	A
M446	ROCKET PYRO TIME FUZE	145	5	A
M500A1	MT SQ FUZE	146	1	A
M501A1	MT SQ FUZE	146	1	A
M502A1	MT SQ FUZE	146	1	A
M503A2	PD FUZE	146	1	A
M504A2	PROXIMITY FUZE	146	1	N
M505A3	PD FUZE	145	7	A
M505A3E2	PD FUZE	145	7	AF
M506	MT SQ FUZE	146	1	A
M507	PD FUZE	146	1	A
M508A1	PD FUZE	146	1	A
M509A2	PIBD FUZE	145	1	A
M509A2E1	PIBD FUZE	145	1	A
M510	MT SQ FUZE	146	1	A
M511	MT FUZE	146	1	A
M512	MT FUZE	146	10	
M513	PROXIMITY FUZE	146	1	N
M514	PROXIMITY FUZE	146	1	N
M514A3	PROXIMITY FUZE	146	1	A
M515	PROXIMITY FUZE	146	1	N
M516	PROXIMITY FUZE	146	1	N
M517	PROXIMITY FUZE	146	1	A
M518A1	MT SQ FUZE	146	1	A
M519	PD FUZE	146	1	A
M520A1	MT SQ FUZE	146	1	A
M521	PD FUZE	146	1	A
M522	MT SQ FUZE	146	1	A
M523	MT SQ FUZE	146	10	
M524A1	PD FUZE	146	1	A
M525	PD FUZE	146	1	A
M526A1	PD FUZE	146	1	A
M526A2E1	PD FUZE	146	1	A
M527B1	PD FUZE	146	1	A
M528	SEE M505A3			
M529	MT SQ FUZE	146	10	
M530A1	PIBD FUZE	146	1	A

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
M531	SEE M526			
M532	PROXIMITY FUZE	146	1	A
M533	PD FUZE	146	7	A
M534A1	BD FUZE	146	1	A
M535	PD FUZE	146	1	A
M536A1	PD FUZE	146	7	A
XM537	PD FUZE	146	7	A
XM538E1	PD FUZE	146	7	A
M539	PIBD FUZE	146	1	A
XM540	MT FUZE	146	1	A
XM541	SEE M539			
M542	MT FUZE	146	10	
XM543	MT FUZE	146	1	A
XM544	PD FUZE	146	10	
XM545	DUMMY FUZE	146	10	
XM546	PROXIMITY FUZE	146	10	
XM547	MT FUZE	146	10	
M548	MTSQ FUZE	146	1	A
M549	PIBD FUZE	145	7	A
M550	PIBD FUZE	145	7	A
M551	PD FUZE	145	7	A
M552	PD FUZE	146	10	
XM553E1	SEE M534A1			
XM554	MT SQ FUZE	146	10	
XM555	PROXIMITY TRAINING FUZE	146	10	
XM556	MTSQ FUZE	146	10	
M557	PD FUZE	146	1	A
M557E1	PD FUZE	146	1	A
XM558	MT FUZE	146	1	A
XM559E1	PI BD FUZE	146	1	A
XM560	MTSQ FUZE	146	1	A
XM561	TIME & SQ FUZE	146	1	A
M562	MTSQ FUZE	146	1	A
M563	MT FUZE	146	1	A
M564	MT SQ FUZE	145	1	A
M565	MT FUZE	145	1	A
XM566	PD FUZE	146	1	A
M567	PD FUZE	145	1	A
XM568	MT FUZE	146	1	A
XM569	PI BD FUZE	146	1	A
XM570	MT FUZE	146	1	A
M571	MT FUZE	146	1	A
M572	PD FUZE	146	1	A
M572E1	PD FUZE	146	1	A
M572A2	SEE M739			
XM573	SEE M62A2			
XM574	ET FUZE	146	1	A
XM575	MTSQ FUZE	146	10	
M576	PD FUZE	146	10	
M577	MTSQ FUZE	145	1	A



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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
M578A1	BD FUZE	146	1	A
XM579	PI BD FUZE	146	7	A
XM580	SEE M594			
XM581E1	PD FUZE	146	7	A
M582	MTSQ FUZE	145	1	A
XM583	PROXIMITY FUZE	146	1	A
XM584	ET FUZE	146	1	A
XM585E4	PD FUZE	146	1	A
XM586	NOT ASSIGNED			
M587	ET FUZE	145	1	A
XM588	PROXIMITY FUZE	146	1	A
XM589	PROXIMITY FUZE	146	1	A
XM590E2	TIME FUZE	146	2	A
M591	MT FUZE	146	1	A
M592	MT FUZE	146	1	A
XM593E1	PD FUZE	146	1	A
M594	PD SD FUZE	145	7	A
XM595	MT FUZE	146	10	
M596	PROXIMITY FUZE	146	7	A
XM597	PD FUZE	146	1	A
XM598	SEE M526A2E1			
XM599	MT FUZE	146	1	A
M600	AT MINE FUZE	146	10	
M601	AT MINE FUZE	146	10	
M602	AT MINE FUZE	146	10	
M603	AT MINE FUZE	145	4	A
M604	AT MINE PRACTICE FUZE	146	4	A
M605	MINE COMBINATION FUZE	145	4	A
M606	AT MINE FUZE	145	4	A
M607	AT MINE FUZE	145	4	A
M608	AT MINE FUZE	146	4	A
M609	AT MINE INFLUENCE FUZE	146	4	A
XM610	AT MINE FUZE	146	10	
XM611	AP MINE COMBINATION FUZE	146	4	A
M612	AT MINE FUZE	146	4	A
XM613	AT MINE FUZE	146	10	
XM614	AT MINE FUZE	146	10	
XM615	AT MINE FUZE	146	10	
M616	AT MINE INFLUENCE FUZE	146	4	A
XM617	AP MINE INFLUENCE FUZE	146	4	A
XM618	AT MINE INFLUENCE FUZE	146	10	
M619	AT MINE INFLUENCE FUZE	146	4	A
XM620	MINE FUZE	146	10	
XM621	ANTI DISTURB DEVICE	146	4	A
XM622	SEE M56 SYSTEM			
XM623	AT MINE FUZE			
M692/731	PROJECTILE, FUZE FOR MINE FOR	145	4	A
M700	TIME FUZE	146	10	
T702E1	BOMB PROXIMITY FUZE	146	2	A
T704	BOMB PROXIMITY FUZE	146	2	A

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FUZE NUMBER	TYPE	HANDBOOK	CHAPTER	SERIES
T708	SEE M169			
T709	SEE M904E2			
M711	MT FUZE	146	1	A
XM712E2	PD FUZE	146	1	A
XM713	SEE M524A6			
XM714	PD SD FUZE	146	7	A
XM715	MT FUZE	146	9	A
M716	PD FUZE	146	1	A
M717	PD FUZE	146	1	A
M718/741 PROJ	AT PROJECTILE, FUZE FOR	145	4	A
XM718	PROXIMITY FUZE	146	1	A
M719	PD FUZE	146	1	A
M720E1	PD FUZE	146	1	A
XM721	MT FUZE	146	10	
XM722	PD SD FUZE	146	7	A
XM723E1	PD FUZE	146	1	A
M724	ET FUZE	145	1	A
XM725	BD FUZE	146	10	
XM726	SEE M577			
M727	PROXIMITY FUZE	146	10	
M728	PROXIMITY FUZE	146	1	A
XM729	PD FUZE	146	10	
T730	SEE M198			
T730E4	SEE M907			
XM730	SEE M735			
XM731	SEE M735			
M732	PROXIMITY FUZE	145	1	A
M733	BASE IMPACT FUZE	146	10	
M734	MULTI-OPTION FUZE	145	1	A
M735	PROXIMITY FUZE	146	10	
M736	SEE M735			
T736	BOMB MT FUZE	146	2	A
XM737	IMPACT FUZE	146	3	A
XM737	GRENADE IMPACT FUZE	146	3	A
T738	SEE M172			
XM738 (FRONT)	PIBD FUZE	145	5	A
XM738 (REAR)	BD FUZE	145	5	A
M739	PD FUZE	145	1	A
T739	SEE M184			
M740	PIBD FUZE	145	1	A
T740	SEE M185			
XM741	MULTI-OPTION FUZE	145	1	A
XM742	ET FUZE	146	1	A
XM743	SEE M757			
M744	SEE M724			
XM745	MULTIOPTION PRACTICE FUZE	145	1	A
XM746	SEE M747			
T747	SEE M178, M179, M180			
XM747E2	PD PRACTICE FUZE	145	1	A
XM748	PD, PRACTICE FUZE	145	1	A

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T750E2	SEE M910			
XM750	ET FUZE	145	5	A
XM751	MULTIOPTION PRACTICE FUZE	145	1	A
XM752	SEE XM752			
XM753	SEE M762			
XM754	PIBD FUZE	145	5	A
XM755	PD SD FUZE	145	7	A
XM756	SEE M755			
XM757	PD SD FUZE	145	7	A
M758	PD SD FUZE	145	7	A
M759	PI BD FUZE	145	7	A
T759E1	SEE M190			
T760E1	SEE M191			
T761E1	SEE M192			
XM762	ET FUZE	145	1	A
T763	BOMB ET FUZE	146	2	A
XM763	PI BD FUZE	145	1	A
XM764	PIBD FUZE	145	1	A
T765	SEE M188			
XM765	PI BD FUZE	145	1	A
T766	BOMB PROXIMITY FUZE	146	2	A
T768	SEE M913			
T770	SEE M903			
T771	SEE M905			
T777	SEE M900			
T778	SEE M193			
T779	BOMB PROXIMITY FUZE	146	2	A
T781	SEE M181			
T782	SEE M182			
T783	SEE M183			
T784	SEE M901, M908			
T785	SEE M902, M909			
T787E4	BOMB LONG DELAY FUZE	146	2	A
T788E3	SEE M906			
T789	SEE M189			
T791	SEE M194			
T792	SEE M195			
T796	BOMB PROXIMITY FUZE	146	2	A
M800	GM BD FUZE	146	6	A
XM801	GM BD SD FUZE	146	10	
XM802	GM BD SD FUZE	146	6	A
XM803	GM IMPACT FUZE	146	10	
XM804E1	GM IMPACT FUZE	146	6	A
M805	SAFETY-ARMING DEVICE	146	6	A
XM806	GM PROXIMITY FUZE	146	10	
M807	GM FUZE	146	10	
XM808	GM FUZE	146	10	
XM809	GM MT FUZE	146	10	
XM810	GM PROXIMITY FUZE	146	10	
M811	GM ET FUZE	145	6	A



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XM812	GM IMPACT FUZE	146	6	A
XM813	SAFETY-ARMING DEVICE	146	6	A
M814	GM IMPACT FUZE	146	6	A
XM815	GM IMPACT FUZE	146	6	A
M816	SEE M811			
M817	TARGET DETECTING DEVICE	145	6	A
XM818E1	GM PROXIMITY FUZE	145	6	A
M819	GM ET PRACTICE FUZE	146	6	A
XM820	GM IMPACT FUZE	145	6	A
M821	TARGET DETECTING DEVICE	145	6	A
M900	BOMB IMPACT FUZE	146	10	
M901	SEE M908			
M902	SEE M909			
M903	BOMB AD FUZE	146	2	N
M904E4	BOMB IMPACT FUZE	145	2	N
M905	BOMB IMPACT FUZE	146	2	N
M906	BOMB IMPACT FUZE	146	2	N
T906	BOMB ET FUZE	146	2	A
M907	BOMB MT FUZE	146	2	N
M908	BOMB MT FUZE	146	2	N
T908E4	BOMB IMPACT FUZE	146	2	A
M909	BOMB MT FUZE	146	2	N
M910	BOMB PROXIMITY FUZE	146	2	N
XM911	BOMBLET FUZE	146	10	
M912	SEE M212			
M913	BOMB PROXIMITY FUZE	146	2	N
M914E1	BOMB PROXIMITY FUZE	146	2	N
XM915	SEE M219			
XM916	BOMB DELAY FUZE	146	10	
XM917	SEE BLU- 7A/B BOMBLET			
M918	BOMB IMPACT FUZE	146	10	
XM919	BOMB MT FUZE	146	10	
XM920E2	BOMB IMPACT FUZE	146	10	
XM921	BOMB IMPACT FUZE	146	10	
XM922	BOMBLET IMPACT FUZE	146	3	A
XM923	BOMB IMPACT FUZE	146	10	
XM924	BOMB IMPACT FUZE	146	10	
XM925	BOMB IMPACT FUZE	146	10	
XM926	BOMBLET AD FUZE	146	10	
XM927	BOMBLET AD FUZE	146	10	
XM928	BOMBLET IMPACT FUZE	146	3	A
XM929	BOMB IMPACT FUZE	146	10	
XM930	BOMB MT FUZE	146	10	
M931	SEE M577			
XM932	SEE XM441			
XM933	BOMB MT FUZE			
M934	GM BD FUZE	145	6	A
XM935	PD FUZE	145	1	A
XM936	SEE XM935			
M990	BOMB IMPACT FUZE	146	2	N

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T1008	HAND GRENADE FUZE	146	10	
T1010	RIFLE GRENADE FUZE	146	10	
T1011E2	SEE M213			
T1011E3	SEE M215			
T1012E1	SEE M217			
T1013	HAND GRENADE FUZE	146	10	
T1014E1	SEE M10A3, M211			
T1015	HAND GRENADE FUZE	146	8	A
T1016	HAND GRENADE FUZE	146	10	
T1017	HAND GRENADE FUZE	146	10	
T1018	HAND GRENADE FUZE	146	10	
T1019	HAND GRENADE FUZE	146	10	
T1020	HAND GRENADE FUZE	146	8	A
T1021	RIFLE GRENADE FUZE	146	8	A
T1022E2	RIFLE GRENADE FUZE	146	8	A
T1023	RIFLE GRENADE FUZE	146	8	A
T1025	HAND GRENADE FUZE	146	8	A
XM1133	DEMOLITION KIT FUZE	146	5	A
XM1134	DEMOLITION KIT FUZE	146	5	A
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Custodians:
Army - AR
Navy - OS
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Project No:
1390-0291