

HANDBOOK
OF
FOREIGN FUZES

FOREWORD

This handbook is primarily intended to serve as a recognition aid for HALO EOD Operators, involved in UXO clearance. It attempts to give the operator details of the most common fuze types currently found within those countries currently being assisted by the HALO Trust programmes.

It should be stressed that it is not an attempt to make a complete inventory over FSU / Chinese/ NATO Fuzes and aircraft bombs. Instead it is a practical handbook for field use, when the operators are facing the most common types of ammunition.

The handbook does not in itself qualify the operator to dispose of the described devices. Proper EOD qualifications should still be fulfilled. Many of the described procedures are untested, but are based on the best technical data available.

Peter Williams
EOD Technical Advisor
HALO Trust
2002

1. ARTILLERY FUZES

M 5 – FSU

LENGTH:		MAX DIA:	40.00 mm
Overall:	66.00 mm		1.57 in
	2.60 in		
Exposed	35.00 mm	OVERALL WT:	299.38 g
	1.38 in		10.56 oz

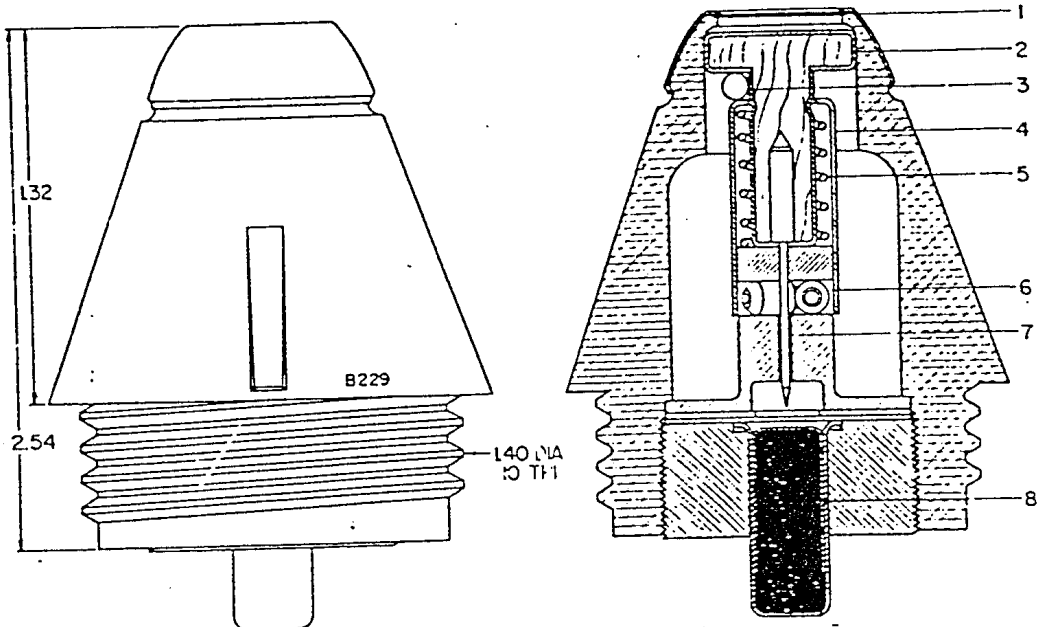
MATERIAL: Steel and bakelite

ORD USED WITH: Mortar projectiles

COMMENTS: This fuze is the sanitized version of the M-5. Instantaneous.



PD Model V-229



Fuze Data:

Type: Impact
Model: V-229
Body Material: Plastic
Weight: 163g
Markings: B-229
Length: 64.5mm

Using Weapons:

122mm Howitzer M1938

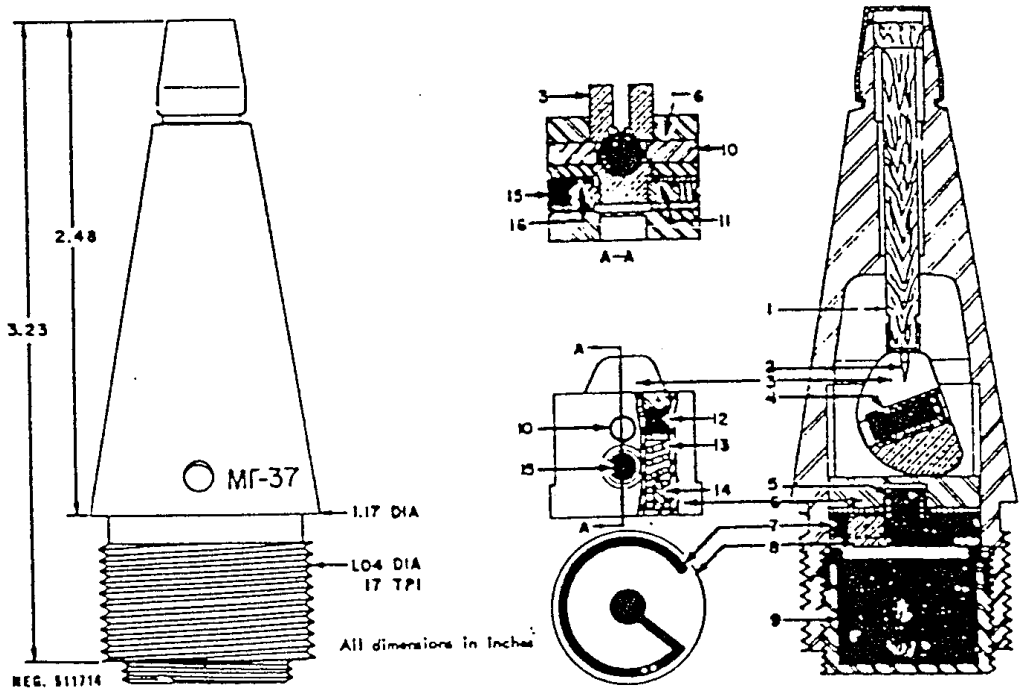
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Spring, Locking Ball, and Safety Rollers

Using Projectiles:

122mm HEAT OP 460A

PD MG-37



Fuze Data:

Type: Impact, Self-Destroying
Model: MG-37
Body Material: Steel
Weight: 172g
Markings: ;э - **37**
Length: 82.5mm

Using Weapons:

37mm, Antiaircraft Gun M1939

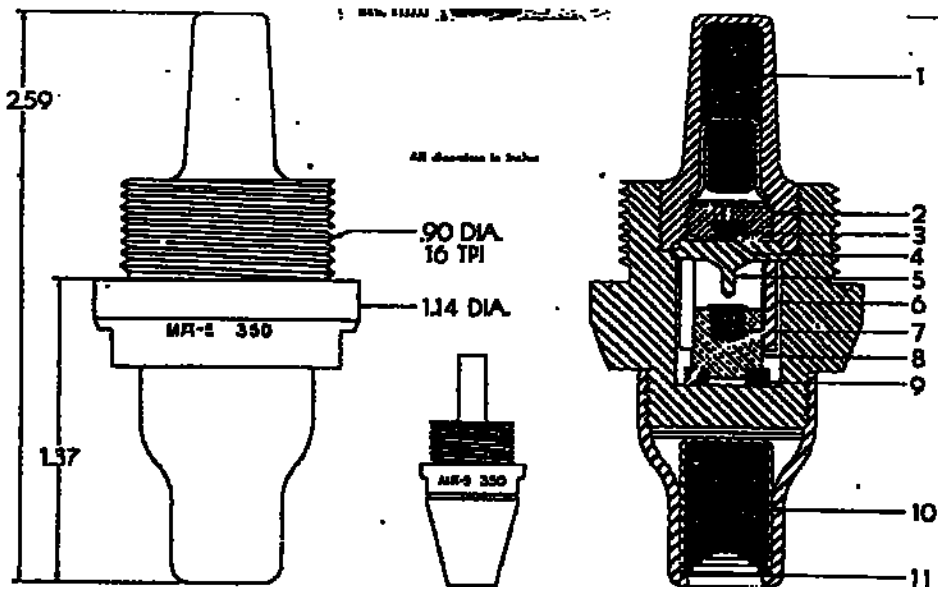
Functional Data:

Arming Method: Setback and spin
Self-destruct Method: Powder Train
Safety Device: Out of live Detonator

Using Projectiles:

37mm FRAG-T OR-167
37mm FRAG-T OR-167 N

BD MD-5



Fuze Data:

Type: Impact
Model: MD-5
Body Material: Steel
Weight: 122.4g
Markings: mA 5-350
Length: 64.5mm

Using Weapons:

45mm Antitank Gun 1942
ASU-57 Assault Gun
57mm Antitank Gun
76mm Field Gun M1942
SU-76 Support Gun

Functional Data:

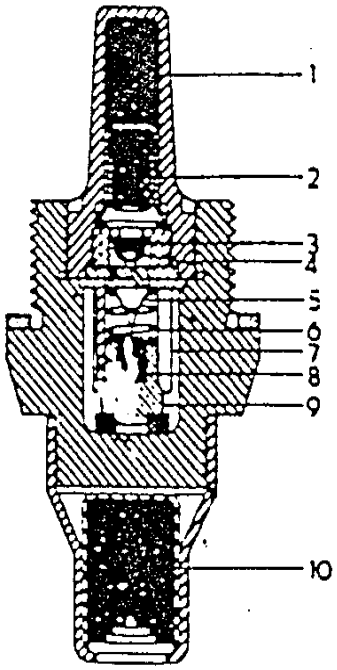
Arming Method: Setback
Self-destruct Method: None
Safety Device: Setback

Using Projectiles:

45mm, API-T BZR-240
57mm, AP-T,BR-271
76mm, AP-T, BR-350

BD MD-7





Fuze Data:

Type: Impact
Model: MD-7
Body Material: Steel
Weight: 140.6g
Markings: MD-7
Length: 66.2mm

Using Weapons:

45mm Antitank Gun 1942
ASU-57 Assault Gun
57mm Antitank Gun
76mm Field Gun M1942
SU-76 Support Gun

Functional Data:

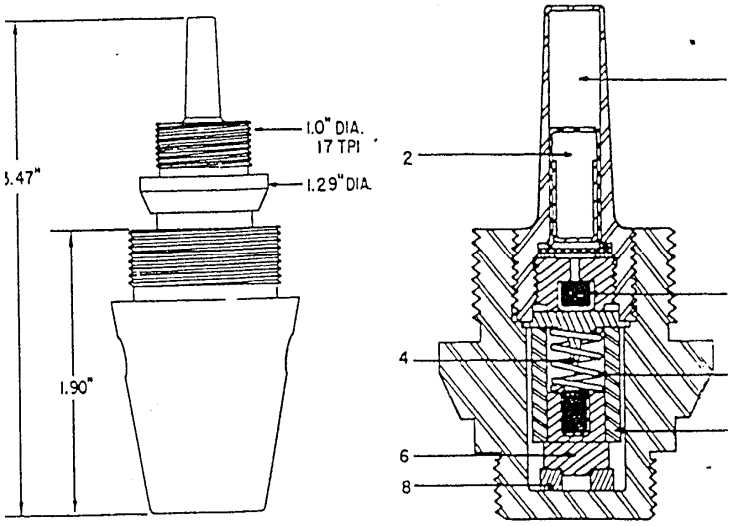
Arming Method: Setback
Self-destruct Method: None
Safety Device: Setback

Using Projectiles:

57mm,AP-T,BR-271
76mm,AP-T, BR-350,
BR350A,BR-350B
85mm,AP-T,BR-365 and BR-365K
152mm,AP-t,BR-540 and BR-540B

BD MD-8





Fuze Data:

Type:	Impact
Model:	MD-8
Body Material:	Steel
Weight:	348.7g
Markings:	A-8 3260
Length:	64.5mm

Functional Data:

Arming Method:	Setback
Self-destruct Method:	None
Safety Device:	Setback

Using Weapons:

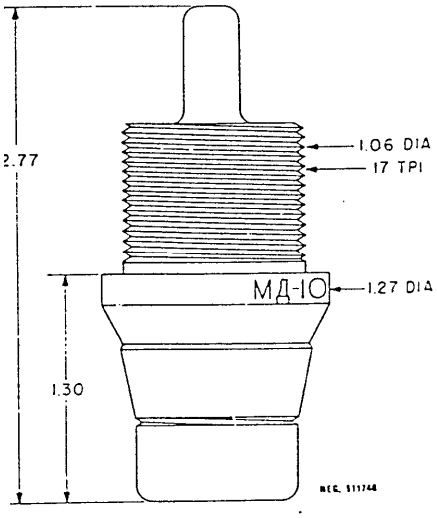
76mm DIV. Gun
76mm,Tank Gun M1940/41
85mm AA Gun M1939/44
85mm,Tank Gun M1943/44
100m Field Gun M1944
100mm Tank Gun M1944
122mm Tank Gun M1943

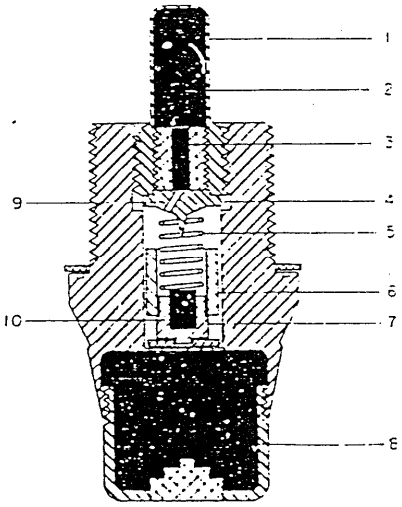
Using Projectiles:

76mm,AP-T,BR-350B
85mm,AP-T,BR-365 and BR-365K
100mm,AP-T,BR-412B
122mm AP-T,BR-471B

BD MD-10







Fuze Data:

Type:	Impact
Model:	MD-8
Body Material:	Steel
Weight:	163g
Markings:	MA-10
Length:	70.3mm

Using Weapons:

57mm Antitank Gun M1941/43
ASU-57 ASSULT Gun
57mm AA Gun s-60 and ZSU-57-2

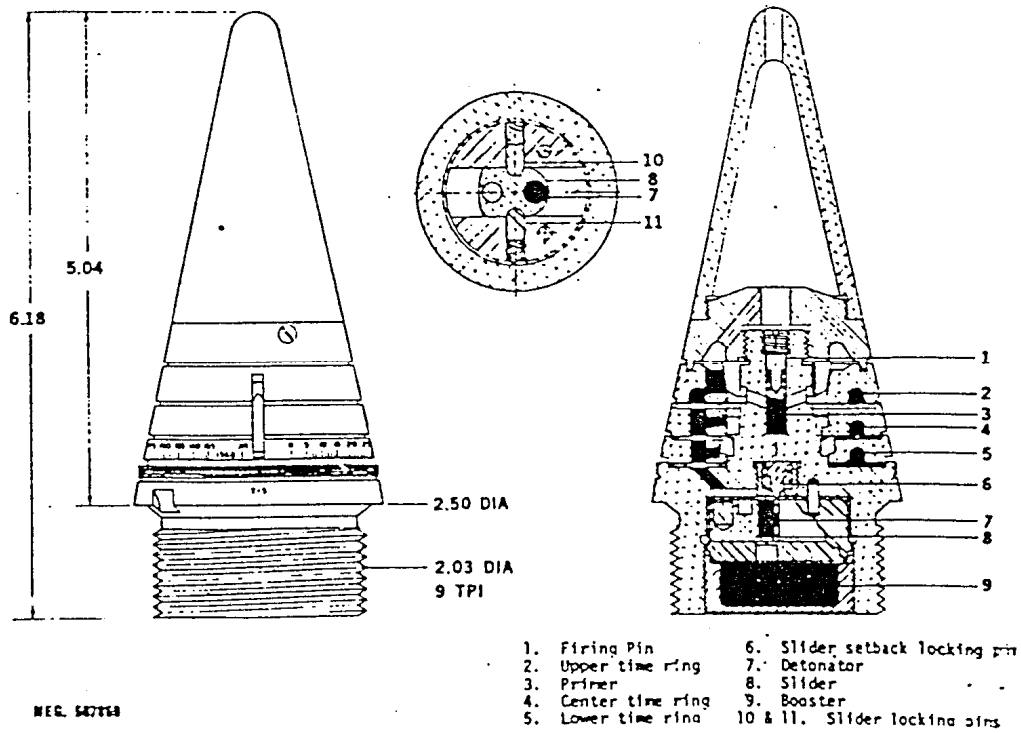
Functional Data:

Arming Method:	Setback
Self-destruct Method:	None
Safety Device:	Setback

Using Projectiles:

57mm AP-T,BR-271,
BR-271K,BR-281 and BR-281 U

TIME FUZE T-5



Fuze Data:

Type: Time
Model: T-5
Body Material: Aluminium
Weight: 708g
Markings: T-5
Length: 156.9mm

Using Weapons:

76mm,Antiaircraft Gun M1939
85mm,Antiaircraft Gun KS-12

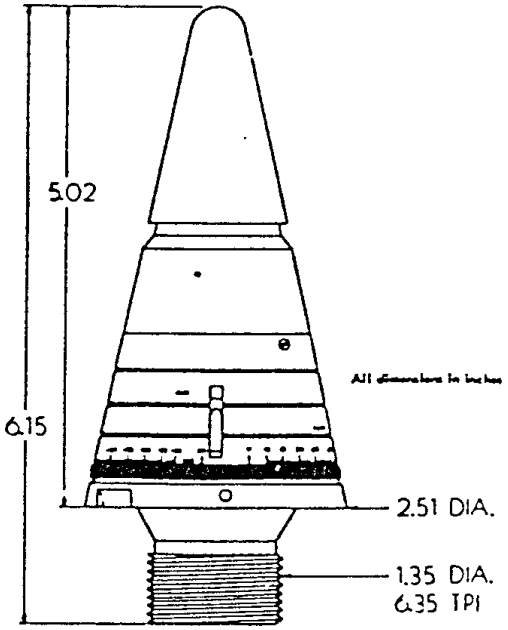
Functional Data:

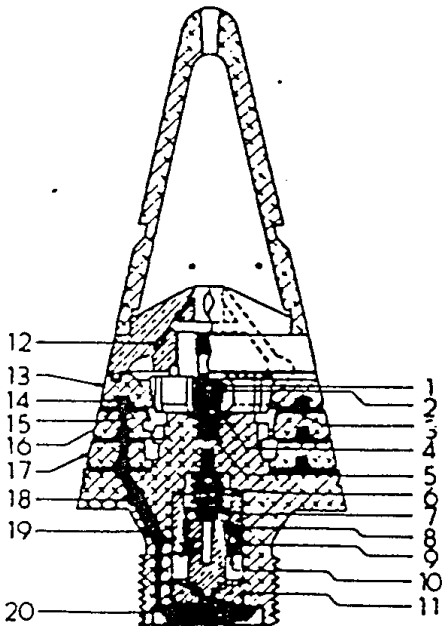
Arming Method: Setback
Self-destruct Method: Time Setting
Safety Device: Out-of-Line-Detonator

Using Projectiles:

76mm FRAG O-361 and O361D
85mm FRAG O365

TIME AND SUPERQUICK T-6





Fuze Data:

Type:	Time/Impact
Model:	T-6
Body Material:	Aluminium
Weight:	540g
Markings:	T-6
Length:	156.2mm

Using Weapons:

76mm Field Gun M1939/42
122mm Howitzer M1938
152mm Howitzer M1943
SU-76 SUPPORT Gun

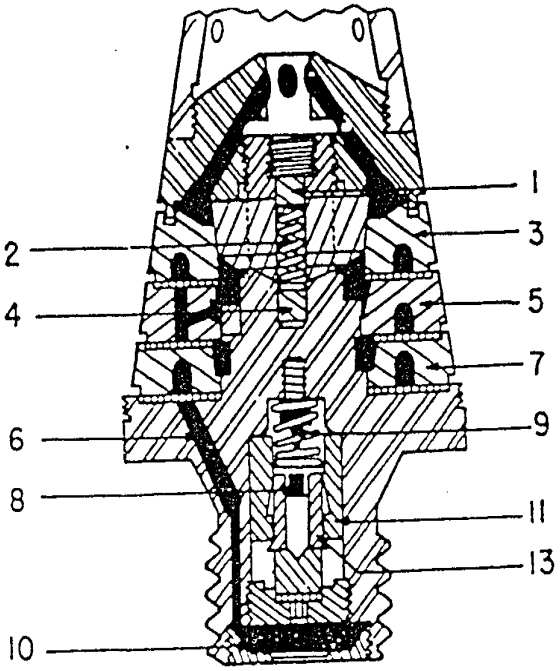
Functional Data:

Arming Method:	Setback
Self-destruct Method:	Timesetting
Safety Device:	Setback Springs

Using Projectiles:

78mm,SHRAP,SH-354T/354U
122mm,ILLUM,S-462
122mm PROP,A-462
122mm,SHRAP,SH-460/SH-460T
152mm,SHRAP,SH-501T

TIME AND SUPERQUICK T-7





Fuze Data:

Type: Time/Impact
Model: T-7
Body Material: Aluminium
Weight: 540g
Markings: T-7
Length: 157.4mm

Using Weapons:

122mm Howitzer M1938
152mm Howitzer M1943

Functional Data:

Arming Method: Setback
Self-destruct Method: Time Setting
Safety Device: Shipping Cap and Setback springs

Using Projectiles:

122mm SHRAP,SH-460T
122mm ILLUM,5-462
122mm,PROP,A-462
152mm SHRAP,SH-501T



MT

LENGTH:		MAX DIA:	41.00 mm 1.61 in
Overall:	108.00 mm 4.25 in		
Exposed	61.00 mm 2.40 in	OVERALL WT:	363.60 g 12.83 oz

MATERIAL: Aluminum and steel

ORD USED WITH: Ejection-type artillery projectiles

COMMENTS: None.





FORMER SOVIET UNION T-90

LENGTH:		MAX DIA:	63.55 mm
Overall:	198.50 mm		2.50 in
	7.81 in		
Exposed	141.50 mm	OVERALL WT:	694.00 g
	5.57 in		24.48 oz

MATERIAL: Aluminum and steel

ORD USED WITH: Ejection-type rockets

COMMENTS: None.



TM-120 **FORMER SOVIET UNION**

LENGTH:		MAX DIA:	64.00 mm 2.52 in
Overall:	135.00 mm 5.31 in		
Exposed	109.00 mm 4.29 in	OVERALL WT:	876.00 g 30.90 oz

MATERIAL: Aluminum and steel

ORD USED WITH: Artillery projectiles

COMMENTS: No visible time setting markings.





FORMER SOVIET UNION VM-30

VM 30 L - MT

LENGTH:		MAX DIA:	64.00 mm
Overall:	136.00 mm		2.52 in
	5.35 in		
Exposed	107.00 mm	OVERALL WT:	789.00 g
	4.21 in		27.83 oz

MATERIAL: Aluminum and steel

ORD USED WITH: Artillery projectiles

COMMENTS: No visible time setting markings.





V 90 – FSU MTSQ

LENGTH:		MAX DIA:	40.00 mm
Overall:	108.00 mm		1.57 in
	4.25 in		
Exposed	61.00 mm	OVERALL WT:	482.00 g
	2.40 in		17.00 oz

MATERIAL: Aluminum and steel

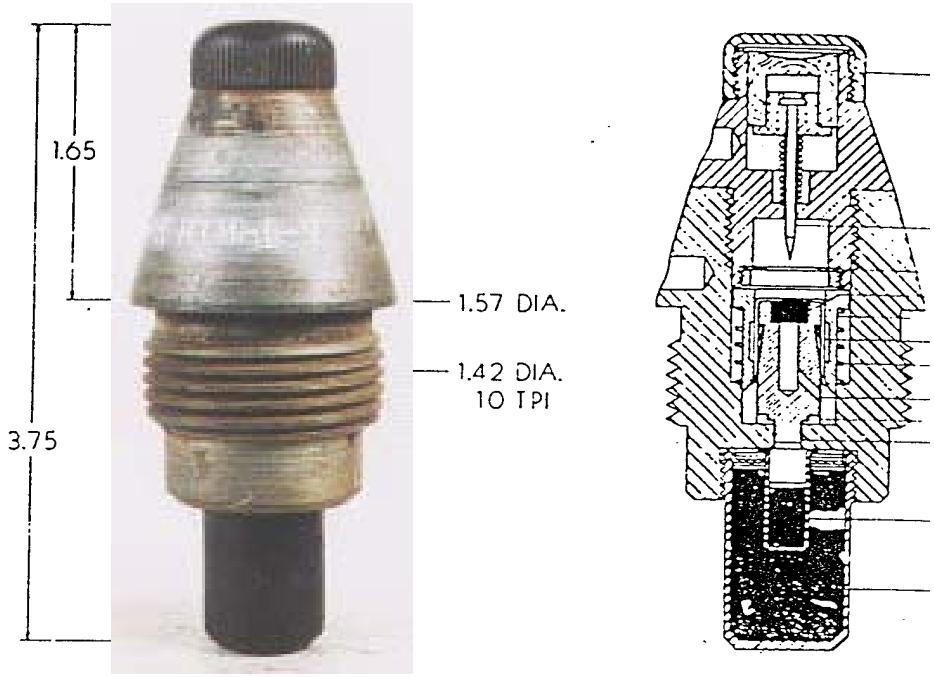
ORD USED WITH: Artillery projectiles

COMMENTS: This fuze is also made by China and uses the same designation.





PD KTM-1



Fuze Data:

Type: Impact
Model: KTM-1
Body Material: Steel
Weight: 367.4g
Markings: (See at Fuze)
Length: 95.2mm

Using Weapons:

45mm AA Gun MMm1942
57mm AA Gun M1942/43
ASU-57 ASSAULT Gun
76mmField Gun M1939/42
PT-76TANK,SU-76Support Gun
85mm AA Gun, KS-12,
85mm Auxiliary Ropelled AA Gun D-44
85mm Tank Gun M1943,
ASU-85 and SU-85 Assault Guns

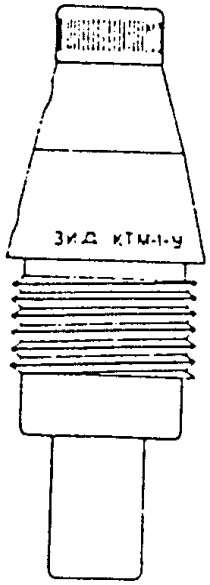
Functional Data:

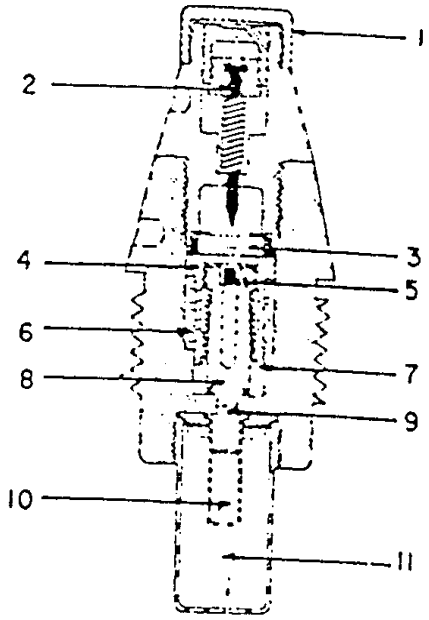
Arming Method: Setback
Self-destruct Method: None
Safety Device: Sleeve spring,
Barrier in Flash Path

Using Projectiles:

45mm FRAG,O-240,O-240A and O-240M
57mm FRAG,0271 and O271U
76mm FRAG-HE,OF-343, OF-350 and OF-350A
76mm FRAG O350A, 76mm SMOKE,D-350A
76mm FRAG-GAS
85mm FRAG,O-365 and O-365K

PD KTM-1-U





Fuze Data:

Type: Impact
Model: KTM-1-U
Body Material: Steel
Weight: 357.2g
Markings: KTM-1-Y
Length: 95.2mm

Using Weapons:

57mm Antitank Gun M1943
76mm Divisional Gun M1942
85mm AA Gun M1939
85mm Tank Gun M1944

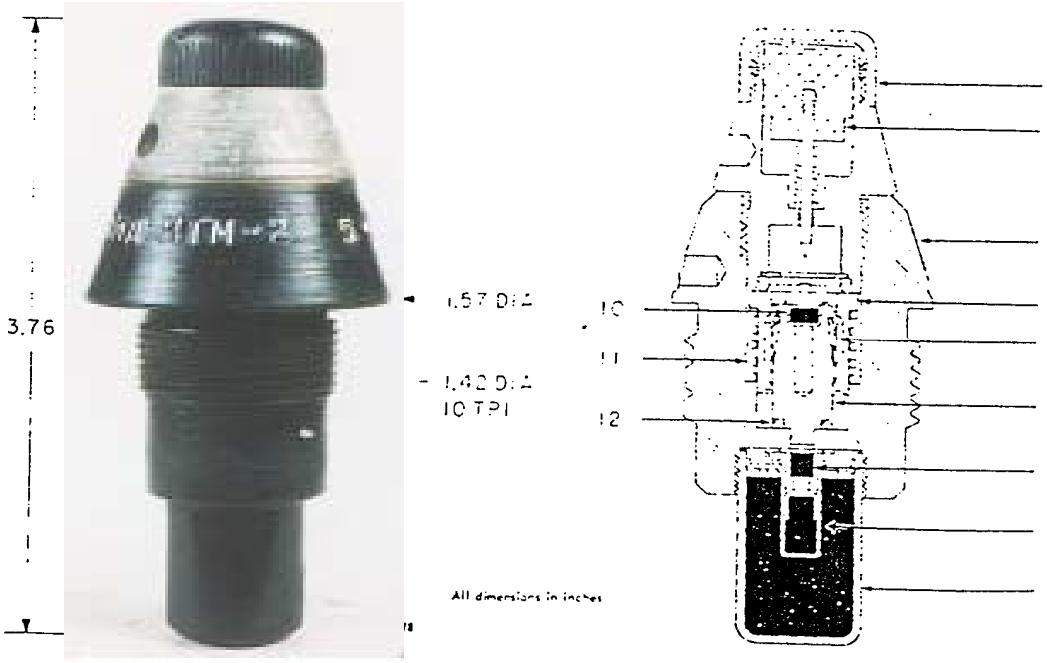
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Setback Arming Sleeve

Using Projectiles:

57mm,FRAG O-271 and O-271U
76mm,FRAG O-350,O350A, OF-343 and OF-350
85mm,FRAG,O-365K

PD KTMZ-1



Fuze Data:

Type:	Impact
Model:	KTMZ-1
Body Material:	Steel
Weight:	358.3g
Markings:	KTM3-1
Length:	95.5mm

Using Weapons:

45mm Antitank Gun M1942
57mm Antitank Gun M1943
57mm ASSAULT Gun ASU-57
76mm Field Gun M1939/42
76mm Support Gun SU-76, PT-76 Tank
85mm AA Gun KS-12 and 85mm Field Gun D-44
SU-85 ASSAULT Gun and 85mm Tank Gun M1944

Functional Data:

Arming Method:	Setback
Self-destruct Method:	None
Safety Device:	Barrier In Flashpath

Using Projectiles:

45mm,FRAG,O-240A and O-240M
57mm,HE,O-271U and O271
76mm,HE,OF-350 and OF-350A
85mm,FRAG,O-365 and O-365K

PD RGM



Fuze Data:

Type: Impact
Model: RGM
Body Material: Steel
Weight: 459g
Markings: PrM
Length: 102.3mm

Functional Data:

Arming Method: Setback, Spin
Self-destruct Method: None
Safety Device: Out-Of-Line Detonator

Using Weapons:

100mm Field Gun M1944
100mm Tank Gun D-10T
122mm Howitzer M1938
152mm Howitzer M1943
152mm Gun Howitzer

Using Projectiles:

100mm HE, F-412
100mm FRAG
OF-471N 122mm FRAG-HE,OF-471, And OF-462
152mm FRAG, O-530A and O-530

RGM 2

LENGTH:		MAX DIA:	40.00 mm
Overall:	100.00 mm		1.57 in
	3.94 in		
Exposed	54.00 mm	OVERALL WT:	454.00 g
	2.13 in		16.01 oz

MATERIAL: Steel

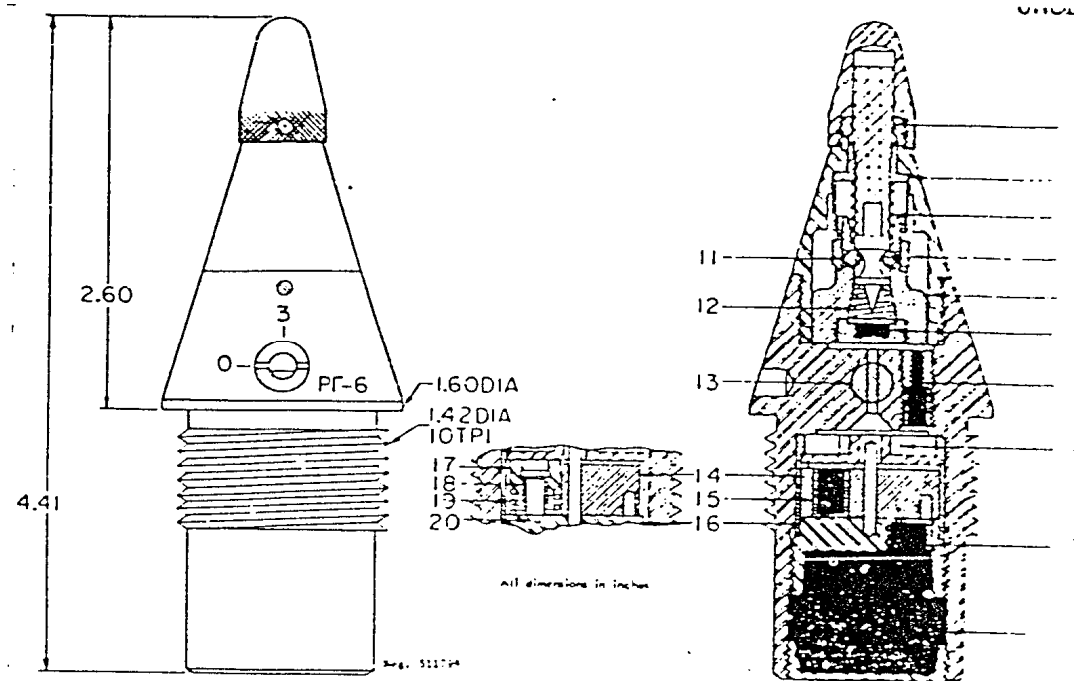
ORD USED WITH: Artillery projectiles

COMMENTS: This fuze is made in two externally different models. Instantaneous, delay, or non-delay settings by the combined use or omission of the selector switch and nose cap.





PD RG-6



Fuze Data:

Type: Impact
Model: RG-6
Body Material: Steel
Weight: 459g
Markings: P"Pr"-6
Length: 112mm

Using Weapons:

122mm Howitzer M1938
152mm Howitzer Gun M1937
152mm Howitzer M1938/43

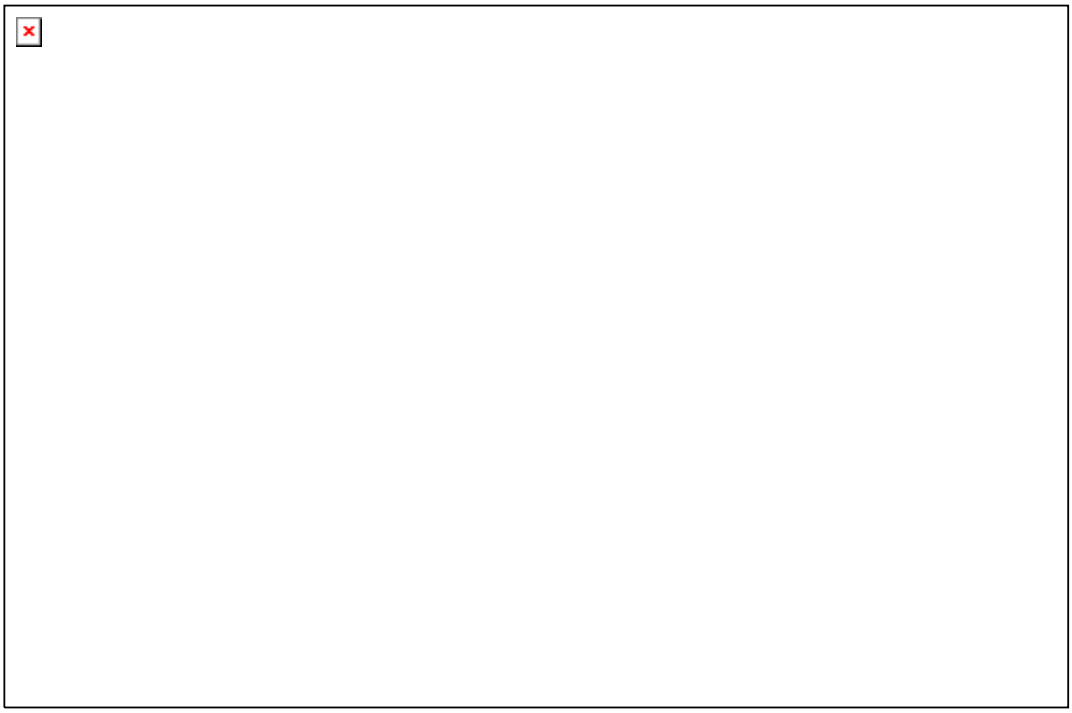
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Out-Of-Line Detonator

Using Projectiles:

122mm FRAG-HE , OF-462
122mm FRAG, O-452A
152mm FRAG-HE, OF-530
152mm FRAG, O530A

TIME AND SUPERQUICK D-1



Fuze Data:

Type: Time/Impact
Model: D-1
Body Material: Brass
Weight: 431g
Markings: 631P
Length: 105.6mm

Using Weapons:

122mm Field Gun M1931/37
122mm Howitzer M1938
122m Tank Gun M1943
152mm Howitzer M1937/43

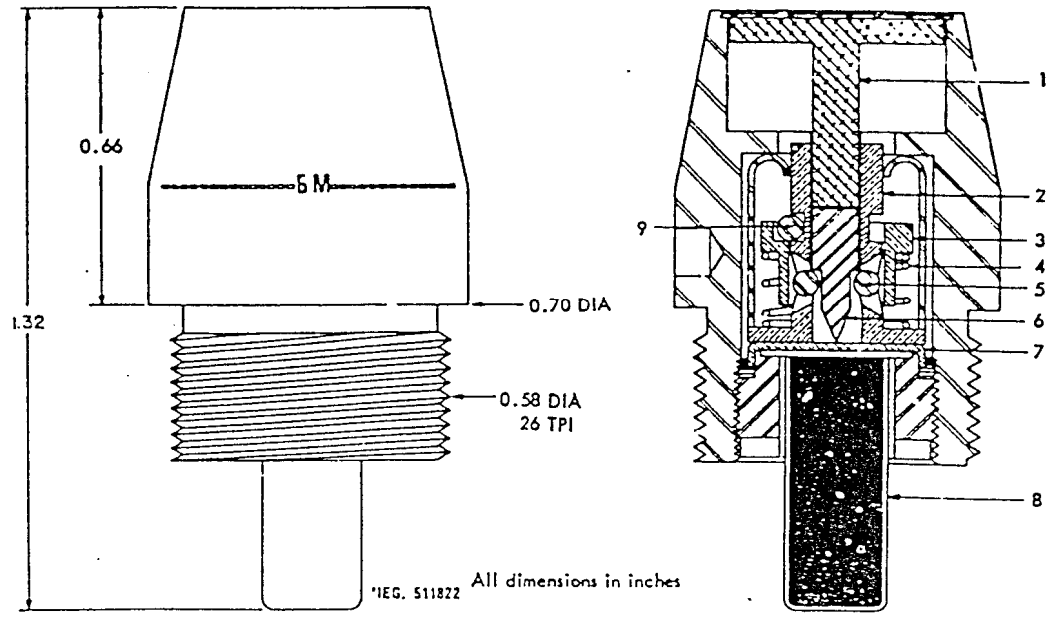
Functional Data:

Arming Method: Setback
Self-destruct Method: Time setting
Safety Device: Out-Of-Line Detonator

Using Projectiles:

122mm FRAG-HE OF-462,OF-471 and 471N
152mm FRAG,O-530A,OF-530, OF-530A,OF-540 and OF-540B

PIBD BM



Fuze Data:

Type: Impact
Model: BM
Body Material: Steel
Weight: 27.2g
Markings: bm
Length: 33.5mm

Using Weapons:

76mm Field Gun M1942/43
SU-76 Support Gun
PT-76 Tank

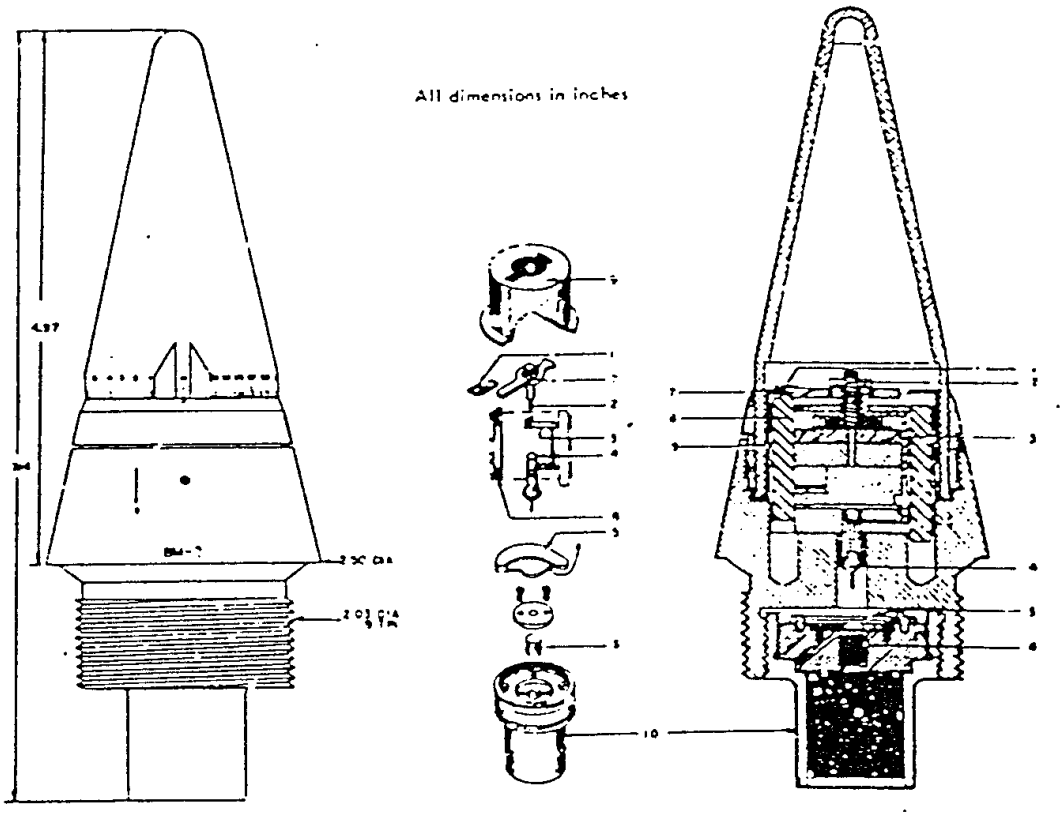
Functional Data:

Arming Method: Setback and Spin
Self-destruct Method: None
Safety Device: Firing-Pin Retaining Ball

Using Projectiles:

76mm HEAT, BP-350M and BP-353A

MECHANICAL TIME VM-2



Fuze Data:

Type: Time
Model: VM-2
Body Material: Aluminium
Weight: ???g
Markings: BM-2
Length: 181.3mm

Using Weapons:

85mm AA Guns KS-12 and KS-18

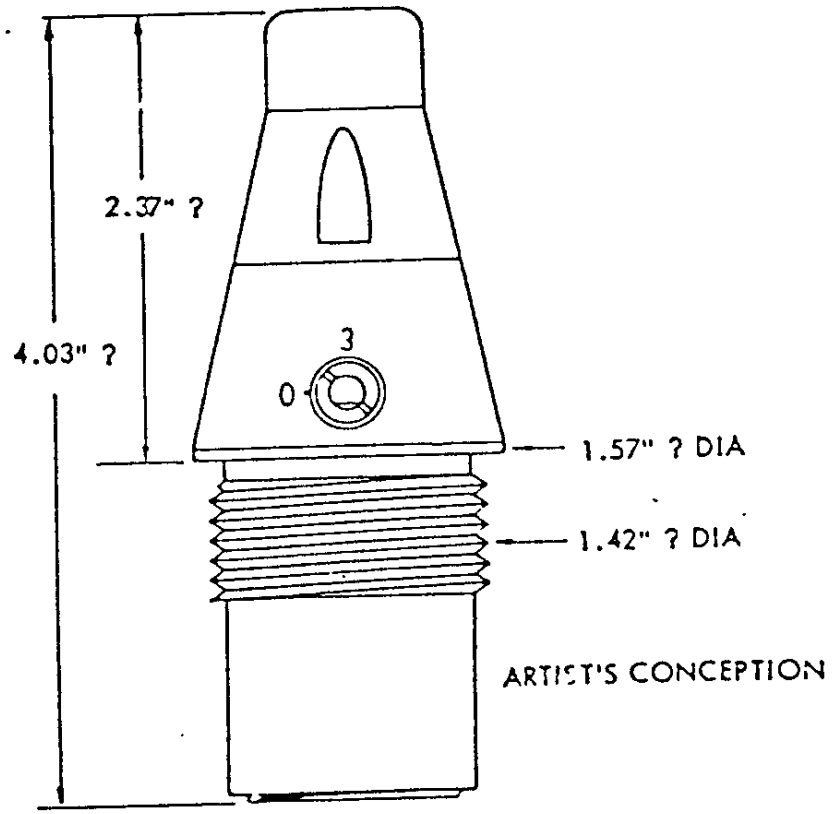
Functional Data:

Arming Method: Setback and Spin
Self-destruct Method: Time Setting
Safety Device: Obstructed Path To Detonator

Using Projectiles:

85mm FRAG,O-365M

PD RGM-6



Fuze Data:

Type: Impact
Model: RGM-6
Body Material: Steel
Weight: 456g
Markings: PrM-6
Length: 102.3mm

Using Weapons:

122mm Howitzer M1938
152mm Howitzer M1943

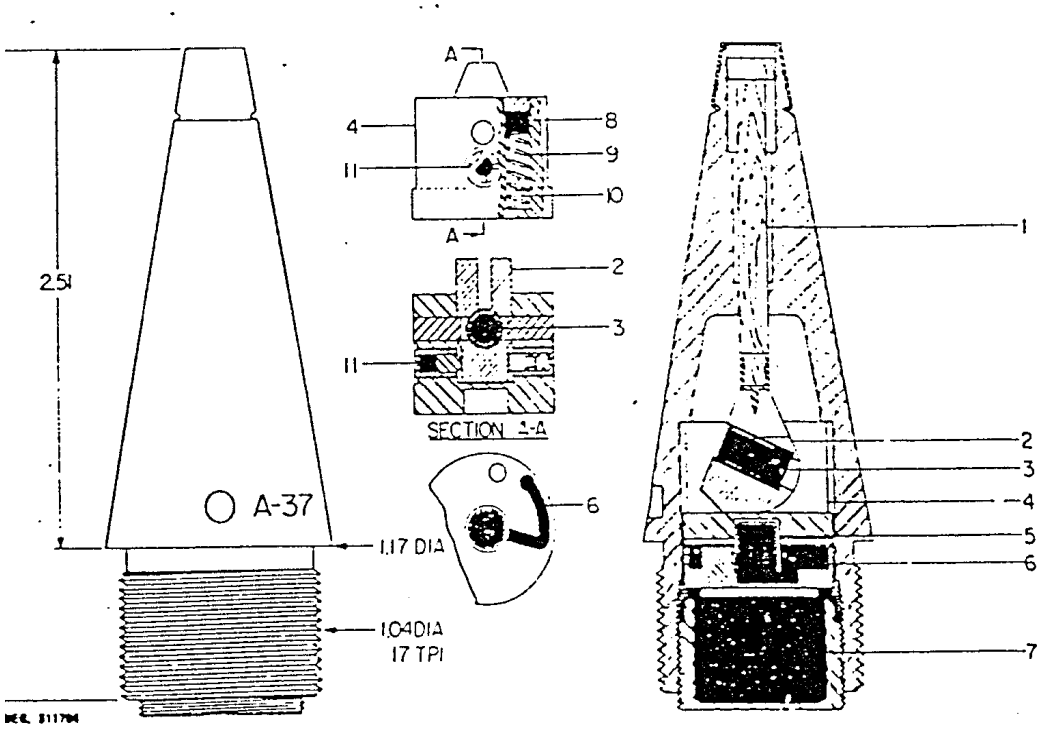
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Out-Of-Line Detonator

Using Projectiles:

122mm HE, OF-462,OF-462A
F-460 and F-460A
152mm HE, OF-530, OF-530A
F-530 and F530

PD SELF-DESTROYING A-37



Fuze Data:

Type: Impact and Self-destroying
Model: A-37
Body Material: Steel
Weight: 176.9g
Markings: A-37
Length: 83.3mm

Using Weapons:

37mm AA Cannon Model N-37

Functional Data:

Arming Method: Spin
Self-destruct Method: Power Train
Safety Device: Out-Of-Line Primer

Using Projectiles:

37mm HE-I Cartridge Type OZT

AG 37 U

LENGTH:		MAX DIA:	30.00 mm 1.18 in
Overall:	82.00 mm 3.23 in		
Exposed	62.00 mm 2.44 in	OVERALL WT:	171.00 g 6.03 oz

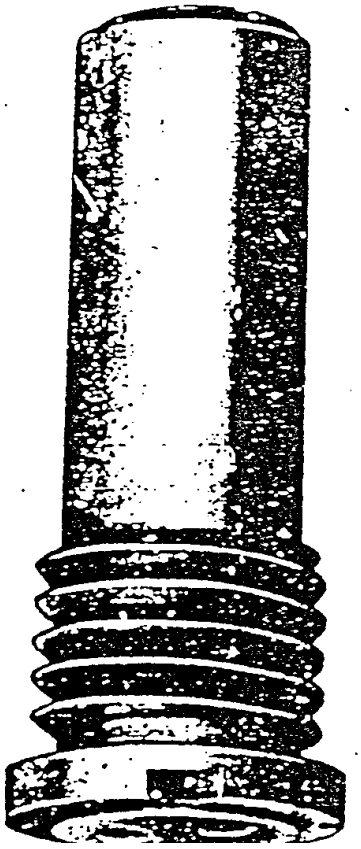
MATERIAL: Steel

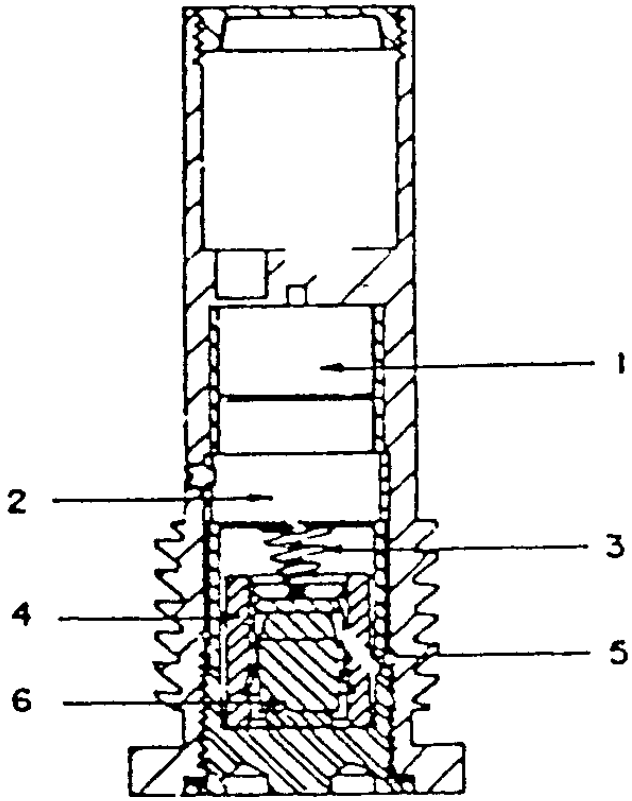
ORD USED WITH: 37-mm antiaircraft artillery projectiles

COMMENTS: Pyrotechnic self-destruct.



BASE-DETONATING MR-Z





Fuze Data:

Type: Impact
Model: MR-Z
Body Material: Steel
Weight: 285,7g
Markings: MP-3
Length: 89.1mm

Using Weapons:

130mm Field Gun M-46

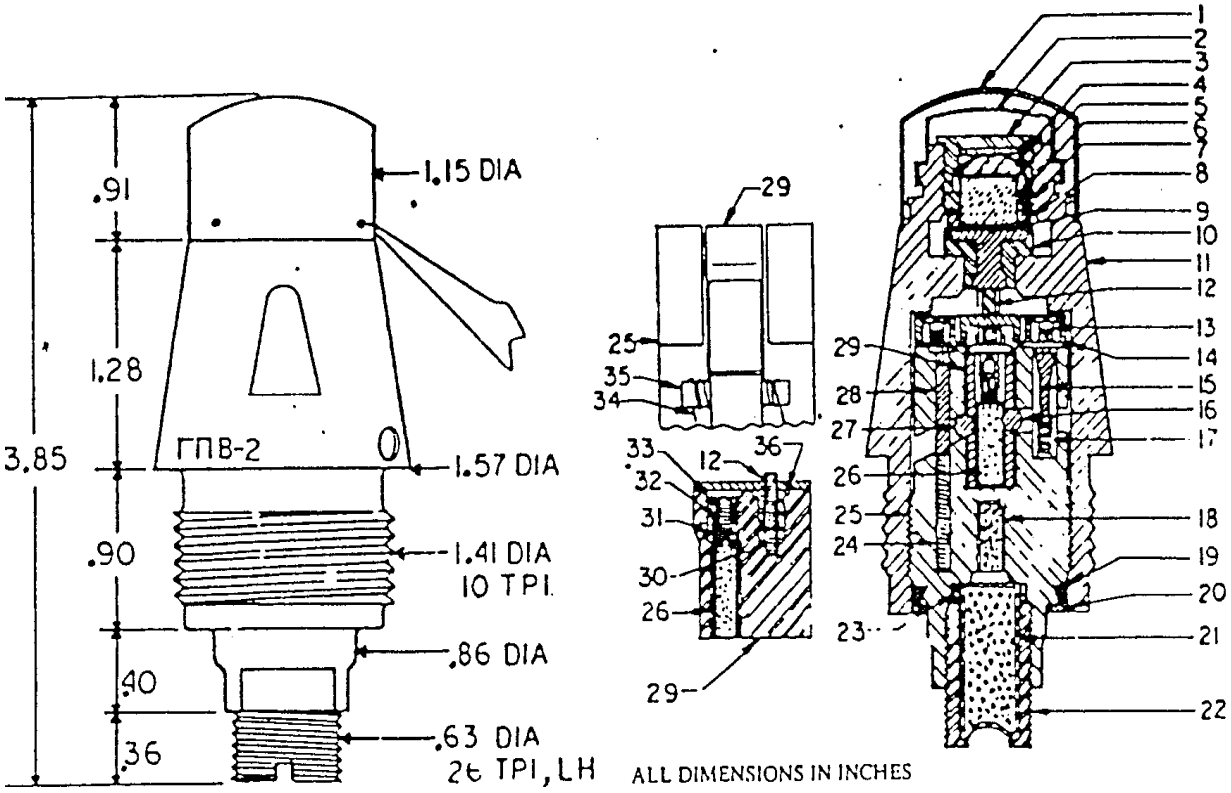
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Out-Of-Line Detonator

Using Projectiles:

130mm CP, G-7
130mm AP, BR-482

PIBD GPV-2



Fuze Data:

Type: PIBD
Model: GPV-2
Body Material: Aluminium
Weight: 191g
Markings: B-2
Length: 98mm

Using Weapons:

ALL ECC. 76,85 and 100mm Tank and Field Gun.
115mm Gun U-5TS on T62 Tank
122mm Howitzer Model D-30

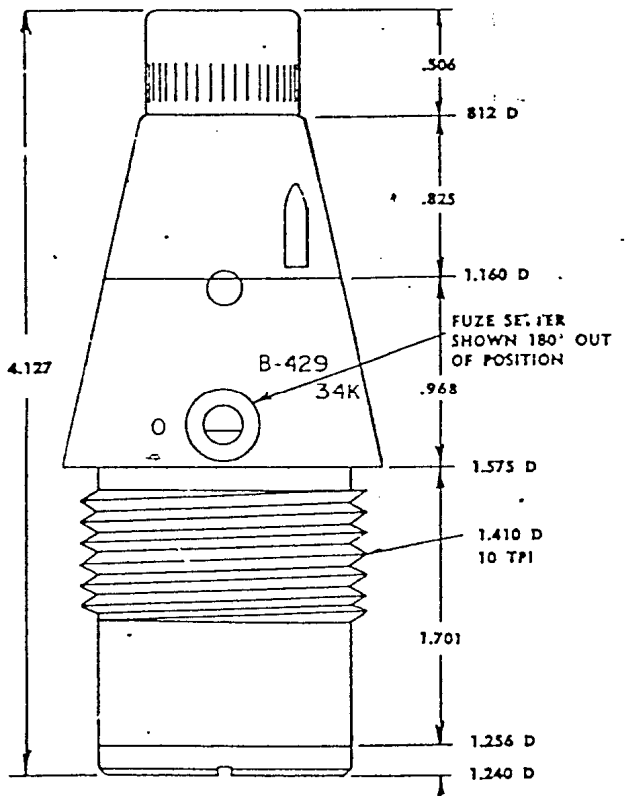
Functional Data:

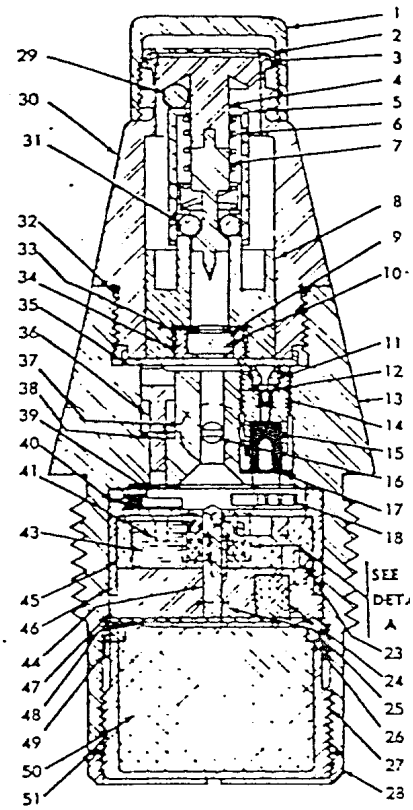
Arming Method: Setback
Self-destruct Method: None
Safety Device: Out-Of-Line Detonator
Electrical Disconnect Protective Cap

Using Projectiles:

76mm HEAT-FS Model BK-354 M
85mm HEAT-FS Model BK-2 M
100mm HEAT-FS Model ZBK-5 M
115mm HEAT-FS Model BK-4 M
122mm HEAT-FS Model BK-6 M

PD V-429





Fuze Data:

Type: Point-Detonating
Model: V-429
Body Material: Steel
Weight: 440g
Markings: B-429
Length: 105mm

Using Weapons:

122mm D 74 Field Gun
122mm D 30 Howitzer
130mm M46 Field Gun
152mm D20 Howitzer

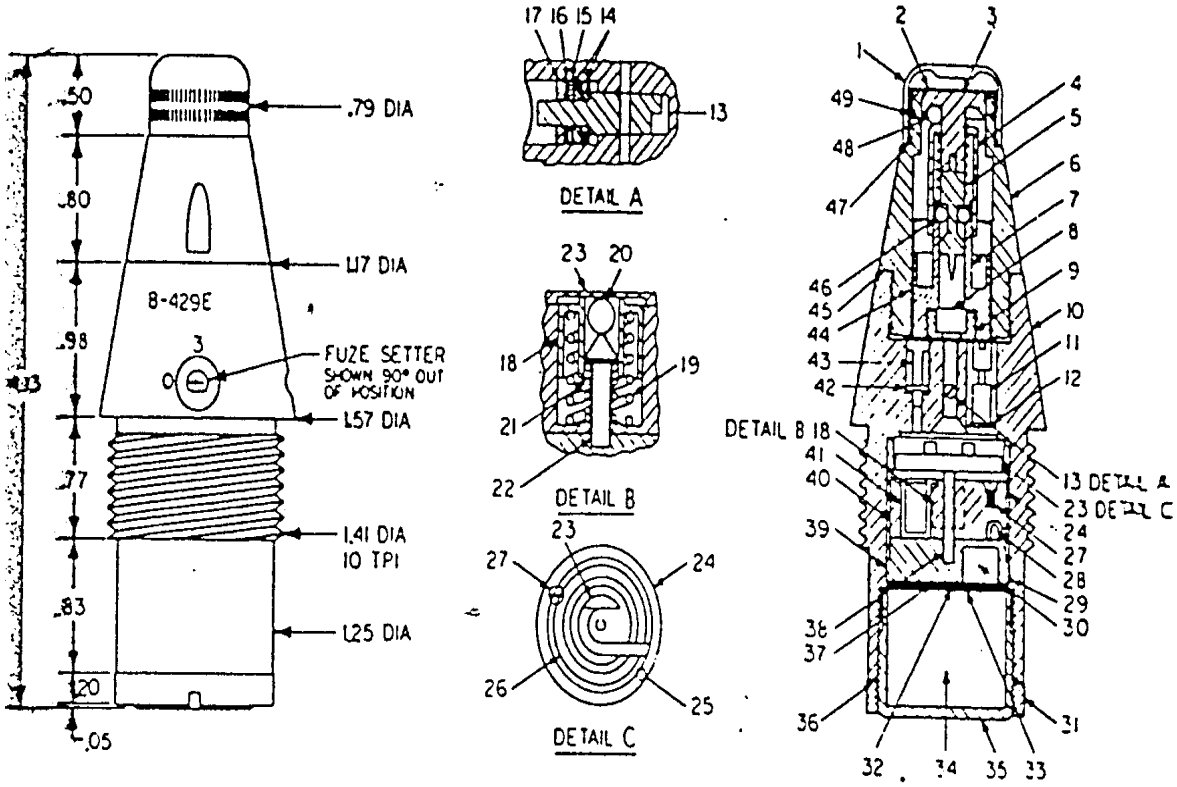
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Out-Of-Line Detonator

Using Projectiles:

100mm FRAG-HE OF-412 and OF-412U
122mm FRAG-HE OF-472
130mm FRAG-HE OF-482
152mm FRAG-HE OF-540

PD V-429E



Fuze Data:

Type: Point-Detonating
Model: V-429E
Body Material: Steel
Weight: 436g
Markings: B-429E
Length: 65mm

Using Weapons:

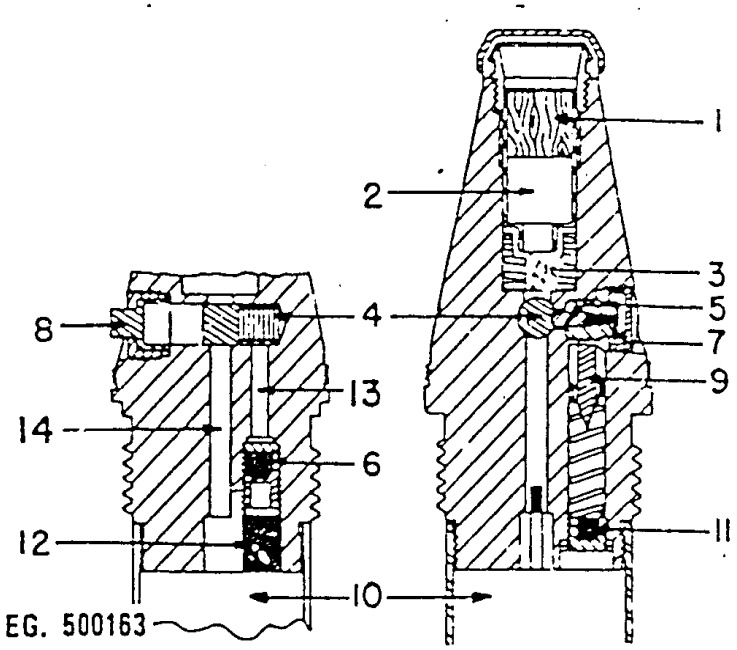
115mm Gun Model
U-5TS on T-62 Tank

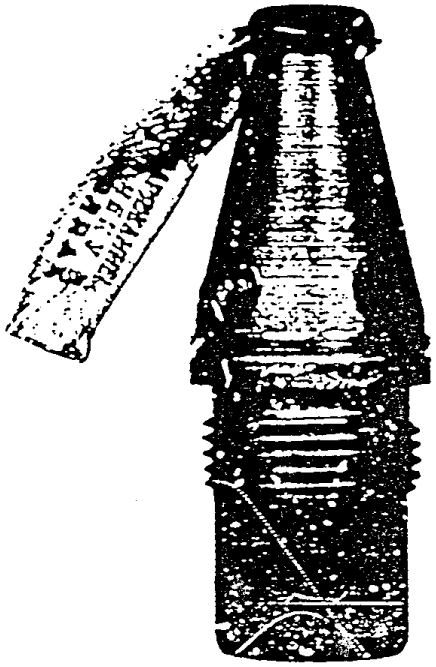
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Protective Cap
Out-Of-Line Detonator

Using Projectiles:

115mm FRAG-HE Model
OF-11 and OF-18





Fuze Data:

Type: Point-Detonating
Model: GVMZ-7
Body Material: Steel
Weight: 481g
Markings: KBM-3-7 3500
Length: 106.4mm

Using Weapons:

122mm Howitzer M1938
152mm Howitzer M1943

Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Shipping cap W/ wire, and interrupter

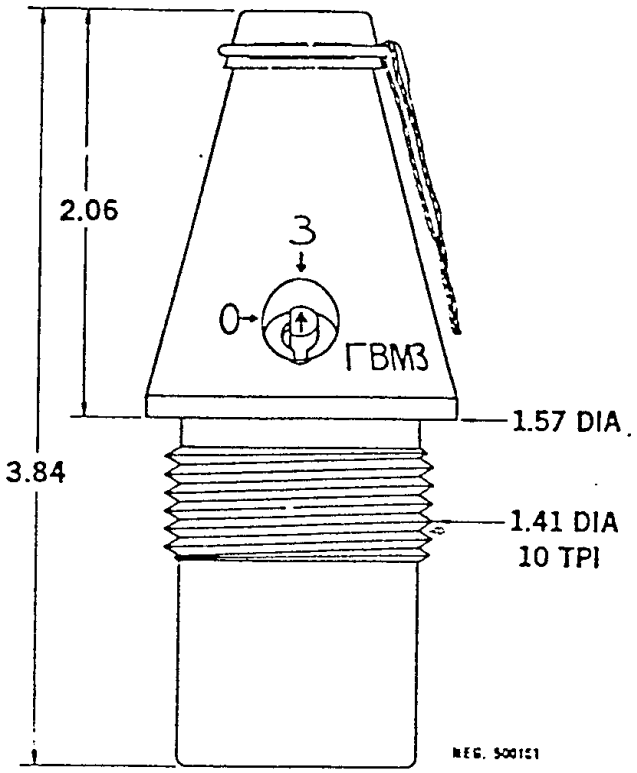
Using Projectiles:

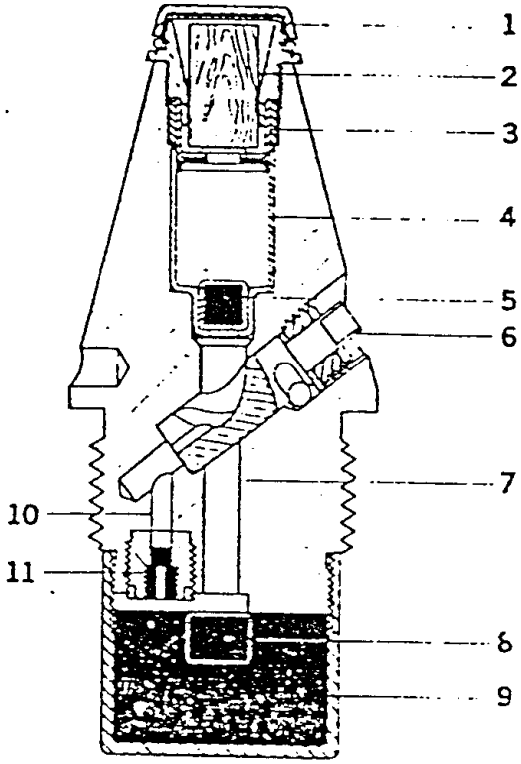
122mm FRAG, OF-462A

152mm FRAG-HE, OF-534G and OF-534AG

2. MORTAR FUZES

PD GVMZ





Fuze Data:

Type:	Point Detonating
Model:	GVMZ
Body Material:	Steel
Weight:	430.9g
Markings:	RBM3 34K
Length:	64.5mm

Using Weapons:

120mm Mortar M1938
120mm Mortar M1943

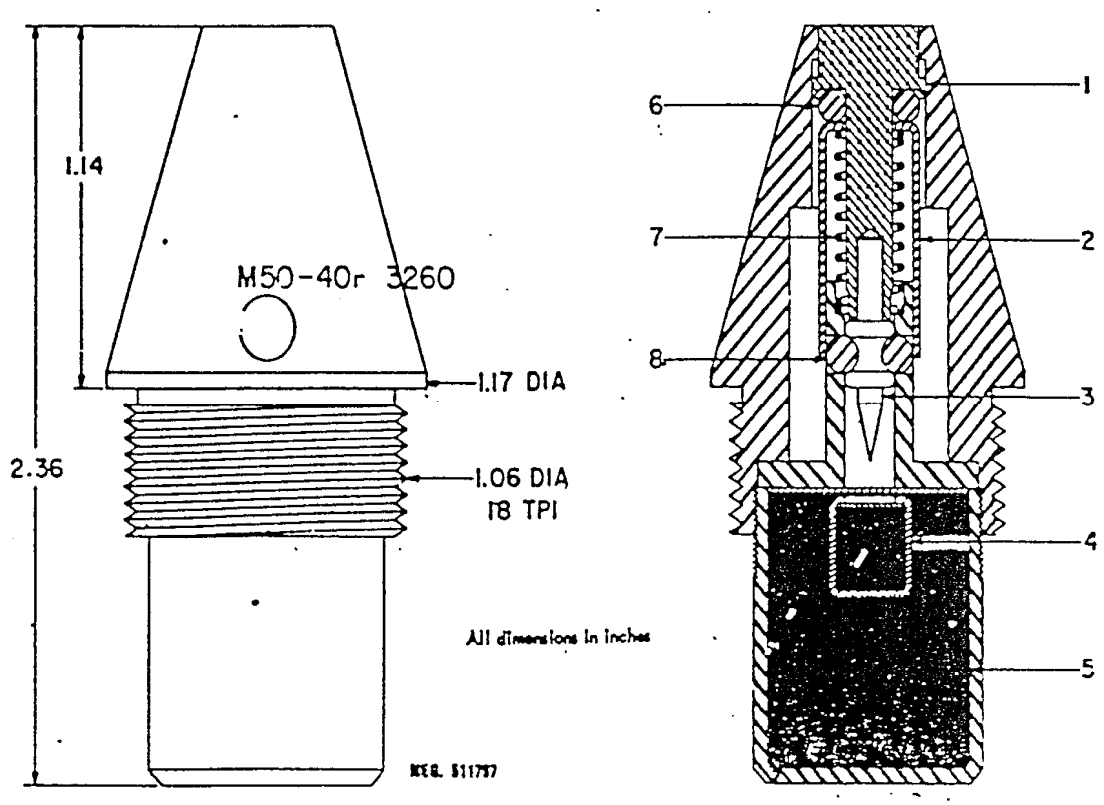
Functional Data:

Arming Method:	N/A
Selv-destruct Method:	None
Safety Device:	Safety -Cap

Using Projectiles:

120mm,FRAG-HE OF-843A
120mm FRAG-HE OF 843
120mm SMOKE, D-843A

PD M-50



Fuze Data:

Type: Point-Detonating
Model: M-50
Body Material: Steel
Weight: 113g
Markings: M50-40
Length: 59.9mm

Using Weapons:

50mm Mortars M1938/40/41

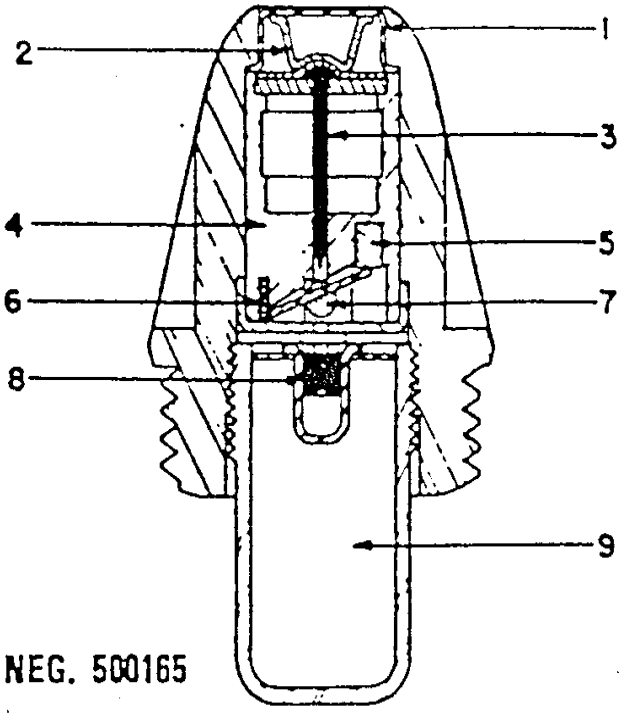
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Check Balls and Spring

Using Projectiles:

50mmFRAG O-822,O-822A and O-822SH

PD MP-82





Fuze Data:

Type: Point-Detonating
Model: MP-82
Body Material: Phenolic
Weight: 68g
Markings: MP-82
Length: 65.5mm

Using Weapons:

82mm Mortars M1937/41/43

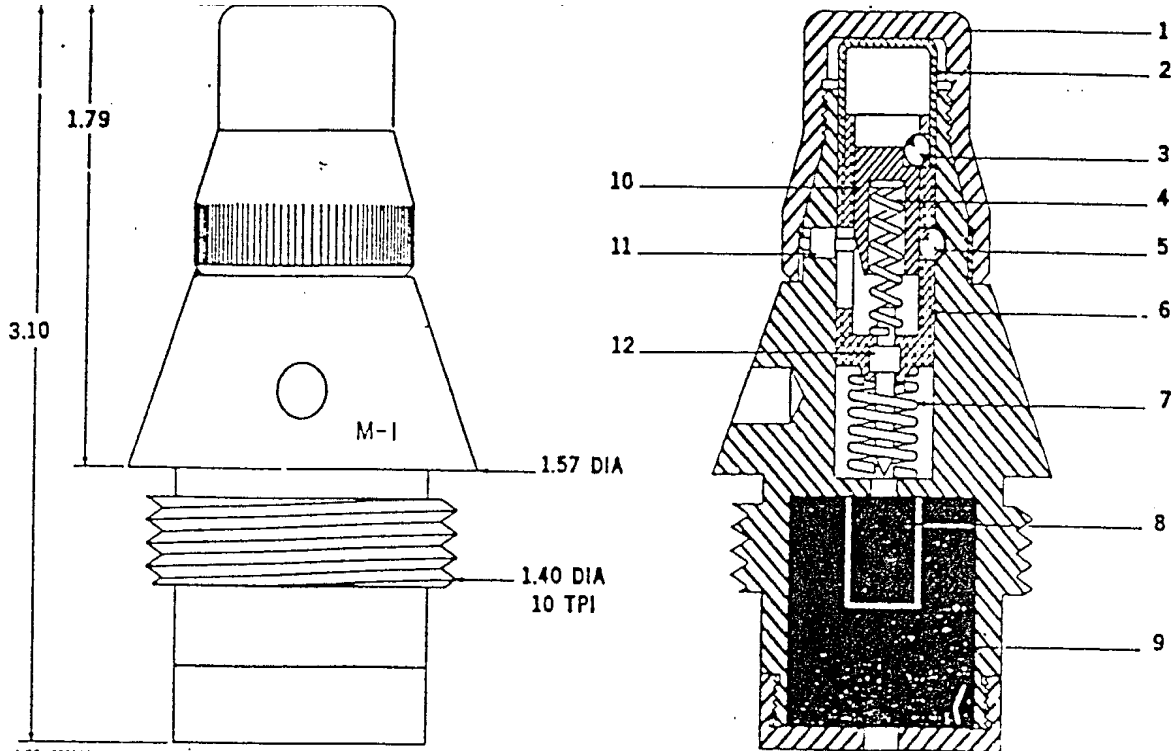
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Mechanical Block (slider)

Using Projectiles:

82mm FRAG,O-832

PD M-1



Fuze Data:

Type: Point-Detonating
Model: M-1
Body Material: Steel
Weight: 249.5g
Markings: M-1
Length: 78.7mm

Using Weapons:

50mm Mortar M1940
82mm Mortar M1937/42/43
120mm Mortar M1943

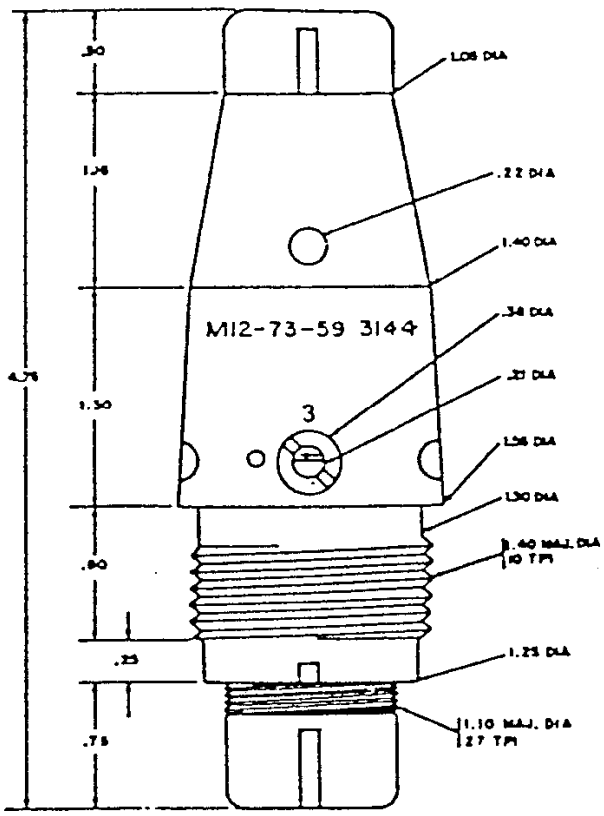
Functional Data:

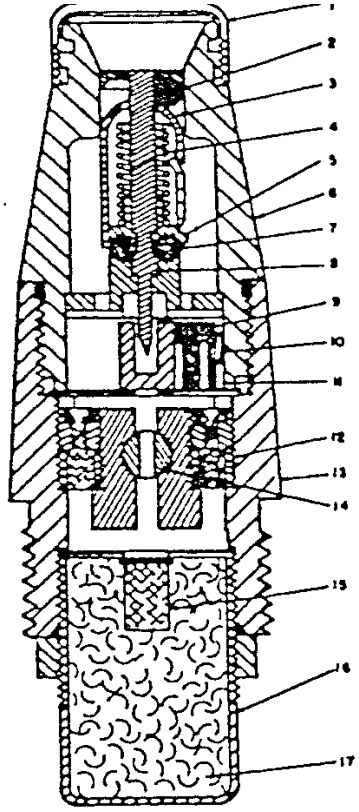
Arming Method: Setback
Self-destruct Method: None
Safety Device: Springs and Locking Balls

Using Projectiles:

50mm FRAG, O-822A,O-822SH
82mm FRAG,O-832D,O-832DO-832
82mmSMOKE DDD-832
120mm INCENDIARY Z-843A

PD M-12





Fuze Data:

Type: Point-Detonating
Model: M-12
Body Material: Steel
Weight: 536g
Markings: M-12
Length: 119mm

Using Weapons:

120mm Mortar M1943

Functional Data:

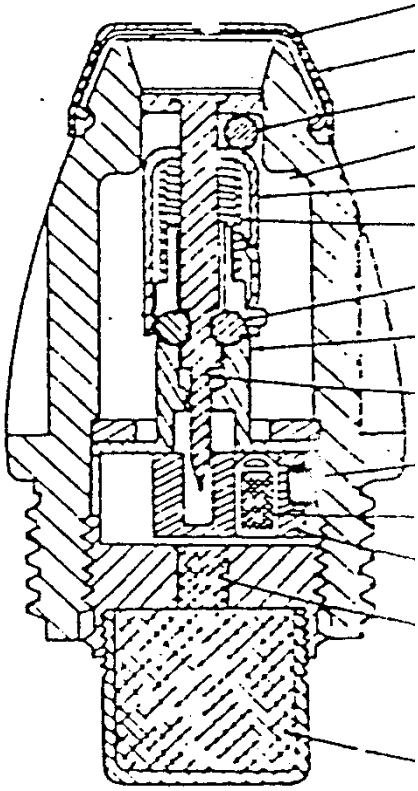
Arming Method: Setback
Self-destruct Method: None
Safety Device: Out-Of-Line Primer
Zig Zag Slot, Locking Balls

Using Projectiles:

120mm FRAG-HE, OF-843A
120mm HE, F-843

PD M-6





Fuze Data:

Type: Point-Detonating
Model: M-6
Body Material: Plastic
Weight: 155.9g
Markings: M-6
Length: 82.6mm

Using Weapons:

82mm Mortar M1937/42/43

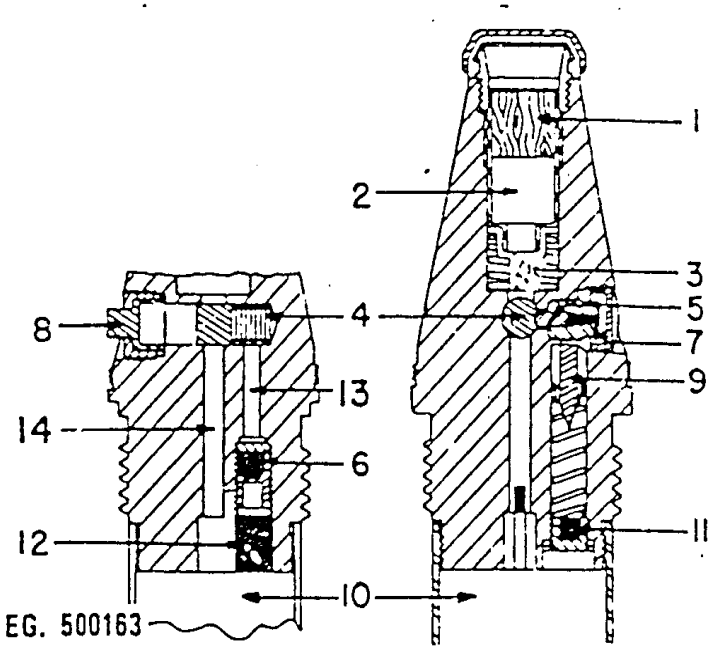
Functional Data:

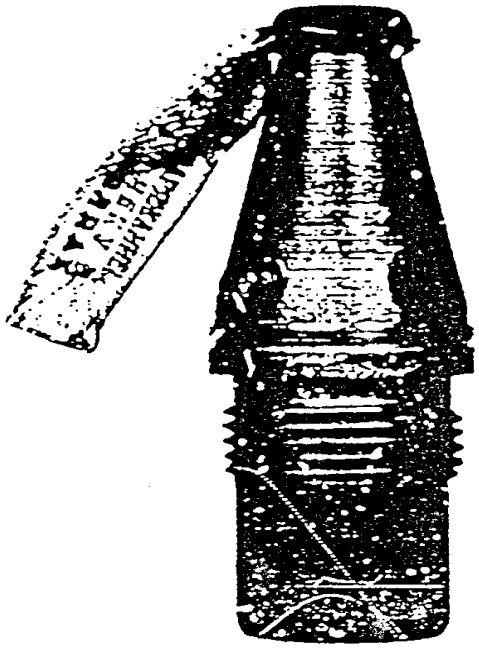
Arming Method: Setback
Self-destruct Method: None
Safety Device: Out-Of-Line Detonator
Zig Zag Slot

Using Projectiles:

82mm FRAG, O-832D
and O-832DU

PD GVMZ-7





Fuze Data:

Type:	Point-Detonating
Model:	GVMZ-7
Body Material:	Steel
Weight:	481g
Markings:	KBM-3-7 3500
Length:	106.4mm

Using Weapons:

107mm Mortar M1938
120mm Mortar M1938/43
160mm Mortar M1943
160mm Mortar M-160

Functional Data:

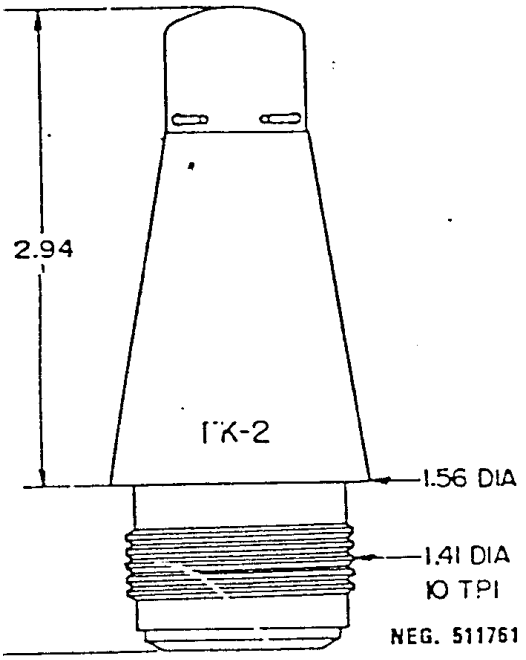
Arming Method:	Setback
Self-destruct Method:	None
Safety Device:	Shipping cap W/ wire, and interrupter

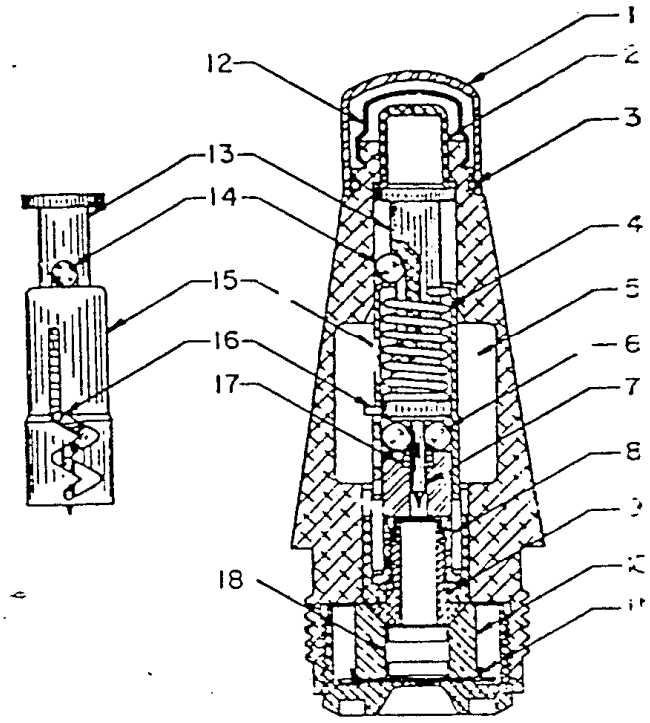
Using Projectiles:

107mm FRAG-HE, OF-841A
120mm FRAG-HE, OF-843
120mm HE, F-843
160mm HE, F-852,F-853U and F-853A

RECOIILLESS FUZES

PD GK-2





Fuze Data:

Type: Point detonating
Model: GK-2
Body Material: Aluminium
Weight: 170.1g
Markings: RK-2
Length: 101.3mm

Using Weapons:

82mm Recoilless gun M-10
107mm Recoilless gun M-11

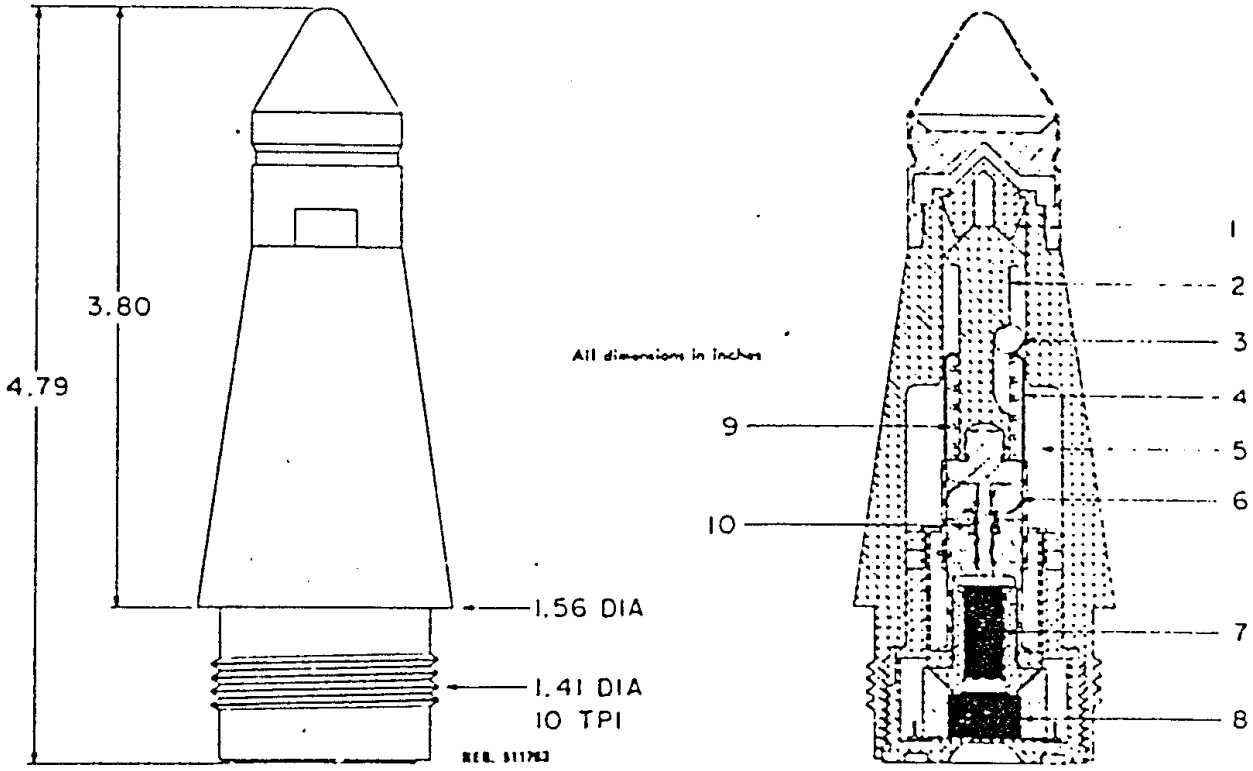
Functional Data:

Arming Method: Setback
Self-destruct Method: None
Safety Device: Safety cap and firing pin
Retaining balls, zig zag delay slot

Using Projectiles:

82mm FRAG, O-881A
82mm HEAT, BK-881
107mm FRAG-HE, OF-883A
107mm HEAT, BK-883

PD GK-2M



Fuze Data:

Type: Point Detonating
Model: GK-2M
Body Material: Aluminium
Weight: 209.9g
Markings: GK-2M,3144,II-60
Length: 121.7mm

Using Weapons:

82mm Recoilless gun M-10
107mm Recoilless gun M-11

Functional Data:

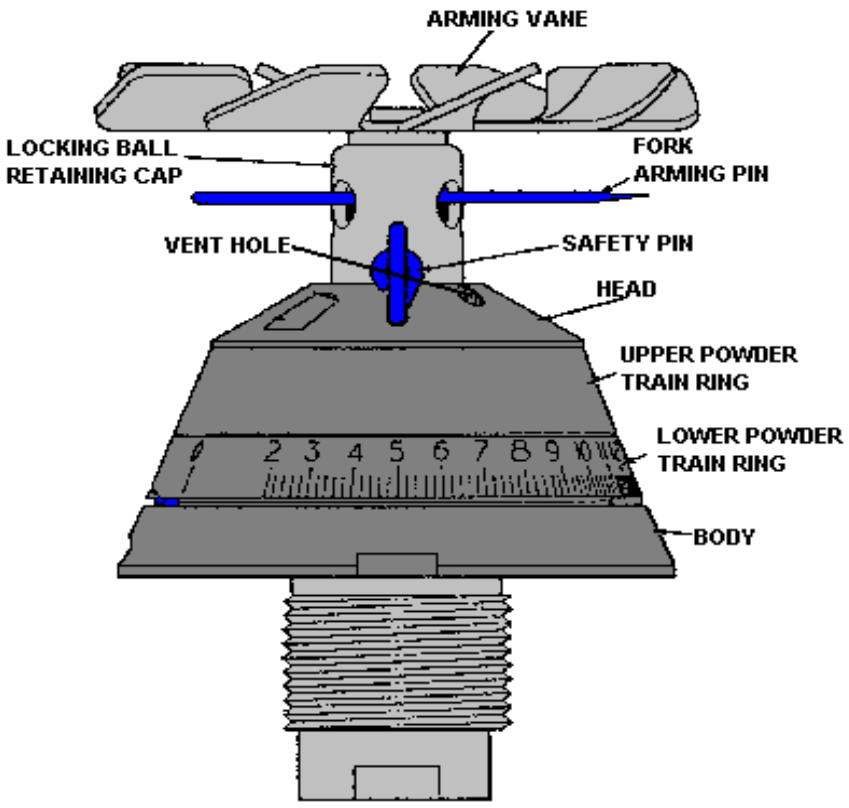
Arming Method: Setback
Self-destruct Method: None
Safety Device: Safety cap and firing pin
Retaining balls, zig zag delay slot

Using Projectiles:

82mm FRAG, O-881A
82mm HEAT, BK-881
107mm FRAG-HE, OF-883A
107mm HEAT, BK-883

4. BOMB FUZES

AGDT-A and B



WARNINGS

1) Do not move or jar a bomb. The Fuze contains a cocked firing pin and an inline firing train.

2) Do not manually remove a Fuze from a photoflash bomb. The bomb booster' charge or photoflash powder may be in the Fuze threads.

3) Wait at least 30 minutes before approaching a suspected dud-fired Fuze. A delay function may he caused by deterioration or dampness which prolongs the burning time of the powder train, or by a hung firing pin overcoming a mechanical obstruction and initiating the powder train in the Fuze

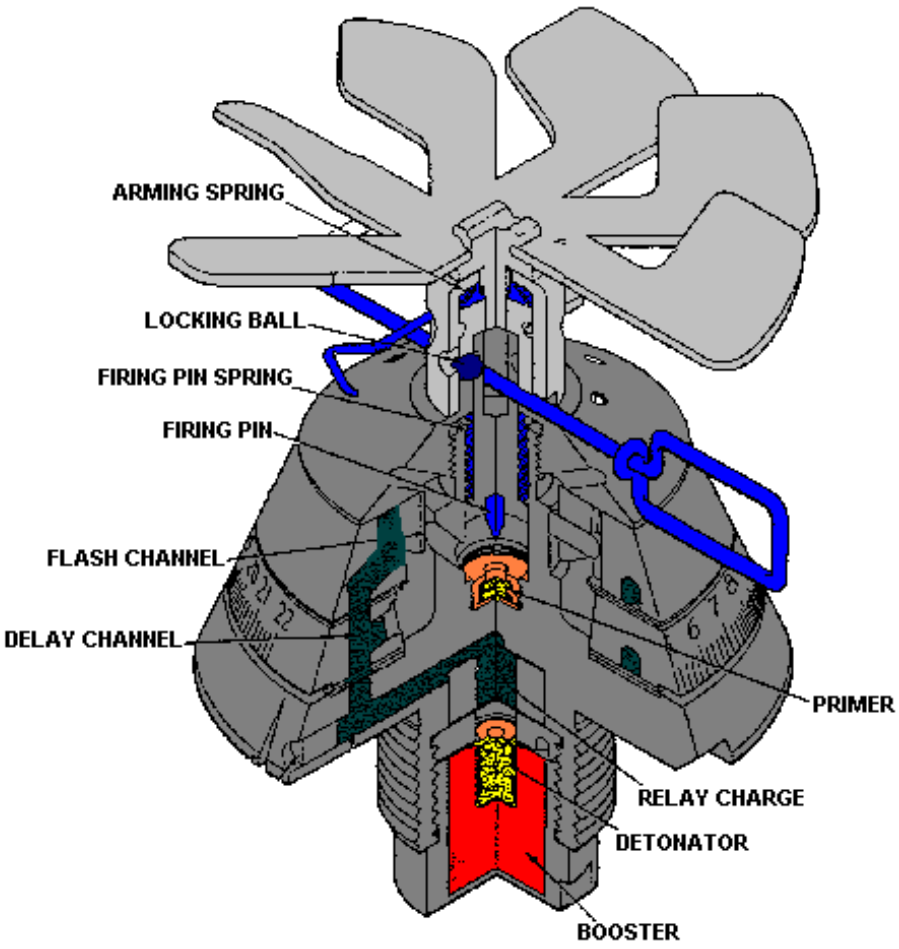
4) Do not approach an armed Fuze for 30 minutes after removal from a bomb. The Fuze contains a powder train time delay that is initiated by a cocked firing pin.

FUZE DATA

TYPE: Time
MODEL: AGDT-A/B
MATERIAL: Aluminium
WEIGHT: ????
MARKINGS: AGDT-A or B
LENGTH: 88.1mm

FUNCTIONAL DATA

ARMING- Dropping Away of Vane-
METHOD: Assembly
SELF-
DESTRUCT: Time Setting
SAFETY-
DEVICE: Arming Wires



ARMED

The Fuze is armed if the arming wire device, fork-type-arming pin, and safety pin are missing, or if the locking ball retaining cap is crushed or missing

UNARMED

The Fuze is unarmed if. The arming wire device fork-type-arming pin or safety pin is in place, and the locking ball retaining cap is not crushed

USING PROJECTILES

82mm Rocket Model RS-82
132mm Rocket Model RS-132
BOMBS AO-10, AO-20M3, AO-25, AO-100, AOKH-10, AOKH-15, KHAB-25, KHAB-200, KHAB-500, KRAB-25, FOTAB

HAZARDOUS

The AGDT-A Fuze contains a primer, pyrotechnic in the powder train rings and the body, relay charge, detonator, and booster. The compositions and weights of these elements are unknown. The AGDT-B Fuze contains the same elements, except that an ignition charge replaces the detonator and booster.

USING WEAPONS:

82mm 48-RD ROC: Launcher
82mm M-8 ROC: launcher
82mm Aircraft ROC: launcher M-13
132mm Aircraft ROC: launcher M-132

RSP-AGDT-A and AGDT-B

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data available.

WARNINGS

Do not move or jar a bomb. The Fuze contains a cocked firing pin and an inline firing train.

Do not manually remove a Fuze from a photoflash bomb. The bomb booster charge or photoflash powder may be in the Fuze threads. For Fuzes installed in photoflash bombs,

a) Secure arming wire device, fork—type arming pin, or safety pin, or use Other means to prevent arming vane rotation.

b) Using wrench or other tool, manually remove Fuze from bomb by turning counter clockwise.

c) Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data available.

WARNINGS

Do not move or jar a bomb. The Fuze contains a cocked firing pin and an inline firing train.

Wait at least 30 minutes before approaching a suspected dud—fired Fuze. A delay function may be caused by deterioration or dampness which prolongs the burning time of the powder train, or by a hung firing pin overcoming a mechanical obstruction and initiating the powder train in the faze.

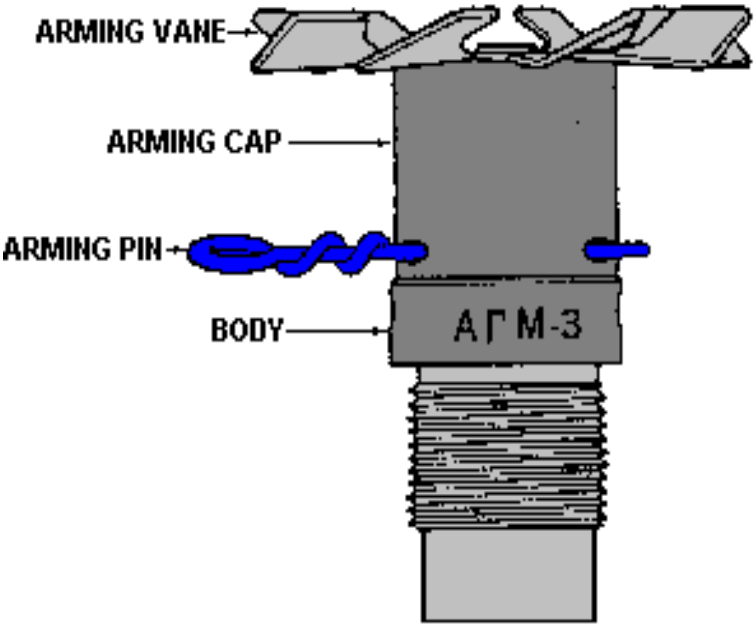
Do not approach an armed Fuze for 30 minutes after removal from a bomb. The Fuze contains a powder train time delay that is initiated by a cocked firing pin.

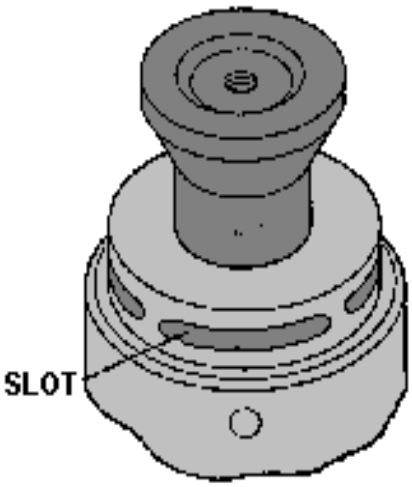
a) Use a rocket wrench
b) If rocket wrench is not available, proceed to disposal procedure(step b)
c) Remove Fuze
d) Proceed to disposal procedure

DISPOSAL PROCEDURE

a) Transport hazardous components to disposal area
b) Dispose of by detonation

AGM-1





ARMED CONDITION

WARNINGS

1) Do not remove a Fuze from a bomb that may contain picric acid, black powder, or toxic chemicals. Sensitive explosives or chemicals may present in the Fuze well.

2) Do not move or depress the striker or
The impact disk on an armed Fuze.
The Fuze has an in-line firing train.

REMARKS

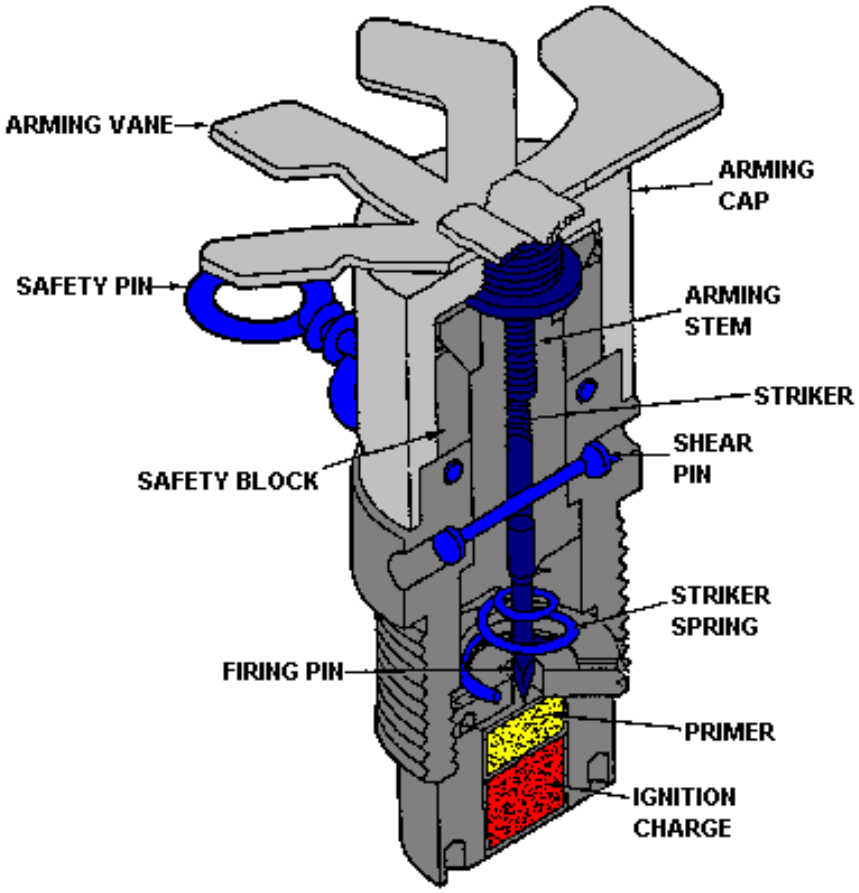
The AGM-1 and AGM-3 is similar,
There are small differences

FUZE DATA

TYPE: Impact
MODEL: AGM-1
MATERIAL: Brass and Aluminium
WEIGHT: 272.3g
MARKINGS: AGM-1
LENGTH: 76.6mm

FUNCTIONAL DATA

ARMING- Dropping away of vane
METHOD: assembly
SELF-DESTRUCT: None
SAFETY-DEVICE: Arming pin and shear pin



ARMED

The Fuze is armed if the safety pin, Arming cap and safety blocks are not Installed, or if the Fuze is damaged

HAZARDOUS

The Fuze has a primer an a Detonator

UNARMED

The Fuze is unarmed if the safety pin is
Installed and the Fuze is not damaged

USING WEAPONS:
AIRCRAFT

USING PROJECTILES

AO-2.5, AO-10, AO-20M3, AO-100, AOKH-8, AOKH-10, AOKH-15, KHAB-25, KHAB-25, KHAB-200, KHAB-500, KRAB-25

RSP-AGM-1

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data available.

WARNINGS

Do not remove a Fuze from a bomb, which may contain picric acid, black powder or toxic chemical.
Sensitive explosives or chemicals may be present in the Fuze well

a) Secure safety pin

b) Remove Fuze from ordnance by turning counter clockwise.

c) Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data available.

WARNINGS

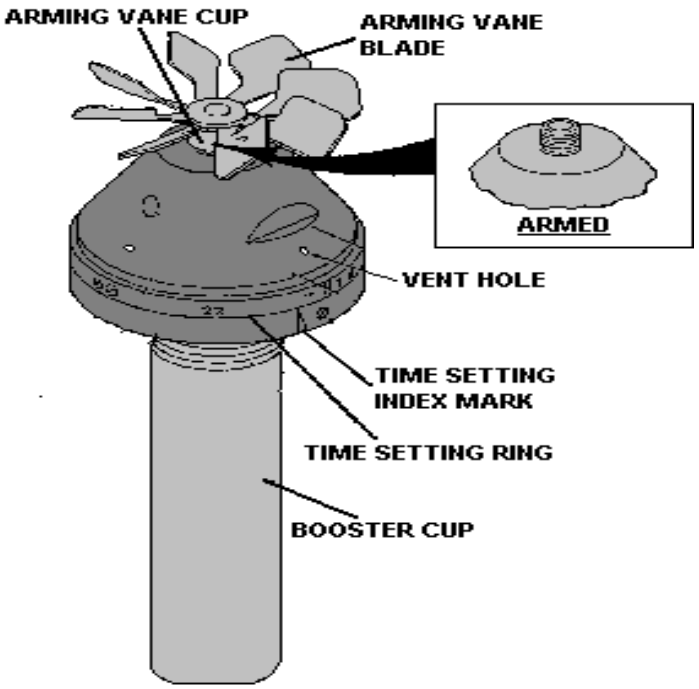
Do not move or depress the striker or the impact disk. The Fuze has an in-line firing train
Do not remove a Fuze from a bomb, which may contain picric acid, black powder, or toxic chemicals. Sensitive explosives or chemicals may be present in the Fuze well

a) Gag striker
b) Remove Fuze from ordnance by turning counterclockwise
c) Proceed to disposal procedure

DISPOSAL PROCEDURE

a) Transport hazardous components to disposal area
b) Dispose of by detonation

AGP



WARNINGS

1) Wait 30 minutes to approach a suspected dud-fired Fuze.
Deterioration or dampness may cause a delay function
Which prolongs the burning time of the powder train.

2) Handle and transport an armed Fuze very carefully. The firing pin and movable primer carrier are held apart by a creep spring. Gagging the striker does not immobilise the primer carrier.

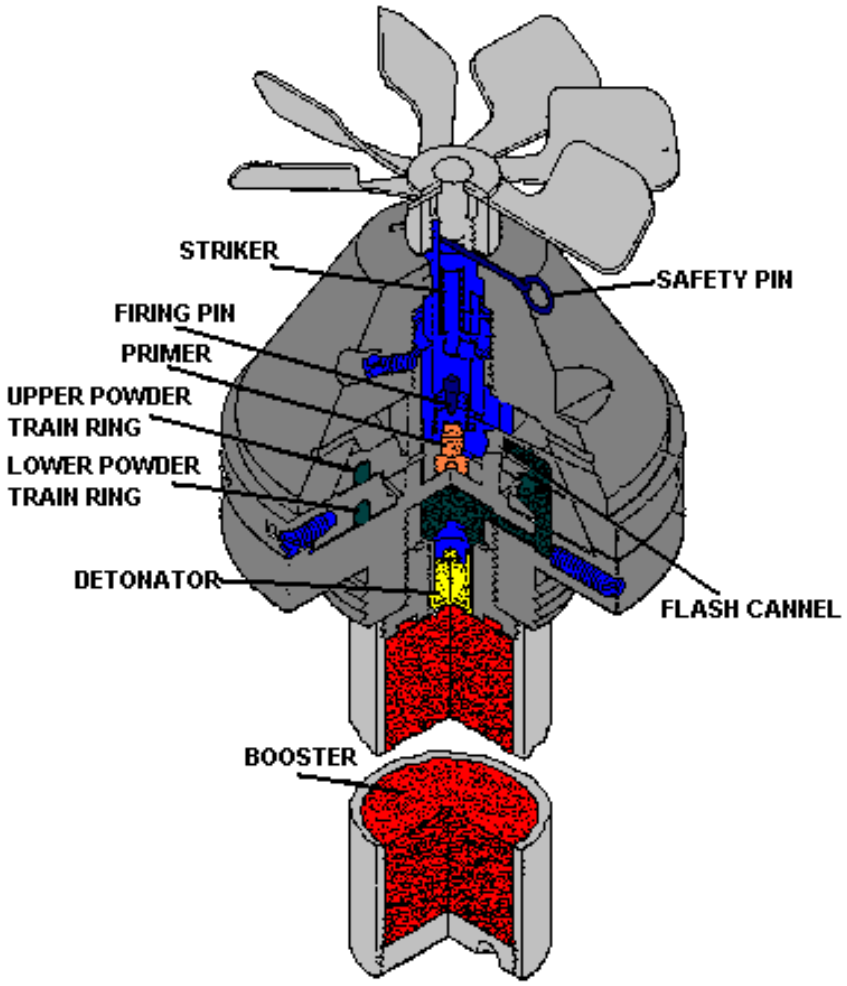
3) Wait 30 minutes to approach a Fuze after impact wrench removal. The powder train may have been initiated during Fuze removal and, deterioration or dampness, which prolongs the burning time of the powder train, may cause a delay function.

FUZE DATA

TYPE: Impact
MODEL: AGP
MATERIAL: Steel
WEIGHT: ???
MARKINGS: ???
LENGTH: 203.2mm

FUNCTIONAL DATA

ARMING METHOD: Dropping Away of vane Assembly
SELF-DESTRUCT: None
SAFETY-DEVICE: Arming vane pin



ARMED

The Fuze is unarmed if the arming vane is present

UNARMED

Consider the Fuze armed if the arming vane is missing

HAZARDOUS

The Fuze contains a primer, a pyrotechnic in the power train rings and the body, a detonator, and a booster.

USING PROJECTILES

FAB-50, FAB-100, FAB-250, FAB-500, FAB-1000,

USING WEAPONS:

AIRCRAFT

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data available.

a) Secure arming vanes to Fuze head/body to prevent rotation.

b) Manually remove Fuze-using wrench, pipe, adjustable, or other Suitable tool placed on body.

c) Proceed to disposal procedure.

RENDER SAFE PROCEDURES FOR ARMED CONDITION.

SPECIAL WARNING

These procedures are untested and are based on the best technical data available.

WARNING

Wait 30 minutes to approach a suspected dud-fired Fuze. A delay function may be caused by deterioration or dampness, which prolongs the burning time of the powder train.

Handle and transport an armed Fuze very carefully. The firing pin and movable primer carrier are held apart by a creep spring. Gagging the striker does not immobilise the primer carrier.

NOTE

Powder burn stains around the vent holes in the head are an indication that the powder train has partially burned out, resulting in an interrupted explosive train. Perform the procedures for the unarmed condition if the powder train has burned.

WARNING

Wait 30 minutes to approach a Fuze after impact wrench removal. The powder
Train may have been initiated during Fuze removal, and, deterioration or dampness, which prolongs the burning time of the powder train, may cause a delay function.

a) Assemble impact wrench (manual actuation)

b) Attach impact wrench to Fuze body, and operate wrench from a safety Area;

c) Proceed to disposal procedure. (Intention next page)

Alternate Procedure.

a) Manually remove Fuze using an adjustable pipe wrench, or other Suitable tool placed on body.

b) Proceed to disposal procedure.

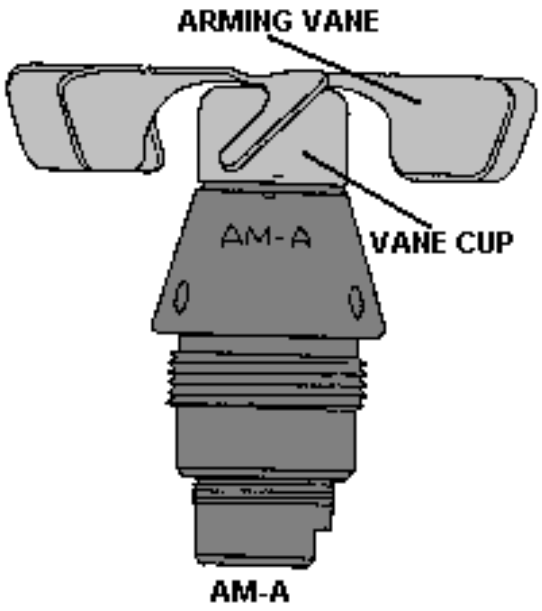
DISPOSAL PROCEDURE

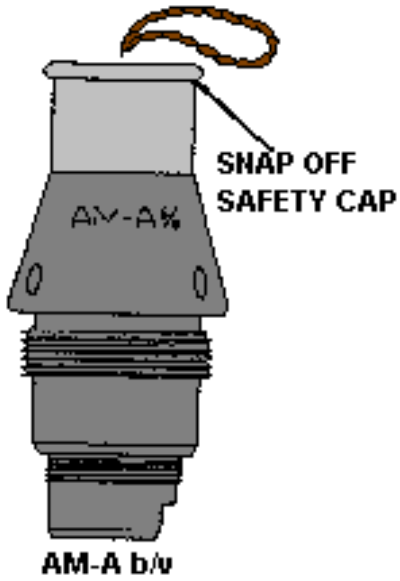
WARNING

Handle and transport an armed Fuze carefully. The tiring pin and movable primer carrier is held apart by a creep spring.
Gagging the striker does not immobilise the primer carrier

a) transport hazardous components to a disposal area
b) Dispose of by detonation.

AM-A





WARNINGS

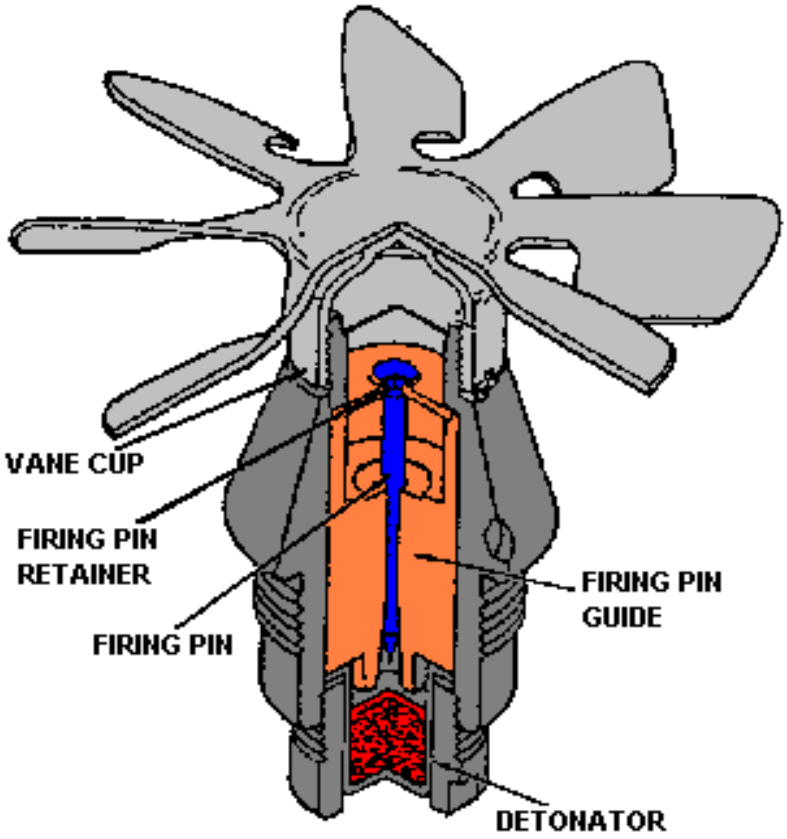
Fuze may function if dropped.

FUZE DATA

TYPE: Impact
MODEL: AM-A
MATERIAL: Steel
WEIGHT 140.6g
MARKINGS: AM-A
LENGTH: 63.2

FUNCTIONAL DATA

ARMING- Dropping Away of Vane
METHOD: Assembly
SELF-DESTRUCT: None
SAFETY-DEVICE: Arming wire



ARMED

Consider the Fuze armed if the arming vane and cup, or the safety cap is missing or if the Fuze is damaged.

HAZARDOUS

The AM-A have a detonator containing 6.2 grams of mercury fulminate and a primer containing less than 1 grams initiating explosive.

UNARMED

The Fuze is unarmed if the arming vane and cup, or the safety cap is place and is not damaged.

USING PROJECTILES

82mm Rocket RS-82, 132mm Rocket RS-132, 132mm Rocket ROFS-132,

BOMB/AO-2.5, A0-8M6, AO-10. AO-15, AO-20M1, AO-20M2, AO-25, AO-25M1, AO-25M2, AOKH-10, KHAB-25, KHAB-200, KHAB-500,

USING WEAPONS:

82mm 48-RD Rocket Launcher
82mm M-8 Rocket Launcher
82mm Aircraft Launcher RO-82
132mm Rocket Launcher M-18
132mm Aircraft Launcher RO-132

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

a) Secure arming vane and cup, or safety cap in place.

b) Remove Fuze by hand or wrench, turning it counter clockwise.

c) Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

a) Remove Fuze by hand or wrench, turning it counter clockwise.

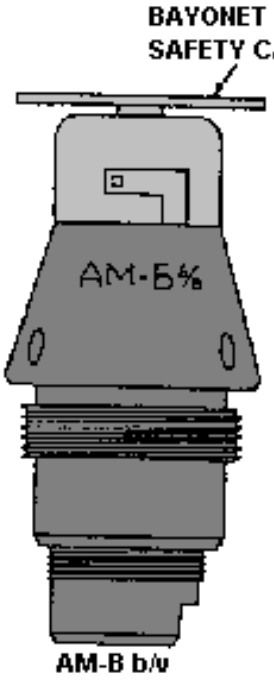
b) Proceed to disposal procedure.

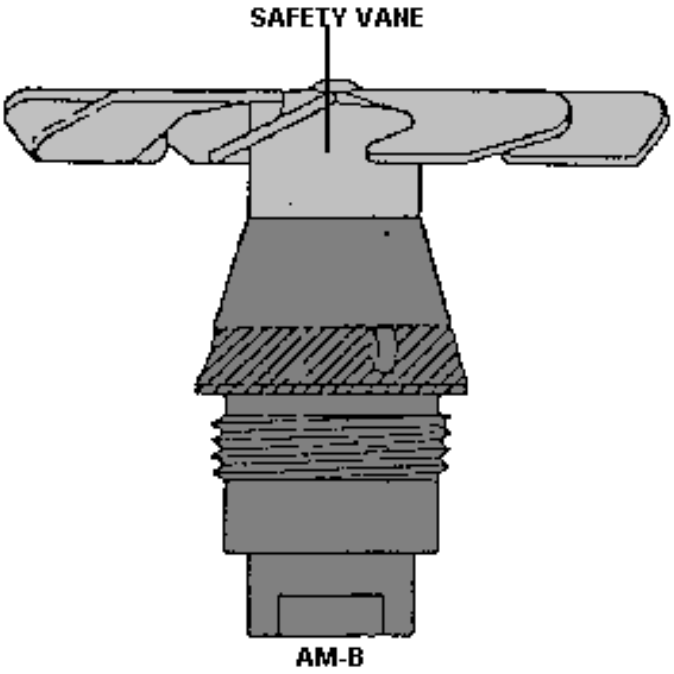
DISPOSAL PROCEDURE

a) Transport hazardous components to disposal area

b) Dispose of by detonation

AM-B





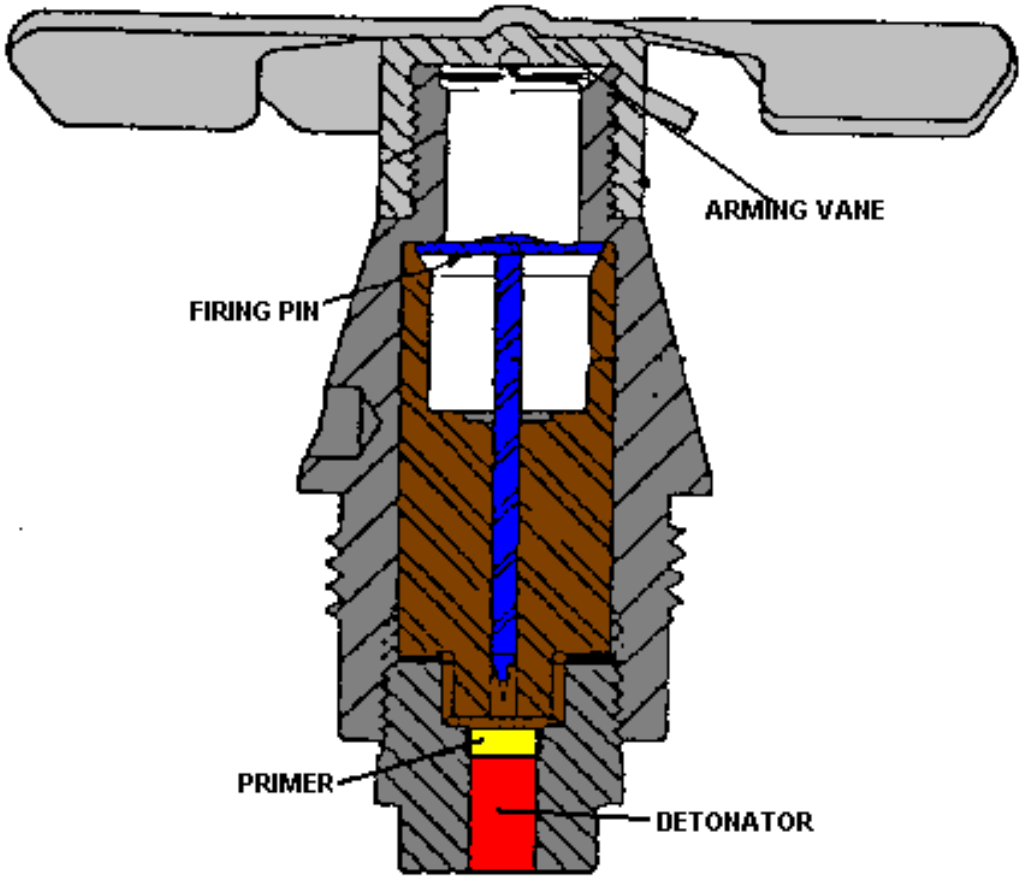
WARNINGS

FUZE DATA

TYPE: Impact
MODEL: AM-B
MATERIAL: Steel
WEIGHT 226.7g
MARKINGS: AM-B
LENGTH: 63.2

FUNCTIONAL DATA

ARMING- Dropping Away of Vane Assembly
METHOD:
SELF-DESTRUCT: None
SAFETY-DEVICE: Arming wire



ARMED

Consider the Fuze armed if the arming vane and cup, or the safety cap is missing or if the Fuze is damaged.

UNARMED

The Fuze is unarmed if the arming vane and cup, or the safety cap is place and is not damaged.

USING PROJECTILES

82mm Rocket RS-82, 132mm Rocket RS-132, 132mm Rocket ROFS-132,

BOMB/AO-2.5, A0-8M6, AO-10. AO-15, AO-20M1, AO-20M2, AO-25, AO-25M1, AO-25M2, AOKH-10, KHAB-25, KHAB-200, KHAB-500

HAZARDOUS

The AM-B has a detonator containing 6.2 grams of mercury fulminate and a primer containing less than 1 grams

USING WEAPONS:

82mm 48-RD Rocket Launcher
82mm M-8 Rocket Launcher
82mm Aircraft Launcher RO-82
132mm Rocket Launcher M-18
132mm Aircraft Launcher RO-132

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

a) Secure arming vane and cup, or safety cap in place.

b) Remove Fuze by hand or wrench, turning it counter clockwise.

c) Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

a) Remove Fuze by hand or wrench, turning it counter clockwise.

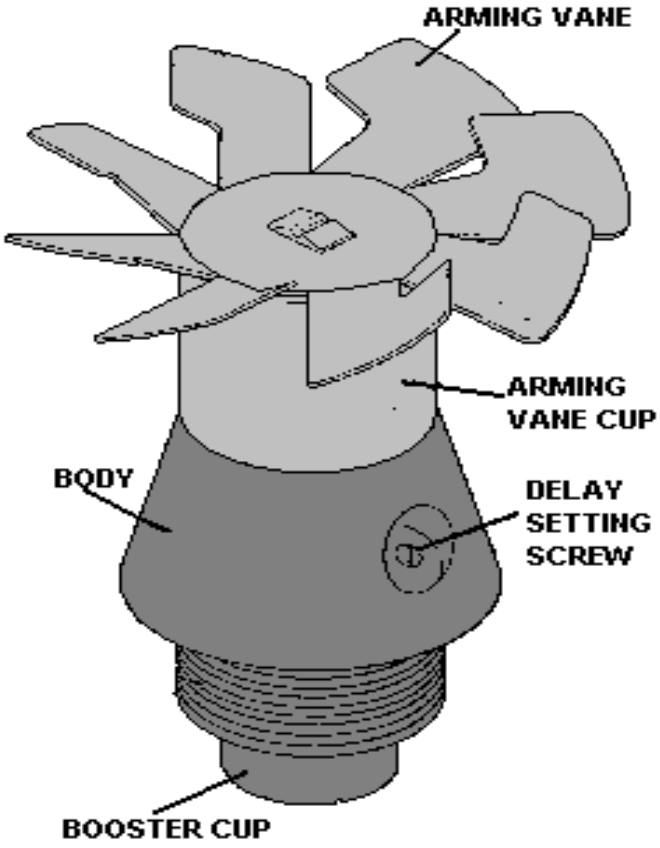
b) Proceed to disposal procedure.

DISPOSAL PROCEDURE

c) Transport hazardous components to disposal area

d) Dispose of by detonation

AV-4



WARNINGS

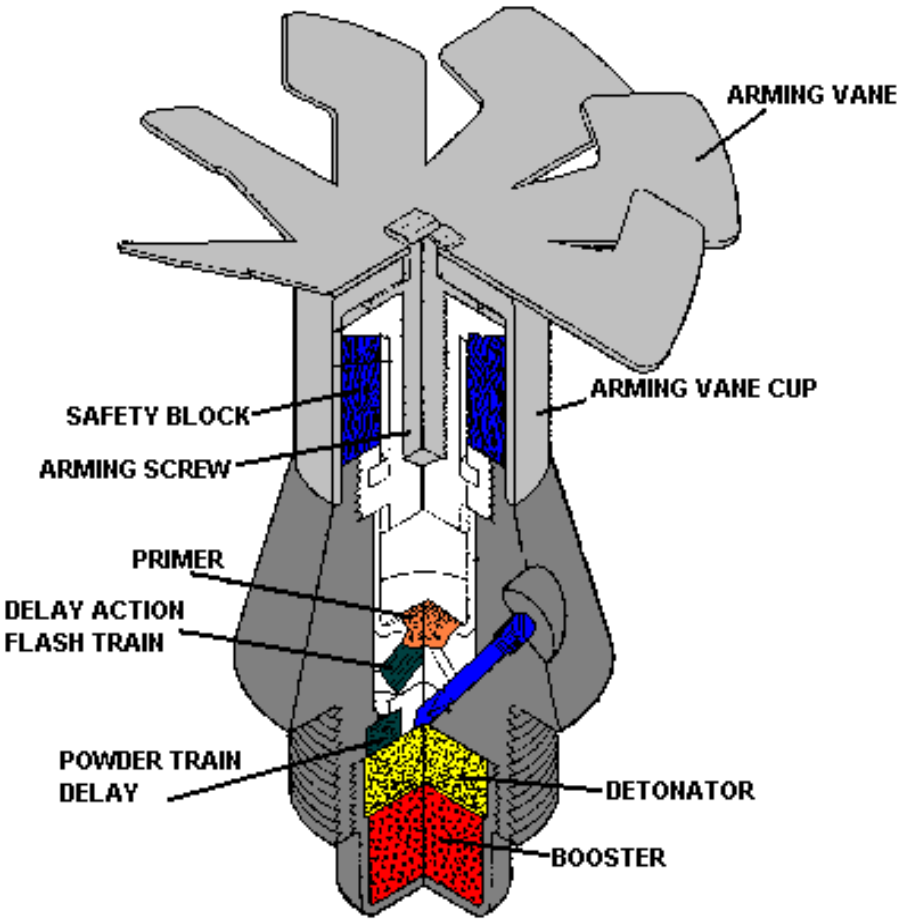
Wait at least 30 minutes from time of release before approaching an armed Fuze.
This will provide ample time for functioning should deterioration or dampness prolong burning time of the powder train delay.

FUZE DATA

TYPE: Impact
MODEL: AV-4
MATERIAL: Steel
WEIGHT: ???
MARKINGS: AB-4
LENGTH: 94.4mm

FUNCTIONAL DATA

ARMING- Dropping away of
METHOD: Assembly
SELF-
DESTRUCT: None
SAFETY-
DEVICE: Arming Wire



ARMED

Consider the Fuze armed if the two safety blocks are not retained under the plunger head by the arming vane cup.

HAZARDOUS

The explosive train consists of a primer powder train delay, detonator, and booster.
The compositions and weights of these components

UNARMED

The Fuze is unarmed if the two safety blocks are retained under the plunger head by the arming vane cup.

USING PROJECTILES

AO-2.5, AO-10, AO-20M3, AO-25M1
AO-100, AOKH-10,AOKH-15,
KHAB-25, KHAB-200, KHAB-500

USING WEAPONS:
AIRCRAFT

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data Available.

a). Tape arming vane and safety wire to Fuze body.

b). Manually removes Fuze by hand or with a suitable tool, turning in a counter clockwise direction.

c). Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data available.

WARNINGS

Wait 30 minutes before approaching a suspected dud-fired Fuze. A random delay function may be caused by deterioration or dampness, which prolongs the burning time of the delay charge.

Do not move or jar a bomb containing an armed Fuze. The Fuze contains an in-line primer separated from the firing pin by a creep spring.

a). Assemble a rocket wrench for operation

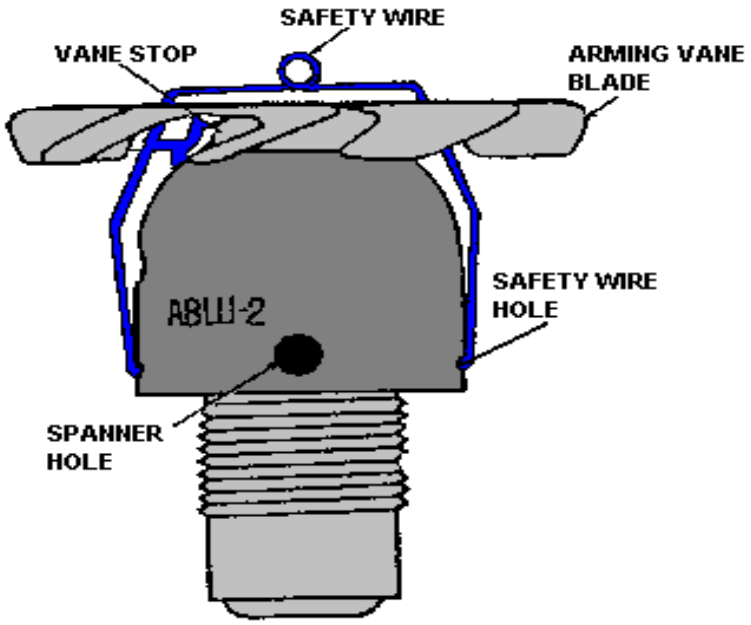
b). Carefully attaches rocket wrench to Fuze body.

DISPOSAL PROCEDURE

a). Transport hazardous components to disposal area

b). Dispose of by detonation

AVSH-2



WARNINGS

1) Wait 30 minutes before approaching a suspected dud—fired Fuze. A random delay function may he caused by deterioration or dampness which prolongs the burning time of the delay charge.

2) Do not move or jar a bomb containing an armed Fuze. The Fuze contains an in—line primer separated from the firing pin by a creep spring.

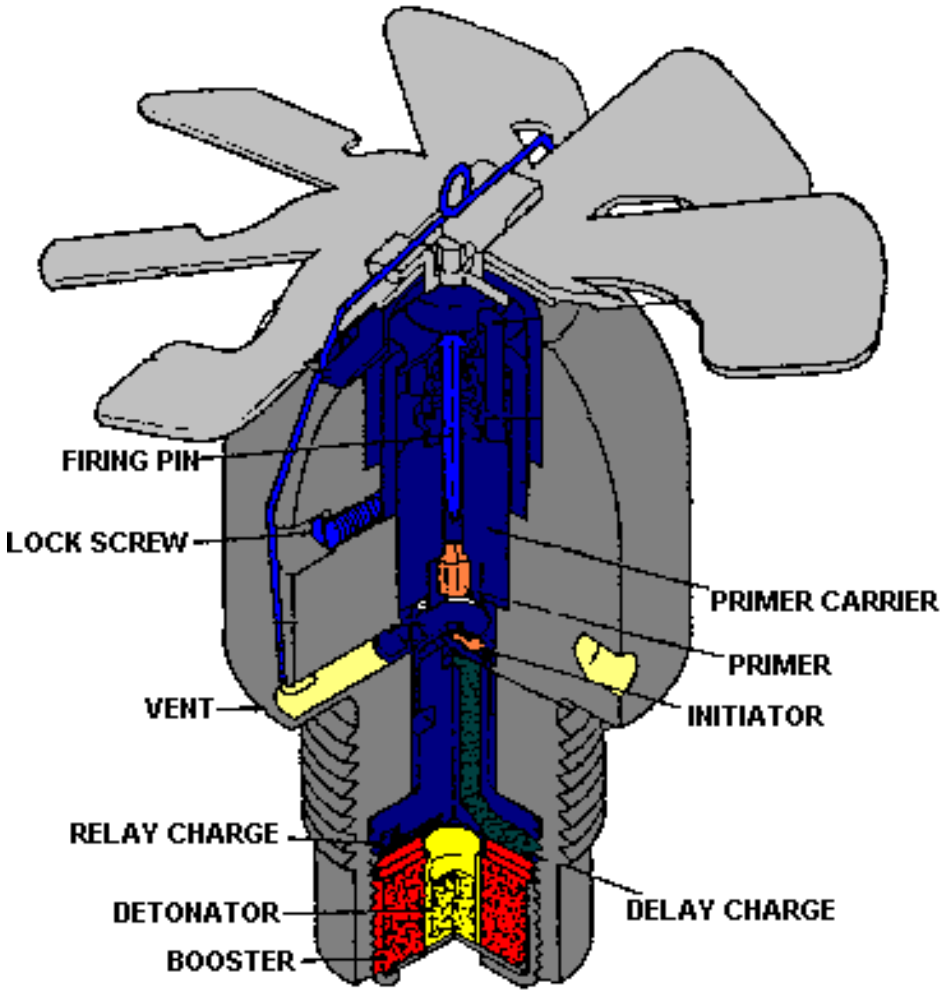
3) Wait 30 minutes to approach a Fuze after rocket wrench removal. The delay may have been initiated during Fuze removal. A random delay function may be caused by deterioration or dampness, which prolongs the burning time of the delay charge.

FUZE DATA

TYPE: Impact
MODEL: AVSH-2
MATERIAL: Steel
WEIGHT: ???
MARKINGS: AB III-2
LENGTH: 71.6mm

FUNCTIONAL DATA

ARMING-METHOD: Dropping away of vane Assembly
SELF-DESTRUCT: None
SAFETY-DEVICE: Arming wire



ARMED

Consider the Fuze armed if the arming vane and vane cup are missing or if the Fuze is damaged.

HAZARDOUS

The explosive train consists of a primer, an initiator, pickup, delay and relay charges, and a detonator, each weighing less than 1 gram, and a 1 gram tetryl booster

UNARMED

The Fuze is unarmed if the arming vane and vane cup are in place and the Fuze is undamaged.

USING WEAPONS:

AIRCRAFT

USING PROJECTILES

?

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data available.

a). Tape arming vane and safety wire to Fuze body.

b). Manually removes Fuze by hand or with a suitable tool, turning in a counter clockwise direction.

c). Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

SPECIALWARNING

This procedure is untested and is based on the best technical data available.

WARNINGS

Wait 30 minutes before approaching a suspected dud-fired Fuze. A random delay function may be caused by deterioration or dampness, which prolongs the burning time of the delay charge.

Do not move or jar a bomb containing an armed Fuze. The Fuze contains an in-line primer separated from the firing pin by a creep spring.

a). Assemble a rocket wrench for operation as prescribed in 60-series Manual.

b). Carefully attaches rocket wrench to Fuze body.

c). Initiate rocket wrench.

WARNING

Wait 30minutes to approach a Fuze after a rocket wrench removal. The

Delay may have initiated during Fuze removal. A random delay may be

Caused by deterioration or dampness which prolongs the burning time at

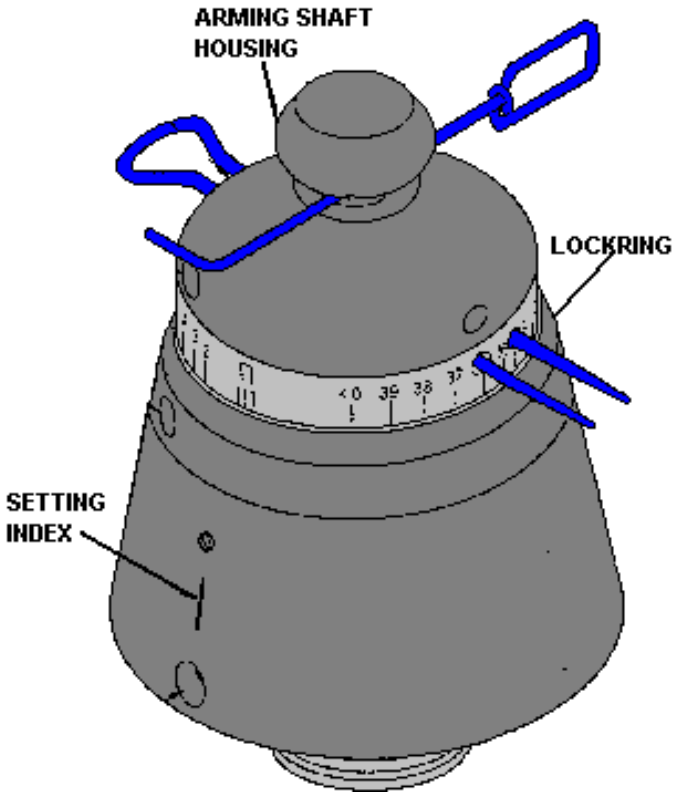
The delay charge

DISPOSAL PROCEDURE

a). Transport hazardous components to disposal area

b). Dispose of by detonation

TM-4A and 4B



WARNINGS

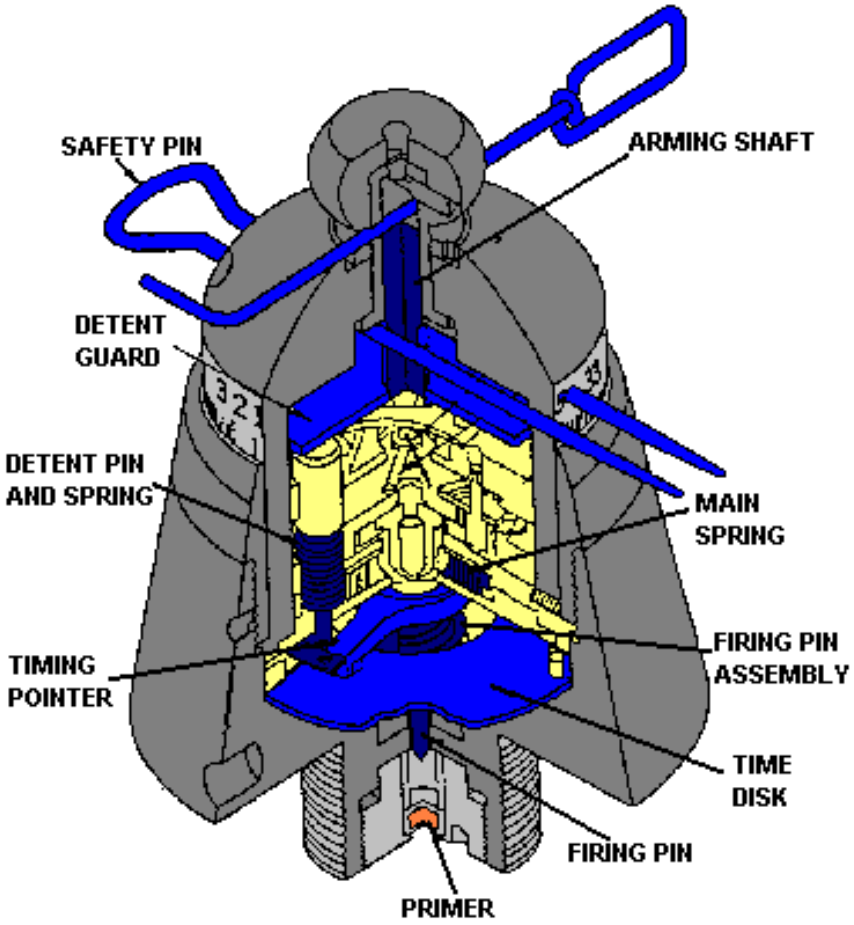
Do not jar or drop an armed Fuze.
The spring-loaded firing pin maybe
Partially released and could function
Upon jarring.

FUZE DATA

TYPE: Mechanical Time
MODEL: TM-4A and TM-4B
MATERIAL: Steel
WEIGHT: ???
MARKINGS: TM-4A/TM-4B
LENGTH: 97.5mm

FUNCTIONAL DATA

ARMING-
METHOD: Remove Arming Wire
SELF-
DESTRUCT: Time Setting
SAFETY-
DEVICE: Safety Pin



ARMED

Consider the Fuze armed if the safety pin and arming pin are not in place.

UNARMED

The Fuze is unarmed if the safety pin or arming pin in place.

HAZARDOUS

The compositions and weights of the TM-4A detonator and the TM-4B primer are unknown.

USING PROJECTILES

AO-2.5, AO-10, AO20M3,
AD-1, AOKH-10, AOKH-15,

USING WEAPONS:
AIRCRAFT

BOMBS FOTAB, SAB, SAB-3M,
SAB-25,
KHAB-200, KHAB-500, KRAB-25,
ZAB-50TSHCH, ZAB-100T.

RSP-TM-4A and TM-4B

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data available.

WARNING

Do not jar or drop an armed Fuze. The spring-loaded firing pin may Be partially released and could function upon jarring.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data Available.

WARNINGS

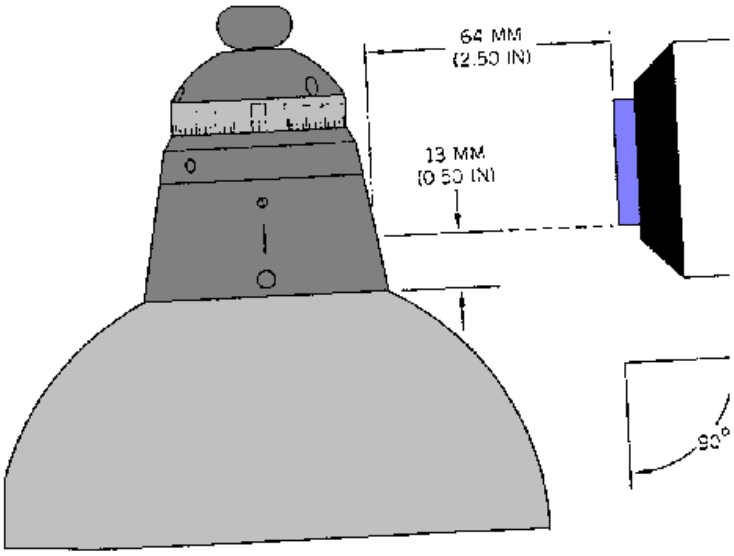
Do not jar or drop an armed Fuze. The spring-loaded firing pin may be partially released and could function upon jarring.

a).Assemble a calibre ***.50*** dearmer / JROD with a standard slug a position as shown in figure 1

b).Fire dearmer.

c).Cover remainder of Fuze with tape.

d).Proceed to disposal procedure.

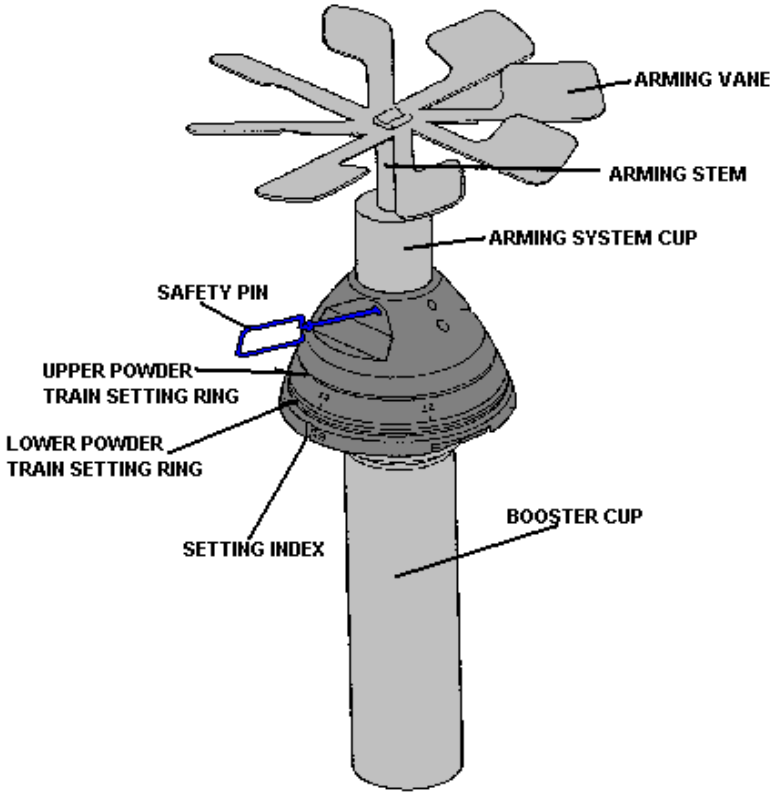


DISPOSAL PROCEDURE

a).Transport hazardous components to disposal area

b).Dispose of by detonation

ADP



WARNINGS

1) Wait 30 minutes to approach a suspected dud-fired Fuze.
Deterioration or dampness may cause a delay function
Which prolongs the burning time of the powder train.

2) Wait 30 minutes to approach a Fuze after rocket wrench removal. The powder train may have been initiated during Fuze removal. A delay function may be caused by deterioration or dampness, which prolongs the burning time of the powder train.

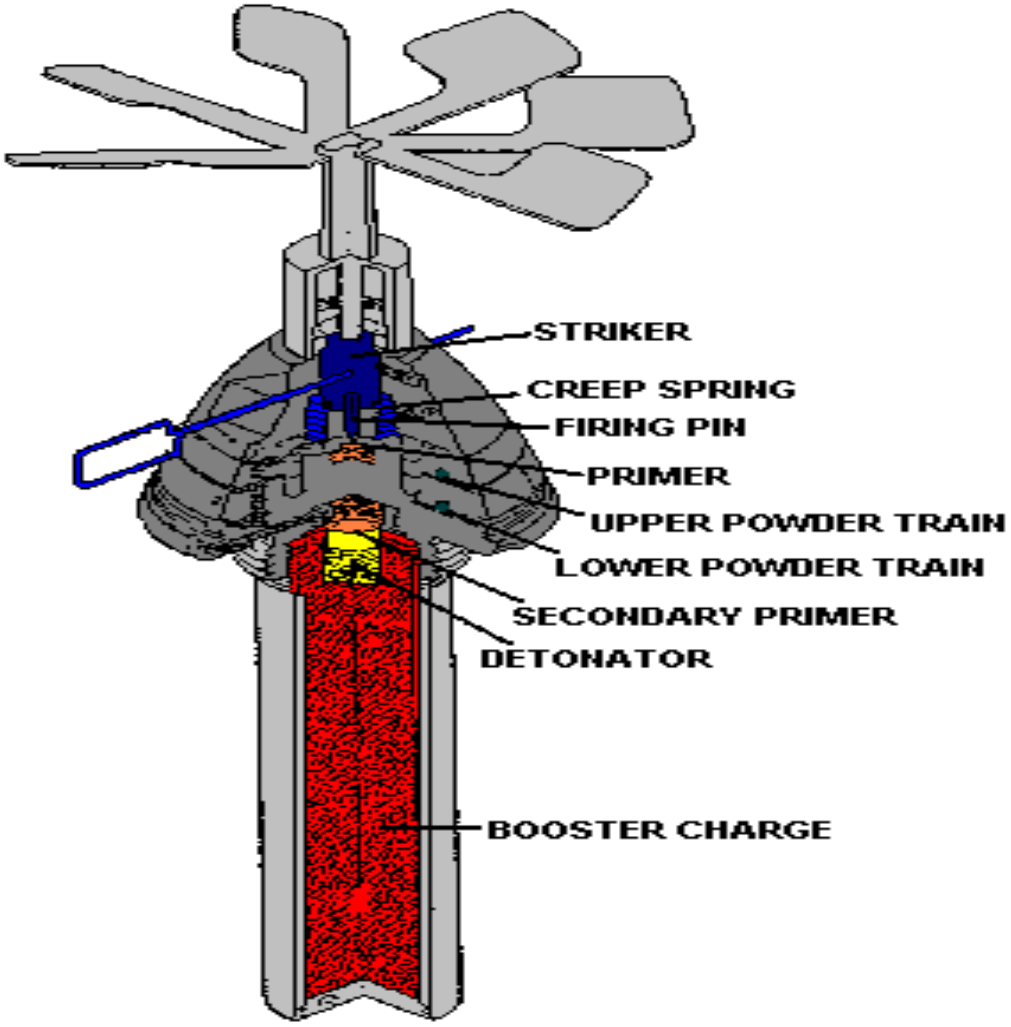
3) Do not depress or move the striker during insertion of the cotter pin into the safety pin hole. The firing pin is held away from the primer by a creep spring or may be embedded in the primer.

FUZE DATA

TYPE: Impact
MODEL: ADP
MATERIAL: Aluminium
WEIGHT: ???
MARKINGS: AA II
LENGTH: 243.8mm

FUNCTIONAL DATA

ARMING-METHOD: Dropping away of vane Assembly
SELF-DESTRUCT: None
SAFETY-DEVICE: Arming Pin



ARMED

Consider the Fuze armed if the fork/safety pin is not in place and/or the Fuze is damaged.

UNARMED

The Fuze is unarmed if the arming fork/safety pin is in place and the Fuze is undamaged.

HAZARDOUS

The explosive components are the primer, upper and lower powder train, relay, secondary primer, detonator, and booster charge.

USING PROJECTILES

USING WEAPONS:
AIRCRAFT

FAB-50, FAB-100, FAB-250
FAB-500, FAB-1000, BRAB-200DS,
BRAB-500, BRAB-1000, BETAB-150DS.

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best Technical data available.

a). Secure arming fork/safety pin in place with tape.

b).Remove Fuze by hand, turning it counter clockwise.

c).Proceed to disposal procedure.

RENDER SAFE PROCEDURES FOR ARMED CONDITION.

SPECIAL WARNING

These procedures are untested and are based on the best technical data available.

WARNING

Walt 30 minutes to approach a suspected dud-fired Fuze. A delay function may be caused by deterioration or dampness, which prolongs the burning time of the powder train.

NOTE

Powder burn stains around the vent holes in the head are an indication that the powder train has partially burned out, resulting in an interrupted explosive train. Perform the procedures for the unarmed condition if the powder train has partially burned.

a).Assemble a rocket wrench for operation

b).Carefully position wrench on Fuze body.

c).Initiate rocket wrench.

.**WARNING** Alternate Procedure

Do not depress or move the striker during insertion of cotter pin into the safety pin hole. The firing pin is held away from the primer by a creep spring or may be embedded in the primer.

a).Insert a cotter pin, or suitable substitute, into safety pin hole, and secure in place

b).Remove Fuze by hand, turning counter clockwise.

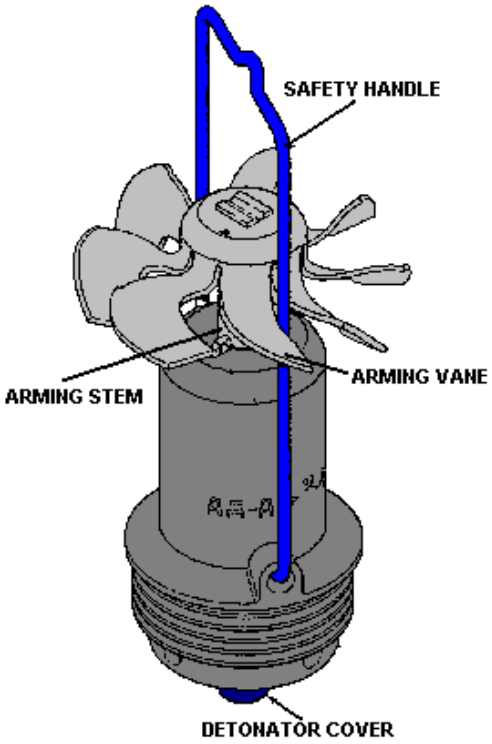
c).Proceed to disposal procedure.

DISPOSAL PROCEDURE

a).Transport hazardous components to disposal area

b).Dispose of by detonation

AD-A



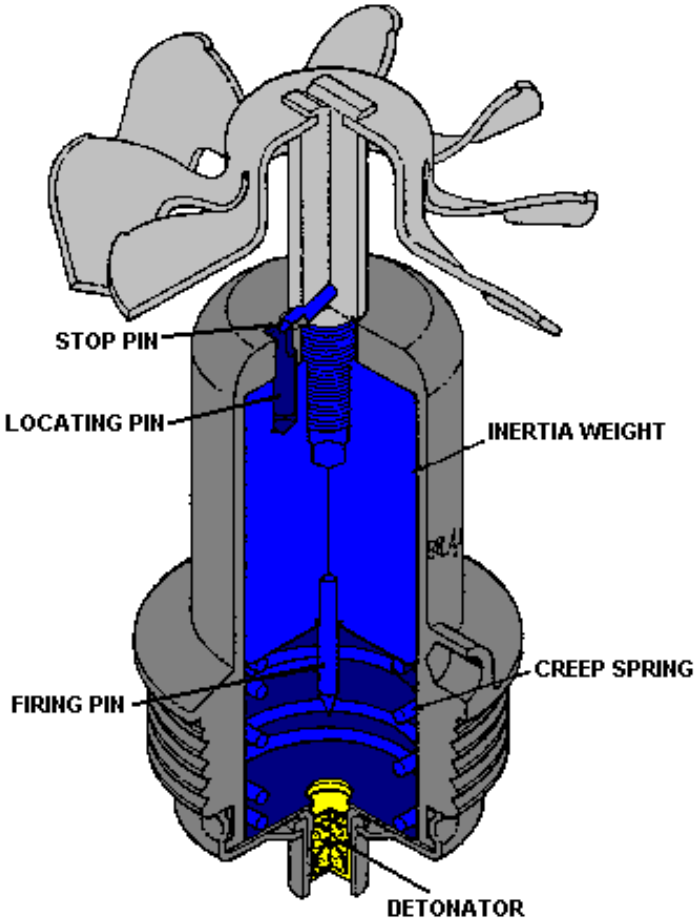
WARNINGS

FUZE DATA

TYPE: Impact
MODEL: AD-A
MATERIAL: Aluminium Alloy
WEIGHT: ???
MARKINGS: AD-A
LENGTH: 96.5mm

FUNCTIONAL DATA

ARMING-METHOD: Dropping Away of vane Assembly
SELF-DESTRUCT: None
SAFETY-DEVICE: Arming Wire



ARMED

Consider the Fuze armed if the arming vane and stem are missing and/or the Fuze is damaged.

UNARMED

The Fuze is unarmed if the safety wire or arming vane is in place and the Fuze is undamaged.

HAZARDOUS

The detonator contains less than 1 gram of explosives

USING PROJECTILES

USING WEAPONS:
AIRCRAFT

Any Appropriate Bomb

RSP-AD-A

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best Technical data available.

a).Tape safety wire or arming vane in place.

b).Remove Fuze by hand or wrench, turning Fuze in a counterclockwise.

c).Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

SPECIAL WARNING

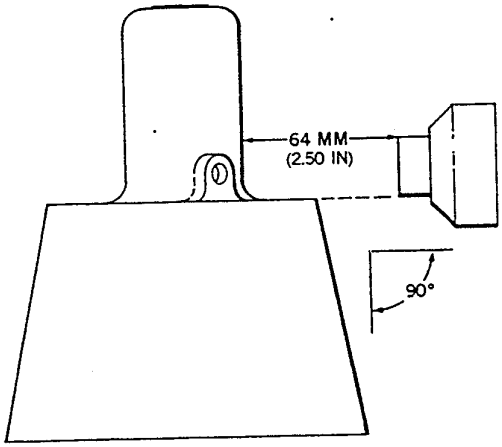
This procedure is untested and is based on the best technical data available.

a).Assemble a calibre .50 dearmer with a standard slug and position as it shown in figure.

b).Fire dearmer

c).Fill cavity with suitable material and/or tape remaining components in place.

d).Proceed to disposal procedure

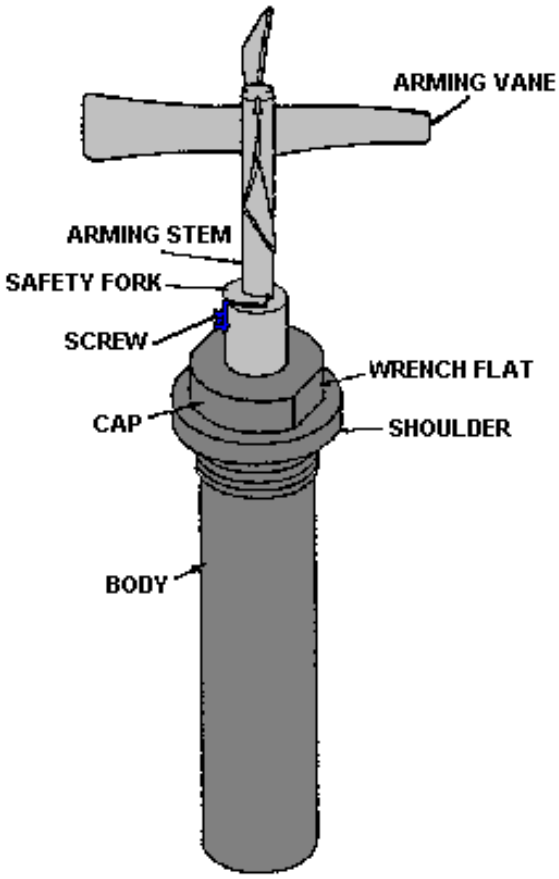


DISPOSAL PROCEDURE

a).Transport hazardous components to disposal area

b).Dispose of by detonation

ADOZ/ADZ/ADZU



WARNINGS

1)Wait 30 minutes from time of impact before performing render safe procedures on an armed Fuze.
Two Fuzes in this series contain delay elements of unknown duration.

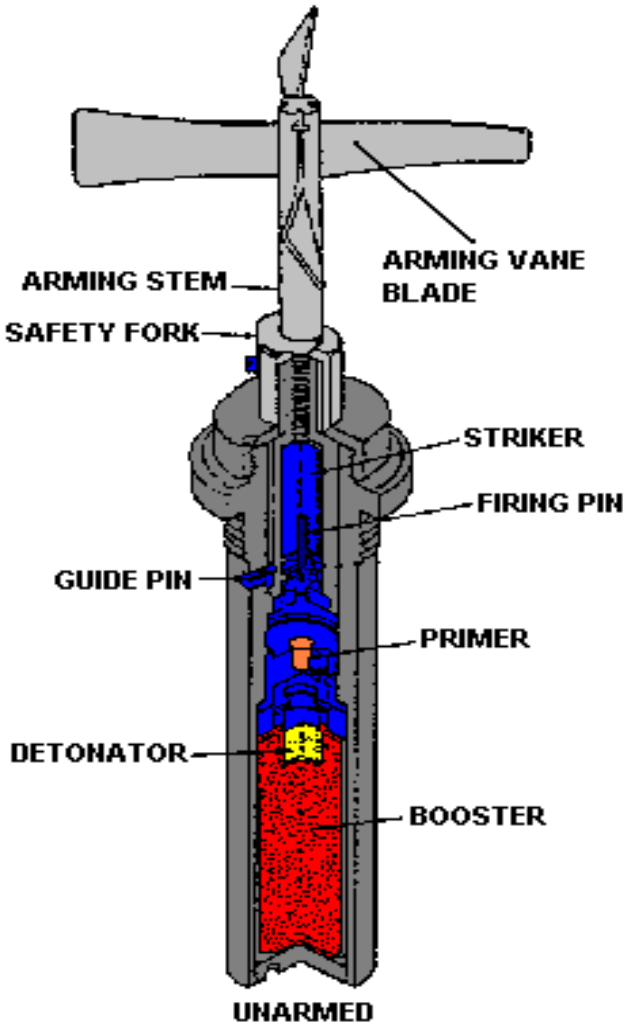
2)wait 30 minutes before approaching a remotely removed armed ADZ or ADZU Fuze.
This should provide ample time to observe any indication of further functioning since deterioration or dampness may prolong burning of the pyrotechnic delay initiated removal.

FUZE DATA

TYPE: Impact
MODEL: ADOZ,ADZ,ADZU
MATERIAL: Steel
WEIGHT: 798.3g
MARKINGS: AGO3 (ADOZ)
LENGTH: 251.4mm

FUNCTIONAL DATA

ARMING-METHOD: Dropping Away of vane Assembly
SELF-DESTRUCT: None
SAFETY-DEVICE: Locking Yoke



ARMED

Consider the Fuze is armed if the arming stem is not installed or if the safety fork is not installed and threads on the arming stem are visible.

UNARMED

The Fuze is unarmed if the arming stem and safety forks are installed.

USING PROJECTILES

HAZARDOUS

These Fuzes contain a primer, relay, detonator, and booster.

The ADZ and ADZU Fuzes each have a delay element.

USING WEAPONS:

AIRCRAFT BOMBS

RSP-ADOZ,ADZ and ADZU

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best Technical data available.

a). Secure arming fork/safety pin in place with tape.

b). Manually removes Fuze by hand or with a suitable tool, turning in a counter clockwise direction.

c). Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best technical data Available.

WARNING

Wait 30 minutes from time of impact before performing procedures on an armed Fuze. Two Fuzes in this series contain delay elements of unknown duration.

a).Assemble and attach remote wrench to Fuze.

b).Remotely remove Fuze.

c).Proceed to disposal procedure.

WARNING

Wait 30 minutes before approaching a remotely removed ADZ or ADZU Fuze. This should provide ample time to observe any indication of further functioning since deterioration or dampness may prolong burning of the pyrotechnic delay if initiated during removal.

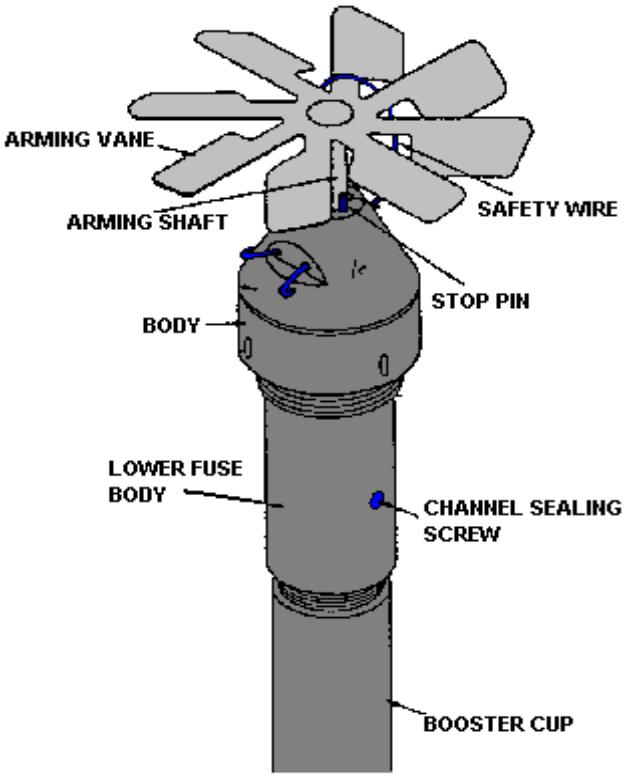
DISPOSAL PROCEDURE

a). Place Fuze in a container of sand or other suitable material.

b).Transport hazardous components to disposal area

c).Dispose of by detonation

AV-1/AV-1d/u



WARNINGS

1) Do not approach an armed Fuze for 30 minutes after impact or remote removal.
Deterioration or dampness may prolong burning of the pyrotechnic delay element.

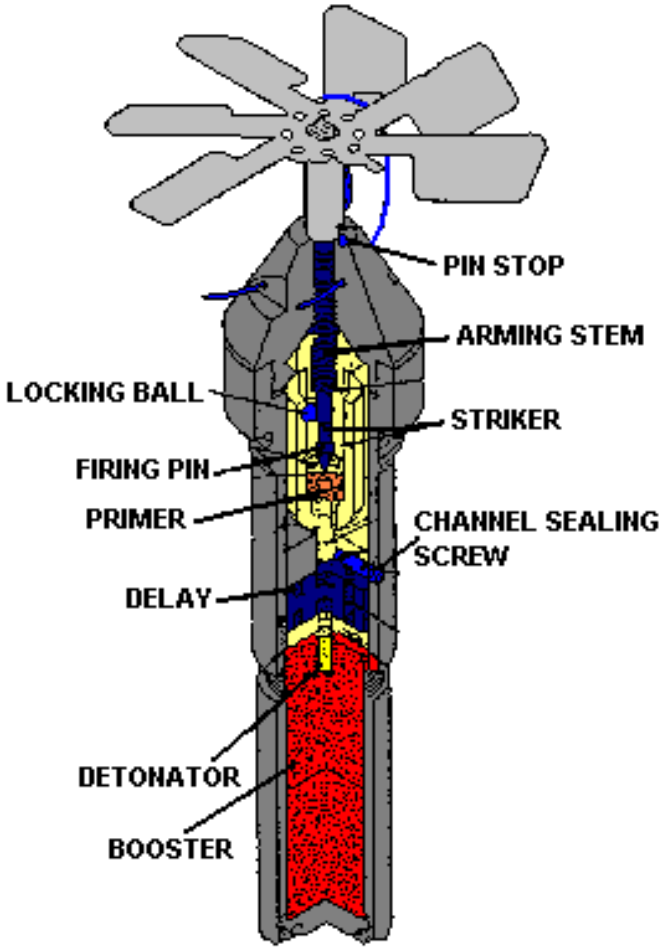
2) Do not subject an armed Fuze to unnecessary movement, and maintain the Fuze in a nose-up attitude after removal.
These are all-way Fuzes, and in the armed condition the firing pin and primer are held apart only by the creep spring.

FUZE DATA

TYPE: Impact
MODEL: AV-1,AV-1d/u
MATERIAL: Steel
WEIGHT: ???
MARKINGS: AB-1
LENGTH: 214.2mm

FUNCTIONAL DATA

ARMING-METHOD: Dropping Away of Vane Assembly
SELF-DESTRUCT: None
SAFETY-DEVICE: Arming Wire



ARMED

Consider the Fuzes armed if the safety wire and the safety fork are missing, and the D-pin is not in contact with the stop pin.

UNARMED

The Fuzes are unarmed if the safety wire or the safety fork is in place, and/or the D-pin is in contact with the stop pin.

HAZARDOUS

Each Fuze contain a primer, a detonator, and a delay element, each with less than 1 gram of explosive, a relay wafer whit 1 gram of potassium nitrate, sulfur and carbon, and a booster with 51grams of tetryl in addition, the AV-1d/u Fuze contains a relay pellet with less than 1 gram of explosive.

USING PROJECTILES

USING WEAPONS:
AIRCRAFT

FAB-50, FAB-100, FAB-250, FAB-500, FAB-1000

RSP-AV-1

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

a). Secure arming vane to prevent movement.

b).Manually remove Fuze.

NOTE

If a wrench is required to loosen the Fuze, attach the wrench to the Fuze body.

c).Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

WARNINGS

Do not approach an armed Fuze for 30 minutes after impact or remote removal. Deterioration or dampness may prolong burning of the pyrotechnic delay element.

Do not subject an armed Fuze to unnecessary movement, and maintain the Fuze in a nose-up attitude after removal. These are all-way Fuzes, and in the armed condition the firing pin and primer are held apart only by the creep spring.

NOTE

Due to the 144-millimeter (5.67-inch) intrusion of the Fuze into the bomb, adequate clearance is required for Fuze removal.

a). Remove Fuze using tape and line technique for small diameter Fuzes.

Ensure that pipe wrench is attached to Fuze body or using a wrench.

Ensure wrench is attached to Fuze body.

b). Maintain Fuze in a nose-up attitude.

c). Proceed to disposal procedure.

DISPOSAL PROCEDURE

Unarmed Condition

a).Transport hazardous components to disposal area

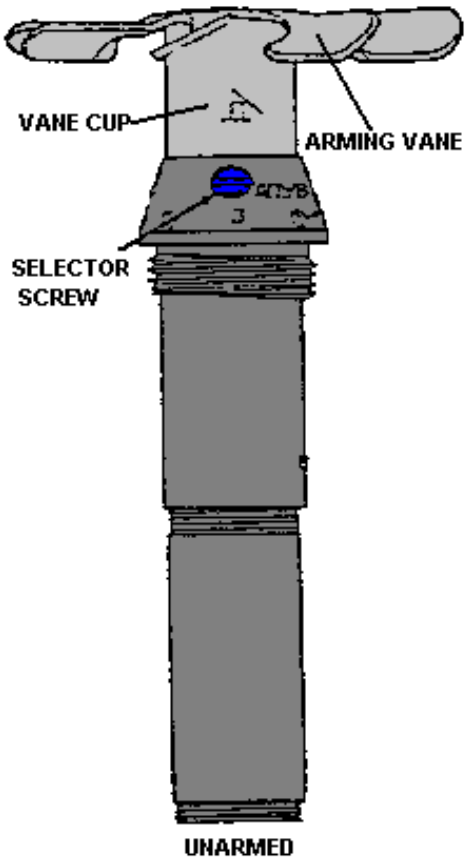
b).Dispose of by detonation

Armed Condition

a). Hand carries Fuze to a disposal area.

b).Dispose of by detonation.

APUV



WARNINGS

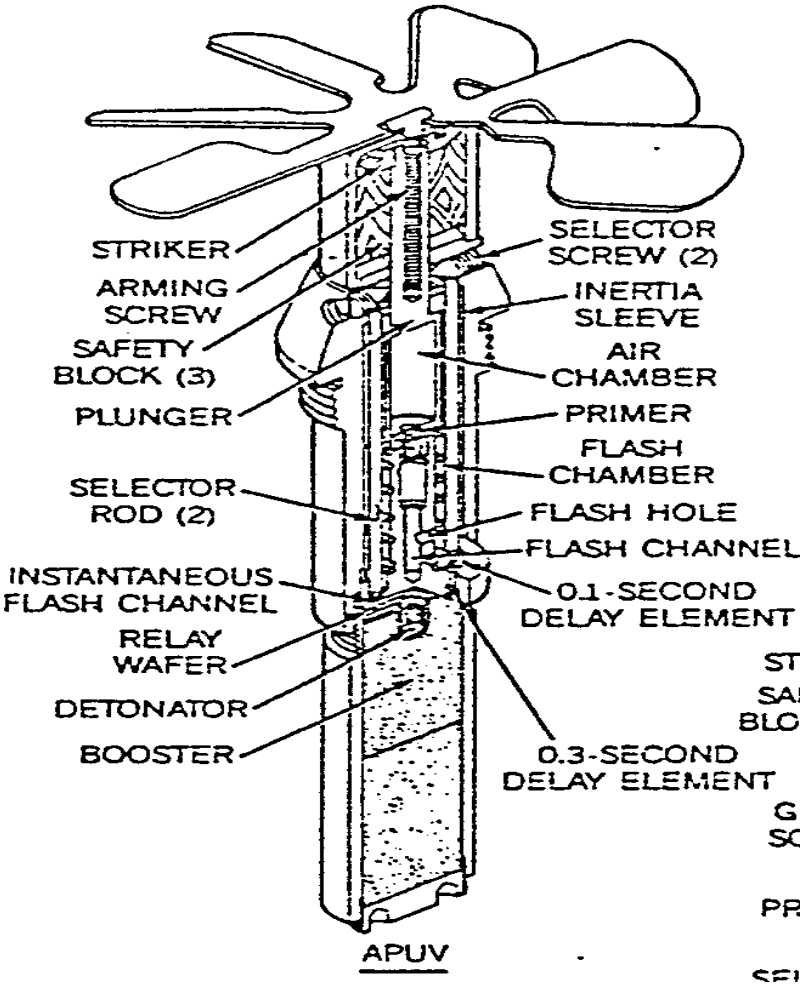
1)Do not depress or permit of the striker.
The Fuze has no out-of-line safety feature.

FUZE DATA

TYPE: Impact
MODEL: APUV
MATERIAL: Steel
WEIGHT: ???
MARKINGS: AIIYB
LENGTH: 199.3mm

FUNCTIONAL DATA

ARMING- Dropping Away of Vane Assembly
METHOD:
SELF-DESTRUCT: None
SAFETY-DEVICE: Safety Wire



ARMED

Consider the Fuze armed if the vane cup is missing, if the vane cup is not seated against the Fuze body, or the Fuze is damaged.

UNARMED

The Fuze is unarmed if the vane cup is seated against the Fuze body and the Fuze is undamaged.

HAZARDOUS

The explosive train of these Fuze consists of a primer (lead styphnate and potassium perchlorate), delay elements (black powder), a relay wafer and a detonator (lead styphnate, lead aside, and tetryl) each of which weight less than 1 gram.
The booster contains 51gram of tetryl.
Some Fuzes have a relay pellet beneath the primer.

USING PROJECTILES

USING WEAPONS:
AIRCRAFT

BOMB/ BRAB and FAB

RENDER SAFE PROCEDURE FOR UARMED CONDITION.

a). Secure vane cup to Fuze body with tape or other suitable material to prevent vane cup rotation.

b). Manually remove Fuze from bomb. If required. Loosen Fuze with wrench, pipe adjustable 18 inch, or other suitable tool, placed on body.

c).Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

WARNING

Do not depress or permit movement of the striker. These Fuzes have no out of line safety feature.

a). Gag plunger and striker in position found.

b). Manually remove Fuze from bomb. If required, loosen Fuze with an 18 Inch pipe wrench, or other suitable tool, placed on body.

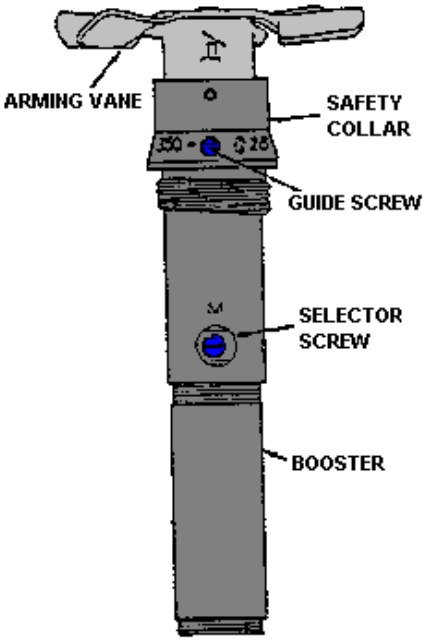
c). Proceed to disposal procedure.

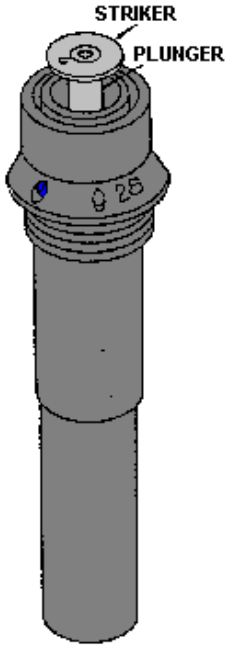
DISPOSAL PROCEDURE

a).Transport hazardous components to disposal area

b).Dispose of by detonation

APUV-1





WARNINGS

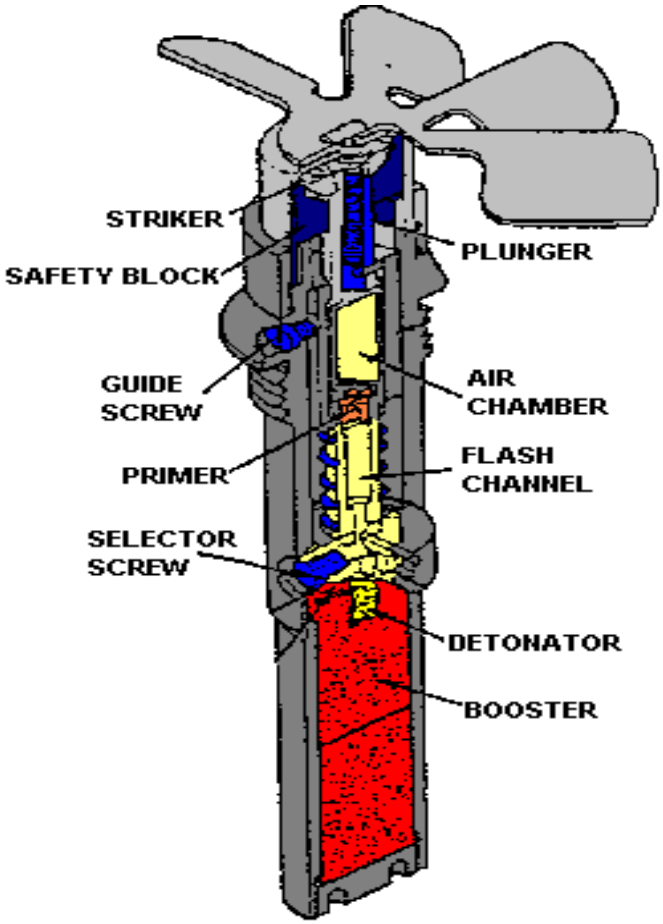
1)Do not depress or permit of the striker.
The Fuze has no out-of-line safety feature.

FUZE DATA

TYPE: Impact
MODEL: APUV-1
MATERIAL: Steel
WEIGHT: ???
MARKINGS: ???
LENGTH: 188.7mm

FUNCTIONAL DATA

ARMING- Dropping Away of Vane Assembly
METHOD:
SELF-DESTRUCT: None
SAFETY-DEVICE: Safety Wire



ARMED

Consider the Fuze armed if the vane cup is missing, if the vane cup is not seated against the Fuze body, or the Fuze is damaged.

UNARMED

The Fuze is unarmed if the vane cup is seated against the Fuze body and the Fuze is undamaged.

USING PROJECTILES

HAZARDOUS

The explosive train of these Fuze consists of a primer (lead styphnate and potassium perchlorate), delay elements (black powder), a relay wafer and a detonator (lead styphnate, lead aside, and tetryl) each of which weight less than 1 gram.
The booster contains 51gram of tetryl.
Some Fuzes have a relay pellet beneath the primer.

USING WEAPONS:
AIRCRAFT

BOMB/ BRAB and FAB

RSP-APUV-1

RENDER SAFE PROCEDURE FOR UARMED CONDITION.

a). Secure vane cup to Fuze body with tape or other suitable material to prevent vane cup rotation.

b). Manually remove Fuze from bomb. If required. Loosen Fuze with wrench, pipe adjustable 18 inch, or other suitable tool, placed on body.

c).Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

WARNING

Do not depress or permit movement of the striker. These Fuzes have no out of line safety feature.

a). Gag plunger and striker in position found.

b). Manually remove Fuze from bomb. If required, loosen Fuze with an 18 Inch pipe wrench, or other suitable tool, placed on body.

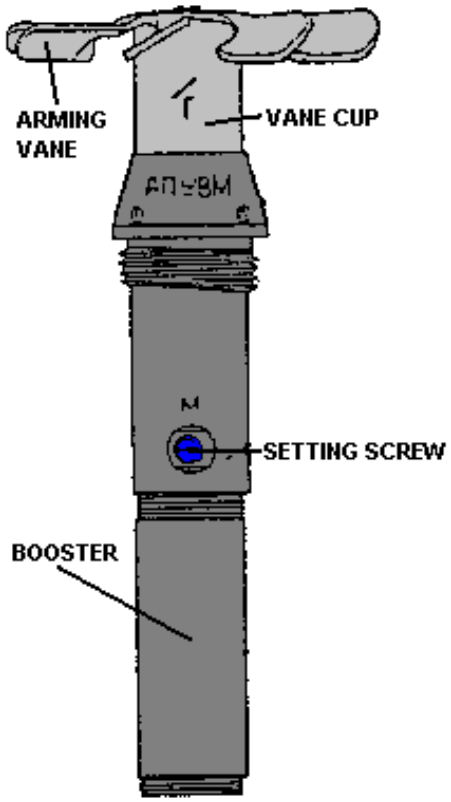
c). Proceed to disposal procedure.

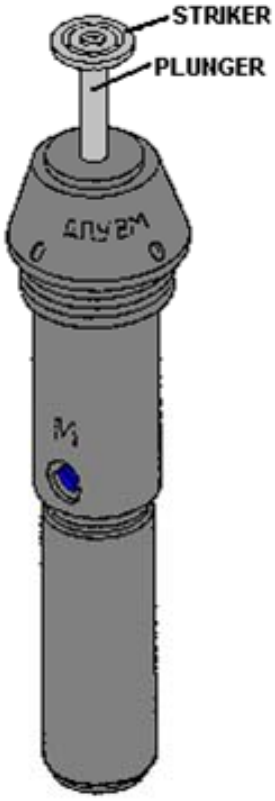
DISPOSAL PROCEDURE

a).Transport hazardous components to disposal area

b).Dispose of by detonation

APUVM





WARNINGS

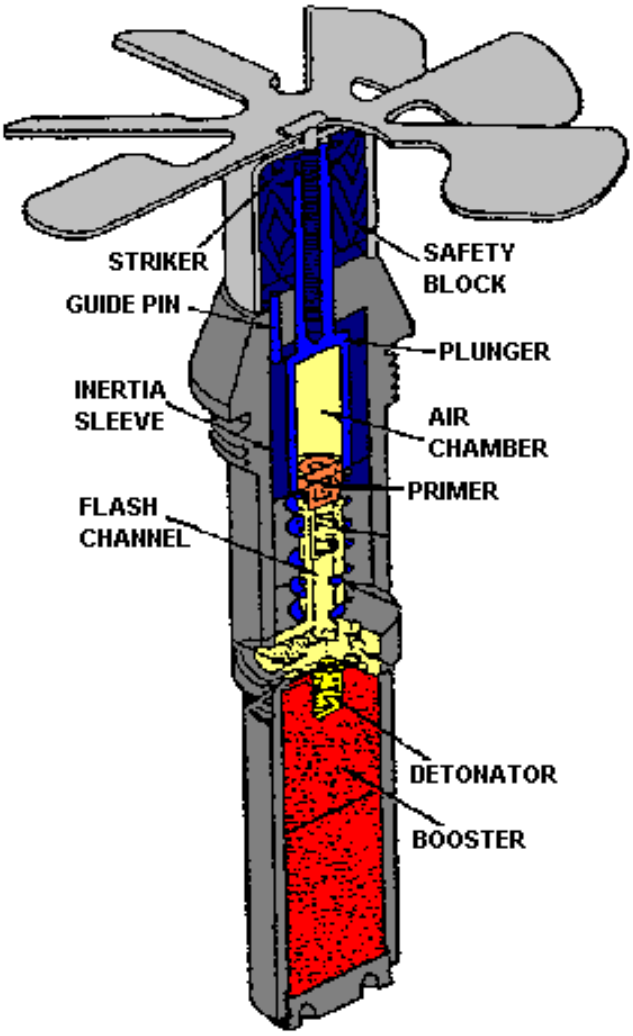
1)Do not depress or permit of the striker.
The Fuze has no out-of-line safety feature.

FUZE DATA

TYPE: Impact
MODEL: APUVM
MATERIAL: Steel
WEIGHT: ???
MARKINGS: ???
LENGTH: 199.3mm

FUNCTIONAL DATA

ARMING- Dropping Away of Vane Assembly
METHOD:
SELF-DESTRUCT: None
SAFETY-DEVICE: Safety Wire



ARMED

Consider the Fuze armed if the vane cup is missing, if the vane cup is not seated against the Fuze body, or the Fuze is damaged.

UNARMED

The Fuze is unarmed if the vane cup is seated against the Fuze body and the Fuze is undamaged.

HAZARDOUS

The explosive train of these Fuze consists of a primer (lead styphnate and potassium perchlorate), delay elements (black powder), a relay wafer and a detonator (lead styphnate, lead aside, and tetryl) each of which weight less than 1 gram.
The booster contains 51gram of tetryl.
Some Fuzes have a relay pellet beneath the primer.

USING PROJECTILES

USING WEAPONS:
AIRCRAFT

BOMB/ BRAB and FAB

RSP-APUVM

RENDER SAFE PROCEDURE FOR UARMED CONDITION.

a). Secure vane cup to Fuze body with tape or other suitable material to prevent vane cup rotation.

b). Manually remove Fuze from bomb. If required. Loosen Fuze with wrench, pipe adjustable 18 inch, or other suitable tool, placed on body.

c).Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

WARNING

Do not depress or permit movement of the striker. These Fuze have no out of line safety feature.

a). Gag plunger and striker in position found.

b). Manually remove Fuze from bomb. If required, loosen Fuze with an 18 Inch pipe wrench, or other suitable tool, placed on body.

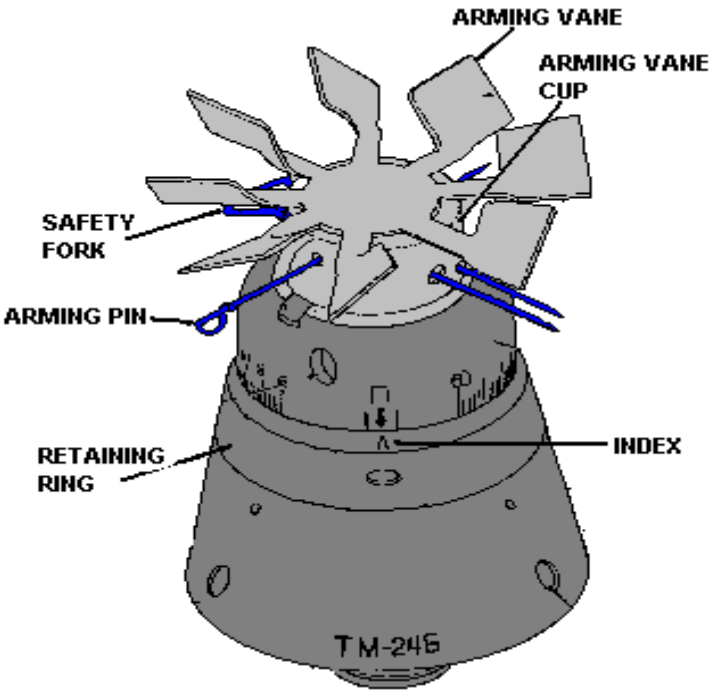
c). Proceed to disposal procedure.

DISPOSAL PROCEDURE

a).Transport hazardous components to disposal area

b).Dispose of by detonation

TM-24A and B





WARNINGS

Do not disturb an armed Fuze.
These Fuzes contain a cocked firing pin.

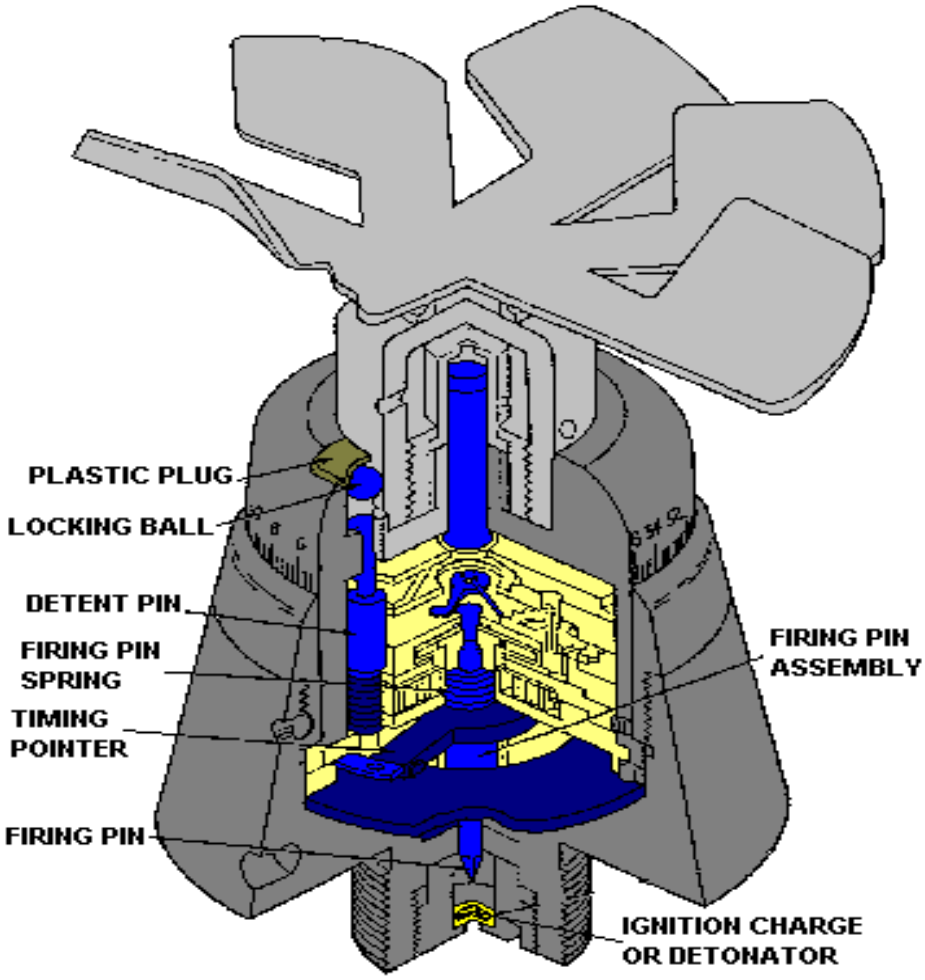
FUZE DATA

TYPE: Mechanical Time
MODEL: TM-24A and B
MATERIAL: Steel
WEIGHT: ???
MARKINGS: TM-24A and B
LENGTH: 93.4



FUNCTIONAL DATA

ARMING-METHOD: Dropping Away of vane Assembly
SELF-DESTRUCT: Time Setting
SAFETY-DEVICE: Arming Pin



ARMED

Consider the Fuze armed if the arming vane assembly is not installed.

UNARMED

The Fuze is unarmed if the arming vane assembly is installed.

HAZARDOUS

The TM-24A Fuze contains a detonator, and the TM-24B Fuze contains an ignition charge, each of unknown weight and composition.

USING PROJECTILES

??????????????????

USING WEAPONS:
AIRCRAFT BOMBS

FOTAB 100 –140, RBK Cluster Bombs

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best Technical data available.

a).Gag arming vane assembly.

b).Using a suitable tool, remove Fuze by turning counterclockwise.

c). Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best Technical data available.

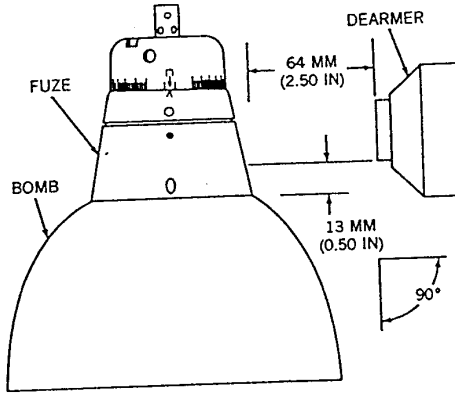
WARNING

Do not disturb an armed Fuze. The Fuze contains a cocked firing pin.

a). Assemble a calibre .50 dearmer with a standard slug and position as shown in figure.

b). Initiate dearmer.

c). Proceed to disposal procedure.

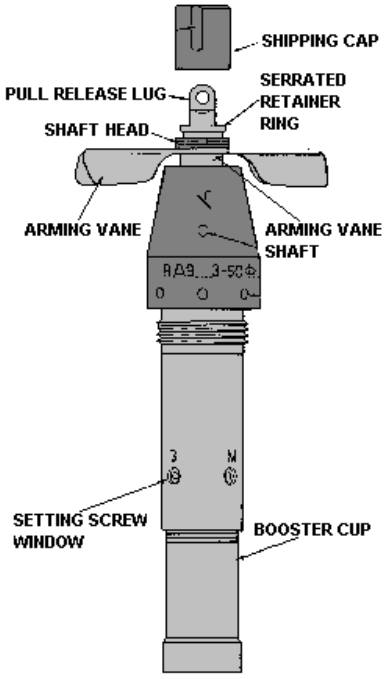


DISPOSAL PROCEDURE

a).Transport hazardous components to disposal area

b).Dispose of by detonation/burning.

VDV/VDV-1 and VDV-2





WARNINGS

1)Do not manually move the arming vane of an unarmed Fuze.
Movement of the vane may ignite the pyrotechnic composition beneath bushing, resulting in a flash of fire between the arming vane shaft and retainer.

2)Do not move the pull-release lug on an unarmed Fuze.
Doing so may release the cocked striker and ignite the arming delay primer.

3)Do not jar an armed Fuze except by remote.
This is an all-way, and the firing pin may be embedded in the primer.

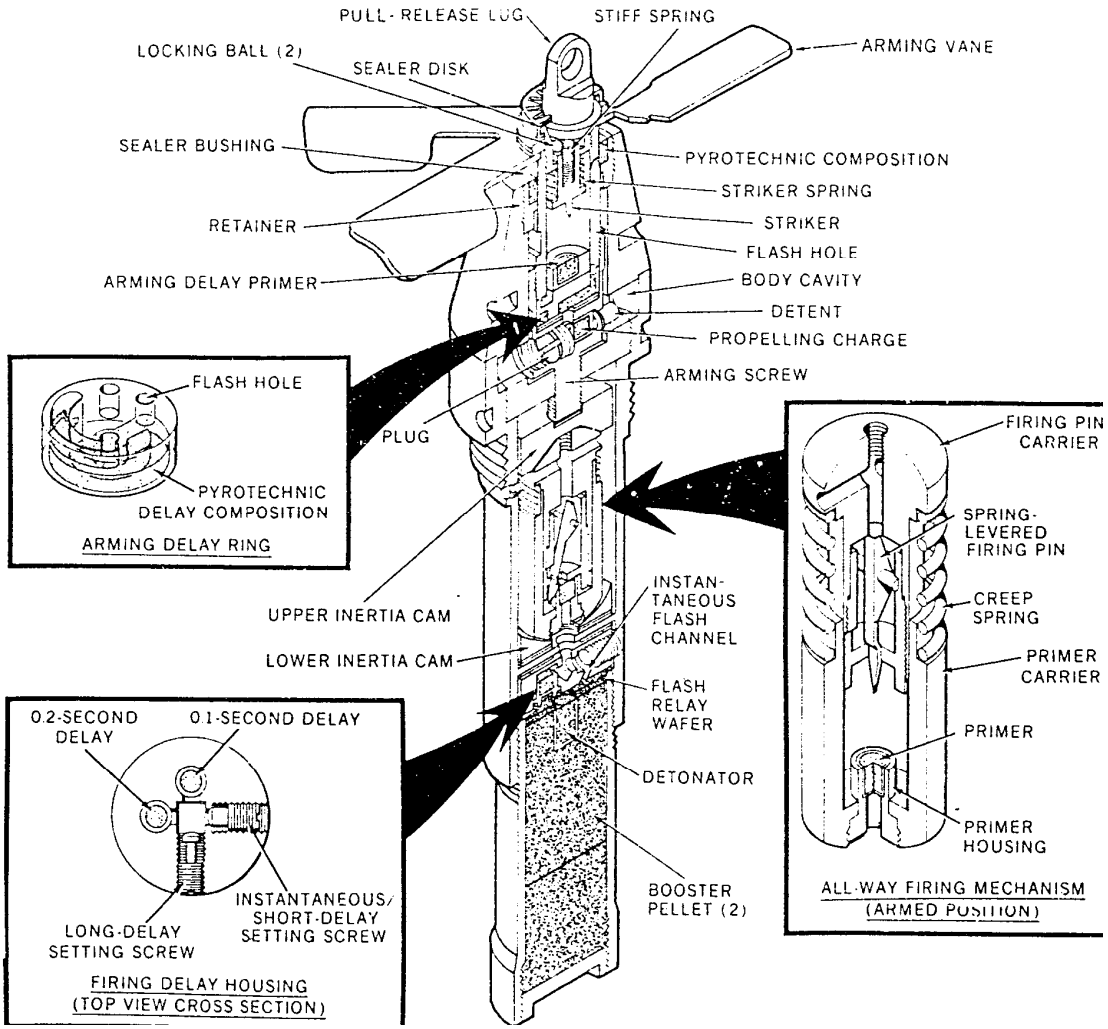
4)Do not move the arming vane of an armed Fuze.
Movement of the vane transmitted through the vane shaft and arming screw function the all-way-firing mechanism.

FUZE DATA

TYPE: Impact
MODEL: VDV/VDV-1and VDV-2
MATERIAL: Steel
WEIGHT:
MARKINGS: BAB 3-50 Ø
LENGTH: 226mm

FUNCTIONAL DATA

ARMING-METHOD:
SELF-DESTRUCT:
SAFETY-DEVICE:



ARMED

Consider the Fuze armed if the pull-release lug is missing from the shaft head.

UNARMED

The Fuze is unarmed if the pull-release lug is retained in the shaft head by the serrated retainer ring and sealer disk.

USING PROJECTILES

??????????????????

HAZARDOUS

Each Fuze contains the following: less than 1 gram of pyrotechnic composition beneath the sealer bushing; an arming delay primer containing less than 1 gram of explosive; approximately 1 gram of pyrotechnic delay composition in the arming delay ring; a propelling charge, a primer, and a 0.1-second and/or 0.2-second delay, each containing less than 1 gram of explosive; a black powder flash relay wafer and a detonator containing lead styphnate, lead azide, and tetryl, each weighing approximately 1 gram; and two tetryl booster pellets weighing a total of 43 grams (1.5 ounces).

USING WEAPONS:

AIRCRAFT BOMBS

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

WARNING

Do not manually move the arming vane of an unarmed Fuze. Movement of the vane may ignite the pyrotechnic composition beneath the sealer bushing, resulting in flash of fire between the arming vane shaft and retainer.

Do not move the pull release lug on an unarmed Fuze. Doing so may release the cocked striker and ignite the arming.

a). Manually remove Fuze from bomb. If a wrench is required to break Fuze loose, apply wrench, pipe 18 inch, or other suitable tool, to lower body.

NOTE

If the pull release lug is inadvertently dislodged, move away from the Fuze. If the cocked striker is released, a flash of fire between the arming vane shaft and retainer will follow within seconds.

b). Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

WARNING

Do not jar an armed Fuze except by remote means. This is an all way Fuze, and the firing pin may be embedded in the primer.

Do not move the arming vane of an armed Fuze. Movement of the vane is transmitted the vane shaft and arming screw, and function the all way firing mechanism.

NOTE

If the arming vane is present, and the blades are not bent forward or back far enough to allow the impact wrench to be applied, use the manual removal method (secondary procedure) (intention next page)

a).Remove Fuze from bomb with mechanical impact wrench

b).Proceed to disposal procedure

<u>Secondary Procedure</u>

a).Manually remove Fuze from bomb. If a wrench is required to break Fuze loose, apply an 18-inch pipe wrench, or other suitable tool, to lower body.

b). Proceed to disposal procedure.

DISPOSAL PROCEDURE

Unarmed Fuze

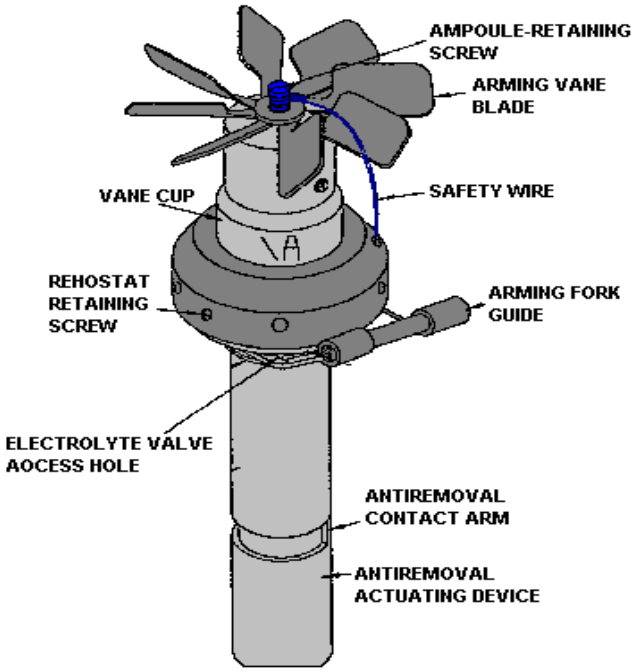
a).Transport hazardous components to disposal area

b).Dispose of by detonation/burning.

Armed Fuze

a). Hand carry hazardous components to a disposal area, keeping Fuze in a horizontal attitude, and dispose of by detonation.

AVDM



WARNINGS

1)Do not depress an extended inertia plunger. Depressing the plunger of a Fuze having an energised battery will arm or rearm the Fuze, causing it to function.

2)Wait 24 days (576 hours), if possible, before attempting to render safe a bomb containing an armed Fuze. This will allow the battery to bleed down below firing voltage.

3)Do not remove an armed and functioning Fuze. As the Fuze unscrews, the anti removal device will complete the firing circuit and detonate the bomb.

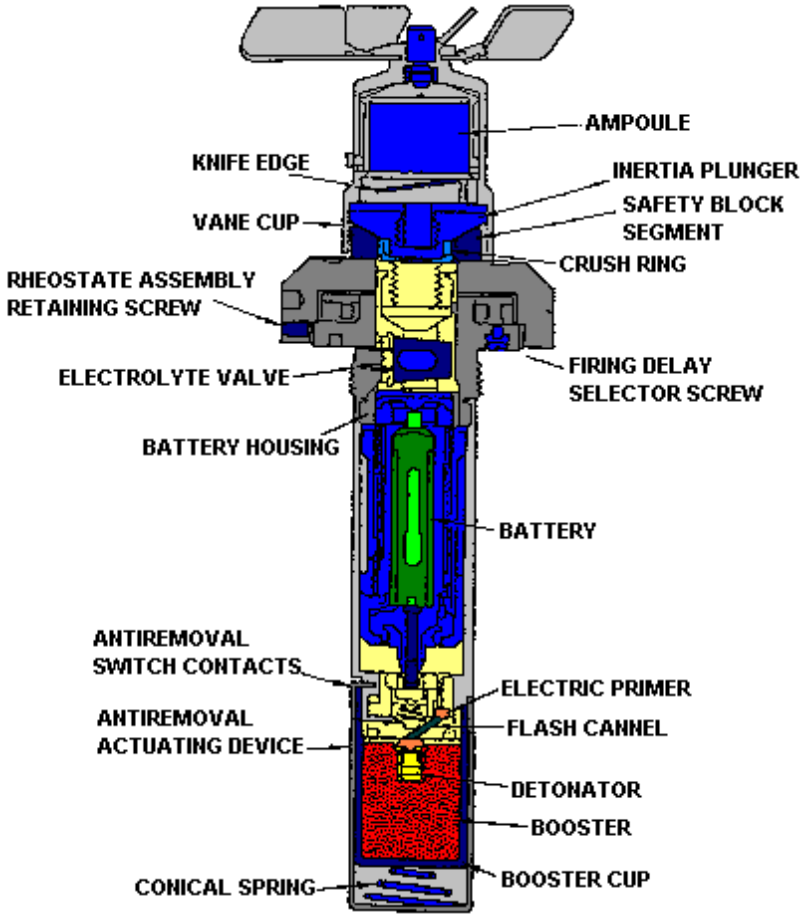
4)Do not remove a Fuze from a bomb after the inertia plunger has been withdrawn (Fuze rendered safe). Withdrawal of the inertia plunger removes only the delay—firing capability. The anti removal circuit remains active for the life of the battery.

FUZE DATA

TYPE: Impact
MODEL: AVDM
MATERIAL: Steel
WEIGHT:
MARKINGS: ABAM
LENGTH: 238mm

FUNCTIONAL DATA

ARMING- Removal of Arming Vane assembly
METHOD:
SELF-DESTRUCT: Chemical Delay
SAFETY-DEVICE: Arming Fork Guide



UNARMED

The Fuze is unarmed if either of the following conditions exist…

1)The vane cup and safety-block segments are in place.

2)The vane cup and safety-block segments are not in place, but the inertia plunger is extended and the crush ring has not been deformed.

HAZARDOUS

The electric and the detonator each contain less than 1 gram of initiating explosive.
The booster contains approximately 27 grams of tetryl.

ARMED

Consider the Fuze armed and functioning if the vane cup and safety block segments are in place, and the inertia plunger is depressed.

USING PROJECTILES

??????????????????

USING WEAPONS:

AIRCRAFT BOMBS

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

NOTE

An extended inertia plunger will protrude 0.25 inch (6 millimetres) from the upper Fuze body.

WARNING

Do not depress an extended inertia plunger. Depressing the plunger (figure 2) of a Fuze having an energised battery will arm or rearm the Fuze, causing it to function.

a).If vane cup is in place, secure it with tape.

b).If vane cup and safety—block segments are not in place, gag plunge in extended position with several turns of soft wire, or tape, placed between plunger and upper Fuze body.

c).Attach a wrench, pipe (pipe wrench), a wrench, strap (strap wrench) or a suitable substitute, to upper Fuze body; remove Fuze by turning it counter clockwise.

d).Fill Fuze well of bomb with rags or paper, cover with tape.

e).Proceed to disposal procedure.

RENDER SAFE PROCEDURES FOR ARMED CONDITION.

WARNINGS

Wait 24 days (576 hours), if possible, before attempting to render safe a bomb containing an armed Fuze. This will allow the battery to bleed down below firing voltage.

Do not remove an armed and functioning Fuze. As the Fuze unscrews, the anti removal device will complete the firing circuit and detonate the bomb.

Do not remove a Fuze from a bomb after the inertia plunger has been withdrawn (Fuze rendered safe). Withdrawal of the inertia plunger removes only the delay-firing capability. The anti removal circuit remains active for the life of the battery.

NOTE

The calibre *.50* dearmer and the improvised dearmer may be completely assembled (explosive train completed and slug installed) prior to entry into the incident site.(intention next page)

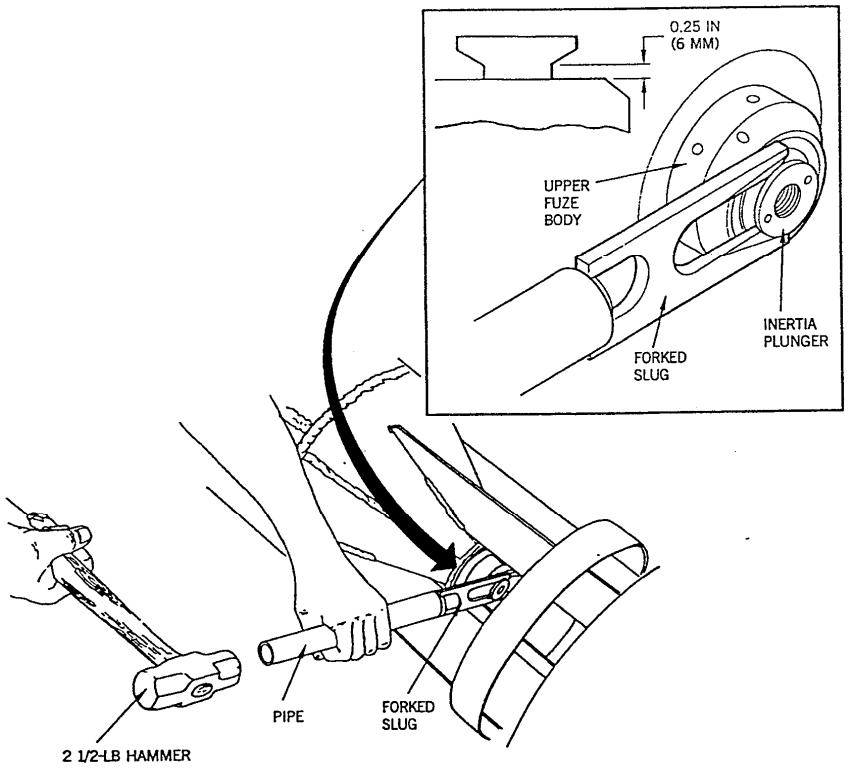
a). If possible observe the 24-day (576 hour) wait time. Using a 1.00 Inch inside diameter by 12.00-inch long pipe a forked slug, and a 2 1/2 Pound hammer, or suitable substitutes, manually extend Fuze inertia plunger as shown in figure.

b).Inspect Fuze to determine if inertia plunger has been withdrawn 0.25 Inch (6 millimetres). **Do not** remove Fuze from bomb.

c), If forked slug stays with Fuze, gag inertia plunger with forked slug in place with several turns of tape.

d). If forked slug does not stay with Fuze, gag inertia plunger with several turns of soft wire or tape, placed between plunger and upper Fuze body.

e). Proceed to disposal procedure.

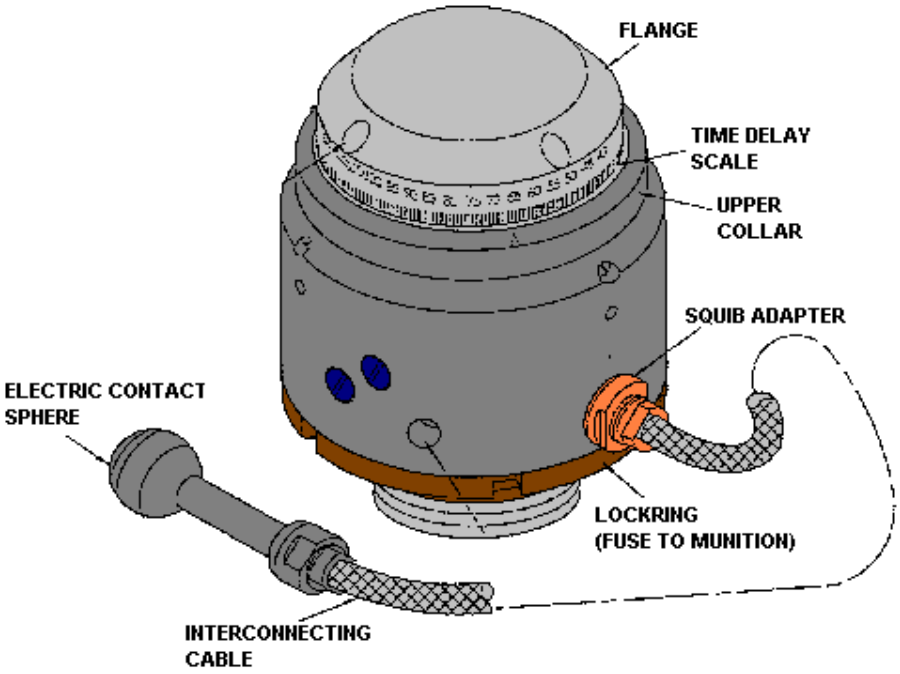


DISPOSAL PROCEDURE

a).Transport hazardous components to disposal area

b).Dispose of by detonation

ATM-EB and ATK-EB



WARNINGS

1)Consider the Fuze always armed. There is no external means of determining if the Fuze has received an electric pulse.

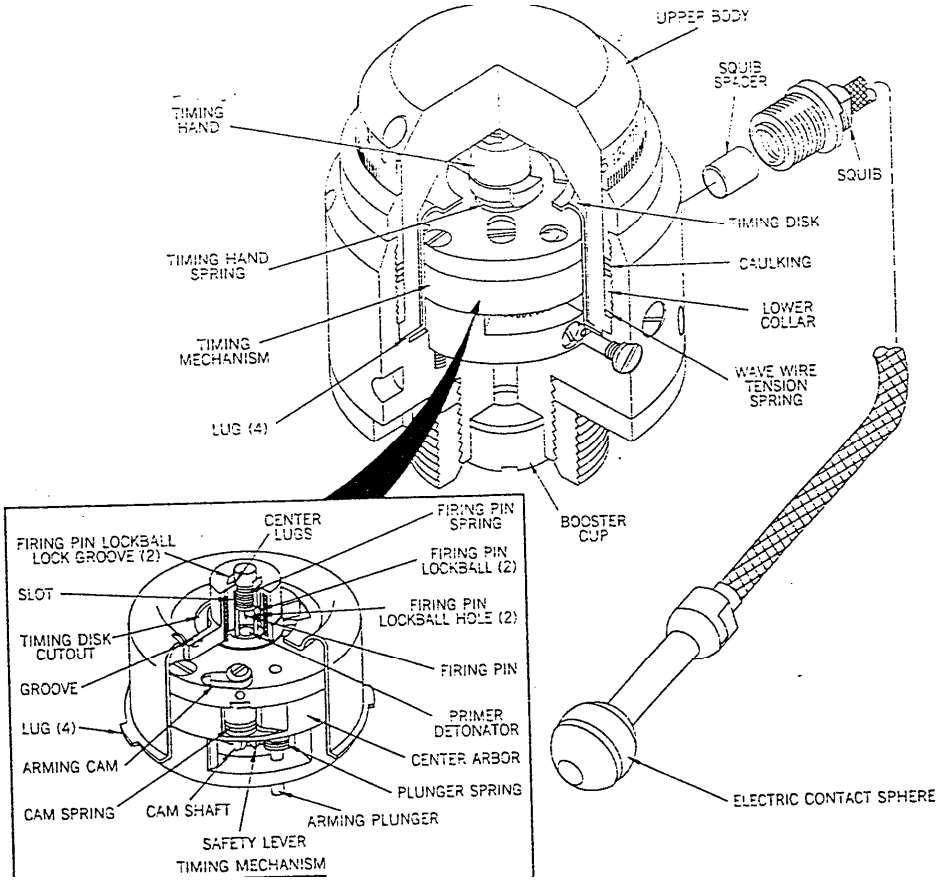
2)Do not jar or strike the Fuze. The Fuze contains a spring-loaded pin.

FUZE DATA

TYPE: Mechanical Time
MODEL: ATM-EB and ATK-EB
MATERIAL:
WEIGHT:
MARKINGS:
LENGTH:

FUNCTIONAL DATA

ARMING-METHOD:
SELF-DESTRUCT:
SAFETY-DEVICE:



ARMED

HAZARDOUS

The Fuze contains a squib, a primer detonator, and a booster, each of unknown weight and composition.

UNARMED

USING PROJECTILES

USING WEAPONS:

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

SPECIAL WARNING

This procedure is untested and is based on the best Technical data available.

WARNING

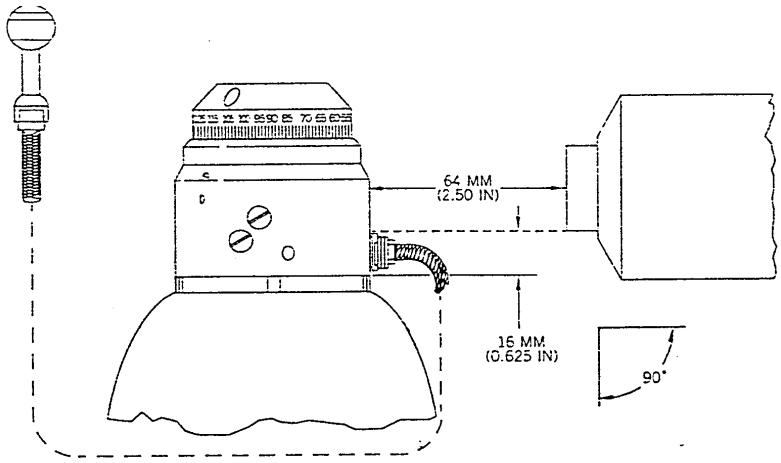
Consider the Fuze always armed. There is no external means of determining if the Fuze has received an electric pulse. Do not manually jar or strike the Fuze. The Fuze contain a spring loaded firing pin

a). Assemble a calibre .50 dearmer with a standard slug, and position it as shown in figure.

b).Fire dearmer.

c). Cover remainder of Fuze with tape to prevent foreign material from entering Fuze body.

d). proceed to disposal procedure.

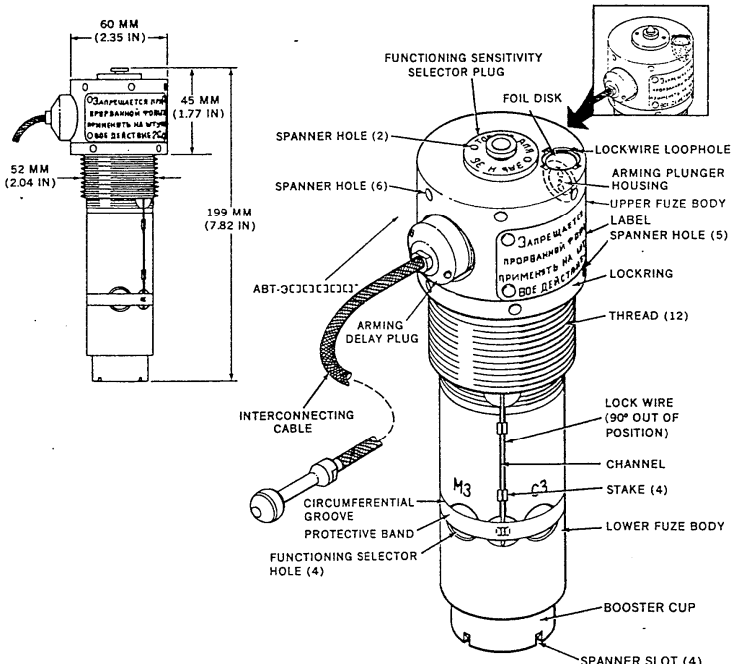


DISPOSAL PROCEDURE

a).Transport hazardous components to disposal area

b).Dispose of by detonation

AVT-E



WARNINGS

1)Do not remove the functioning sensitivity selector plug when installed in the Fuze with the cylindrical cavity exposed.
If the Fuze is armed and has received impact, the firing pin may be embedded in the primer, removal of the selector plug may move the Fuze firing mechanism, functioning the Fuze.

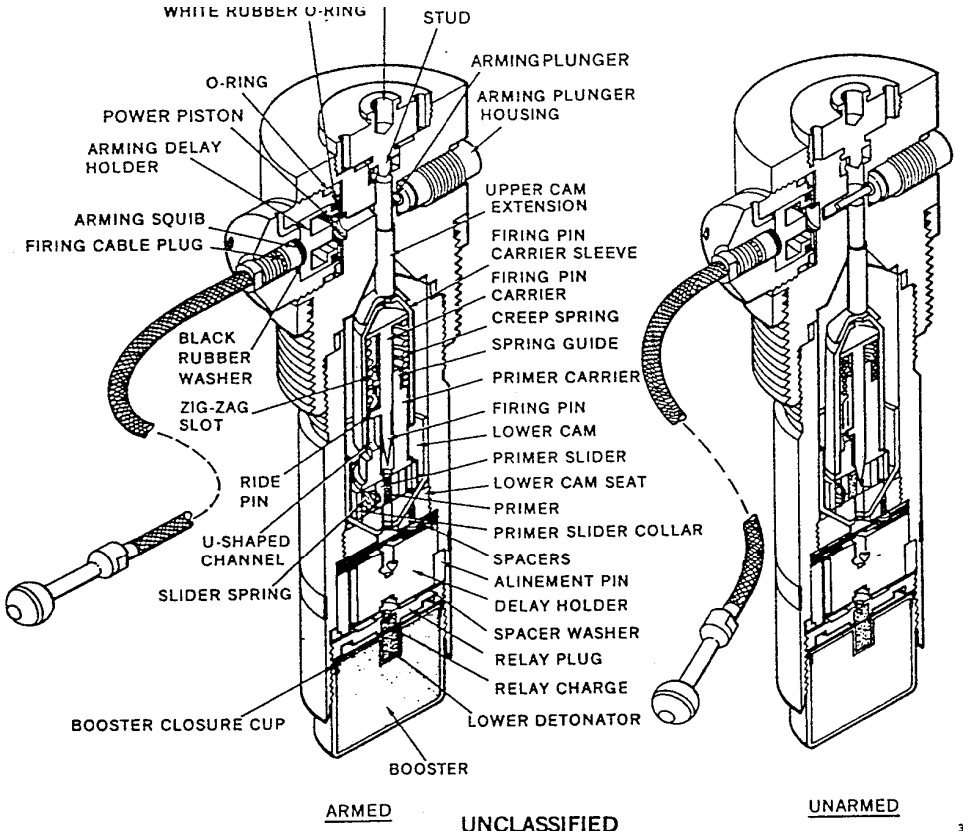
2)Handle an armed Fuze carefully.
The Fuze contains an all-way-firing mechanism.

FUZE DATA

TYPE:
MODEL:
MATERIAL:
WEIGHT:
MARKINGS: ABT-E
LENGTH:

FUNCTIONAL DATA

ARMING-
METHOD:
SELF-DESTRUCT:
SAFETY-DEVICE:



UNARMED

The Fuze is unarmed if one of the following applies.

1)It is positively that the Fuze has not received an electrical pulse to fire the arming squib.

2)The Fuze is undamaged, permitting removal of the sensitivity selector plug, and after removal, visual inspection reveals that the arming plunger has not been withdrawn, preventing movement of the upper cam extension.

ARMED

Consider the Fuze armed if one or more of the following apply.

1)If it positively that the Fuze has not received an electrical pulse to fire the arming squib.

2)The Fuze is undamaged, permitting removal of the sensitivity selector plug, and, after removal visual inspection reveals that arming plunger has not been withdrawn, preventing movement of the upper cam extension.

HAZARDOUS

USING WEAPONS:

RENDER SAFE PROCEDURE FOR UNARMED CONDITION.

a). Using a wrench, spanner, hook, or other suitable tool, loosen lock ring by turning counterclockwise

b). Manually remove fuze from bomb. If required, loosen fuze using wrench, pipe adjustable (pipe wrench), 18 inch, or other suitable too, placed on upper fuze body.

c). Carefully place Fuze in metal container partially filled with sand or other cushioning material, and secure container lid in place.

d). Proceed to disposal procedure.

RENDER SAFE PROCEDURE FOR ARMED CONDITION.

WARNING

Handle an armed fuze carefully. The fuze contains an all way firing mechanism.

NOTE

If the interconnecting cable is present and interferes with the attachment of the wrench, cut the cable at the entrance to the arming delay plug with pliers, diagonal cutting, 6 inch, or other suitable tool.

a). Using remote wrench (manual or cartridge actuated) rocket wrench or mechanical impact wrench.

b). Carefully place the fuze in metal container partially filled with sand or other cushioning material, and secure container lid in place.

c). Proceed to disposal procedure.

Secondary Procedure.

a). Using a hook spanner wrench, or other suitable tool, loosen lock ring by turning counterclockwise.

b). Manually remove fuze from bomb. If required loosen fuze, using 18 Inch pipe wrench, or other suitable tool, placed on upper fuze body.

c). Carefully place fuze in metal container partially filled with sand or other cushioning material, and secure container lid in place.

d). Proceed to disposal procedure.

DISPOSAL PROCEDURE

NOTE

Handle armed fuzes carefully. The fuze contains an all way firing mechanism

a).Transport hazardous components to disposal area.

b).Dispose of by detonation.