KUWAIT M.O.D.
H. Q. of the Army
Engineering Directorate

UNEXPLODED ORDNANCE IN KUWAIT
THE EOD OPERATOR'S POCKET BOOK



Prepared by:
UK EOD CELL - KUWAIT CITY

Printed by:
KUWAIT M.O.D.
Directorate of Morale Guidance and
Engineering Directorate

UNEXPLODED ORDNANCE IN KUWAIT
THE EOD OPERATOR'S POCKET BOOK

CONTENTS

	PAGE
INTRODUCTION	5
TECHNICAL NOTES	6
ABBREVIATIONS	7

BOMBLETS:

MARK 42/46/77	10
MARK 118 ROCKEYE	12
BLU 61 A/B	14
BLU 63 B/BLU 86 B	16
BLU 77 B	18
BLU 91 B/BLU 92 B	20
BLU 97 B	22
BELOUGA	24

MINES

ANTI PERSONNEL:

V69 VALMARA	30
VS50	32
PMN	34
TYPE 72	36
SB 33	37
P40	39
VS-T ILLUMINATION	40

ANTI TANK: **PAGE**

TYPE 72	44
P2 MARK 3	45
CAST EXPLOSIVE MINE	46
VS 1.6	47
VS 2.2	48
PT-MI-BA3	50
TM 46	51
TMN 62 M	52

LAND SERVICE AMMUNITION

MORTAR ROUNDS:

60mm MK 1 HE	56
60mm MK 61 SMOKE	58
60mm MK 49A2 HE	60
60mm M73 HE	62
60mm M73 SMOKE	64
60mm M67 ILLUM	66
81mm FRAG	68
82mm O-832 FRAG/HE (SCHNEIDERITE)	69
82mm O-832 FRAG/HE (TNT)	70
82mm O-832 FRAG/HE (TNT/AMATOL)	72
82mm TYPE 20	73
82mm M67 ILLUM	74
120mm OF-843 FRAG	77
160mm F-852 HE	78
160mm F-853U HE	80

ARTILLERY ROUNDS: **PAGE**

57mm APC-T (ANTI AIRCRAFT)	82
57mm FRAG-T	83
122mm HEAT FS (HOWITZER)	84
122mm HEAT (HOWITZER)	85
122mm AP-T	86
122mm SMOKE	87
130mm FRAG/HE (FIELD GUN)	88
130mm FRAG/HE (COASTAL GUN)	89
130mm APC-T	90
130mm ILLUM	91
152mm FRAG/HE	92
82mm FRAG PROJECTILE (RECOILLESS GUN)	93

TANK ROUNDS:

100mm HE	96
100mm AP-T (BR 412)	97
100mm AP-T (BR 412 B)	98
100mm HV APDS-T (BM-8)	99
125mm HV APFSDS-T (BM-9)	100
125mm FS FRAG/HE	101

HAND GRENADES:	PAGE
M67	104
RGN	106
RGO	108
RGD-5	110
RGD-78	112
F1	114
M75	116
RG 42	118
RG-4	120
RG-34	122
TYPE 82	124
RKG-3	126
LAUNCHED GRENADES:	
PG-7M HEAT	130
PG-7G HEAT	132
OG-7 AP	134
PG-9 HEAT	136
RPG-18 LAW	138
ARMBURST	140
RIFLE GRENADES	142
MISSILES:	
SAGGER ATGW	146
APILAS LAW	148
SA-2	150
SA-6	152
SA-7	154
SA-16	156

THE EOD OPERATOR'S POCKET BOOK
INTRODUCTION

THIS POCKET BOOK HAS BEEN PRODUCED SOLELY FOR THE EXPLOSIVE ORDNANCE DISPOSAL (EOD) OPERATOR IN KUWAIT. IT HAS BEEN WRITTEN TO FILL THE OPERATOR'S NEED FOR EASY ACCESS TO INFORMATION FOR RECOGNITION AND DISPOSAL. THIS INFORMATION IS THE BEST AVAILABLE TO UK MILITARY EOD AT TIME OF PRINTING. THE DISPOSAL PROCEDURES ARE ADVISORY; THE GOLDEN RULE SHOULD BE:

"IF IN DOUBT, DESTROY IN PLACE"

THE HANDBOOK IS DESIGNED IN THREE SECTIONS:

BOMBLETS
MINES
LAND SERVICE AMMUNITION

WITH THE EXCEPTION OF IRON BOMBS IT THEREFORE COVERS THE SPECTRUM OF MUNITIONS IN KUWAIT, BUT DOES NOT CLAIM TO BE COMPREHENSIVE. IT IS DESIGNED SO THAT ADDITIONS MAY BE INSERTED. WHERE THE INFORMATION ON A MUNITION IS INCOMPLETE, OR WHERE A PARTICULAR MUNITION HAS BEEN LEFT OUT, OPERATORS OF ALL NATIONS ARE ASKED TO PASS PHOTOGRAPHS AND NOTES TO UK EOD WHO WILL PUBLISH UPDATES. BLANK FORMS FOR RECORDING AND REPORTING NEW ITEMS ARE INCLUDED AT THE BACK OF THE POCKET BOOK.

FINALLY, THE POCKET BOOK IS PUBLISHED IN BOTH ENGLISH AND ARABIC, WITH POSSIBLY A FRENCH VERSION IN FUTURE, TO ENABLE MAXIMUM USAGE THROUGHOUT KUWAIT. YOU ARE REQUESTED TO USE IT WISELY.

TECHNICAL NOTES

UNEXPLODED ORDNANCE IN KUWAIT IS SUBJECTED TO VERY HIGH TEMPERATURES IN OR OUT OF SUNLIGHT. THIS INEVITABLY CAUSES DETERIORATION OF EXPLOSIVES. THE FOLLOWING POINTS SHOULD BE NOTED:

- EXUDATION IS COMMON, OFTEN AROUND THREADED JOINS, AND PARTICULARLY WHEN THE ROUND IS CONFINED. FOR EXAMPLE A MORTAR ROUND WITHIN ITS PACKING CASE.
- EXUDED EXPLOSIVES WILL CRYSTALLISE AND BECOME VERY SENSITIVE TO FRICTION. ON NO ACCOUNT SHOULD FUZES BE UNSCREWED.
- PROPELLANT IS PARTICULARLY SENSITIVE TO FRICTION IN THESE CONDITIONS.

THE STATE OF CERTAIN SOVIET,CHINESE AND LOCAL LAND SERVICE AMMUNITION IS NOT EASILY IDENTIFIED. IF IN DOUBT, ASSUME THE ROUND IS ARMED AND TREAT AS A BLIND. ALSO, NOTE THAT WHITE PHOSPHOROUS ROUNDS ARE NOT ALWAYS MARKED AS SUCH. DEMOLITION OF WHITE PHOSPHOROUS ROUNDS REQUIRES MORE EXPLOSIVE THAN USUAL IN ORDER TO ENSURE COMPLETE DESTRUCTION OF THE FILL.

ABBREVIATIONS

A NUMBER OF ABBREVIATIONS HAVE BEEN USED IN THE POCKET BOOK. MANY ARE USED IN MUNITION DESIGNATIONS, SOME OF THEM HAVING BEEN TRANSLATED FROM SOVIET CYRILLICS. EXPLANATIONS OF THE MOST COMMON ENGLISH ABBREVIATIONS ARE SHOWN BELOW:

MEASUREMENTS:

M	METRE
MM	MILIMETRE
'	FEET
"	INCHES
LB	POUND
KG	KILOGRAMME
G	GRAMME
SECS	SECONDS
APPROX	APPROXIMATELY
N/K	NOT KNOWN
N/A	NOT APPLICABLE

DESCRIPTIONS:

AP	ANTI PERSONNEL OR ARMOUR PIERCING
AT	ANTI TANK
BD	BASE DETONATING
DET	DETONATOR
DS	DISCARDING SABOT
FRAG	FRAGMENTING
FS	FIN STABILISED
GREN	GRENADE
GW	GUIDED WEAPON

DESCRIPTIONS CONTINUED:

HE	HIGH EXPLOSIVE
HV	HIGH VELOCITY
ILLUM	ILLUMINATING
LAW	LIGHT ANTI TANK WEAPON
MOR	MORTAR
PD	POINT DETONATING
PI	POINT INITIATING
RSP	RENDER SAFE PROCEDURE
SA	SURFACE TO AIR
WP	WHITE PROSPHOROUS

BOMBLETS



M42, M46 AND M77 GRENADES (BOMBLET)

DESCRIPTION: ALL GRENADES ARE SIMILAR IN DESIGN AND ALL HAVE THE FOLLOWING IN COMMON:

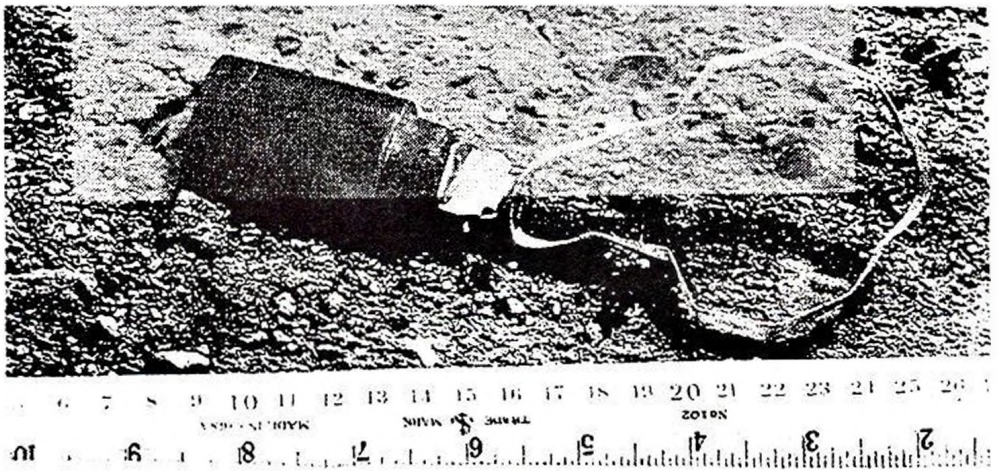
A. FUZE M223 IS FITTED TO THE BODY OF THE GRENADE AND SECURED BY STEEL RIVETS.

B. EACH GRENADE CONTAINS 30.5G OF EXPLOSIVE A5, WHICH IS SLIGHTLY MORE SENSITIVE THAN TNT.

C. THE ONLY EXTERNAL DIFFERENCE BETWEEN M77 AND M42/46 GRENADES IS THAT THE M77 HAS A POLYURETHANE SHEATH FITTED OVER THE RIBBON STABILIZER.

OPERATION: THE GRENADE DETONATES ON IMPACT PRODUCING A SHAPED CHARGE EFFECT TO DEFEAT IN EXCESS OF 63.5MM OF ROLLED HOMOGENOUS ARMOUR PLATE. THE GRENADE ALSO HAS AN ANTI-PERSONNEL EFFECT.

RENDER SAFE PROCEDURE: ALL PROJECTILES OR SUB-MUNITIONS ARE TO BE DESTROYED INSITU WITHOUT MOVING OR TOUCHING THE SUSPECT ITEM UNLESS THEY CAN BE POSITIVELY IDENTIFIED AS BEING UNARMED.



UNARMED SUB-MUNITION

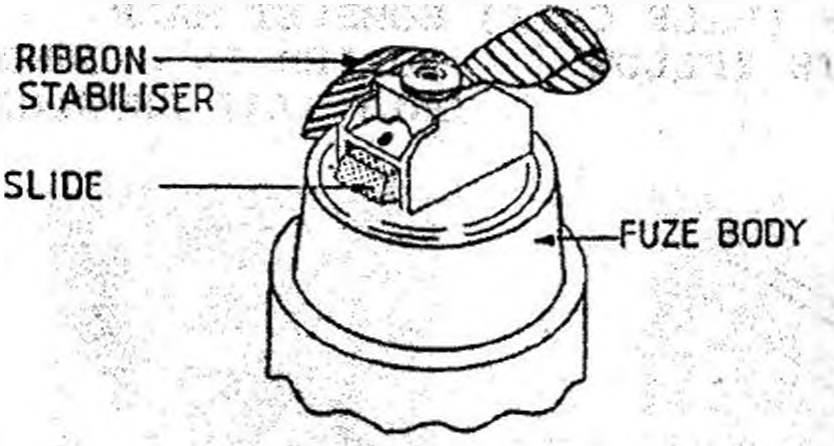
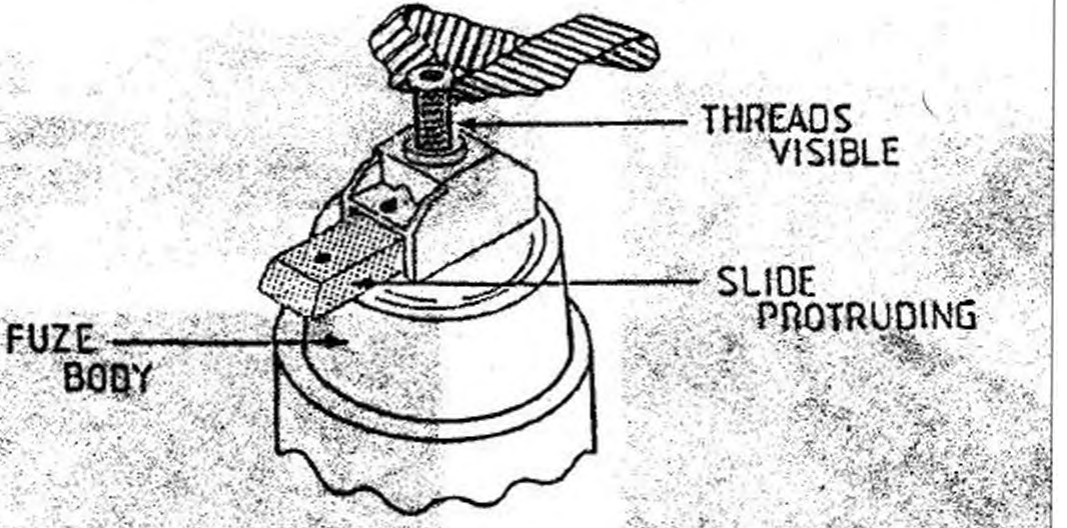


FIG 1

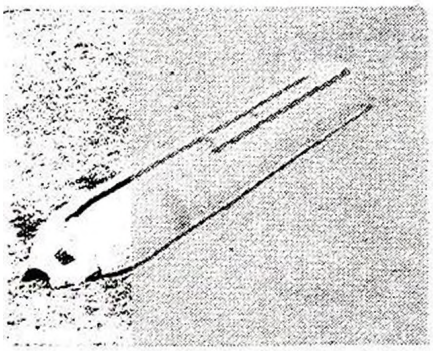
ARMED SUB-MUNITION



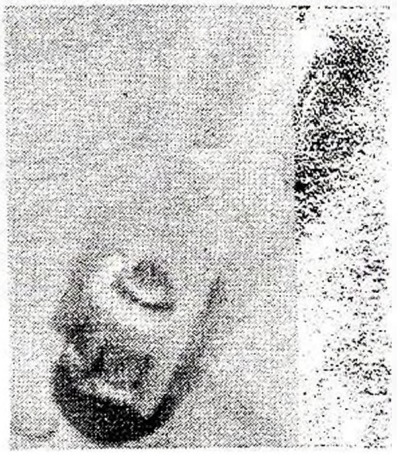
"ROCKEYE" CLUSTER WEAPON

THE FOLLOWING PHOTOGRAPHS ILLUSTRATE COMPONENT PARTS AND MAY BE USED TO ASSIST IN IDENTIFICATION OF AN AREA AROUND A ROCKEYE STRIKE.

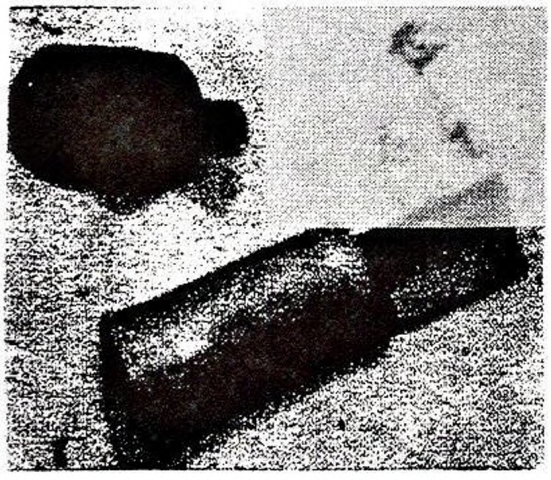
CONTAINER (HALF CASE) WHITE WITH YELLOW BAND



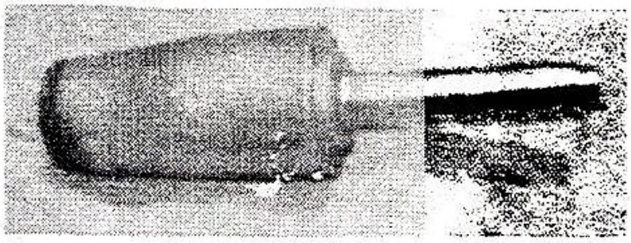
BOMBLET HALF BURIED IN GROUND ONLY TAIL SHOWING

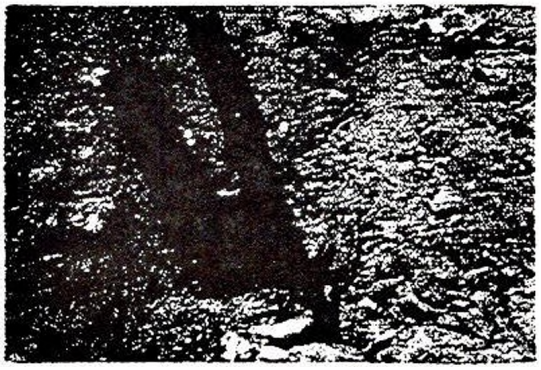


PLASTIC PACKING SPACERS



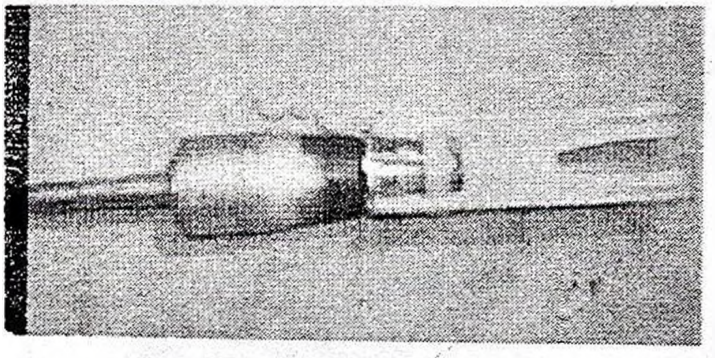
BROKEN AND BURIED BODIES





MK 118 BOMBLET "ROCKEYE"

DESCRIPTION - AERIALLY DISPENSED, SHAPED CHARGE, TARGET DISCRIMINATING, FIN STABILISED BOMBLET, USED FOR HARD OR SOFT TARGETS.



OPERATION - IMPACT PIEZO ELECTRIC

RSP - PLACE CHARGE ALONGSIDE BOMBLET, ON NO ACCOUNT TOUCH OR MOVE BOMBLET.

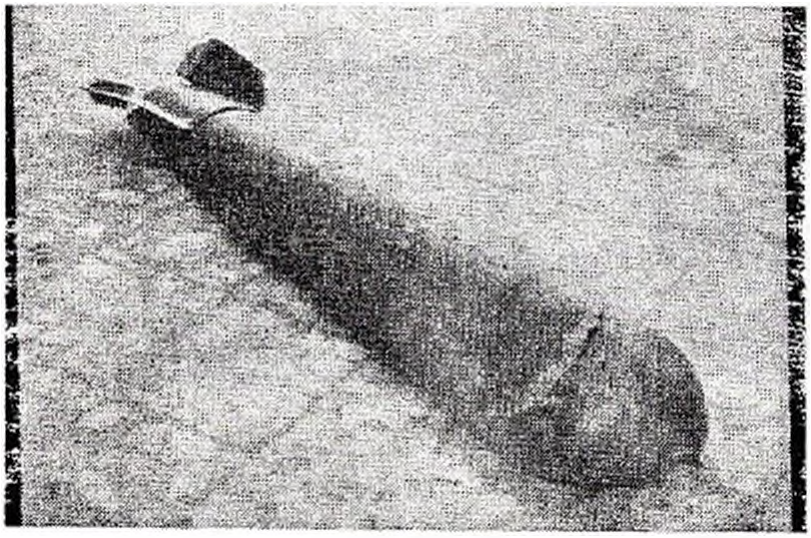
SPECIFICATION:

ORIGIN: USA
LENGTH: 0.34m/13"
TYPE: AERIAL BOMBLET
DIAM: 0.06m/2.5"
WEIGHT: 0.6kg/1.31lb
DETECTABLE: YES, NORMALLY VISIBLE
COLOUR: BODY ANODISED GOLD, WITH YELLOW BAND, WHITE FINS
CASE MATERIAL: STEEL BODY, FLEXIBLE PLASTIC FINS

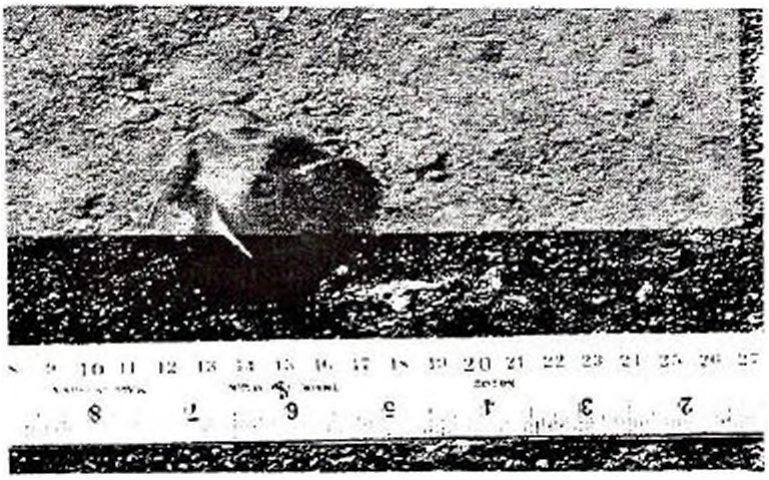
BLU 61A/B CLUSTER WEAPON

THE FOLLOWING PHOTOGRAPHS ILLUSTRATE COMPONENT PARTS AND MAY BE USED TO ASSIST IN IDENTIFICATION OF AN AREA AROUND A BLU 61A/B STRIKE.

GREEN WITH YELLOW BAND ON NOSE

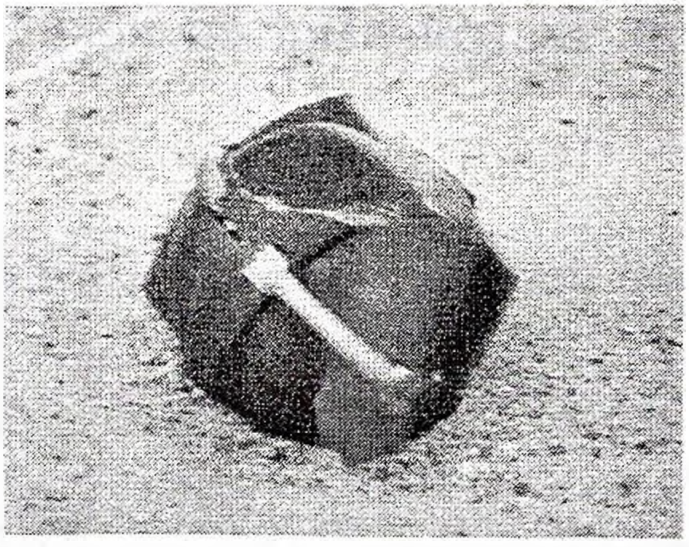


VERY FEW COMPONENT PARTS ALTHOUGH HALF BOMBLETS MAY BE ENCOUNTERED, APPROACH WITH CAUTION, ESPECIALLY IN SOFT GROUND AS THESE MAY BE WHOLE BOMBLETS PARTIALLY BURIED



BLU 61A/B BOMBLET

DESCRIPTION - AERIALLY DISPENSED, CENTRIFUGALLY ARMED, IMPACT FIRED, HE INCENDIARY BOMBLET.



OPERATION: IMPACT

RSP: SMALL ARMS FIRE 7.62mm OR 5.56mm OR PLACE CHARGE ALONGSIDE BOMBLET, ON NO ACCOUNT TOUCH OR MOVE BOMBLET.

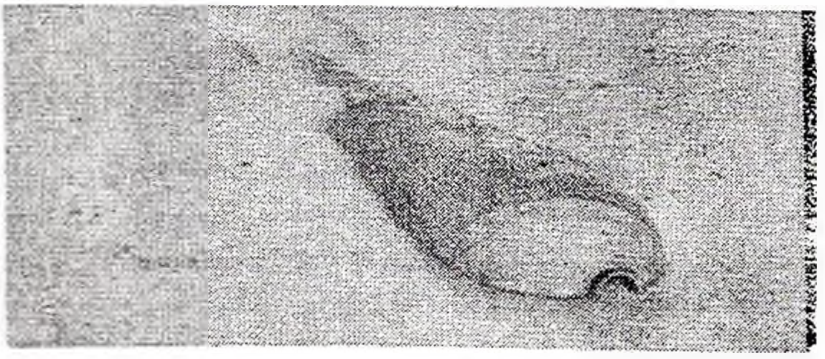
SPECIFICATION:

ORIGIN: USA
TYPE: ANTI MATERIAL, ANTI PERSONNEL
WEIGHT: 1.2kg/2.6lb
DIAMETER: 94mm/3.9"
DETECTABLE: YES, NORMALLY VISIBLE
COLOUR: BODY - GREEN
CIRCUMFERENTIAL BAND - SILVER
MATERIAL: STEEL FRAG INNER & CIRCUMFERENTIAL BAND WITH PLASTIC COATED OUTER LAYER.

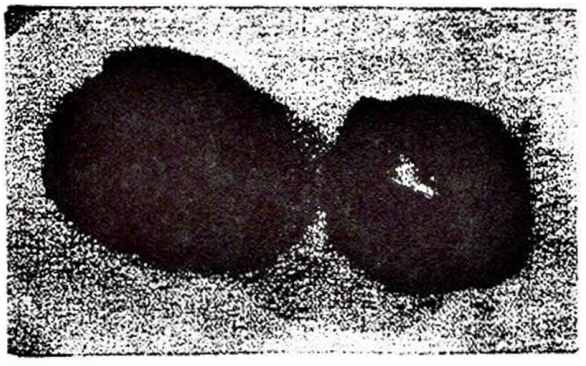
BLU 63/B & 86/B CLUSTER WEAPON

THE FOLLOWING PHOTOGRAPHS ILLUSTRATE COMPONENT PARTS AND MAY BE USED TO ASSIST IN IDENTIFICATION OF AN AREA AROUND A BLU 63/B 86/B STRIKE.

GREEN WITH YELLOW BAND ON NOSE

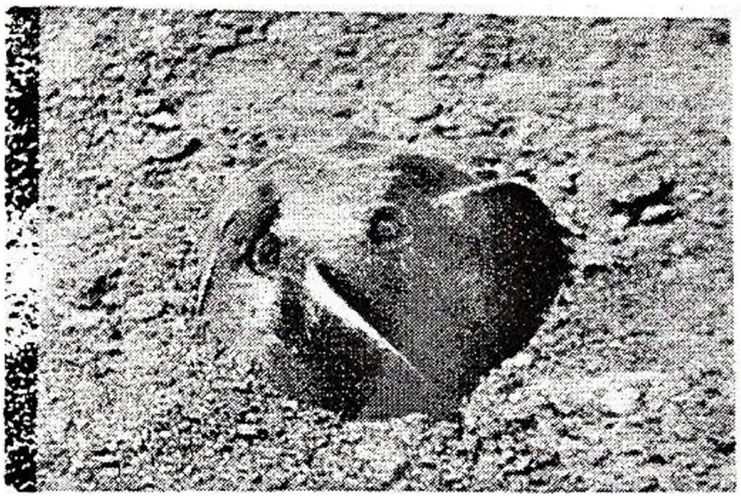


VERY FEW COMPONENT PARTS ALTHOUGH HALF BOMBLETS MAY BE ENCOUNTERED, APPROACH WITH CAUTION, ESPECIALLY IN SOFT GROUND AS THESE MAY BE WHOLE BOMBLETS PARTIALLY BURIED.



BLU 63/B & 86/B BOMBLET

DESCRIPTION - AERIALLY DISPENSED CENTRIFUGALLY ARMED IMPACT FIRED (POSSIBLY DELAYED) HE FRAG BOMB.



OPERATION: IMPACT

RSP: SMALL ARMS FIRE 7.62mm OR 5.56mm OR PLACE CHARGE ALONGSIDE BOMBLET, ON NO ACCOUNT TOUCH OR MOVE BOMBLET .

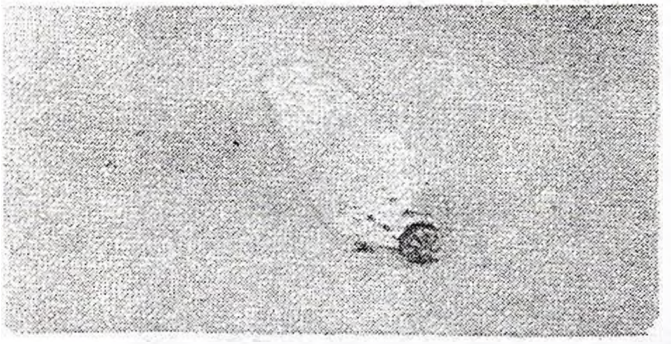
SPECIFICATION:

ORIGIN: USA
TYPE: ANTI MATERIAL, ANTI PERSONNEL
WEIGHT 0.45kg/1.01lb
DIAMETER: 76mm/3.0"
DETECTABLE: YES, NORMALLY VISIBLE
COLOUR: GREEN
CASE MATERIAL: STEEL

BLU 77/B CLUSTER WEAPON

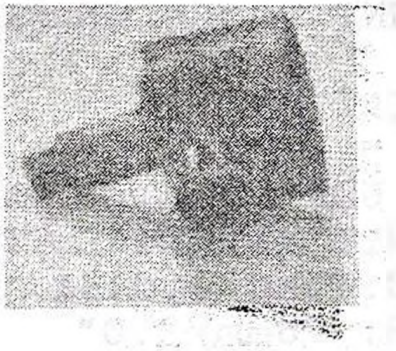
THE FOLLOWING PHOTOGRAPHS ILLUSTRATE COMPONENT PARTS AND MAY BE USED TO ASSIST IN IDENTIFICATION OF AN AREA AROUND A BLU 77/B STRIKE.

CONTAINER WHITE WITH YELLOW BAND ON NOSE



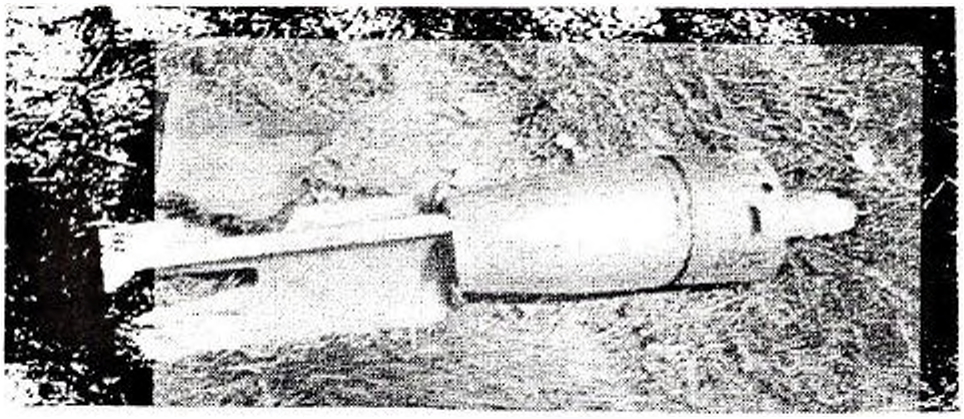
FUSE (NOSE SECTION) BROKEN BODIES AS FOR ROCKEYE





BLU 77/B BOMBLET

DESCRIPTION - AERIALLY DISPENSED, SHAPED CHARGE, TARGET DISCRIMINATING, FIN STABILIZED, FRAGMENTATION BOMBLET.



OPERATION - IMPACT OR AIRBURST.

RSP - SMALL ARMS FIRE OR PLACE A CHARGE ALONGSIDE BOMBLET ON NO ACCOUNT TOUCH OR MOVE BOMBLET. WARNING: IF UXO IS MOVED THE MAIN CHARGE MAY BOUND TO CHEST HEIGHT BEFORE FRAGMENTING.

SPECIFICATION:

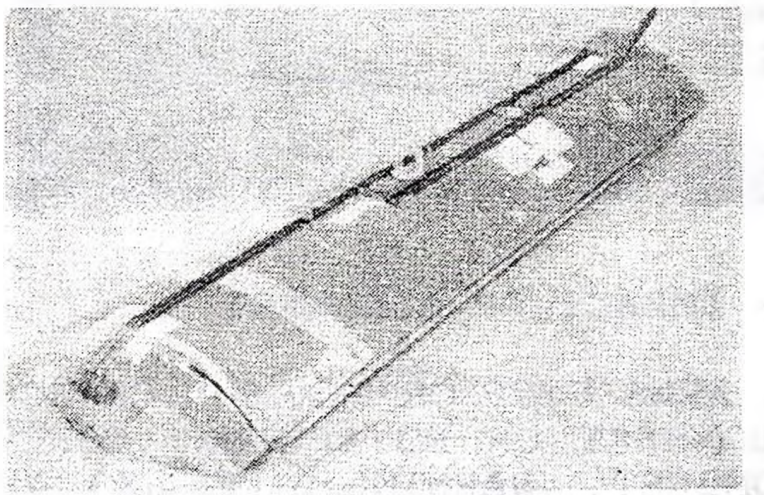
ORIGIN: USA
TYPE: ANTI MATERIAL, ANTI ARMOUR, ANTI PERSONNEL
WEIGHT: 0.45kg/1.01lb
LENGTH: 224mm/8.8"
DIAMETER: 40mm/1.59"
DETECTABLE: YES, NORMALLY VISIBLE
COLOUR: ANODIZED GOLD, WHITE FINS

CASE MATERIAL: STEEL

"GATOR" CLUSTER WEAPON

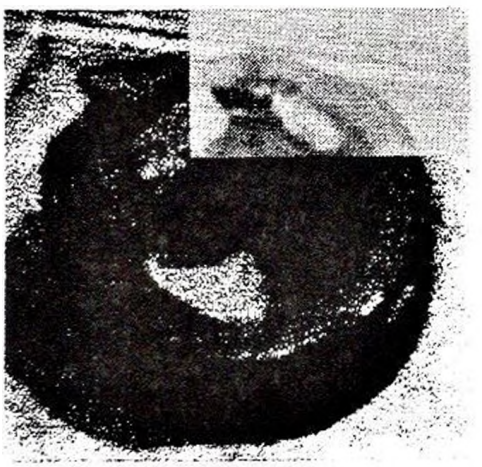
THE FOLLOWING PHOTOGRAPHS ILLUSTRATE COMPONENT PARTS AND MAY BE USED TO ASSIST IN IDENTIFICATION OF AN AREA AROUND A BLU 91/B & 92/B STRIKE.

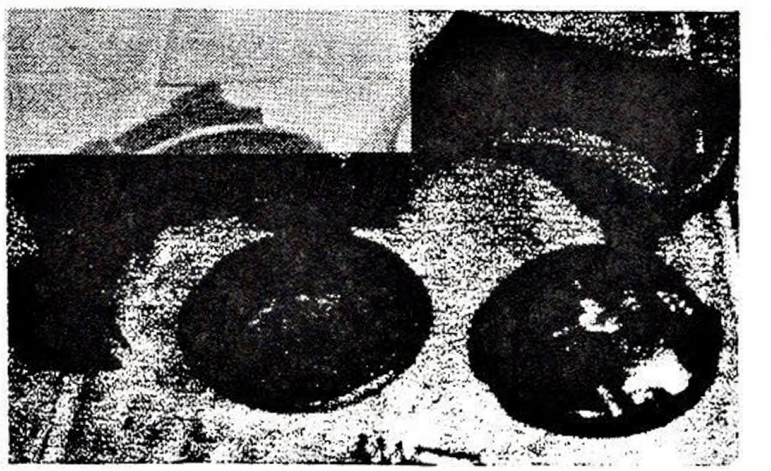
CONTAINER (HALF CASE) YELLOW BAND



INNER MAIN CHARGE BODY

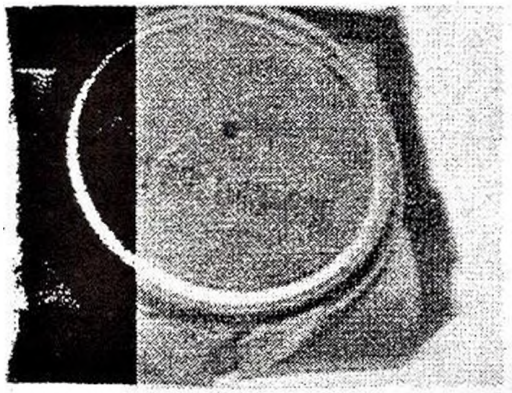
OUTER PLASTIC SHELLS
METAL COVER ELEC PACK

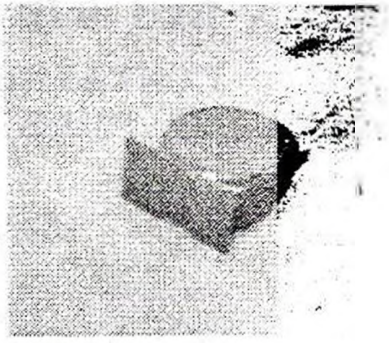




BLU 91/B & 92/B GATOR MINES

DESCRIPTION - AERIALLY DISPENSED, FREE FALL, ELECTRO MECHANICALLY ARMED, AREA DENIAL MINE.



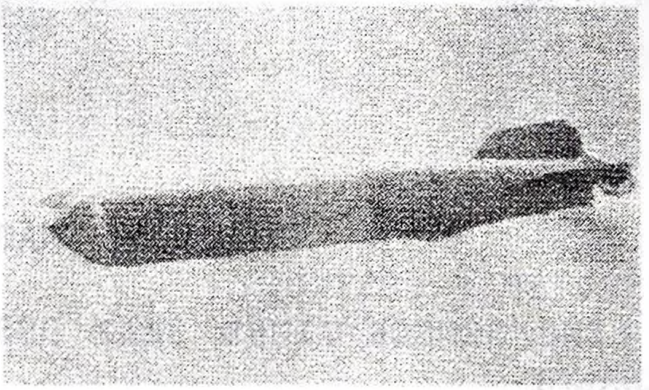


OPERATION - BLU 91/B ELECTRO MAGNETIC DISTURBANCE/TIMED SELF DESTRUCT
BLU 92/B TRIP LINE SENSOR/TIMED SELF DESTRUCT OR ANTI DISTURBANCE
RSP - SMALL ARMS FIRE 0.5", 7.62mm OR 5.56mm OR PLACE CHARGE ALONGSIDE MINE, ON NO ACCOUNT TOUCH OR MOVE THE MINE
NOTE: DO NOT TOUCH TRIPLINES, IF EITHER MINE IS FOUND ASSUME PRESENCE OF OTHER MINE, MANUAL RSP'S ONLY AFTER 22 DAYS WAIT, ON APPROACH DO NOT HAVE ANY FERROUS METAL ON PERSON.
SPECIFICATIONS:
ORIGIN: USA
TYPE: ANTI DENIAL MINE
WEIGHT: 1.9kg/4.2lb
WIDTH: 127mm/5.0"
HEIGHT: 66mm/2.6"
DIAMETER: 147mm/5.8"
DETECTABLE: YES, NORMALLY VISIBLE
COLOUR: OUTER BODY GREEN,MAINCHARGE BODY GREY/SILVER, ELECTRICAL PACK OPAQUE RED
CASE MATERIAL: PLASTIC OUTER BODY, STEEL MAINCHARGE BODY.

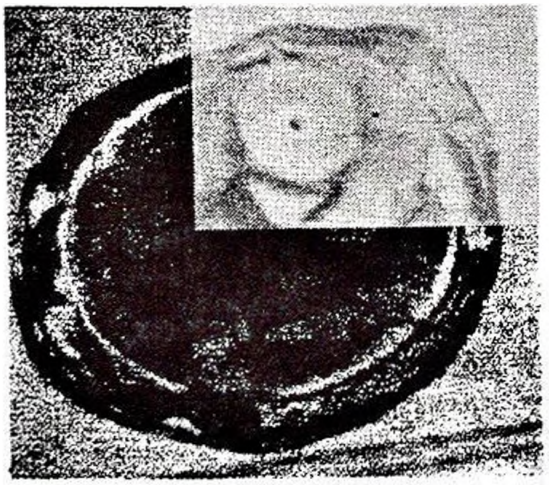
BLU 97B CLUSTER WEAPON

THE FOLLOWING PHOTOGRAPHS ILLUSTRATE COMPONENT PARTS AND MAY BE USED TO ASSIST IN IDENTIFICATION OF AN AREA AROUND A BLU 97B STRIKE.

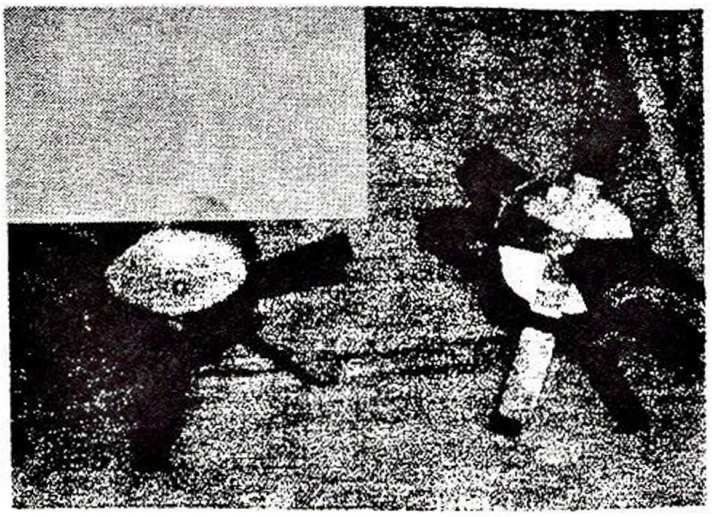
CONTAINER (HALF CASE)
OLIVE DRAB WITH YELLOW BAND



AIR CANOPIES



END CUP ASSEMBLIES



BLU 97B

DESCRIPTION - AERIALLY DISPENSED, DECELERATOR STABILIZED, AIR ARMED, SHAPED CHARGE BOMBLET.



OPERATION - PIEZO ELECTRIC

RSP - PLACE CHARGE ALONGSIDE BOMBLET, ON NO ACCOUNT TOUCH OR MOVE BOMBLET. (IF MOVED BY TOUCH OR WIND BOMBLET MAY RE-ARM).

SPECIFICATION:

ORIGIN: USA
LENGTH: 64mm/6.5"
DIAMETER: 25mm/2.5"
TYPE: AERIAL BOMBLET
WEIGHT: 1.6kg/3.4lb
DETECTABLE: YES, NORMALLY VISIBLE
CASE MATERIAL:STEEL BODY, CANVAS CANOPY
COLOUR: BODY YELLOW, BLACK WRITING, CANOPY GREEN.

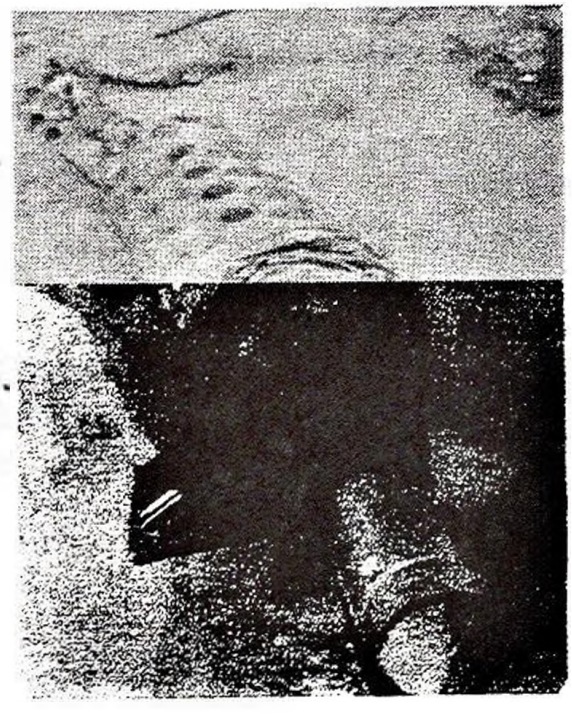
BELOUGA CLUSTER WEAPON

THE FOLLOWING PHOTOGRAPHS ILLUSTRATE COMPONENT PARTS AND MAY BE USED TO ASSIST IN IDENTIFICATION OF AN AREA AROUND A BELOUGA STRIKE.

GREEN WITH YELLOW BAND ON NOSE

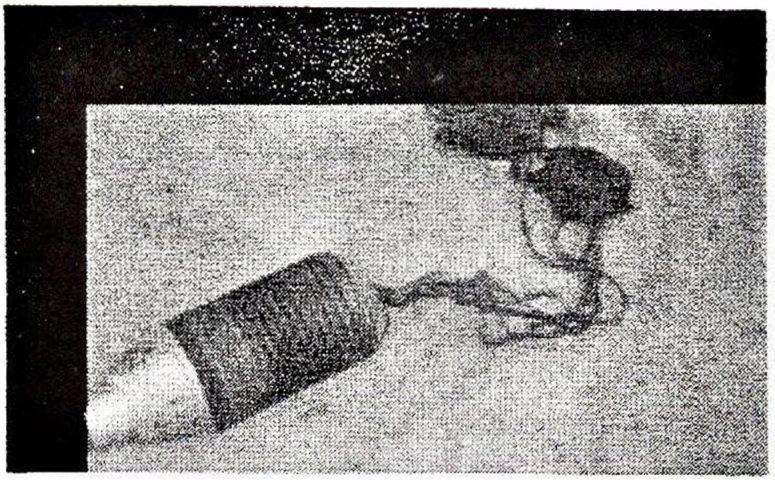


DAMAGED NOSE/TAIL AND BODY FRAGS



BELOUGA BOMBLET

DESCRIPTION - AERIALLY DISPENSED, PARACHUTE RETARDED GRENADES.



OPERATION - EG 2 AC INSTANTANEOUS PERCUSSION IZ (UNKNOWN) TIME DELAY

RSP - SMALL ARMS FIRE 0.5", 7.62mm OR 5.56mm OR PLACE CHARGE ALONG SIDE GRENADE, ON NO ACCOUNT TOUCH OR MOVE GRENADE

SPECIFICATION:

ORIGIN: FRANCE
TYPE: ANTI PERSONNEL (EG), ANTI TANK (AC), AREA DENIAL (IZ)
WEIGHT: 1.3kg/2.81b
LENGTH: 0.15m/6"
DIAMETER: 0.065m/2.5"
DETECTABLE: YES, NORMALLY VISIBLE
COLOUR: BODY - GUN METAL BLUE
NOSE - SILVER STEEL
CASE MATERIAL - STEEL

MINES

ANTI PERSONNEL

ANTI TANK

ANTI PERSONNEL MINES

V 69

DESCRIPTION: THE V69 IS A PLASTIC GOVERED, BOUNDING A/P MINE. IT HAS A REMOVABLE 5 PRONGED FUSE MOUNTED ON TOP. THE FUSE IS RETAINED IN POSITION BY A FORKED SAFETY CLIP. THE MINE IS FULLY WATERPROOF AND NON BUOYANT. IT HAS A LETHAL RADIUS OF 27m, 360 DEGREE AREA OF COVERAGE.

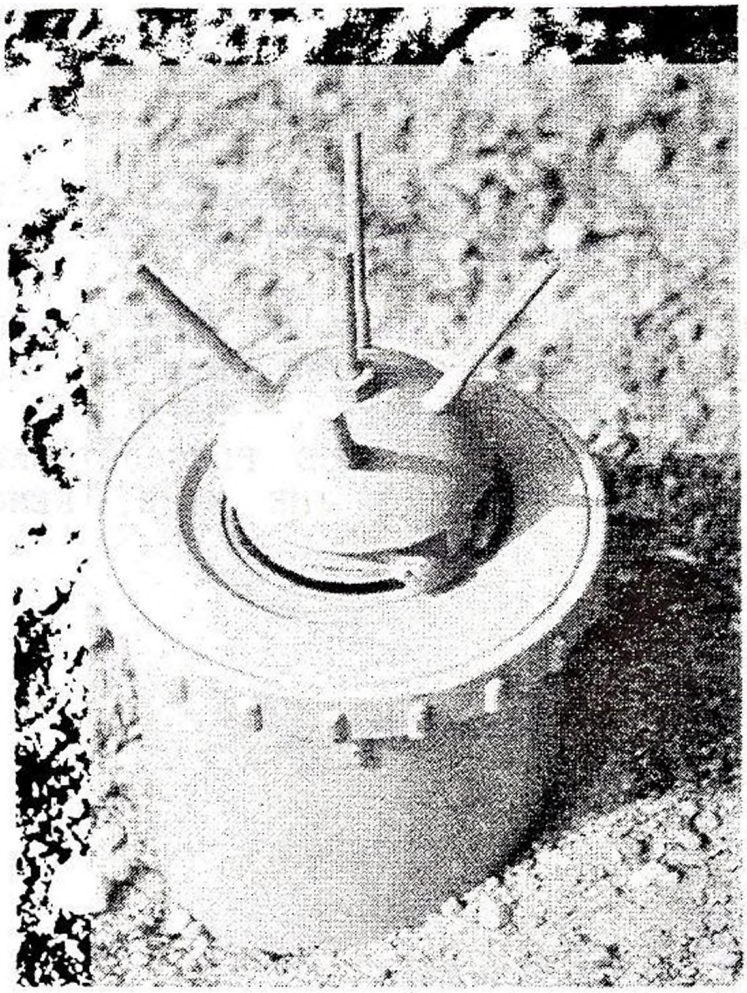
OPERATION: A TRACTION LOAD ON THE TRIPWIRE OR 6 - 8kg OR DIRECT PRESSURE OF 10.8kg ON ONE OF THE FUSE PRONGS WILL CAUSE IT TO ACTIVATE. WHEN ACTIVATED IT IS PROJECTED INTO THE AIR AT A HEIGHT OF 0.45m CAUSING THE PERCUSSION OF THE DETONATOR AND THE EXPLOSION OF THE MINE.

RSP: NEUTRALISATION IS DONE BY REPLACING THE FORKED SAFETY CLIP. TO DISARM, REPLACE SAFETY CLIP, TRACE AND CUT ANY ATTACHED WIRES, UNSCREW THE FUSE AVOIDING CONTACT WITH THE PRONGS. PULL MINE BODY, INSURING ANTI HANDLING IS NOT PRESENT. INVERT MINE AND REMOVE DET FROM CENTRAL WELL.

SPECIFICATIONS:

ORIGIN: ITALY TYPE: A/P BOUNDING FRAG
WEIGHT: 3.7kg HEIGHT: 205mm
DIAMETER: 130mm DETECTABLE: YES
CASE MATERIAL: PLASTIC

V69 VALMARA



VS50

DESCRIPTION: A PLASTIC COVERED A/P MINE, DESIGNED FOR LAYING BY HAND, OR SCATTERED FROM HELICOPTERS OR VEHICLES. IT IS WATERPROOF AND NON BUOYANT. THE HAND LAY VERSION INCORPORATES A SCYTHE SHAPED SAFETY PIN, WHILST THE SCATTER VERSION INCORPORATES A SAFETY CAP WHICH IS AERODYNAMICALLY REMOVED IN FLIGHT.

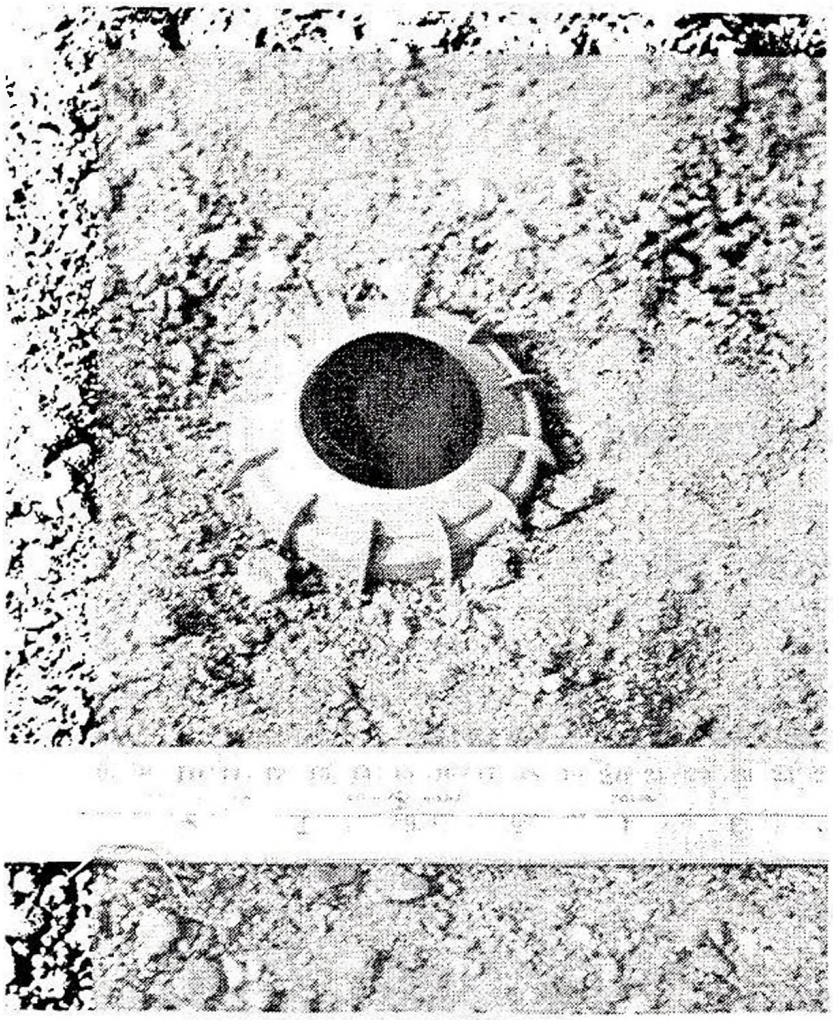
OPERATION: EXTERNAL FORCE OF APPROX 10kg TOP OR BOTTOM WILL CAUSE IT TO FUNCTION.

RSP: NEUTRALISE BY REPLACING THE CORRECT SAFETY PIN. TO DISARM, PULL THE MINE TO ENSURE ANTI HANDLING IS NOT PRESENT. HOLD MINE AT SIDES, CAREFULLY UNSCREW THE PLUG/DETONATOR HOUSING FROM THE BASE OF THE MINE, REMOVE DETONATOR.

SPECIFICATIONS:

ORIGIN: ITALY
TYPE: A/P BLAST
WEIGHT: 185kg
HEIGHT: 45mm
DIAMETER: 90mm
DETECTABLE: NO
CASE MATERIAL: PLASTIC
WARNING: AN ELECTRONIC VERSION OF THE VS50, KNOWN AS THE VS50E03, IS IN SERVICE. IT INCORPORATES A HIGHLY SENSITIVE ANTI HANDLING DEVICE EXTERNALLY IT LOOKS IDENTICAL TO THE VS50

VS 50

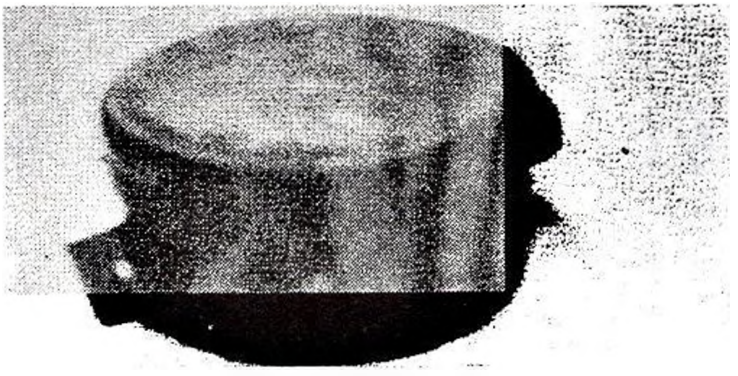


PMN

DESCRIPTION: THE CASE OF THE PMN MINE IS DUOPLASTIC. THE CASE HAS A PLUG ON EITHER SIDE OF IT; ONE RETAINS THE FIRING MECHANISM AND THE OTHER THE DETONATOR ASSEMBLY. THE COLOUR OF THE MINE MAY BE GREEN, BLACK OR BROWN.

OPERATION: ACTIVATED BY A FORCE OF 5.8kg. A CENTRAL CYLINDER IS FORCED DOWN BY PRESSURE, WHICH RELEASES THE FIRING MECH ONTO THE DETONATOR, INITIATING THE MINE. ONCE THE SAFETY PIN IS REMOVED IT TAKES APPROX 15-20 MINS, APPLYING THE SAME PRINCIPLES AS THE MUV2 FUSE.

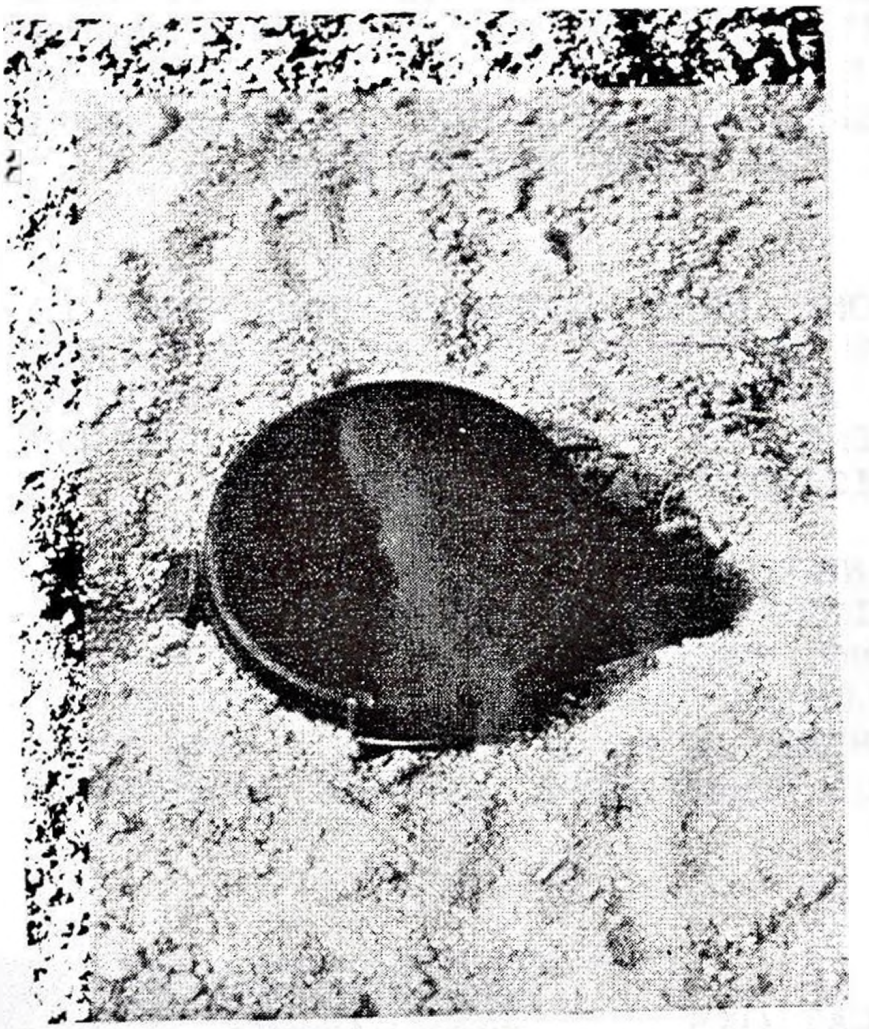
RSP: THIS MINE CANNOT BE NEUTRALISED. TO DISARM, CAREFULLY UNCOVER THE MINE AND UNSCREW THE DET HOLDER. TIP THE MINE ON ITS SIDE TO ALLOW THE BOOSTER TO FALL INTO THE PALM OF THE HAND. THE MINE IS NOW DISARMED.



SPECIFICATIONS:

ORIGIN: SOVIET
TYPE: A/P BLAST
WEIGHT: 550g
HEIGHT: 56mm
DIAMETER: 112mm
DETECTABLE: YES
CASE MATERIL: PLASTIC WITH RUBBER TOP
WARNING: IF DETONATOR PLUG IS DIFFICULT TO REMOVE, DESTROY THE MINE IN SITU.

PMN



TYPE 72

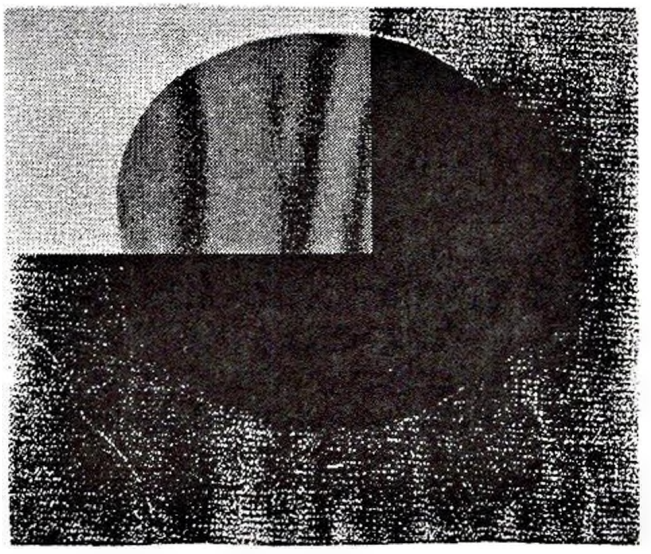
DESCRIPTION: A SMALL CIRCULAR MINE WITH SLIGHTLY SMALLER DIAMETER AT BASE THAN AT THE TOP. IT HAS A SOFT RUBBER CAP. ON THE SIDE OF THE TYPE 72 IS A SMALL RING SAFETY PIN. THE REMOVAL OF THIS PIN FULLY ARMS THE MINE. THE MINE IS WATER PROOF AND HAS MINIMUM METAL CONTENT (ONLY THE FIRING PIN) .

OPERATION: WHEN DOWNWARD PRESSURE IS PUT ONTO THE MINE, THE PRESSURE PLATE INVERTS AN INTERNAL DIAPHRAGM CAUSING THE FIRING PIN TO STRIKE THE PERCUSSION CAP, INITIATING THE FIRING CHAIN.

RSP: NEUTRALIZING. CANNOT BE NEUTRALIZED
DISARMING. THERE ARE 3 VERSIONS OF TYPE 72 INCLUDING AN ANTI HANDLING TYPE. SINCE THERE IS NO WAY TO TELL ONE FROM THE OTHER THIS MINE IS BEST DESTROYED IN SITU

SPECIFICATIONS

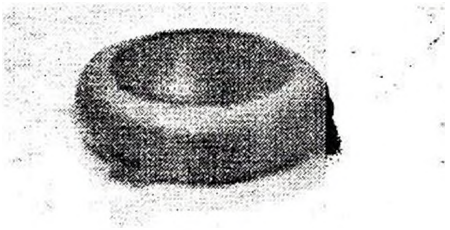
ORIGIN : CHINA
TYPE: A/P BLAST
WEIGHT: 150g
DETECTABLE: NO
CASE MAT: PLASTI
HEIGHT: 37mm
DIAMETER: 78mm



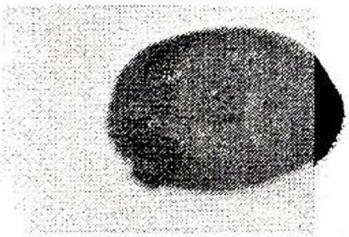
SB 33

DESCRIPTION: A RESILIENT PLASTIC ALMOST CIRCULAR MINE. OFFSET FROM THE CENTRE, ON THE UNDERSIDE, IS THE DETONATOR CAP, WHICH UNSCREWS. ON THE SIDE OF THE MINE IS A SOCKET FOR AN ARMING PIN, THOUGH ONCE ARMED ONLY A SB 33 ARMING PIN CAN BE USED TO NEUTRALISE THE MINE. IT IS WATERPROOF AND HAS MINIMUM METAL CONTENT.

OPERATION:
A STEADY PRESSURE ON THE COVER OF THIS MINE WILL CAUSE DETONATION. HOWEVER, SHOULD THE MINE BE THE MINE WILL NOT FIRE. SUBJECTED TO UNDUE SHOCK



RSP: TO NEUTRALISE REPLACE THE CORRECT PIN. TO DISARM, IF BURIED OR IN ANY WAY SUSPICIOUS, PULL FIRST. HOLD MINE BY THE EDGES, TURN IT OVER, UNSCREW DETONATOR CAP AND REMOVE IT. THE DETONATOR IS ATTACHED TO THE CAP.



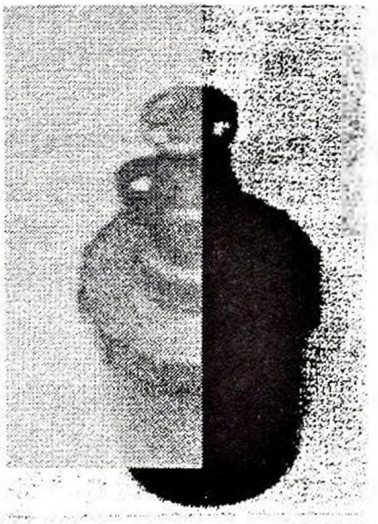
ORIGIN: ITALY
TYPE: A/P BLAST
WEIGHT: 140g
DIAMETER: 88mm
HEIGHT: 32mm
DETECTABLE: NO, (HAS APPROX 0.86g OF METAL, ALL NON DETECTABLE).
CASE MATERIAL: THERMO PLASTIC
WARNING: AN ELECTRONIC VERSION OF THE SB 33 HAS BEEN PRODUCED WHICH INCORPORATES A SENSITIVE ANTI HANDLING DEVICE. IT IS INDISTINGUISHABLE FROM THE SB 33

P4O

DESCRIPTION: IT IS A BOUNDING A/P MINE. IT IS WATERPROOF & NON BUOYANT. IT HAS A LETHAL RADIUS OF 2Om, 360 DEGREE AREA OF COVERAGE.

OPERATION: THE MINE IS EITHER BURIED WITH JUST THE FUSE SHOWING, OR ATTACHED TO A PICKET ABOVE THE GROUND. TWO TRIP WIRES, EACH 15m IN LENGTH, CAN BE ATTACHED TO THE FUSE. IT OPERATES WHEN A PULL OF 5kg IS APPLIED OR A FORCE OF 7 - 13kg IS APPLIED TO THE TOP OF THE FUSE.

RSP: NEUTRALISATION IS ACHIEVED BY REPLACING THE FORKED SAFETY CLIP. DISARMING IS CARRIED OUT BY REPLACING THE SAFETY CLIP, AND CUTTING THE TRIP WIRES. UNSCREW AND REMOVE THE FUSE. PULL FOR ANTI HANDLING DEVICES, REMOVE DET HOLDER AND DET.

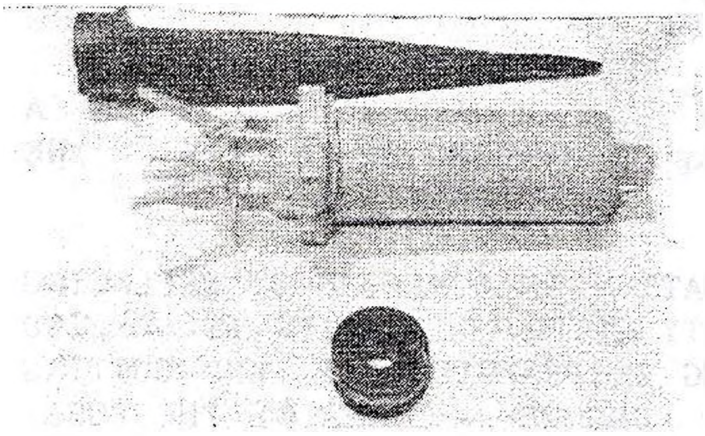


SPECIFICATIONS:

ORIGIN: ITALY
TYPE: A/P BOUNDING FRAG
WEIGHT: 2kg
HEIGHT: 12Omm (215 WITH FUSE)
DIAMETER: 1OOmm
DETECTABLE: YES
CASE MATERIAL: PLASTIC

VS-T

DESCRIPTION - THE VS-T IS PURELY AN ILLUMINATION MINE. IT IS CYLINDRICAL IN SHAPE WITH 3 DISTINCTIVE PRONGS PROTRUDING FROM THE TOP. IT CAN BE SANDY BROWN OR OLIVE DRAB IN COLOUR. COMES COMPLETE WITH A 260mm LONG STAKE AND TRIP WIRES.

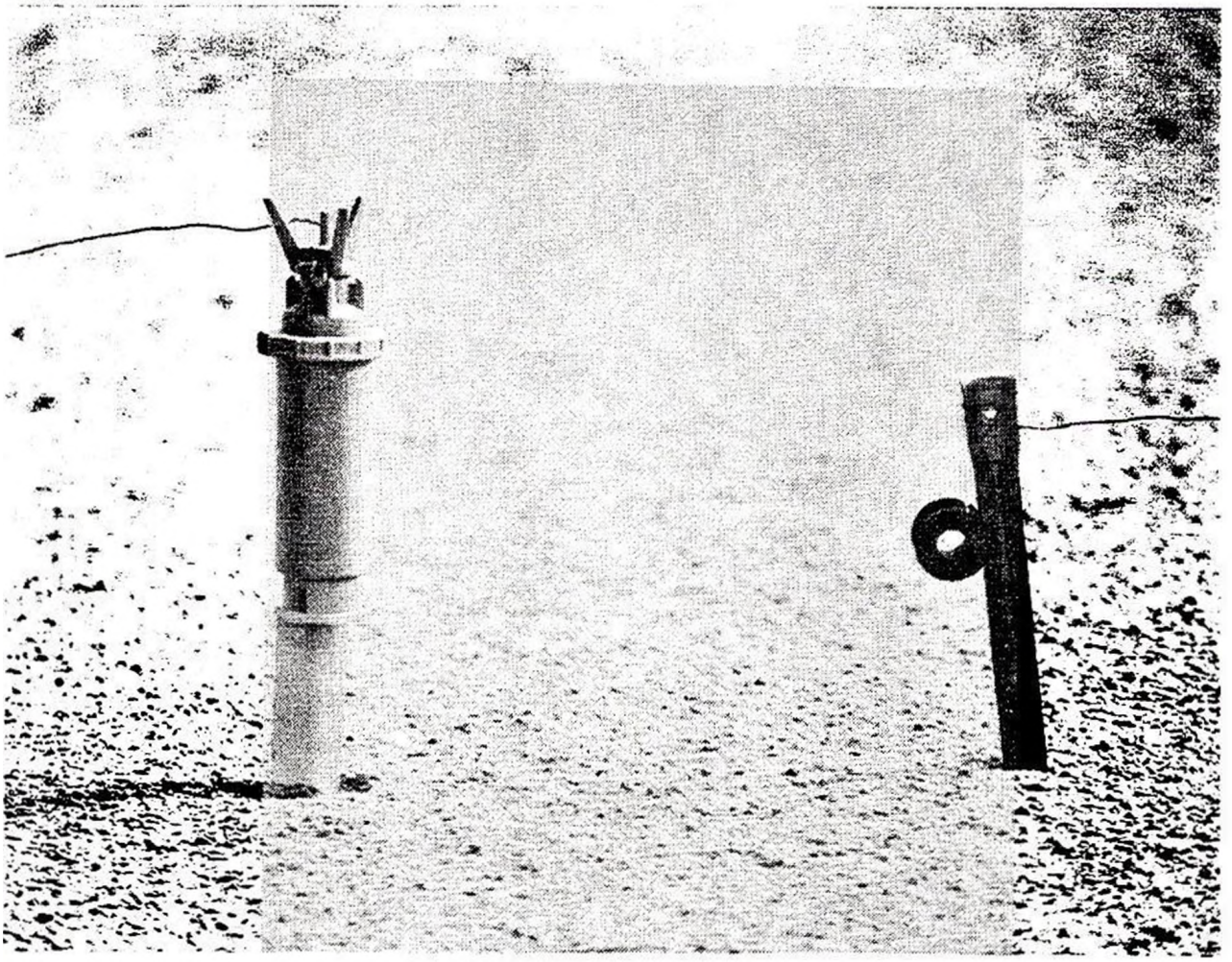


OPERATION - WHEN A PRESSURE OF 4 - 20kg IS APPLIED TO THE PRONGS OR A TENSION OF 2 - 10kg IS APPLIED TO THE TRIP WIRE IT RELEASES A COCKED SPRING INSIDE THE FUSE ASSEMBLY. THIS IN TURN INITIATES THE MINE.

RSP - TO NEUTRALISE REPLACE THE FORCED SAFETY CLIP AND TRACE AND CUT ALL TRIP WIRES. TO DISARM, AFTER NEUTRALISING, UNSCREW THE FUSE ASSEMBLY FROM THE MINE.

SPECIFICATIONS:

ORIGIN: ITALY
TYPE: ILLUMINATION WEIGHT: 470g
HEIGHT: 220mm
DIAMETER: 70mm
DETECTABLE: YES, USUALLY
CASE MATERIAL: PLASTIC



ANTI TANK MINES



TYPE 72

DESCRIPTION - A GREEN CIRCULAR PLASTIC MINE WITH A VERY DISTINCTIVE FUSE PATTERN ON TOP. THE FUSE IS BLAST RESISTANT AND HAS A REMOVABLE FUSE CAP IN THE CENTRE AT THE TOP OF THE MINE. THE MINE IS WATERPROOF AND INCORPORATES AN INTEGRAL CARRYING HANDLE IN ITS BASE.



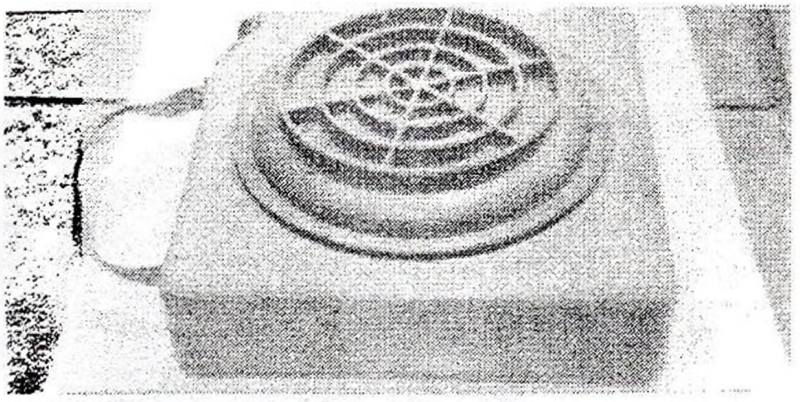
OPERATION - A PRESSURE IN EXCESS OF 300kg WILL ACTIVATE THIS MINE WITH THE NORMAL FUSE FITTED. HOWEVER A DOUBLE IMPULSE FUSE CAN ALSO BE FITTED TO THIS MINE.

RSP - THE MINE DOES NOT INCORPORATE A SECONDARY FUSE WELL OR BUILT IN ANTI HANDLING DEVICE. HOWEVER AS THERE IS LITTLE OR NO INFO ON THIS MINE IT IS BEST BLOWN IN SITU.

ORIGIN: CHINA
TYPE: A/T BLAST
WEIGHT: 6.5kg
HEIGHT: 100mm
DIAMETER: 270mm
DETECTABLE: NO
CASE MATERIAL: PLASTIC

P2 MK3

DESCRIPTION - A BROWN PLASTIC CUBOID A/T MINE. THE UPPER SURFACE HOUSES A REMOVABLE, CIRCULAR PRESSURE PLATE. THE MINE FUSE IS A REMOVABLE UNIT WHICH CAN BE USED AS AN A/P MINE.



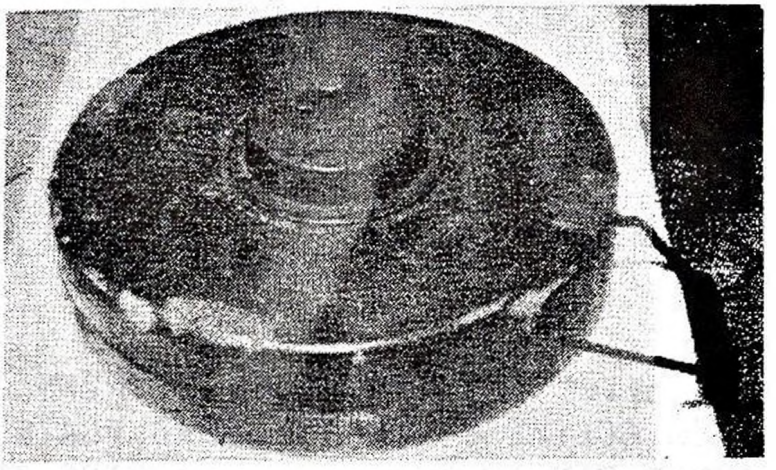
OPERATION - A PRESSURE BETWEEN 204 TO 250kg WILL COLLAPSE THE PRESSURE PLATE, SHATTER THE SHEAR PIN IN THE FUSE, CAUSING THE STRIKER TO STRIKE THE DETONATOR, CAUSING INITIATION.

RSP - TO NEUTRALISE, PULL FIRST FOR ANTI HANDLING, UNSCREW THE PRESSURE PLATE AND PLACE THE ALUMINIUM DISC ON TOP OF THE DETONATOR. REPLACE THE PRESSURE PLATE. TO NEUTRALISE THE A/T MINE REPEAT AS FOR THE A/P MINE THEN REPLACE THE FUSE AND THE PRESSURE PLATE. TO DISARM, CAREFULLY UNCOVER AND PULL. UNSCREW THE PRESSURE PLATE AND REMOVE THE FUSE, UNSCREW THE PRESSURE PLATE ON THE FUSE AND DROP OUT THE DETONATOR AND BOOSTER.

ORIGIN: PAKISTAN TYPE: AT/AP BLAST
WEIGHT: A/T 7.26kg A/P 140g HEIGHT: 120 & 38mm
DIAMETER: A/T 262mm A/P 70mm DETECTABLE: NO
CASE MATERIAL: PLASTIC
WARNING: MINE HAS FUSE WELL ON BASE FOR BOOBY TRAP PURPOSES.

CAST EXPLOSIVE MINE

DESCRIPTION - A LARGE GREEN PAINTED CAST EXPLOSIVE CIRCULAR MINE. IT INCORPORATES A ROPE CARRYING HANDLE WITH A PLASTIC SLEEVE. THE FUSE IS 122mm IN DIAMETER AND 25mm IN HEIGHT. IT SITS PROUD OF THE MINE AND IS MADE OF BAKELITE.



OPERATION - WHEN A FORCE OF APPROX 200kg IS APPLIED TO THE FUSE IT RELEASES THE WEDGED IN STRIKER WHICH STRIKERS THE DETONATOR AND CAUSES INITIATION OF THE MINE.

RSP - LITTLE OR NO INFORMATION IS AVAILABLE SO BEST TO BLOW IN SITU.

SPECIFICATIONS:

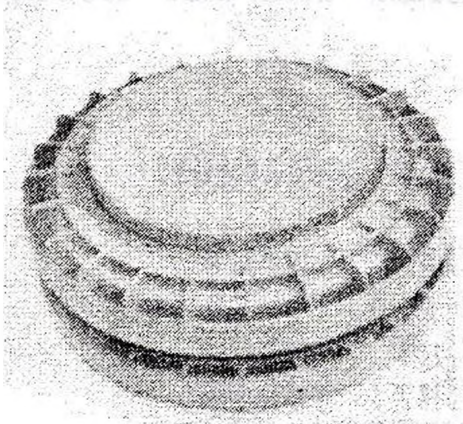
ORIGIN: IRAQ
TYPE: A/T BLAST
WEIGHT:
HEIGHT: 80mm
DIAMETER: 320mm
DETECTABLE: HAS MINIMAL METAL CONTENT
CASE MATERIAL: CAST EXPLOSIVE

VS 1.6

Description - A circular non metallic A/T mine. It is waterproof and non buoyant. Designed to be laid by helicopter and is fitted with a prematic pressure fuse (anti sudden shock).

Operation - Once a force in excess of 150kg is exerted on either the plate or the base the striker is compressed and fired onto a booster charge, thus detonating the main charge.

RSP - This mine cannot be neutralised. To disarm, pull the mine for anti disturbance. Remove detonator holder in base and remove detonator.



Specifications

Origin: Italy
Type: A/T Blast
Weight: 3kg
Height: 92mm
Diameter: 222mm
Detectable: No
Case Material: Plastic
Warning - An electric anti disturbance fuse and self neutralisation device have been developed.

VS 2.2

DESCRIPTION: A CIRCULAR NON METALLIC A/T MINE WHICH INCORPORATES AN INTEGRAL HANDLE FOR CARRYING. IT IS WATERPROOF, NON BUOYANT AND SHOCK PROOF. THE FUSE IS INCORPORATED INTO THE PRESSURE PLATE

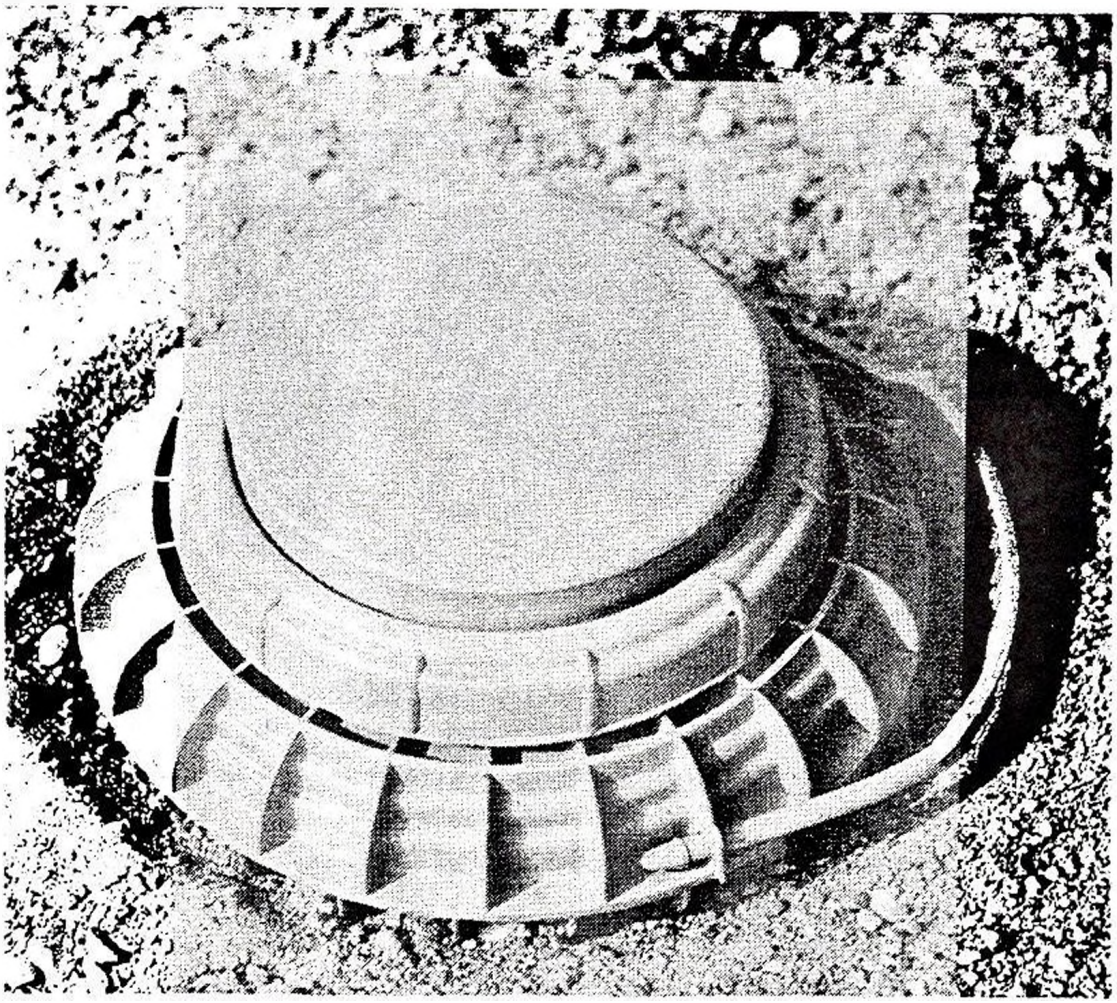
OPERATION: ONCE A FORCE OF 175-225kgHAS BEEN EXERTED ON TO THE PRESSURE PLATE, THE RESISTANCE TO THE STRIKER SPRING IS OVERCOME AND THE STRIKER IS FORCED ONTO THE DETONATOR CAUSING INITIATION. WARNING: AN ELECTRIC ANTI DISTURBANCE FUSE AND SELF NEUTRALISATION DEVICE HAVE BEEN DEVELOPED.

RSP: THIS MINE CANNOT BE NEUTRALISED. TO DISARM; PULL THE MINE FIRST, UNSCREW THE CIRCULAR FUSE FROM THE MAIN BODY, UNSCREW THE DET HOLDER AND REMOVE FUSE.

SPECIFICATIONS:

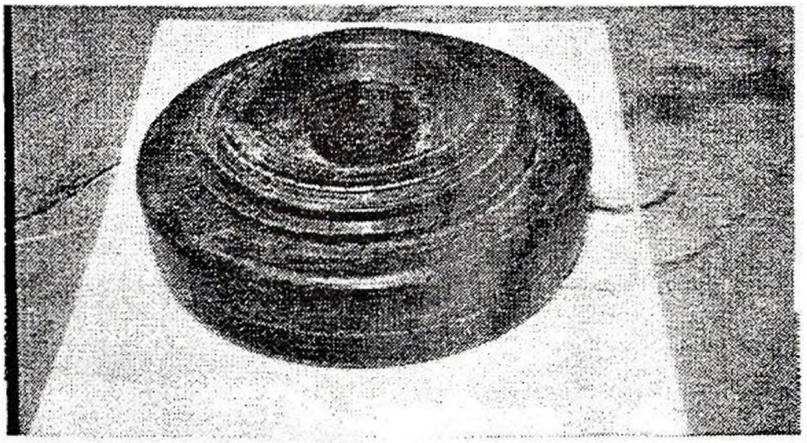
ORIGIN: ITALY
TYPE: A/T BLAST
WEIGHT 3.5kg
HEIGHT: 120mm
DIAMETER: 240mm
DETECTABLE: NO
CASE MATERIAL: PLASTIC.

VS 2.2



PT-MI-BA3

DESCRIPTION: A LARGE CIRCULAR A/T MINE WITH A PLASTIC BUILT IN CARRYING HANDLE AT THE BASE. CAN BE COLOURED BLACK, OLIVE DRAB OR BROWN.



OPERATION - WHEN A FORCE IN EXCESS OF 200kg IS APPLIED TO THE MINE THE SPRING RELEASES THE STRIKER ONTO THE DETONATOR CAUSING INITIATION.

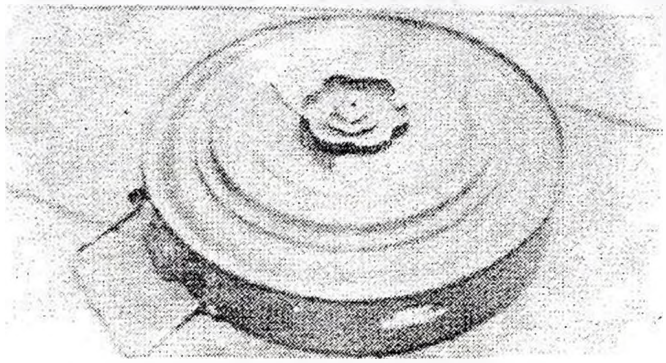
RSP - BECAUSE OF A POSSIBLE A/HANDLING FUSE BEING FITTED (RO-4) THE RSP IS TO BLOW IT IN SITU.

SPECIFICATIONS:

ORIGIN: CZECHOSLAVAKIA
TYPE: A/T BLAST
WEIGHT: 9.9kg
HEIGHT: 107mm
DIAMETER: 330mm
DETECTABLE: DIFFICULT, HAS MINIMAL METAL CONTENT
CASE MATERIAL: BAKELITE

TMN 46

DESCRIPTION - THE TMN 46 IS IDENTICAL TO THE TMN 40 EXCEPT THAT IT HAS AN AUXILIARY FUSE WELL LOCATED ON THE UNDERSIDE, INTENDED FOR ANTI LIFT DEVICES. THE BASE OF THE MINE HAS 6 STAMPED STIFFENING RIBS AT REGULAR INTERVALS. IT IS MADE OUT OF STEEL AND CAN ACCOMMODATE A TILT ROD OR PRESSURE FUSE.



OPERATION - WHEN A FORCE IN EXCESS OF 180kg IS APPLIED TO THE PRESSURE PLATE, OR A 21kg PULL OR A 3mm TILT IS APPLIED TO THE TILT ROD, THE STRIKER IS FORCED DOWN ONTO THE DETONATOR BY MEANS OF A SPRING, THUS CAUSING INITIATION.

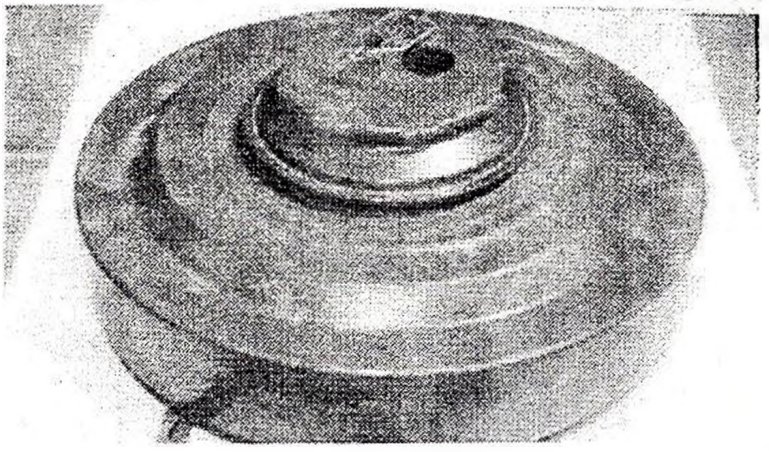
RSP - ONLY THE PRESSURE ACTIVATED FUSE CAN BE NEUTRALISED REPLACING THE SAFETY PIN. TO DISARM THE MINE FIRST PULL FOR BOOBY TRAPS, THEN WITH THE PRESSURE FUSE, UNSCREW AND REMOVE THE DETONATOR. WITH THE TILT ROD, UNSCREW THE SHIPPING PLUG AND REMOVE THE FUSE AND THE DETONATOR.

SPECIFICATIONS:

ORIGIN: SOVIET TYPE: A/T BLAST
WEIGHT: 8.6kg HEIGHT: 108mm
DIAMETER: 305mm DETECTABLE: YES
CASE MATERIAL: STEEL

TM 62M

DESCRIPTION - THE TM 62 IS A FAMILY NAME FOR A GROUP OF A/T MINES THAT DIFFER IN THEIR CONSTRUCTION. IT IS SIMILAR TO THE TM 57 BUT HAS A LARGER FUSE WELL. FUSES CAN BE MAGNETIC, SEISMIC, PRESSURE OR TILT INFLUENCED.



OPERATION - WHEN FITTED WITH A NORMAL PRESSURE FUSE, IN PRESSURE IN EXCESS OF 200kg WILL RELEASE THE SPRING LOADED STRIKER PIN ONTO THE DETONATOR CAUSING INITIATION OF THE MINE.

RSP - TO NEUTRALISE THE PRESSURE FUSE INSERT KEY INTO RECESS ON TOP OF THE FUSE AND TURN ONE REVOLUTION CLOCKWISE. TO DISARM, PULL MINE FIRST THEN UNSCREW THE FUSE ASSEMBLY.

SPECIFICATIONS:

ORIGIN: SOVIET
TYPE: A/T BLAST
WEIGHT: 8.5kg
HEIGHT: 102mm
DIAMETER: 320mm
DETECTABLE: DEPENDS ON CASE MATERIAL
CASE MATERIAL: METAL, PLASTIC, WOOD OR WAXED PAPER.

LAND

SERVICE

AMMUNITION

MORTAR ROUNDS

ARTILLERY ROUNDS

TANK ROUNDS

HAND GRENADES

LAUNCHED GRENADES

MISSILES

MORTAR ROUNDS

MORTAR BOMB 60MM MK1 HE BOMB

DESCRIPTION - THE BOMB BODY IS MADE OF PEARLITIC, MALLEABLE CAST IRON. SECONDARY CHARGES ARE GENERALLY HORSE SHOE TYPE ALTHOUGH EARLIER BOMBS USED SECONDARY CHARGES FITTED BETWEEN FINS. BLACK MARKING ON PINKY CREAM BODY COLOUR.

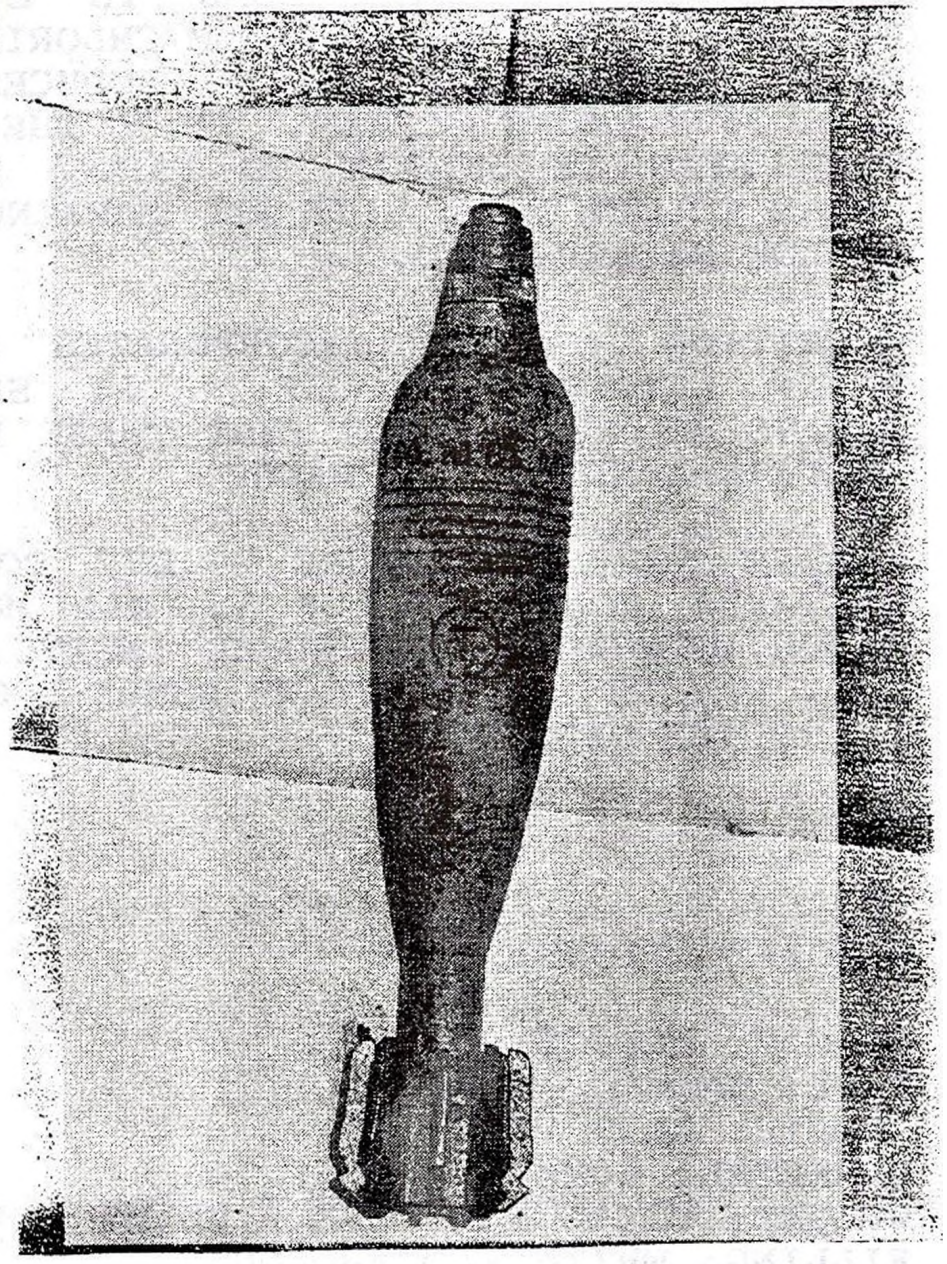
OPERATION - THE MORTAR BOMB IS FITTED WITH A V9 POINT DETONATING FUSE.

RENDER SAFE PROCEDURE - NONE REQUIRED FOR UNFIRED BOMBS ALTHOUGH CARE SHOULD BE TAKEN IF MUNITION HAS BEEN INVOLVED IN A FIRE OR EXPLOSION OR LEFT IN DIRECT SUNLIGHT. IT SHOULD ALSO BE NOTED THAT THE HE BOMB AND WP ARE VERY SIMILAR EXCEPT FOR MARKINGS.

SPECIFICATIONS:

ORIGIN: FRANCE
TYPE: HE
LENGTH: 317MM
DIAMETER: 60MM
WEIGHT: TOTAL - 1.72KG
FILLING - 0.26KG
FILLING: PRESSED TNT
FUZE: V9
RANGE: 1050M

MORTAR BOMB 60MM MK1 HE BOMB



MORTAR BOMB 60MM MK61 SMOKE BOMB

DESCRIPTION - THIS BOMB IS EITHER FILLED WITH LIQUID TITANIUM CHLORIDE OR WHITE PHOSPHOROUS WHICH PRODUCES AN EFFECTIVE SMOKE SCREEN. WP IS THE ONLY TYPE SEEN IN KUWAIT SO FAR. PINKY CREAM COLOUR BODY WITH RED MARKING AND YELLOW HAZARD BAND.

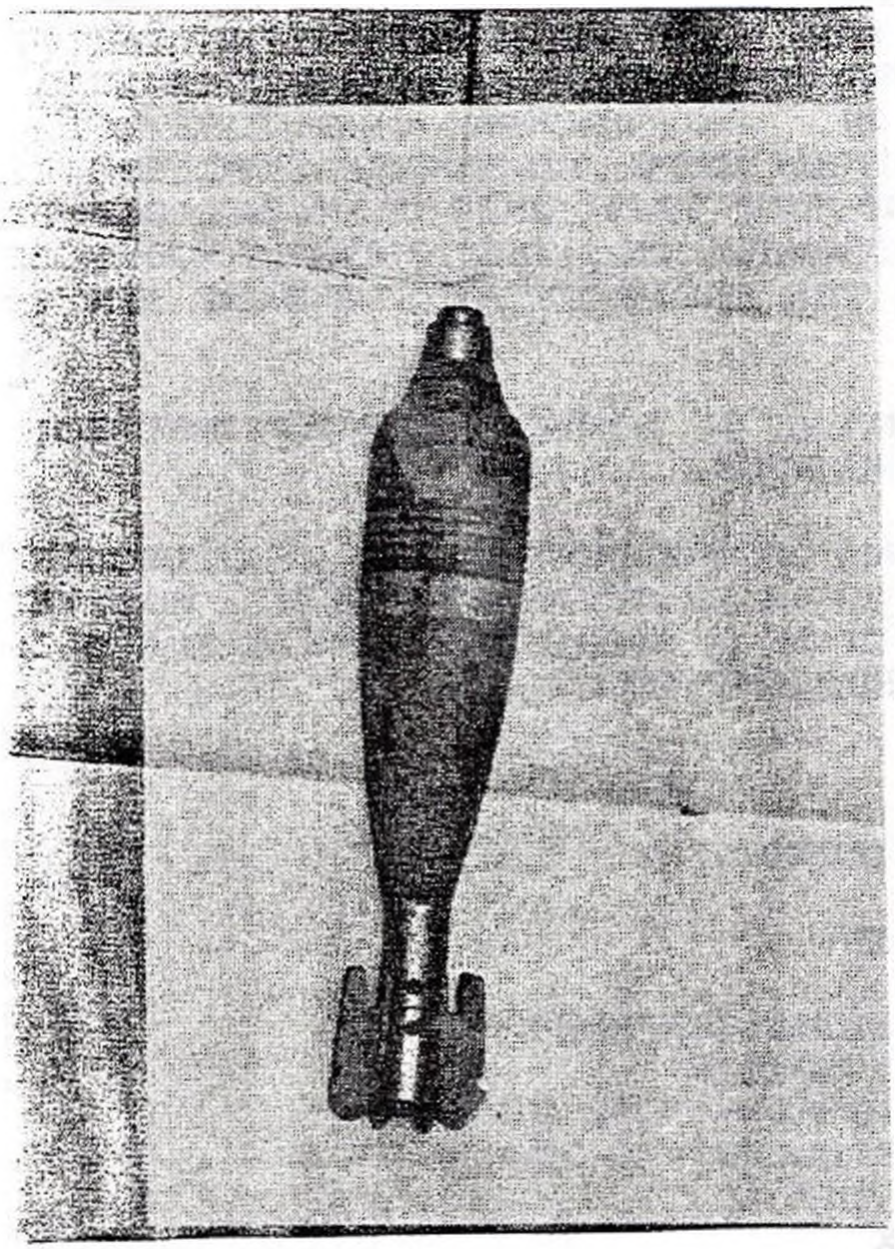
OPERATION - BOMB INCORPORATES A V9 POINT DETONATING FUZE. IT SHOULD ALWAYS BE REMEMBERED THAT THESE BOMBS CONTAIN A BURSTING CHARGE.

RENDER SAFE PROCEDURE - DUE TO THE UNSTABLE CONDITION OF WP ALL MORTAR BOMBS SHOULD BE DESTROYED INSITU. THE ONLY WAY TO INDENTIFY WP BOMBS FROM HE IS BY THE MARKINGS.

SPECIFICATIONS:

ORIGIN: FRANCE
TYPE: SMOKE
LENGTH: 317
DIAMETER: 60MM
WEIGHT: TOTAL - 1.72KG FILLING - N/K
FILLING: WHITE PHOSPHOROUS
LIQUID TITANIUM CHLORIDE
FUZE: V9
RANGE: 1050M

MORTAR BOMB 60MM MK61 SMOKE BOMB



60MM M49A2 HE BOMB

DESCRIPTION - THE M49A2 IS A CAST IRON PATTERN BOMB WITH OBTURATING GROOVES AROUND THE BODY AND A STEEL TAIL UNIT SCREWED IN. THE PRIMARY CARTRIDGE IS OF A SHOTGUN TYPE, INSERTED INTO THE CENTRE OF THE TAIL UNIT. M48A2 HAS BEEN IMPROVED IN THE M49A2 MODEL ALTHOUGH THE BASIC DETAILS REMAIN THE SAME.

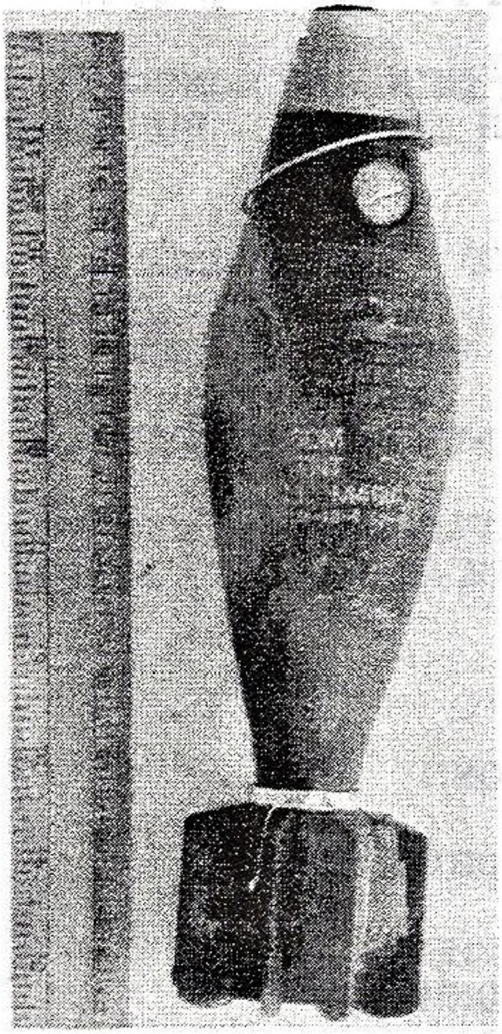
OPERATION - A DIRECT ACTION POINT DETONATING FUSE.

RENDER SAFE PROCEDURES - NONE REQUIRED IF SAFETY PIN IS STILL IN PLACE. WHEN SAFETY PIN IS MISSING TREAT AS A BLIND AND DESTROY IN SITU.

SPECIFICATIONS:

ORIGIN: USA
TYPE: HE
LENGTH: 260MM (APPROX)
DIAMETER: 60MM
WEIGHT: TOTAL - 1.46 KG
FILLING - 0.154 KG
FILLING: TNT
FUSE: N/K
RANGE: 1814 M

60MM M49A2 HE BOMB



60MM HE BOMB M73

DESCRIPTION - THIS IS A CONVENTIONAL "TEAR DROP" WITH A TAIL UNIT, AROUND WHICH SUPPLEMENTARY CHARGES ARE FITTED. THE TNT FILLED BOMB IS FITTED WITH A FUSE UT M68PI.

OPERATION - STANDARD MORTAR BOMB WHICH FUNCTIONS ON IMPACT. FUSE ARMS 8" FROM THE MUZZLE.

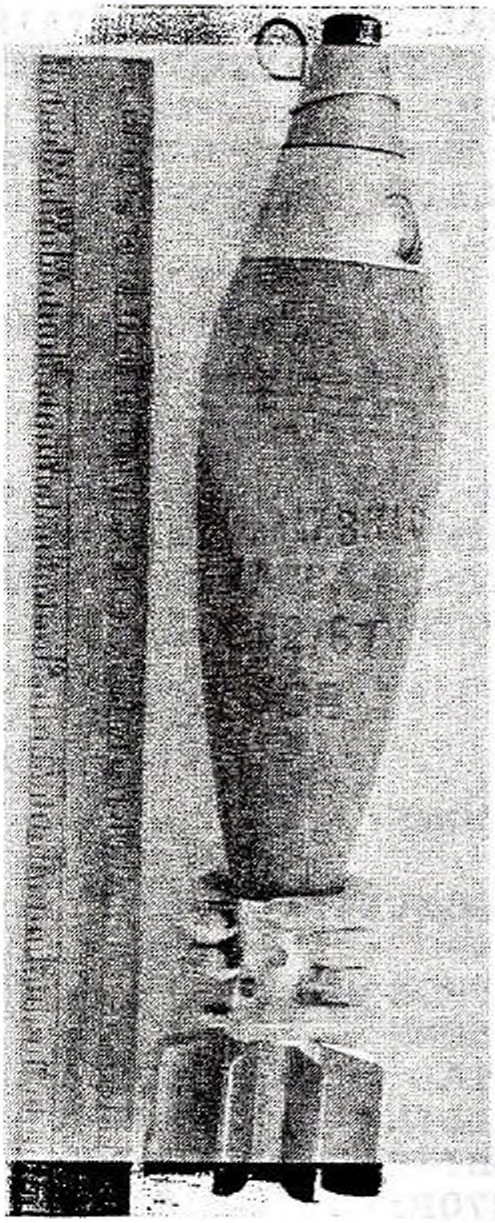
RENDER SAFE PROCEDURES - NONE IS REQUIRED IF THE SAFETY PIN IS IN PLACE AND THE MUNITION IS IN GOOD CONDITION. WHEN THE PIN IS MISSING TREAT AS A BLIND AND BLOW IN SITU.

NOTE: IDENTICAL TO WP BOMB IF THE MARKINGS ARE MISSING. TREAT AS WORST CASE IE WP.

SPECIFICATIONS:

ORIGIN: YUGOSLAVIA
TYPE: HE
LENGTH: 290 MM
DIAMETER: 60MM
WEIGHT: TOTAL - 1.3 KG
FILLING - 0.22 KG
FILLING: TNT
FUSE: UT M68PI
RANGE: 2537 M MAX

60MM HE BOMB M73



60MM SMOKE BOMB M73

DESCRIPTION - THE M73 SMOKE BOMB IS OF WHITE PHOSPHOROUS BURSTING TYPE, WHICH WAS A CENTRAL EXPLODER CONTAINER AND IS FITTED WITH THE DIRECT ACTION IMPACT FUSE UTM70PI. IT IS BALLISTICALLY MATCHED TO THE HE BOMB M73 AND USES THE SAME PROPELLING CHARGES TO OBTAIN THE SAME RANGES.

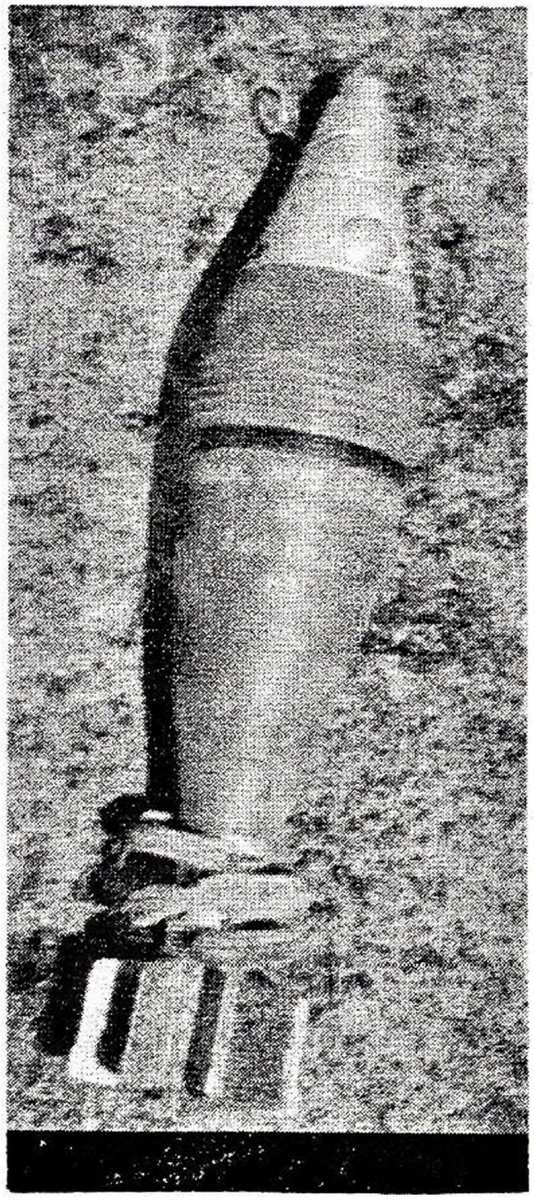
OPERATION - DIRECT ACTION POINT DETONATING FUSE. ARMS 8" FROM THE MUZZLE.

RENDER SAFE PROCEDURE - DUE TO THE LOW MELTING POINT OF WP ALL MORTAR BOMBS SHOULD BE DESTROYED AND NOT TRANSPORTED TO AMMUNITION STOCKPILES.

SPECIFICATIONS:

ORIGIN: YUGOSLAVIA
TYPE: SMK WP
LENGTH: APPROX 290MM
DIAMETER: 60MM
WEIGHT: TOTAL - 1.35 KG
FILLING - 0.19 KG
FILLING: WHITE PHOSPHOROUS
FUSE: UT M70PI
RANGE: 2537 M

60MM SMOKE BOMB M73



60MM ILLUMINATING BOMB M67

DESCRIPTION - THE M67 ILLUMINATING BOMB CONTAINS THE USUAL TYPE OF MAGNESIUM FLARE UNIT SUSPENDED BY A PARACHUTE. THE BOMB IS FUSED WITH A PYROTECHNIC TIME FUSE.

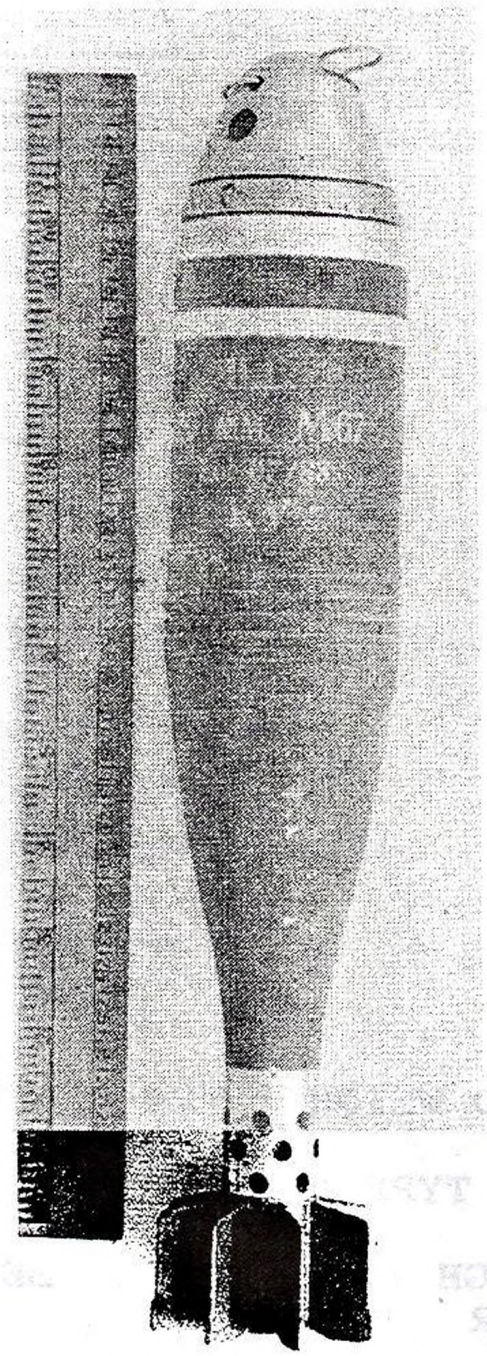
OPERATION - THE PYROTECHNIC TIME FUSE AT THE END OF A SET TIME IGNITES AN EXPELLING CHARGE AND EJECTS THE PARACHUTE AND FLARE UNIT FROM THE NOSE OF THE BOMB.

RENDER SAFE PROCEDURES - NONE IS REQUIRED IF THE SAFETY PIN IS IN PLACE AND THE MORTAR BOMB IS IN GOOD CONDITION. IF THE PIN IS MISSING, TREAT AS A BLIND AND DESTROY IN SITU.

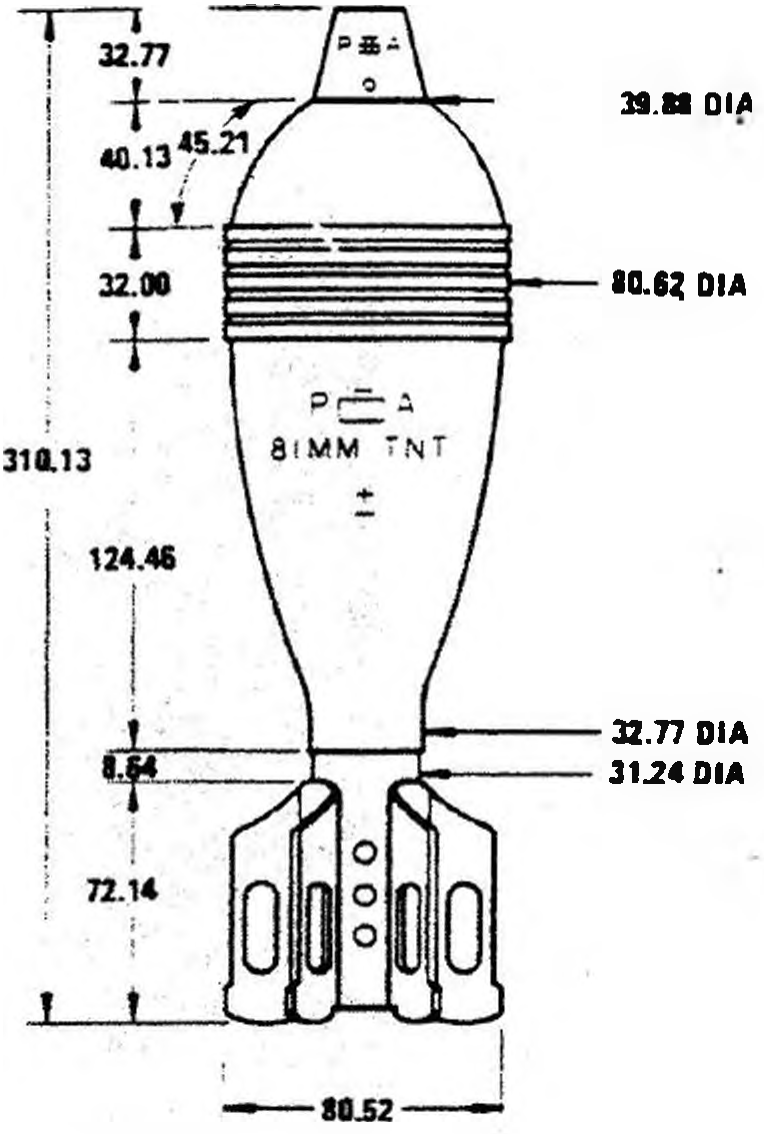
SPECIFICATIONS:

ORIGIN: YUGOSLAVIA
TYPE: ILLUMINATION
LENGTH:
DIAMETER:
WEIGHT: TOTAL 1.27 KG
FUSE: N/K
RANGE: 2450 M
ILLUMINATION DURATION: 35 SEC

60MM ILLUMINATING BOMB M67



CHINESE 81MM FRAG PROJECTILE TYPE ?

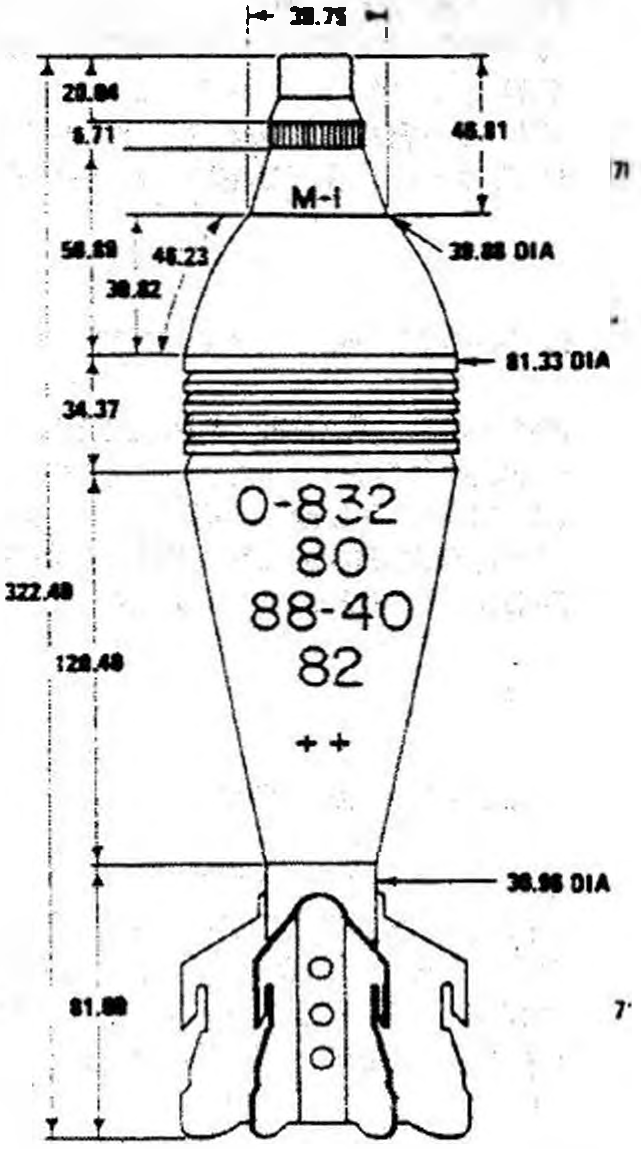


SPECIFICATIONS:

ORIGIN: CHINA
LENGTH: 325MM
DIAMETER: 81MM
WEIGHT: 3.22KG
FILLING TYPE AND WEIGHT: TNT 0.56KG
FUZE: TYPE ? PD
WEAPONS: MORTAR TYPE 53

REMARKS: ALTHOUGH 81MM IT CAN BE USED FROM 82MM MORTAR

82MM FRAG PROJECTILE MODEL O-832



SPECIFICATIONS:

ORIGIN: SOVIET
TYPE: HE
LENGTH: 322MM
DIAMETER: 82MM
WEIGHT: 3.41KG
FILLER TYPE: SCHNEIDERITE
FILLER WEIGHT: 0.4KG
FUZE: M-1 PD

REMARKS: ALSO USES M-2, M-3, M-4, MP AND MP-82 FUZES

82MM MODEL 0.832 DU FRAGMENTATION PROJECTILE

DESCRIPTION - POINT DETONATING MEDIUM MORTAR BOMB, STEEL BODY INCORPORATING THE MODEL M-6 FUSE. NORMALLY FIRED FROM THE 82mm M-37 MORTAR. NORMAL BODY COLOUR IS GREY WITH BLACK MARKINGS.

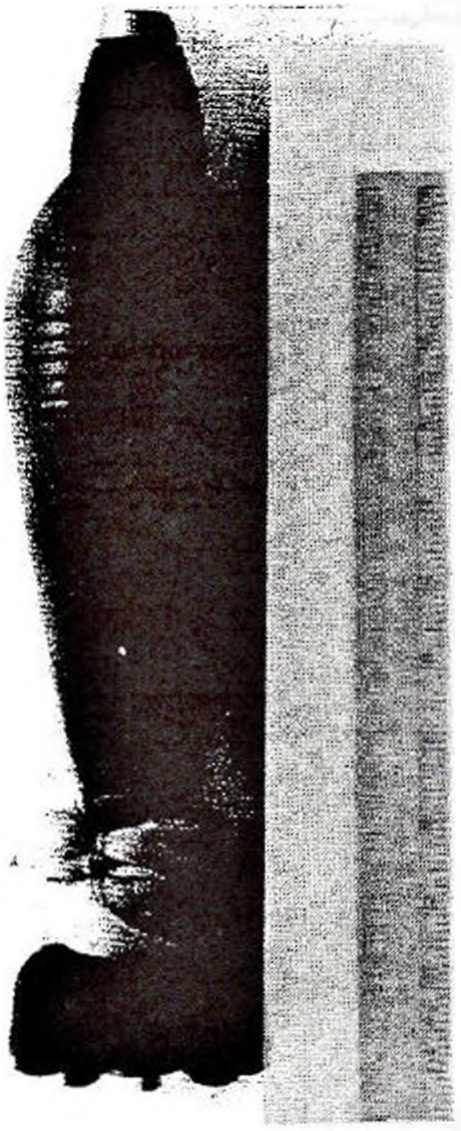
OPERATION - DIRECT ACTION FUSE.

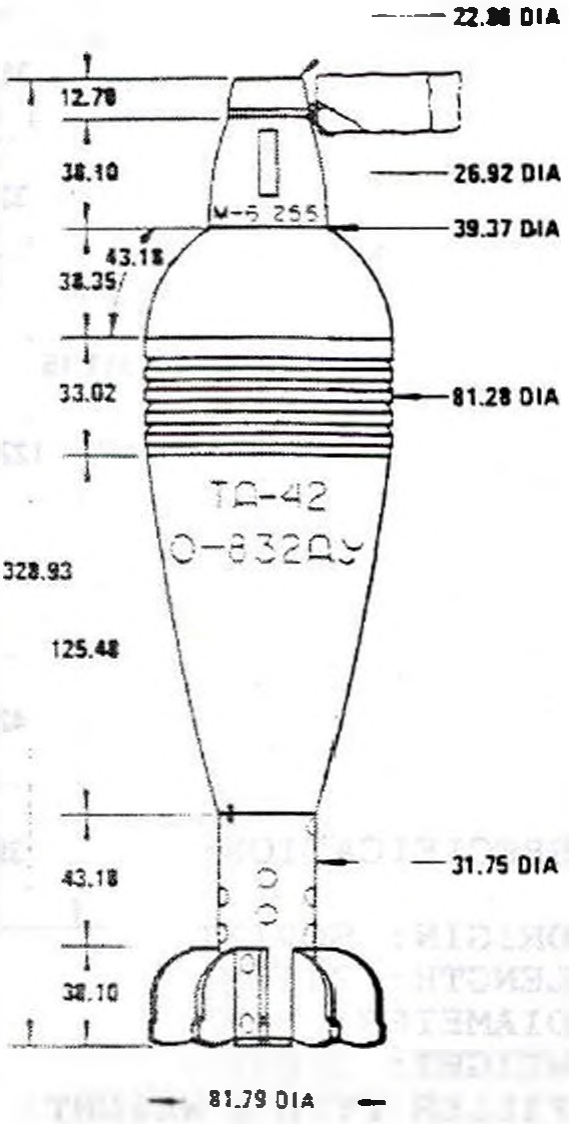
RENDER SAFE PROCEDURE - DEPENDENT ON CONDITION OF PROJECTILE, ALTHOUGH PROJECTILES WITH SAFETY PINS MISSING REGARDLESS OF WHETHER OR NOT THEY HAVE BEEN FIRED MUST BE TREATED AS BLINDS.

SPECIFICATIONS:

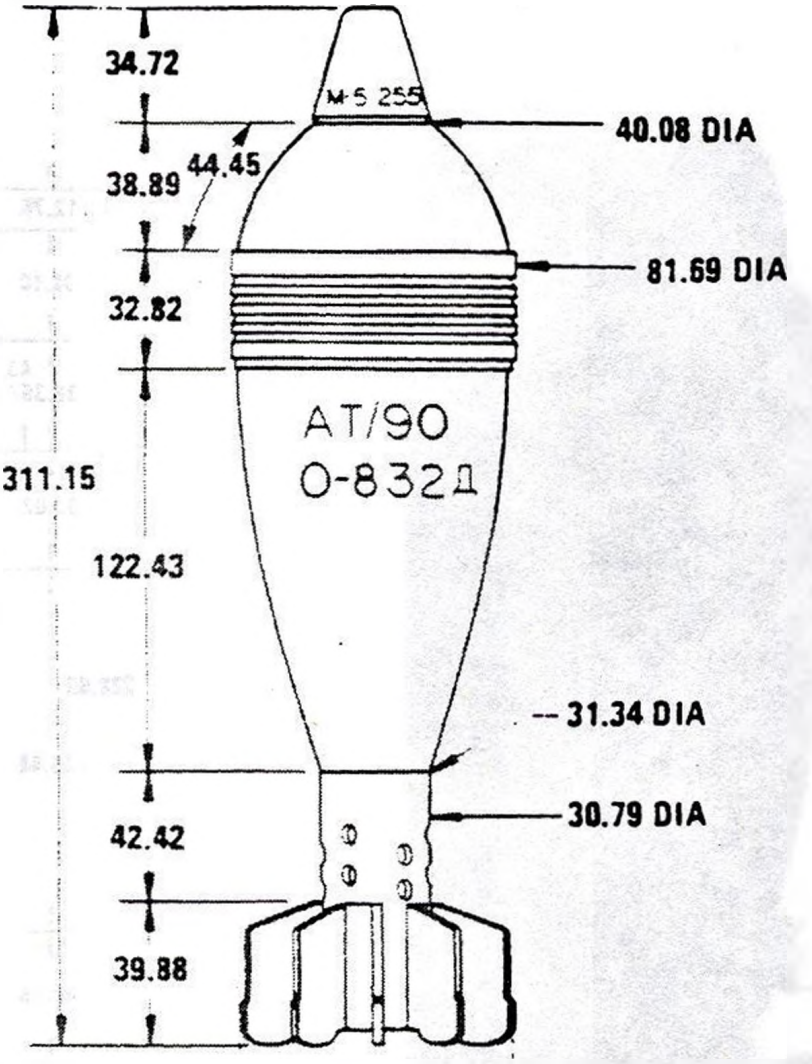
ORIGIN: SOVIET
TYPE:FRAGMENTATION/HE
COLOUR: DARK GREY WITH BLACK WRITING
FUSE: MODEL M-6 POINT DETONATING
EXPLOSIVE TYPE AND WEIGHT: 0.435kg - TNT

82MM MODEL 0.832 DU FRAGMENTATION PROJECTILE





SOVIET 82MM FRAG PROJ MODEL 0.832D

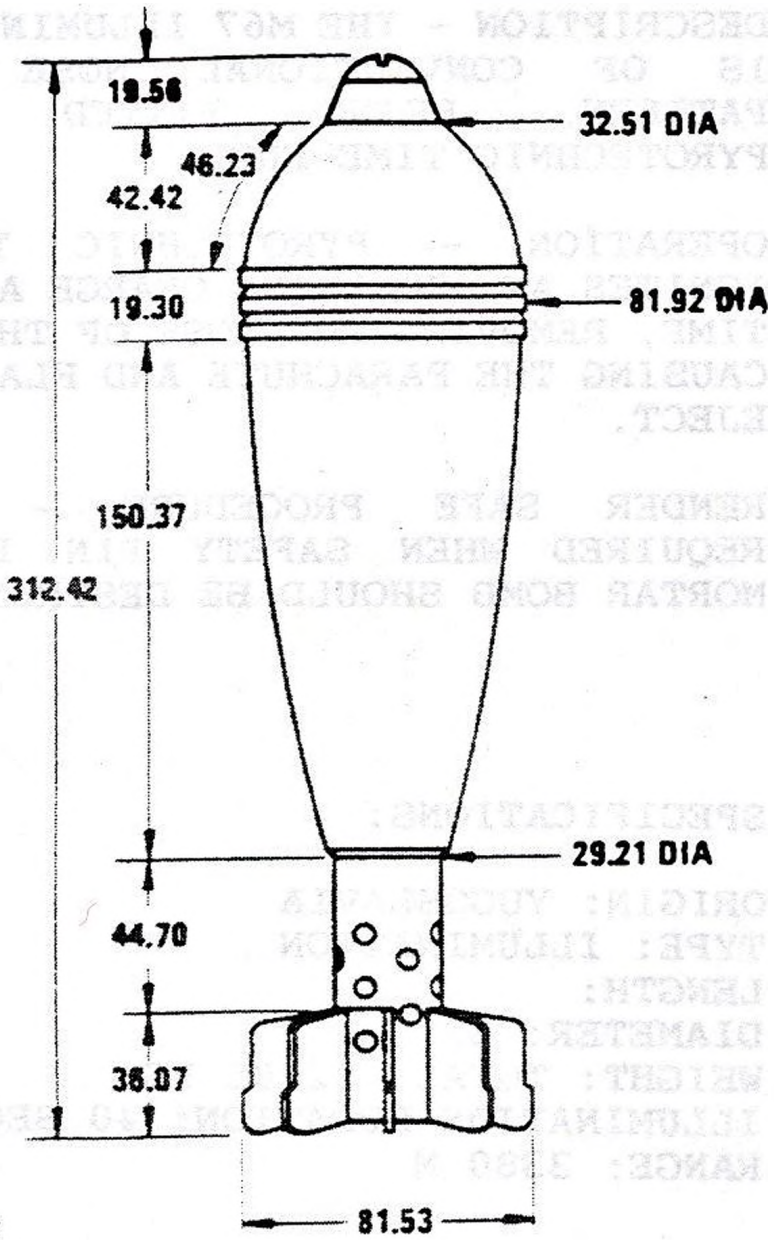


SPECIFICATION:

ORIGIN: SOVIET
LENGTH: 311MM
DIAMETER: 82MM
WEIGHT: 3.07KG
FILLER TYPE & WEIGHT: TNT/AMATOL 0.41KG
FUZE: M-5 PD

REMARKS: ALSO USES MP-1, MP-2, MP-3, MP-4, MP-82 AND M-6 PD FUZES.

CHINESE 82MM FRAG PROJECTILE TYPE 20



SPECIFICATIONS:

ORIGIN: CHINA
LENGTH: 312MM
DIAMETER: 82MM
WEIGHT: 3.82KG
FILLING TYPE: COMMERCIAL DYNAMITE
FILLING WEIGHT: 0.14KG
FUZE: TYPE 9 PD
WEAPONS: MORTAR TYPE 53

82MM ILLUMINATING BOMB M67

DESCRIPTION - THE M67 ILLUMINATING BOMB IS OF CONVENTIONAL NOSE EJECTION PATTERN, BEING FITTED WITH A PYROTECHNIC TIME FUSE.

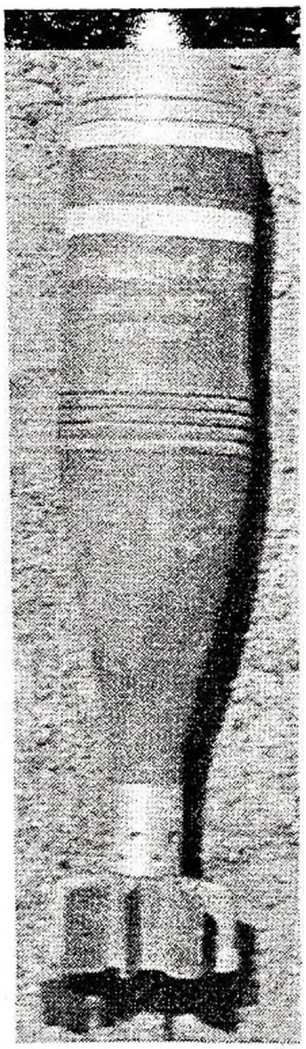
OPERATION - PYROTECHNIC TIME FUSE IGNITES AN EXPELLING CHARGE AFTER A SET TIME, REMOVING THE NOSE OF THE BOMB AND CAUSING THE PARACHUTE AND FLARE UNIT TO EJECT.

RENDER SAFE PROCEDURE - NONE IS REQUIRED WHEN SAFETY PIN IS MISSING MORTAR BOMB SHOULD BE DESTROYED.

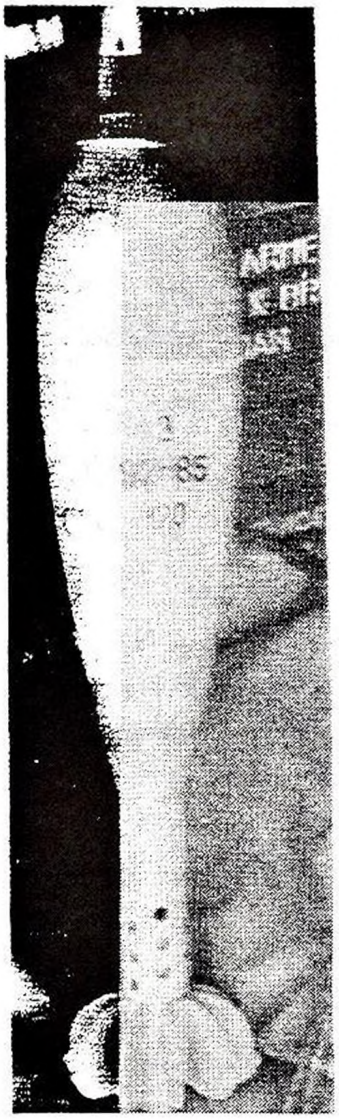
SPECIFICATIONS:

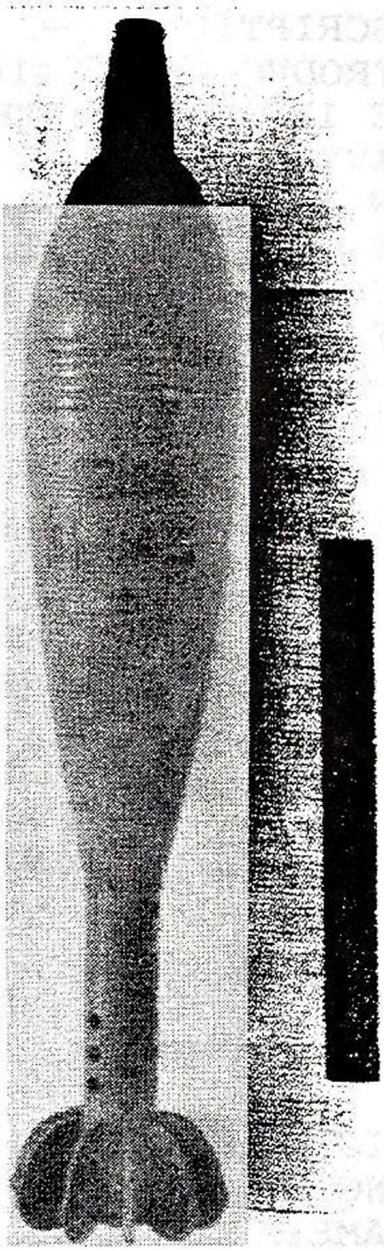
ORIGIN: YUGOSLAVIA
TYPE: ILLUMINATION
LENGTH:
DIAMETER: 82MM
WEIGHT: TOTAL - 2.95 KG
ILLUMINATION DURATION: 40 SEC
RANGE: 3380 M

82MM ILLUMINATING BOMB M67



120MM FRAG - HE PROJECTILE MODEL OF-843





SPECIFICATIONS:

ORIGIN: SOVIET/CHINA
LENGTH: 658MM
DIAMETER: 120MM
WEIGHT: 16.02KG
FILLER TYPE AND WEIGHT: TNT 2.68KG
FUZE: GVMZ-7PD
WEAPON: MOR M1938 & M1943

160MM MODEL F-852 HE PROJECTILE

DESCRIPTION - THE SOVIET ARMY INTRODUCED THE 160MM M1943 TO PROVIDE THE INFANTRY WITH A WEAPON PRODUCING A HEAVY WEIGHT OF HIGH EXPLOSIVE BUT A LOW COST OF MANUFACTURE. BECAUSE OF THE LENGTH OF BARREL IT HAD TO BE A BREECH LOADING WEAPON. BODY COLOUR IS NORMALLY DARK GREY WITH BLACK MARKINGS.

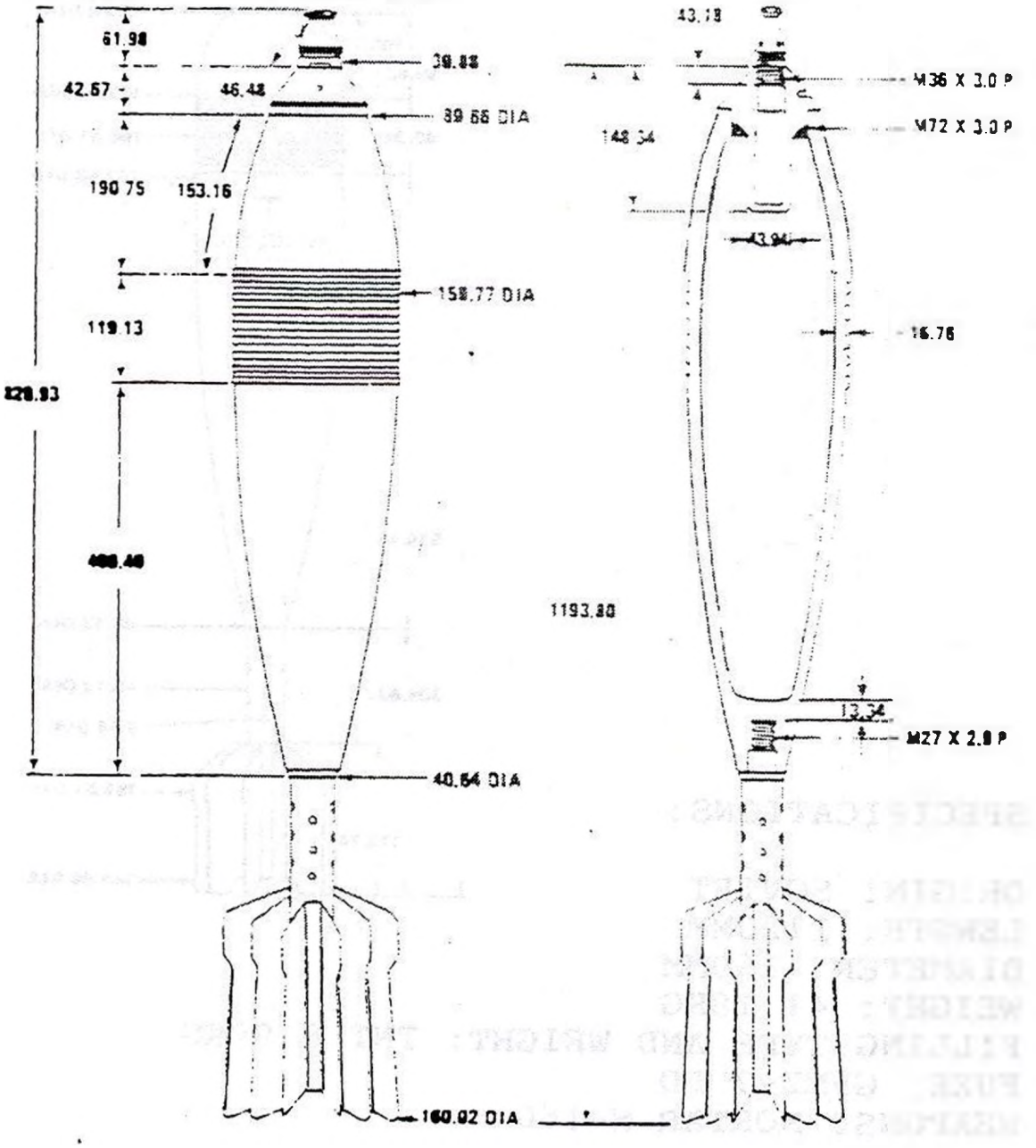
OPERATIONS - BREECH LOADED PROJECTILE, FUSE IS THE MODELGVMZ-7 POINT DETONATING.

RENDER SAFE PROCEDURES - NONE IS REQUIRED IF PROJECTILE IS IN THE UNFIRED CONDITION, ALTHOUGH CARE SHOULD BE TAKEN IF PROJECTILE HAS BEEN INVOLVED IN A FIRE/EXPLOSION OR BEEN LEFT OUT IN THE DIRECT SUNLIGHT. ALSO, DUE TO THE WEIGHT THE FUSE IS SENSITIVE TO DROP.

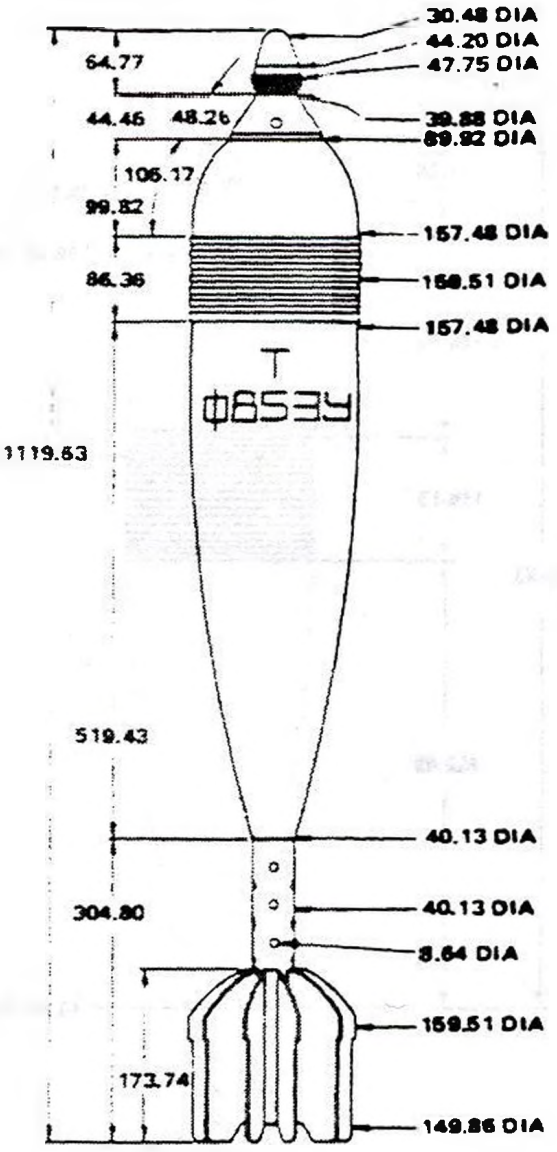
SPECIFICATIONS:

ORIGIN: SOVIET (MOST EASTERN COUNTRIES)
LENGTH: 1120MM
DIAMETER: 160MM
WEIGHT: TOTAL - 40KG
FILLING - 7.38KG
FILLING TYPE: TNT
FUZE: MODEL GMVZ-7
MAXIMUM RANGE: 8040M

160MM MODEL F-852 HE PROJECTILE



SOVIET 160MM HE PROJECTILE MODEL F-853U

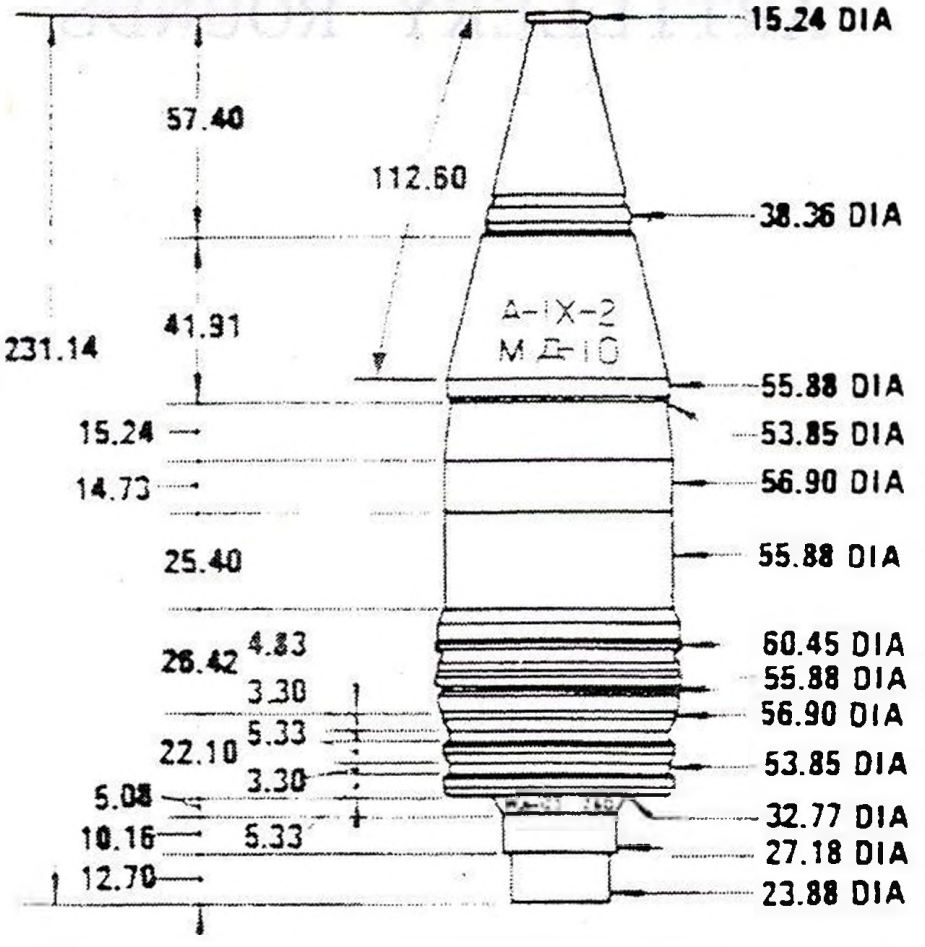


SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 1120MM
DIAMETER: 160MM
WEIGHT: 41.18KG
FILLING TYPE AND WEIGHT: TNT 8.99KG
FUZE: GVMZ-7 PD
WEAPONS: MORTAR M-160

ARTILLERY ROUNDS

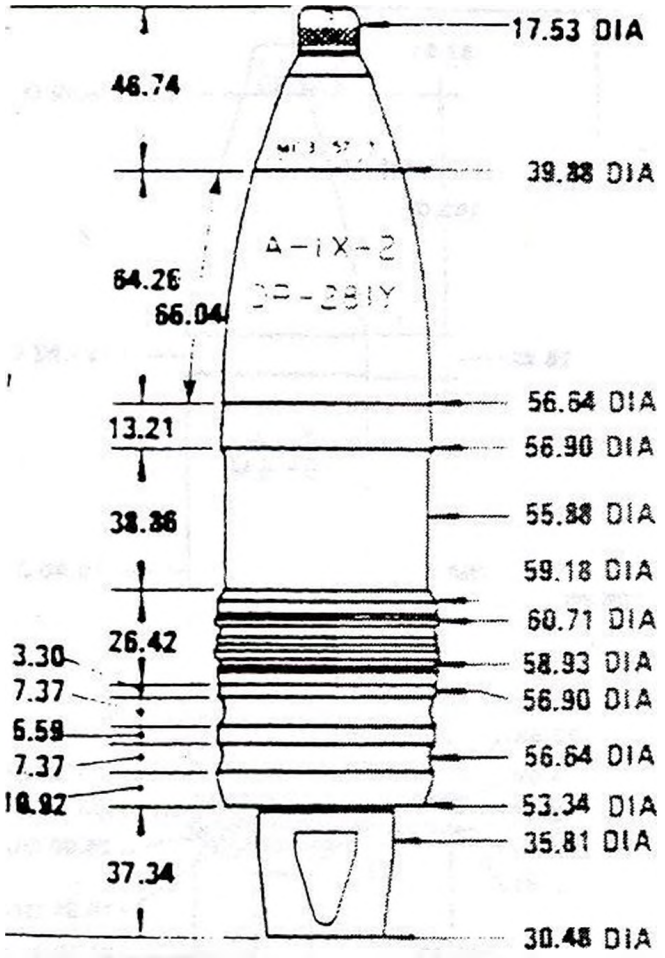
SOVIET 57MM APC-T PROJECTILE
MODEL BR-281

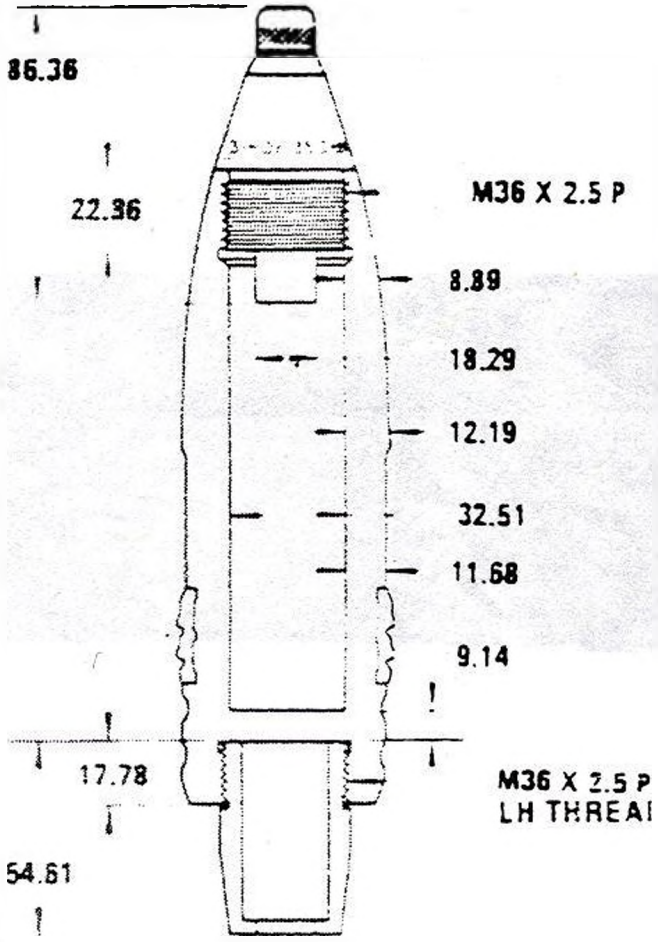


SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 231MM
DIAMETER: 60MM
WEIGHT: 2.82KG
FILLING TYPE: RDX/ALUM
FILLING WEIGHT: 0.02KG
FUSE: MD-10 BD
WEAPONS: AA GUN S-60 AND SP

SOVIET 57MM FRAG-T PROJECTILE
MODEL OR-281U

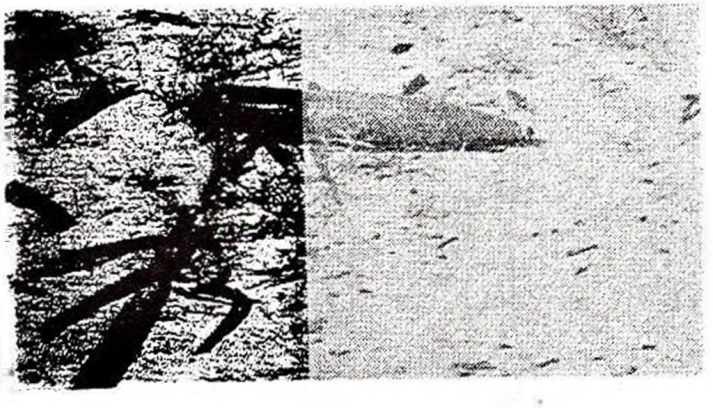


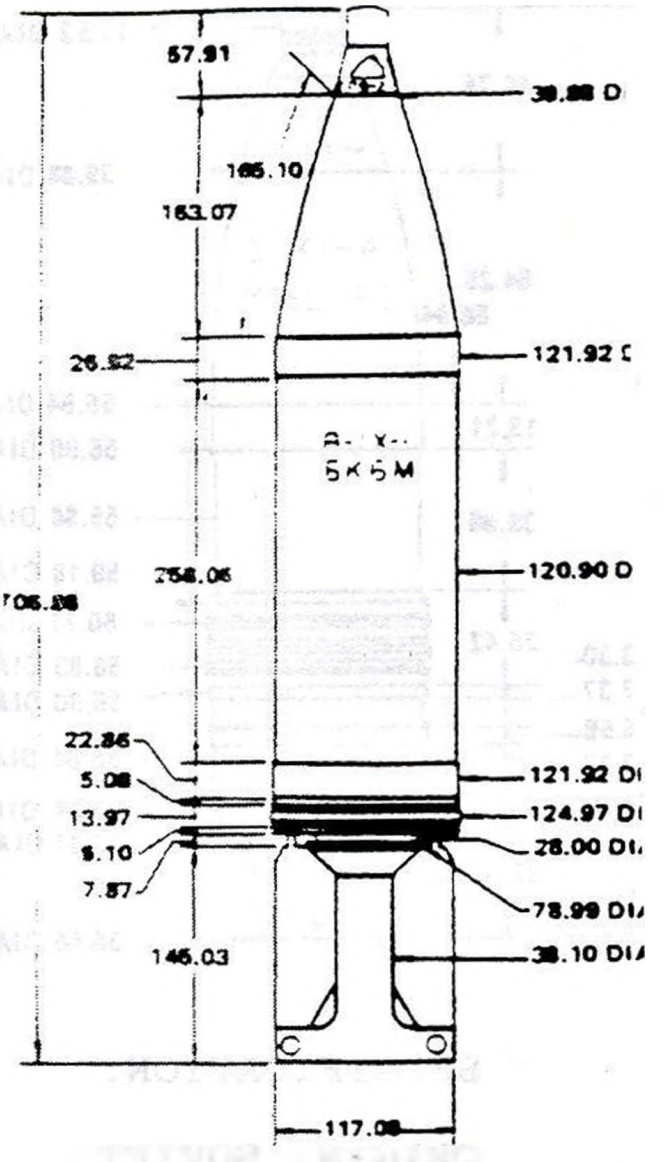


SPECIFICATION:

ORIGIN: SOVIET
LENGTH: 261MM
DIAMETER: 60MM
WEIGHT: 2.85KG
FILLER TYPE AND WEIGHT: RDX/AL 0.15KG
FUZE: MG - 57 PDSD

SOVIET 122MM HEAT FS PROJECTILE
MODEL BK-6M

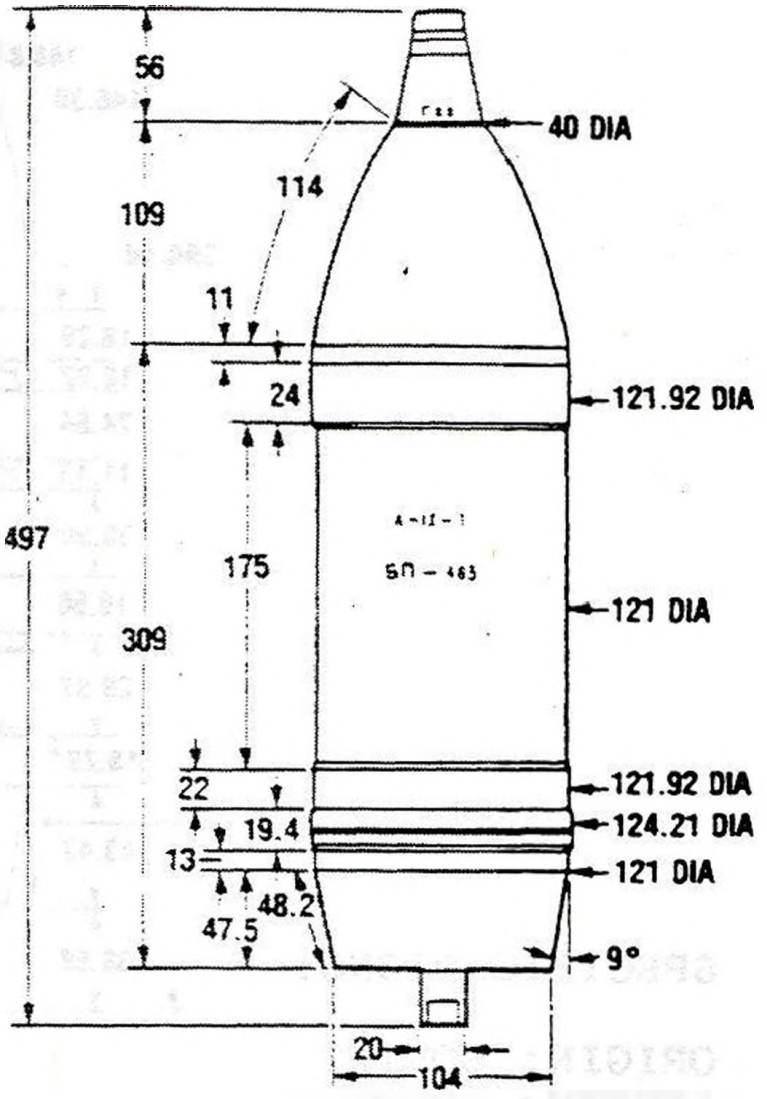




SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 706MM
DIAMETER: 122MM
WEIGHT: 21.58KG
FILLING TYPE: RDX 2.15KG
FUSE: GPV-2 PIBD
WEAPONS: HOWITZER D-30 AND SP2S1

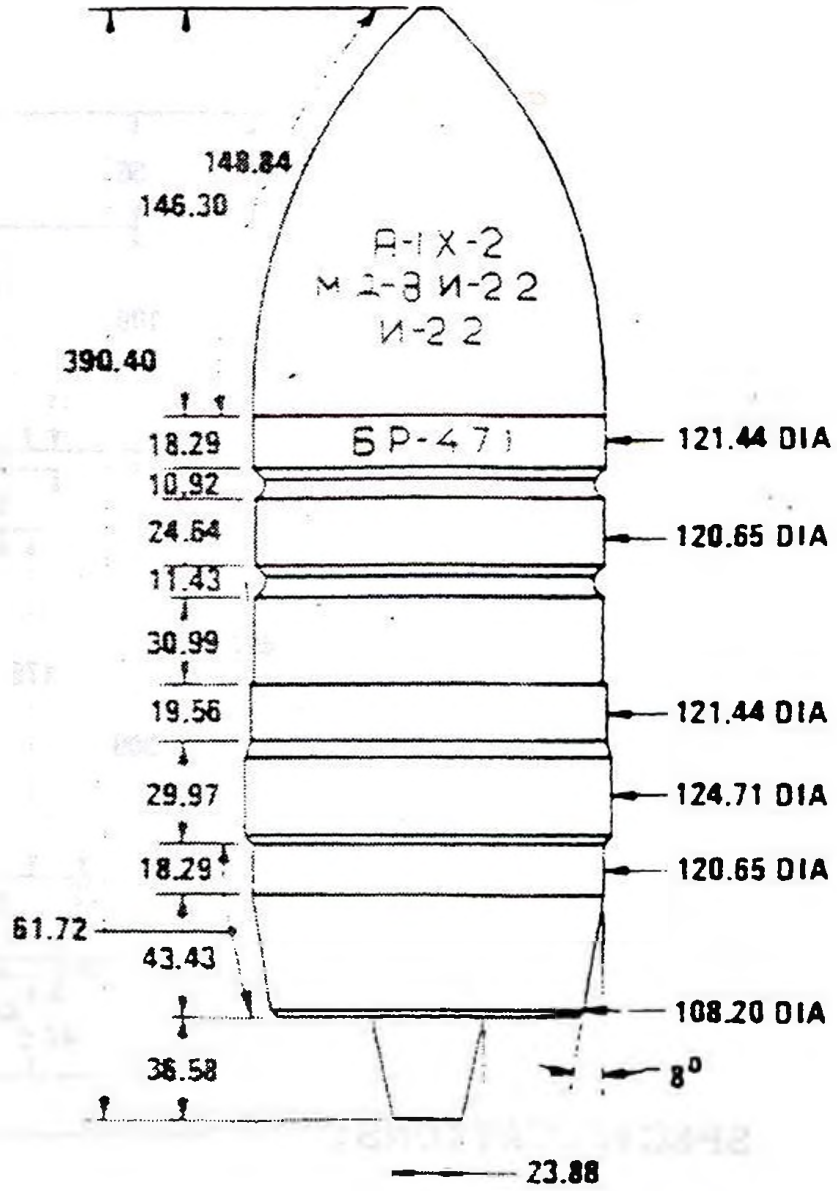
SOVIET 122MM HEAT PROJECTILE
MODEL BP-463



SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 497MM
DIAMETER: 122MM
WEIGHT: 14.8KG
FILLER TYPE AND WEIGHT: RDX 2.18KG
FUZE: GKV FIBD
WEAPON: HOWITZER M-30

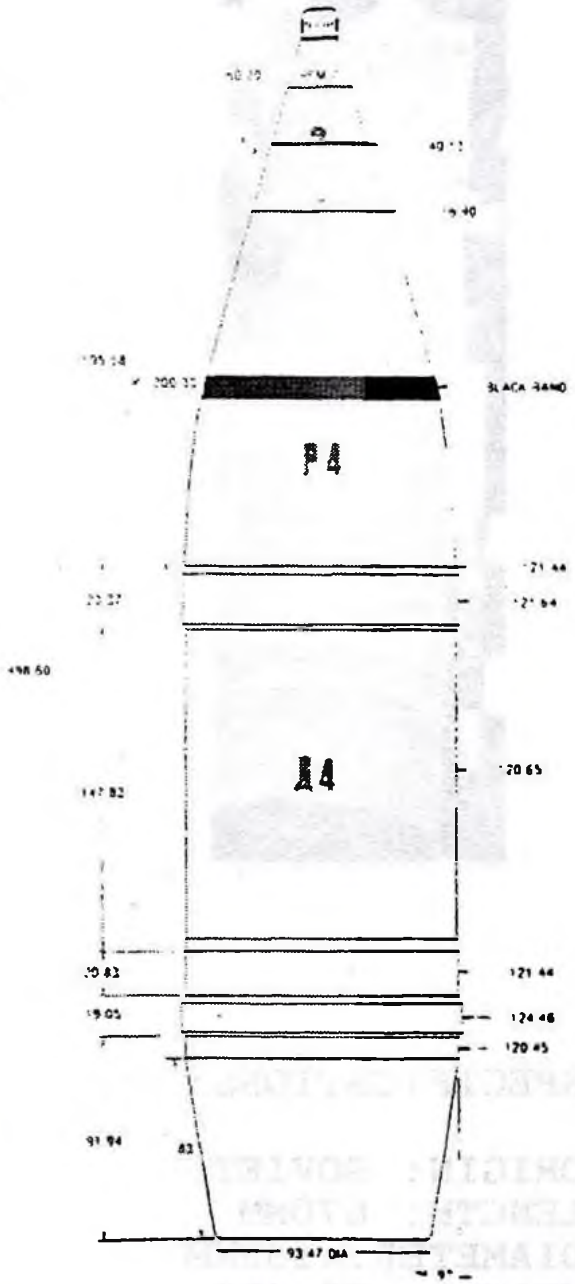
SOVIET 122MM AP-T PROJECTILE
MODEL BR-471



SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 390MM
DIAMETER: 125MM
WEIGHT: 25.26KG
FILLING TYPE: RDX AND ALUMINIUM
FILLING WEIGHT: 0.16KG
FUZE: MD-8 BD
WEAPONS: FIELD GUN A-19, TANK GUN D-25 AND SP ASSAULT GUNS D-25S AND A-19S

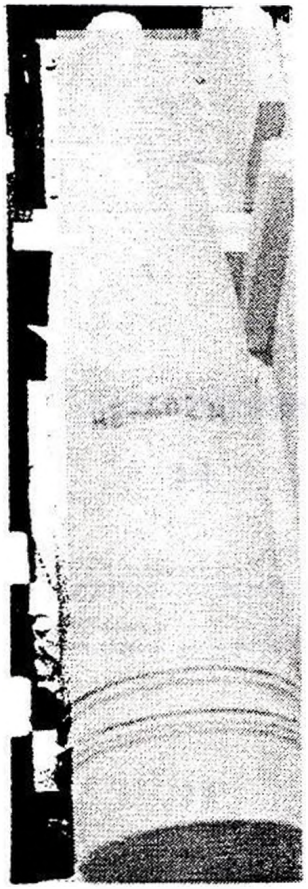
SOVIET 122MM SMOKE PROJECTILE
MODEL D-4

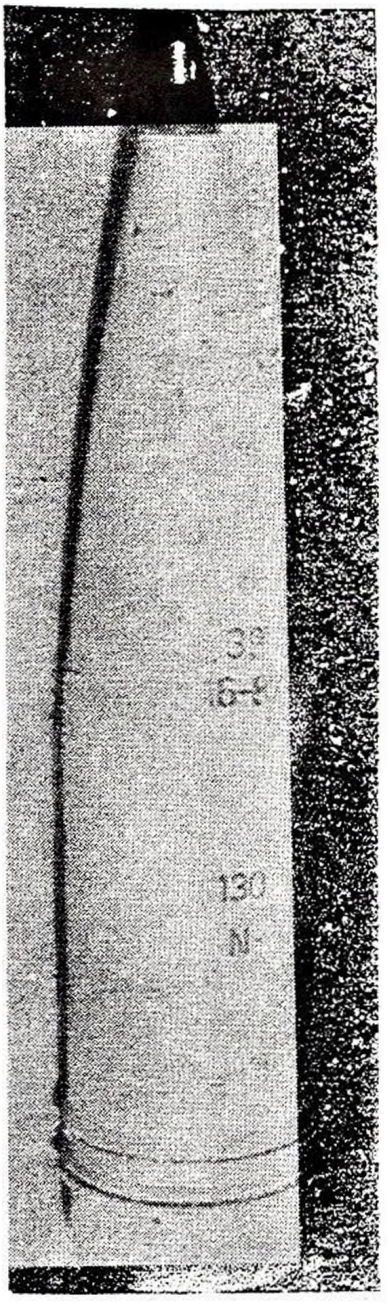


SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 499MM
DIAMETER: 120MM
WEIGHT: 21.7KG
FILLER TYPE: WHITE PHOSPHOROUS
FILLER WEIGHT: 3.6KG
FUZE: RGM-2 PD
WEAPON: HOWITZER M-30, D-30 AND SP2S1

130MM FRAG - HE PROJECTILE
MODEL OF-482M

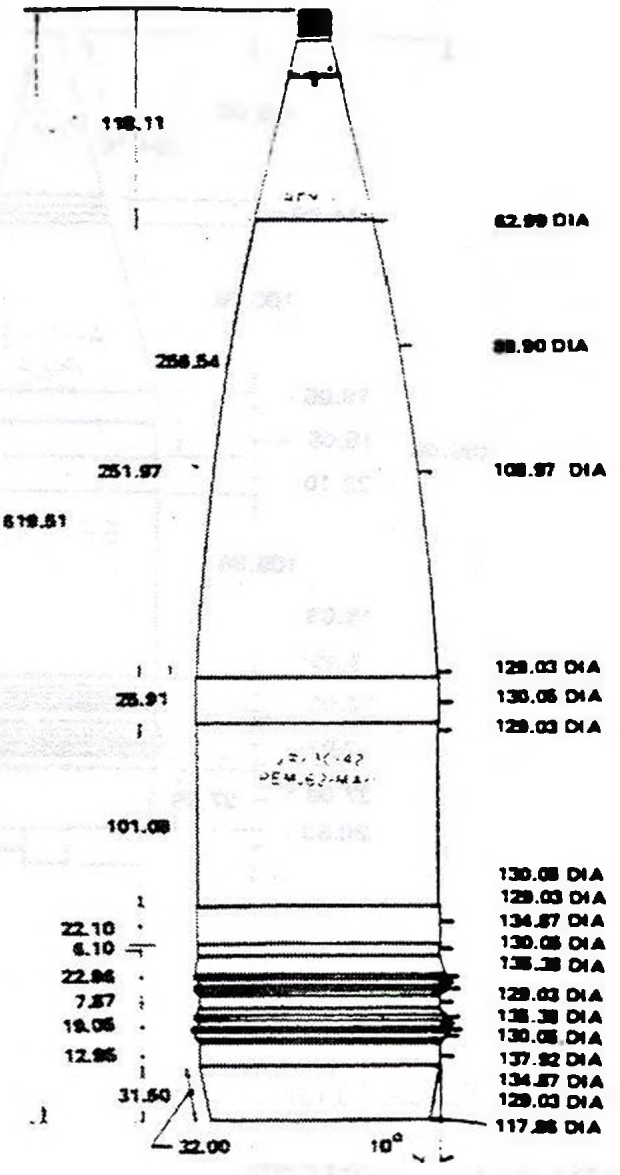




SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 670MM
DIAMETER: 130MM
WEIGHT: 33.4KG
FILLER TYPE AND WEIGHT: TNT 3.6KG
FUZE: RGM-2PD
WEAPON: FIELD GUN M-46

SOVIET 130MM FRAG HE PROJECTILE
MODEL OF-3S-42

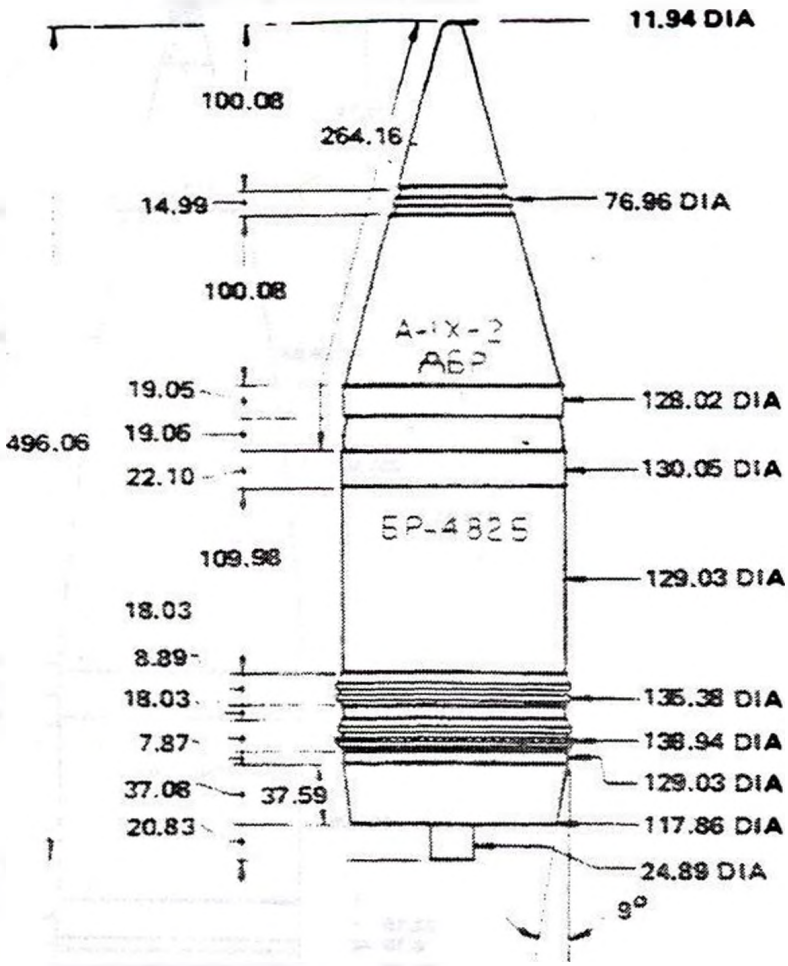


SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 619MM
DIAMETER: 129MM
WEIGHT: 33.46KG
FILLER TYPE AND WEIGHT: TNT ?
FUZE: VGU-1 PD
WEAPON: COASTAL GUN M-58

ALSO USES A VMT-60 MT FUZE

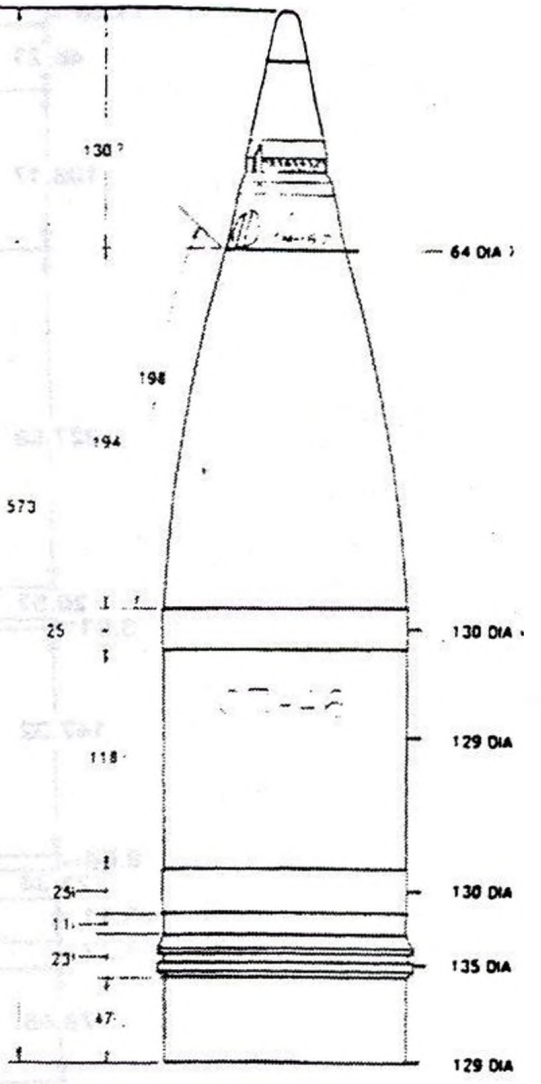
SOVIET 130MM APC-T MODEL BR-482B



SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 496MM
DIAMETER: 129MM
WEIGHT: 33.49KG
FILLER TYPE: RDX/ALUM
FILLER WEIGHT: 0.13KG
FUSE: DBR BD
WEAPON: FIELD GUN M-46

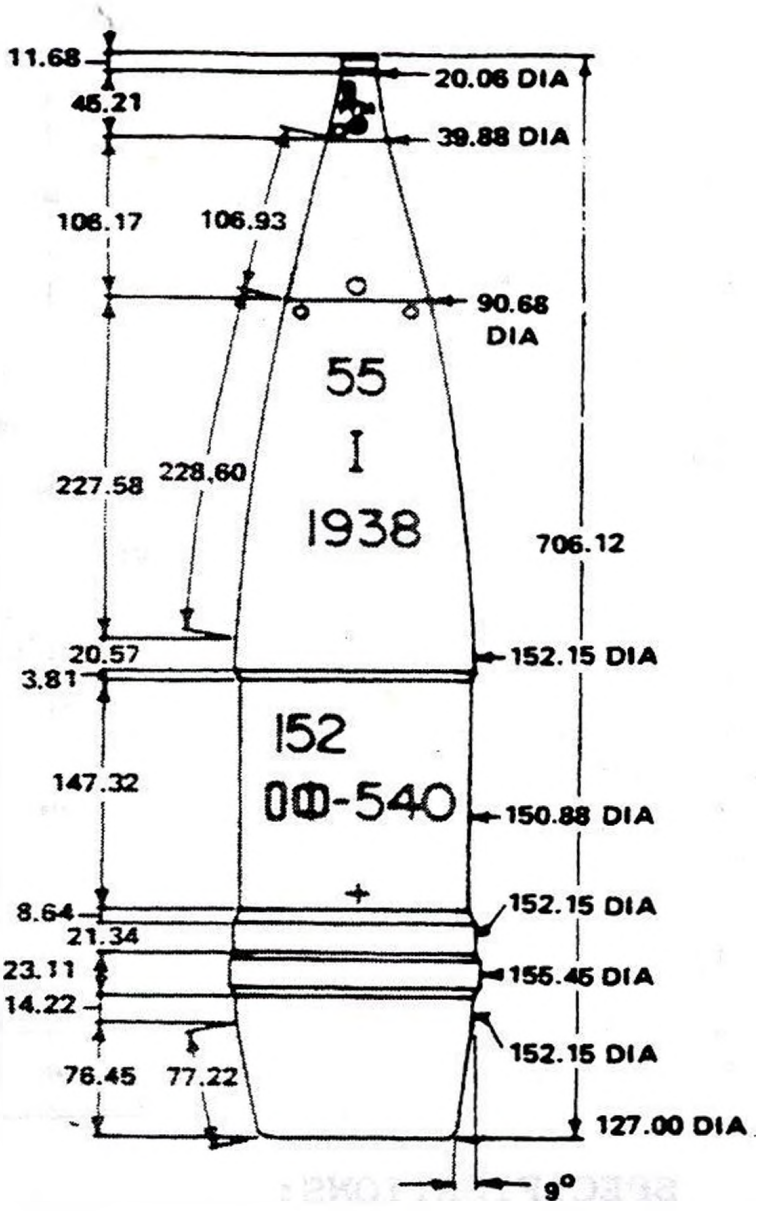
SOVIET 130MM ILLUMINATING PROJECTILE MODEL SP-46



SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 573MM
DIAMETER: 129MM
WEIGHT: 25.8KG
FILLER TYPE: BLACK POWDER
FILLER WEIGHT: 0.78KG
FUZE: TM-16L MT
WEAPON: FIELD GUN M-46

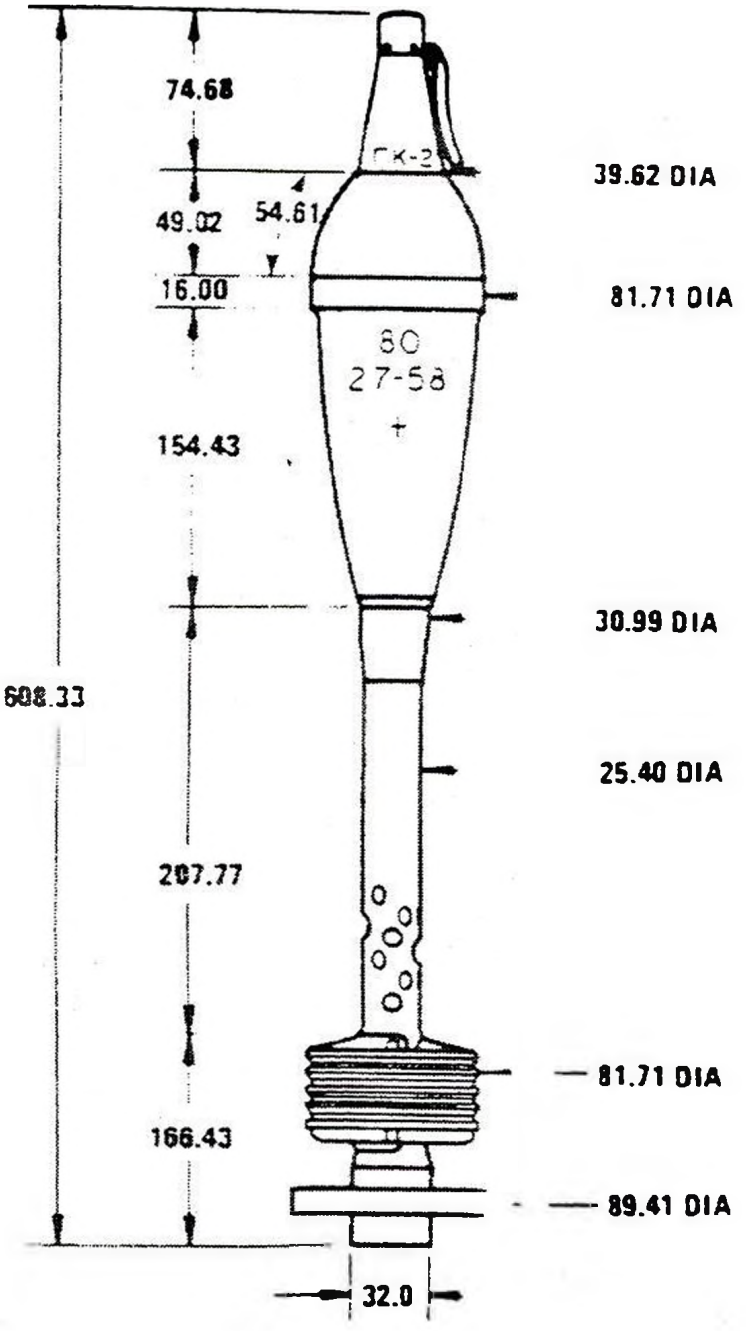
SOVIET 152MM FRAG HE PROJECTILE MODEL OF-540



SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 710MM
DIAMETER: 152MM
WEIGHT: 43.51KG
FILLER TYPE AND WEIGHT: TNT / 6.24KG
FUZE: TSQ FUZE D-IU
RGM-2PD

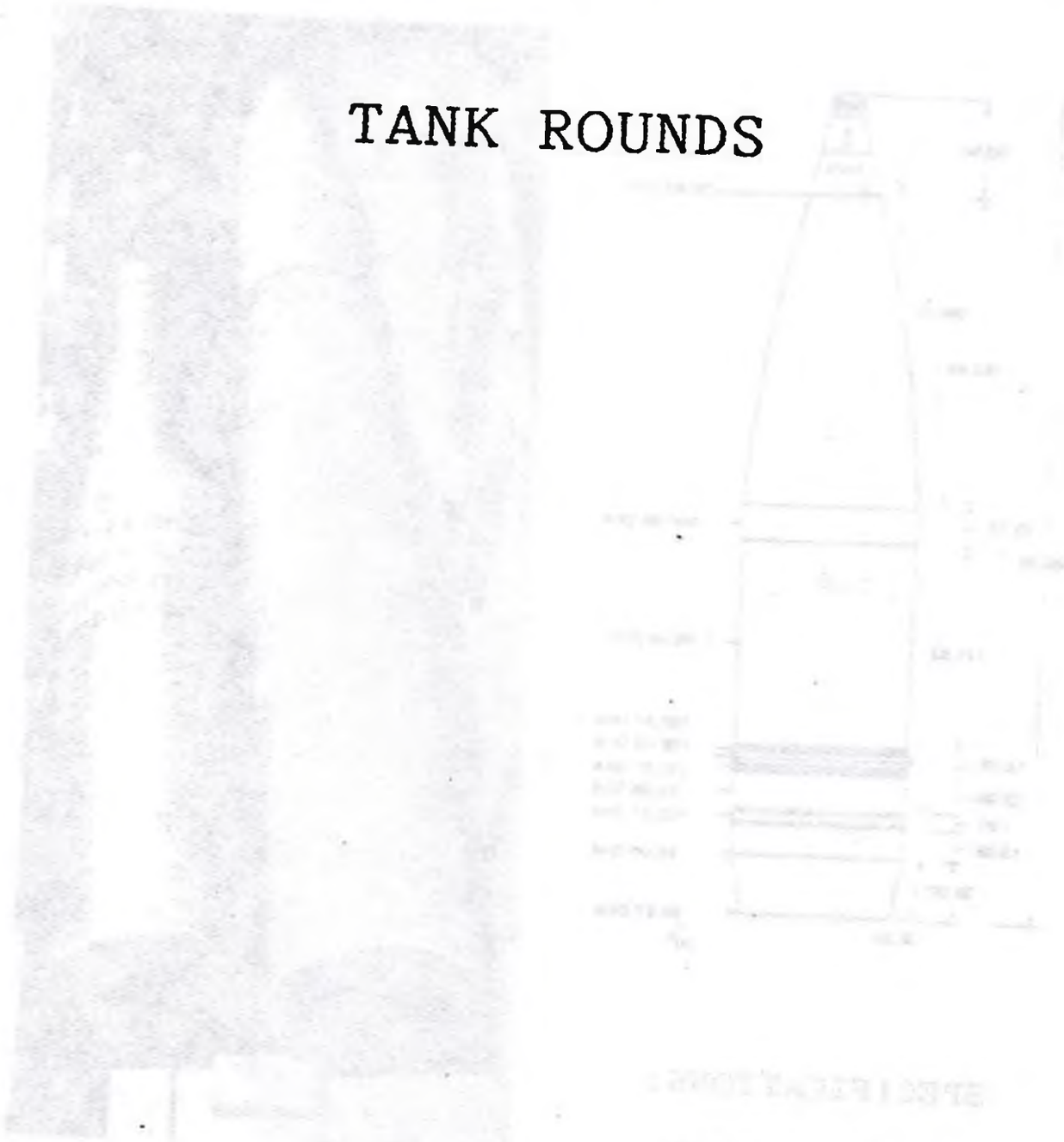
SOVIET 82MM FRAG PROJECTILE
MODEL 0-881A



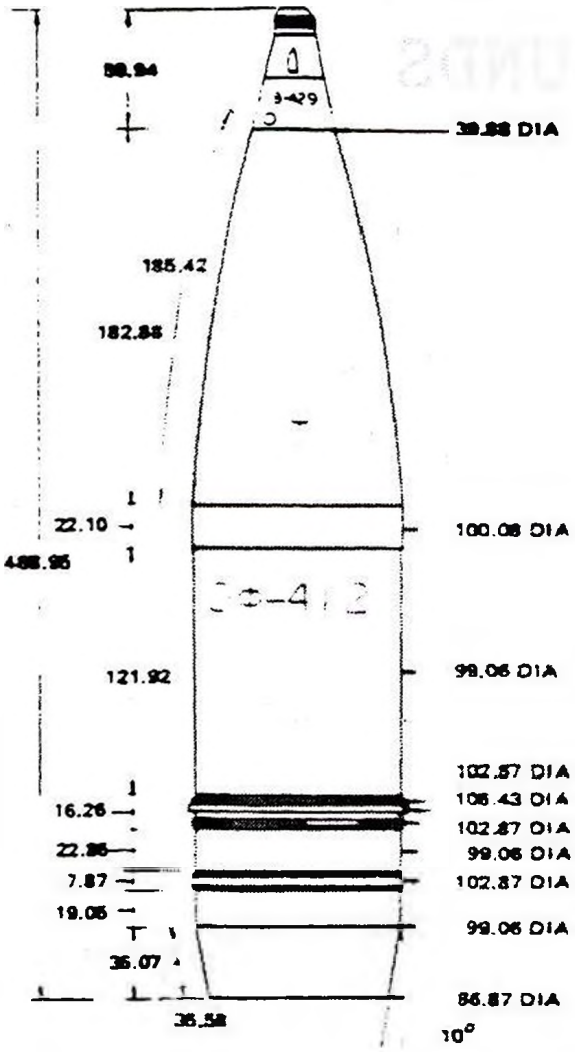
SPECIFICATIONS:

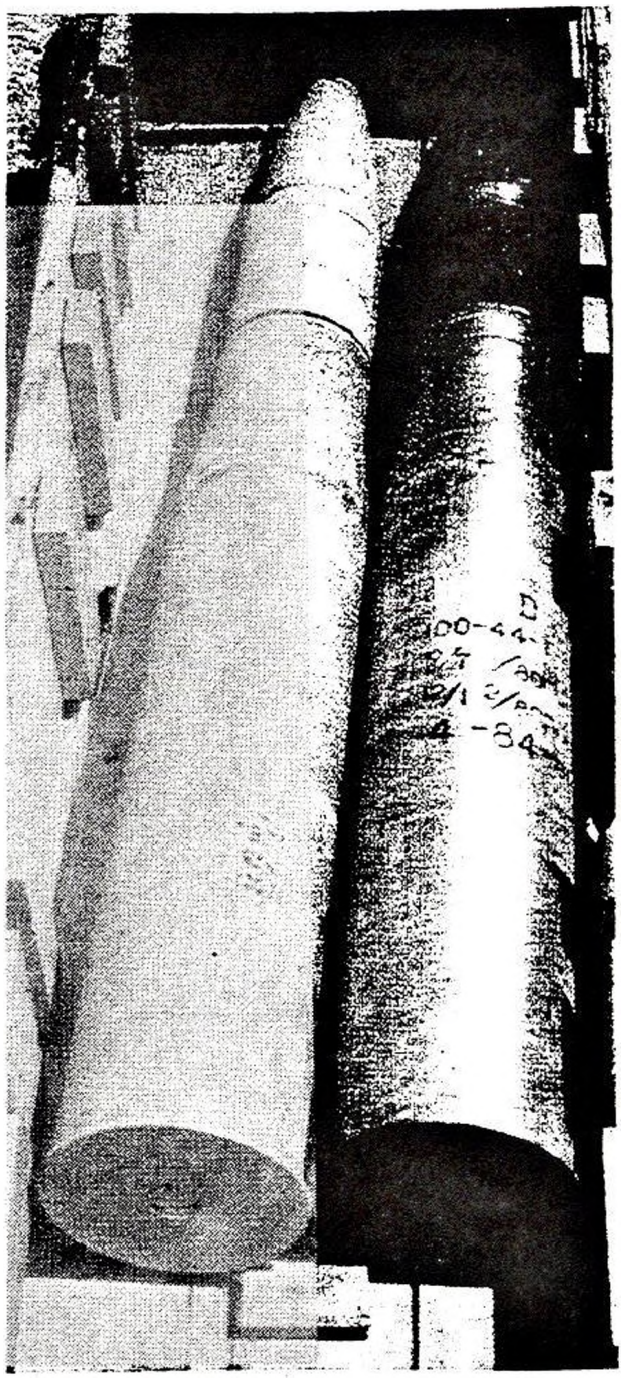
ORIGIN: SOVIET
LENGTH: 608MM
DIAMETER: 89MM
WEIGHT: 3.9KG
FILLING TYPE: TNT AND DINITRONAPTHALENE
FILLING WEIGHT: 0.47KG
FUZE: GK-2 PD
WEAPONS: B-10 RECOILLESS GUN

TANK ROUNDS



100MM HE PROJECTILE MODEL F-412

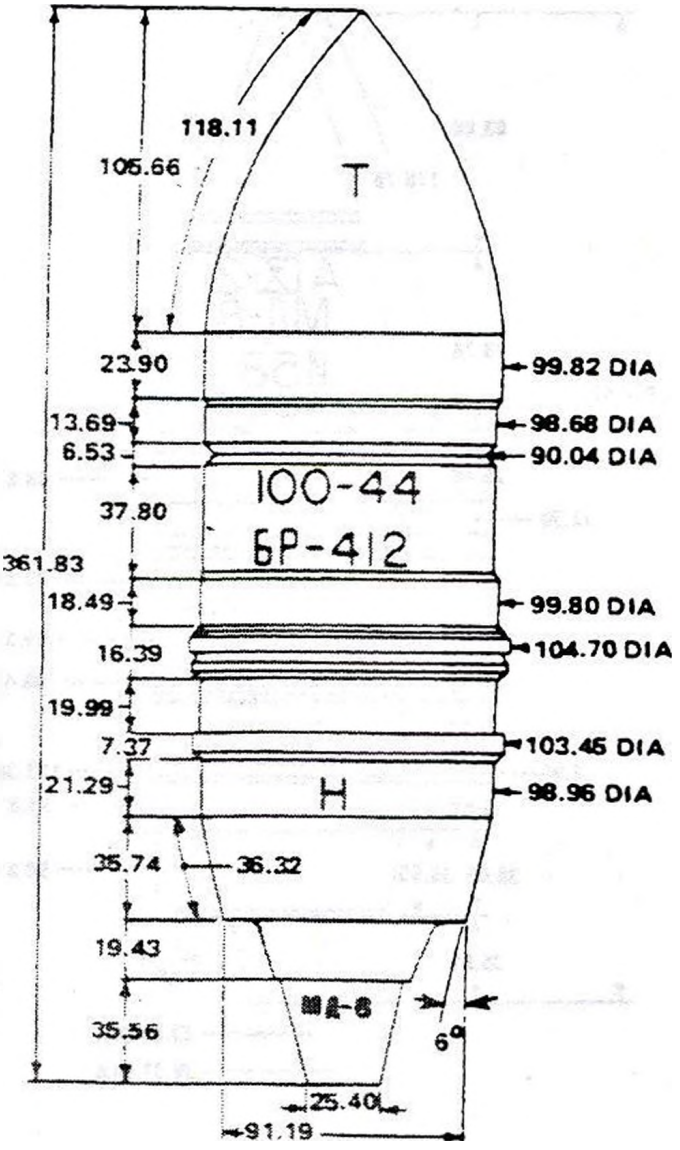




SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 486MM
DIAMETER: 100MM
WEIGHT: 15.91KG
FILLER TYPE AND WEIGHT: TNT 2.16KG
FUZE: RGM PD

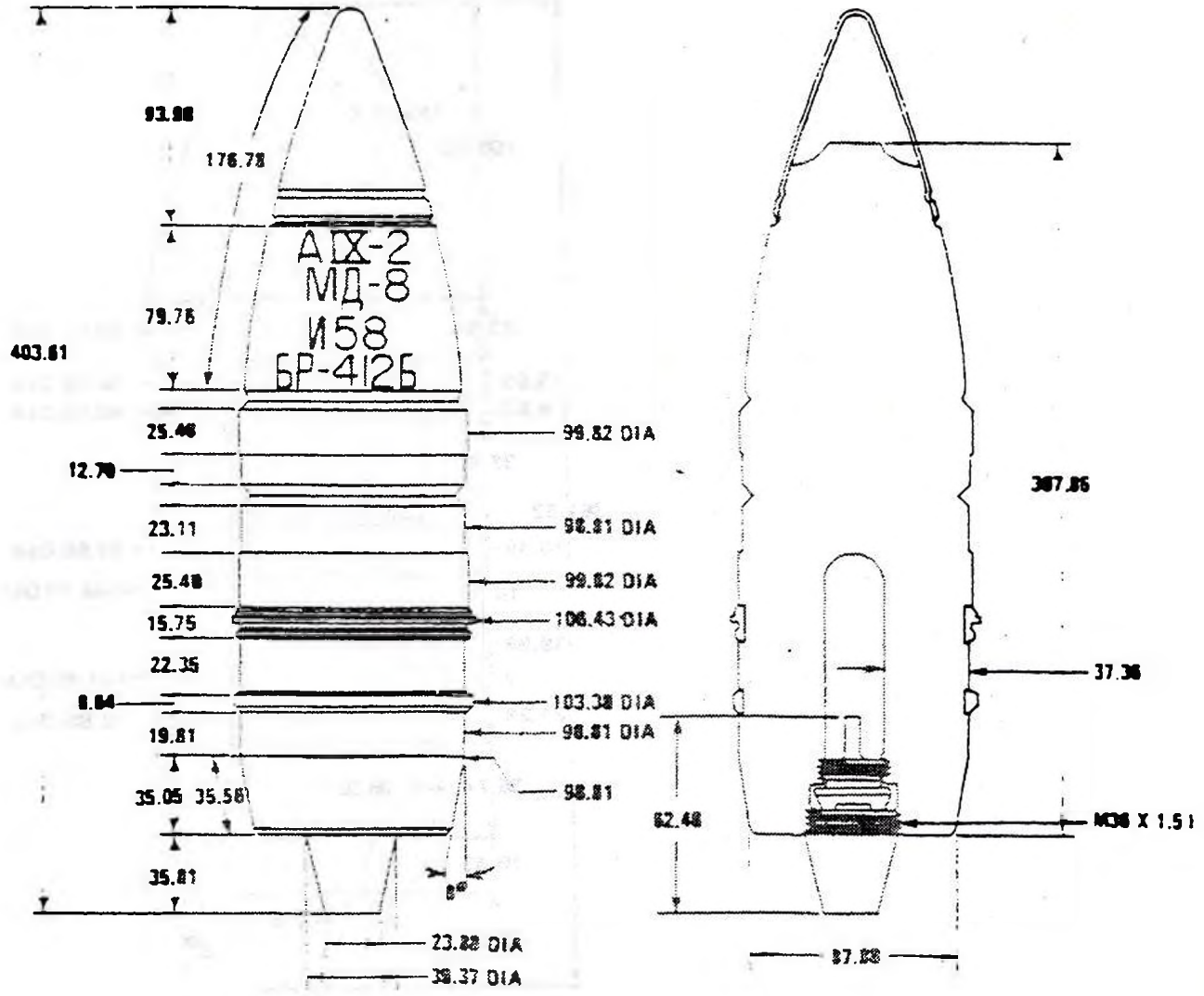
100MM AP-T PROJECTILE MODEL BR-412



SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 361MM
DIAMETER: 100MM
WEIGHT: 15.7KG
FILLING TYPE: RDX/ALUM
FILLING WEIGHT: 0.06KG
FUZE: MD-8BD

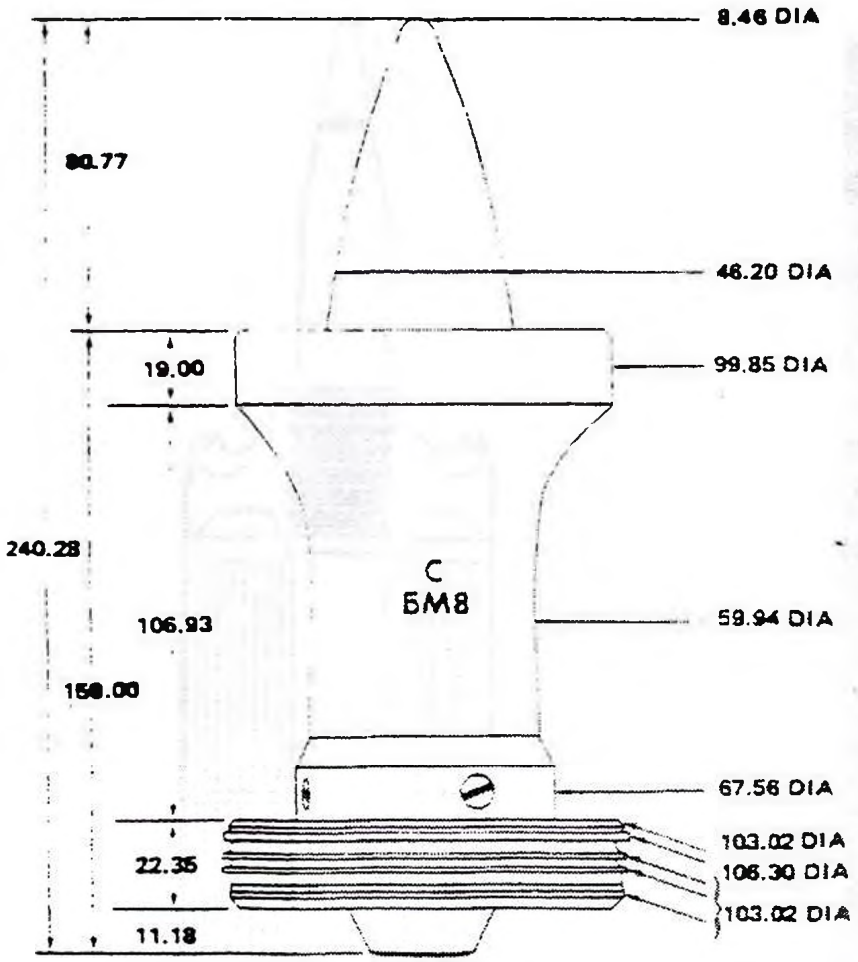
100MM AP-T PROJECTILE MODEL BR-412B

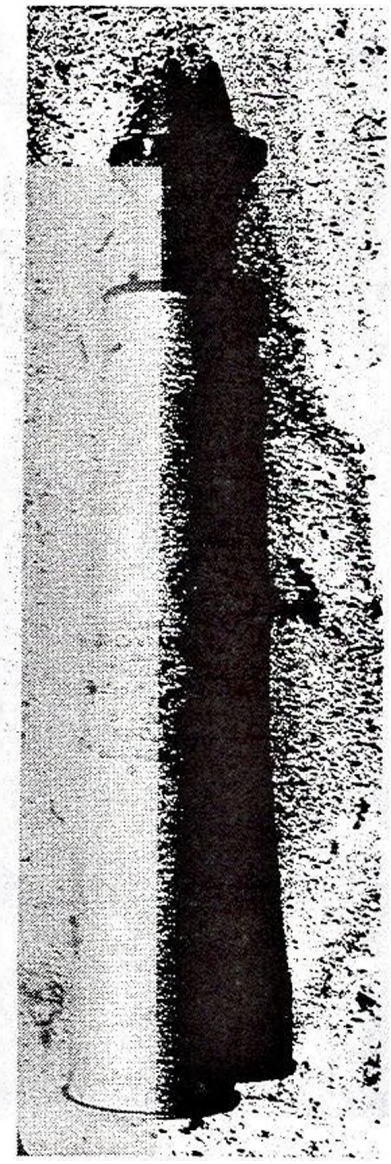


SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 403MM
DIAMETER: 100MM
WEIGHT: 15.89KG
FILLER TYPE: RDX/ALUM
FILLER WEIGHT: 0.06KG
FUZE: MD-8 BD

100MM HV APDS-T PROJECTILE MODEL BM-8



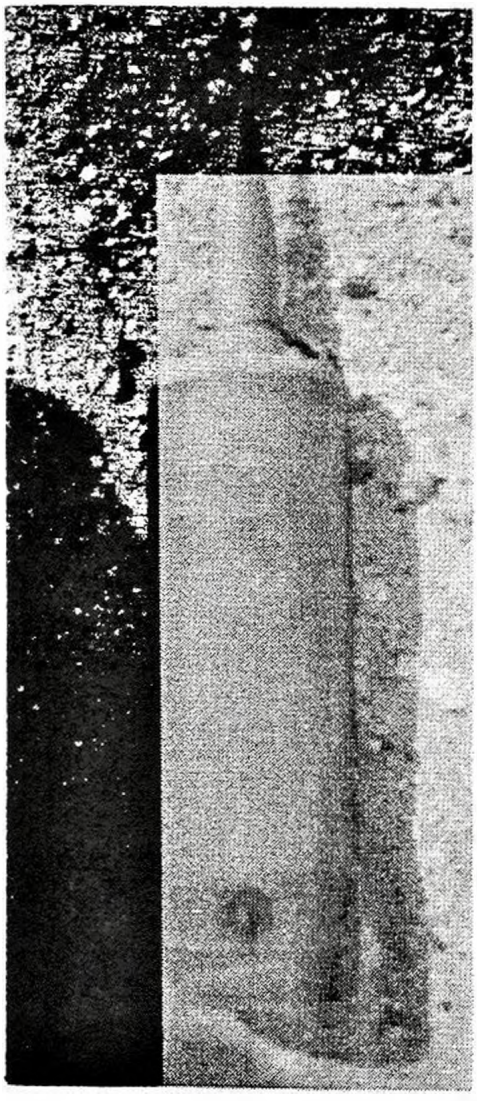


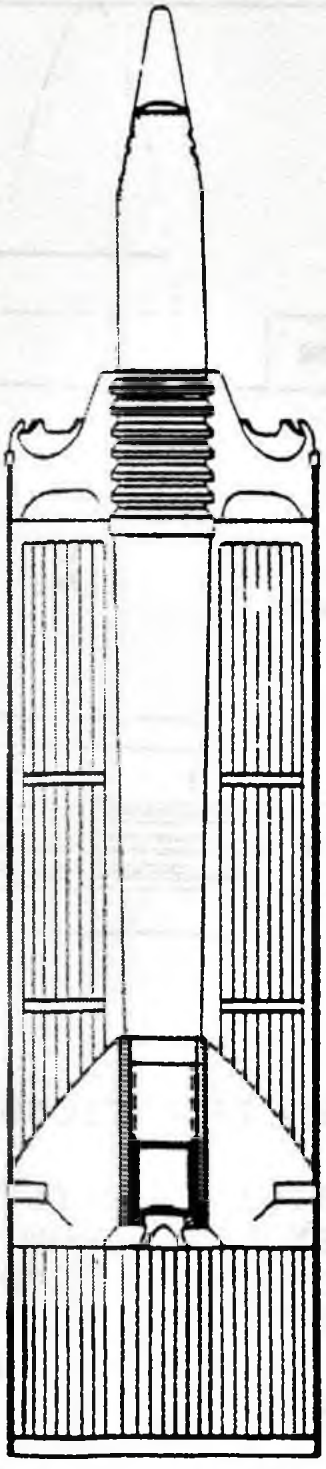
SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 240MM
DIAMETER: 100MM
WEIGHT: 5.69KG
FILLER TYPE AND WEIGHT: N/A
FUZE: N/A

REMARKS: PROJECTILE HAS TUNGSTEN CARBIDE CORE

125MM HVAPFSDS-T PROJECTILE MODEL BM-9

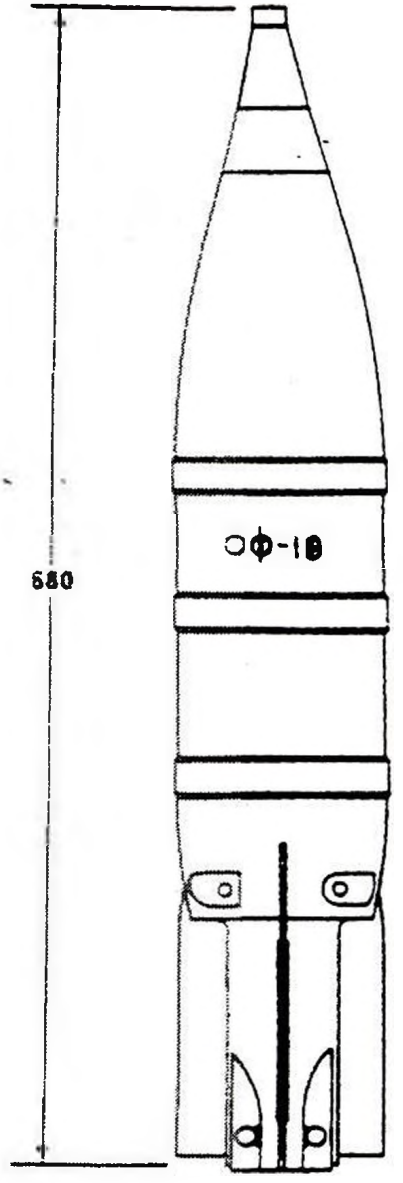




SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 600MM
DIAMETER: 125MM
WEIGHT: CLASSIFIED
FUZE: N/A
WEAPON: T64, T72 AND T80 TANKS

SOVIET 125MM FRAG - HE PROJECTILE
MODEL OF-19



SPECIFICATIONS:

ORIGIN: SOVIET
LENGTH: 680MM
DIAMETER: CLASSIFIED
WEIGHT: CLASSIFIED
FILLER TYPE: TNT
FILLER WEIGHT: NOT KNOWN
FUZE: V-429 PD
WEAPON: T64, T72 AND T80 TANKS

HAND GRENADES

M67 DELAY FRAGMENTATION HAND GRENADE

DESCRIPTION - IT IS A SPHERICAL GRENADE WHICH IS TIME FUSED AND CAN ONLY BE THROWN BY HAND. THE STEEL BODY BREAKS UP ON DETONATION TO PROVIDE FRAGMENTATION. IT HAS 2 SAFETY CLIPS/PINS. THE FIRST IS THE USUAL SPLIT PIN WHICH MUST BE PULLED BEFORE THROWING. THE SECOND IS A SMALL WIRE CLIP WHICH ALSO HOLDS THE LEVER DOWN.

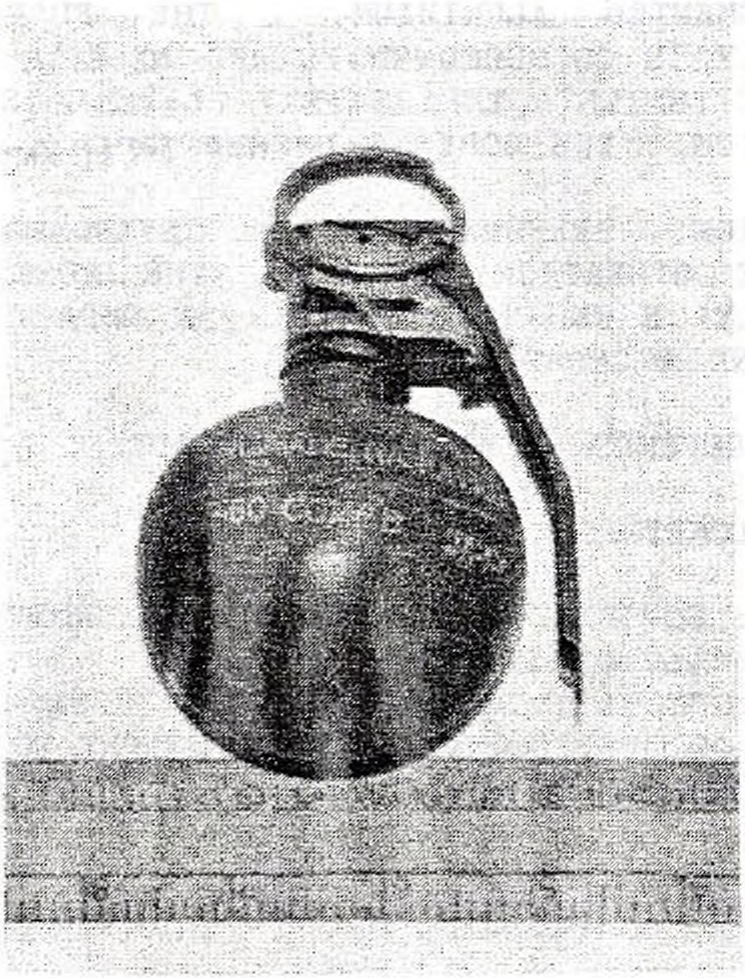
OPERATION - NORMAL GRENADE ACTION INCORPORATING A 4-5 SECOND DELAY.

RENDER SAFE PROCEDURE - NORMAL RSP FOR BLIND GRENADES DESTROY IN SITU.

SPECIFICATIONS:

ORIGIN: AMERICAN
LENGTH: 89.7MM
DIAMETER: 63.5MM
WEIGHT: TOTAL 0.39KG
FILLING TYPE AND WEIGHT: COMP B/0.18KG
FUZE: M213
MAX CASUALTY RADIUS: 15M
DELAY: 4 - 5 SECONDS

M67 DELAY FRAGMENTATION HAND GRENADE



RGN HAND GRENADE

DESCRIPTION - A NEW GENERATION OF OFFENSIVE HAND GRENADES. THE BODY IS COLOURED OLIVE GREEN AND IS MADE OF A DOUBLE LAYER OF INTERNALLY PREFRAGMENTED ALUMINIUM. THE FUSE ASSEMBLY IS COLOURED WHITE AND MADE OF PLASTIC WHILST THE SAFETY LEVER IS ALUMINIUM. THE BODY IS MARKED РГН-А-1Х-1

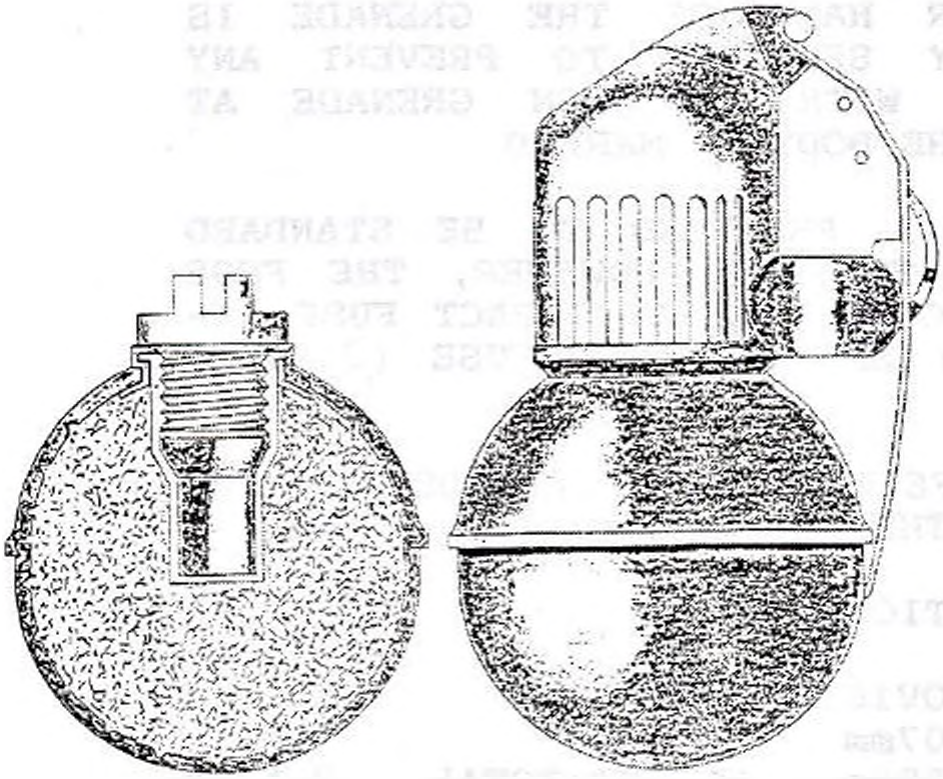
OPERATION: PRESUMED TO BE STANDARD GRENADE OPERATION, HOWEVER, THE FUSE ASSEMBLY IS KNOWN TO CONTAIN AN IMPACT FUSE AND A DELAY FUSE.

RSP - DEPENDS ON STATE OF GRENADE.

SPECIFICATIONS:

ORIGIN: SOVIET TYPE: RGN FILLER: RDX
LENGTH: 107mm DIAMETER: 55mm
WEIGHT: TOTAL 0.31kg, FILLER 0.114kg
LETHAL RADIUS: NOT KNOWN BUT THOUGHT TO BE A VERY SHORT RADIUS.

RGN HAND GRENADE



RGO HAND GRENADE

DESCRIPTION - A NEW DEFENSIVE HAND GRENADE. THE BODY IS MADE OF STEEL AND IS COLOURED OLIVE GREEN. THE FUSE ASSEMBLY IS MADE OF PLASTIC AND IS COLOURED WHITE, WHILE THE FUSE SAFETY LEVER IS ALUMINIUM. THE BODY CONSISTS OF TWO LAYERS OF PREFRAGMENTED STEEL, THE LOWER HALF OF THE GRENADE IS EXTERNALLY SERRATED TO PREVENT ANY CONFUSION WITH THE RGN GRENADE AT NIGHT. THE BODY IS MARKED

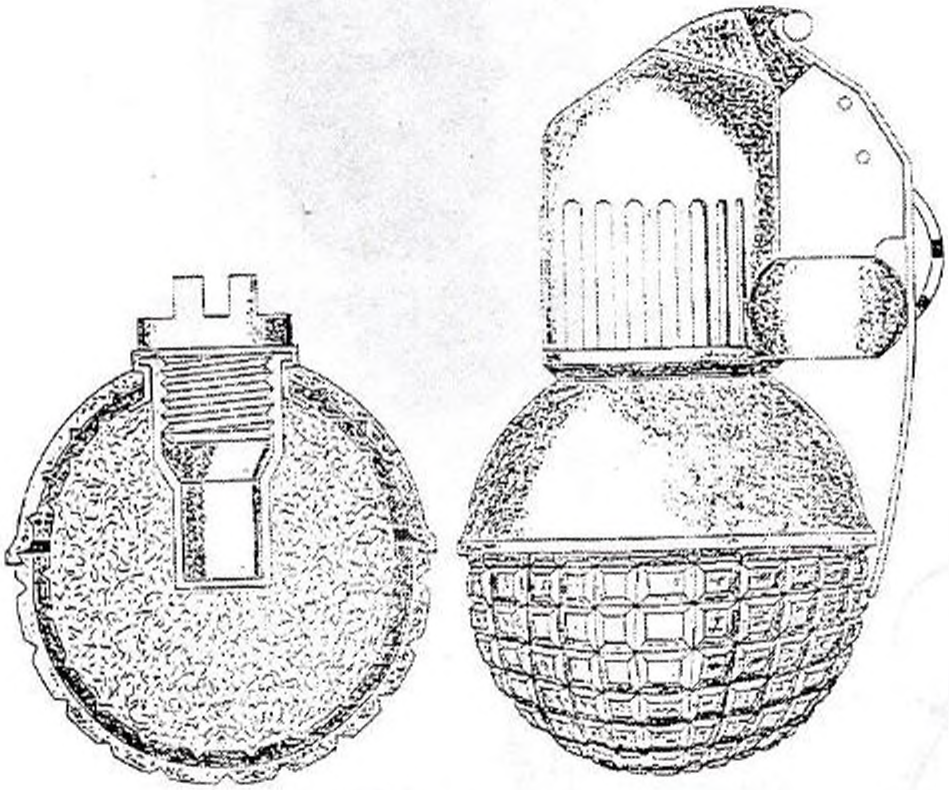
OPERATION - PRESUMED TO BE STANDARD GRENADE OPERATION, HOWEVER, THE FUSE ASSEMBLY COMPRISES AN IMPACT FUSE (1-1.8 secs) AND A DELAY FUSE (3.3-4.3 secs).

RENDER SAFE PROCEDURE: DEPENDS UPON THE STATE OF THE GRENADE.

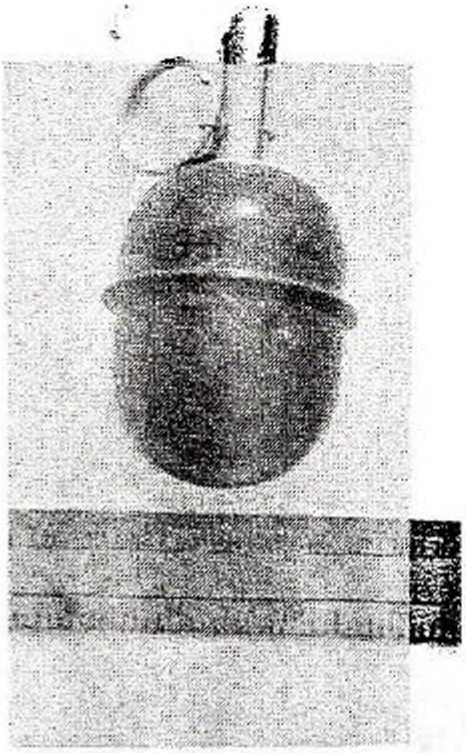
SPECIFICATIONS:

ORIGIN: SOVIET TYPE: RGO
LENGTH: 107mm
DIAMETER:55mm WEIGHT:TOTAL 0.53kg
FILLER 0.09kg
FILLER: RDX LETHAL RAD: 20m
DANGER RAD: 100m

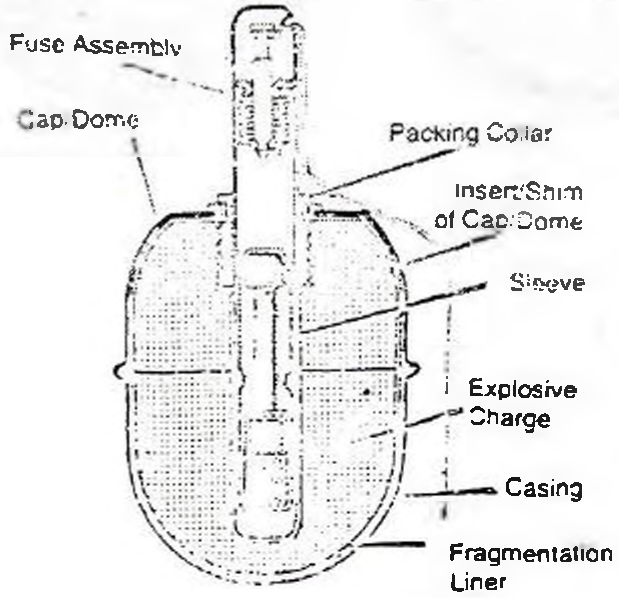
RGO HAND GRENADE



RGD-5 HAND GRENADE







RGD-5 anti-personn hand grenade

RGD-5 HAND GRENADE

DESCRIPTION - AN OFFENSIVE HAND GRENADE WITH STEEL BODY. THE GRENADE IS COLOURED OLIVE GREEN WITH AN ALUMINIUM FUSE ASSEMBLY. THE BODY IS MARKED WITH РГД - 5.

AND THE FUSE ASSEMBLY SAFETY LEVER IS MARKED УЗРГМ. (UZRGM)

OPERATION - STANDARD GRENADE OPERATION UTILISING PRIMER FUSE CORD AND DETONATOR.

RENDER SAFE PROCEDURE - DEPENDS ON THE STATE OF THE GRENADE.

SPECIFICATIONS:

ORIGIN: SOVIET TYPE: RGD-5
LENGTH: 134mm DIAMETER: 56mm
WEIGHT: TOTAL 0.31kg FILLER 0.11kg
NOMINAL DELAY: 0.13 secs FILLER:TNT
LETHAL RADIUS: 25m

WARNING: THIS GRENADE MAY BE SUPPLIED WITH 4 DIFFERENT DELAY FUSES RANGING FROM 0-13 secs, AND IS KNOWN TO HAVE BEEN USED IN BOOBY TRAPS.

RGD-78 FRAGMENTATION GRENADE

DESCRIPTION: RGD-78 IS VERY SIMILAR TO THE RGD-5 EXCEPT THAT IT IS SLIGHTLY BIGGER AND HAS GROOVES IN THE BODY TO ASSIST HANDLING AND THROWING. IT ALSO INCORPORATES A FLAGMENTATION SLEEVE OF STEEL BALLS GIVING IT A GREATER LETHAL RANGE. THE GRENADE USES THE STANDARD UZRGM DELAY FUZE.

OPERATION: STANDARD GRENADE OPERATION, ALTHOUGH IT IS IMPORTANT TO NOTE THAT THE UZRGM DELAY FUZE IS SUPPLIED WITH DIFFERENT DELAYS 0 to 13 SECONDS. THE NORMAL FUZE SETTINGS ARE 3.2 - 4.2 SECONDS.

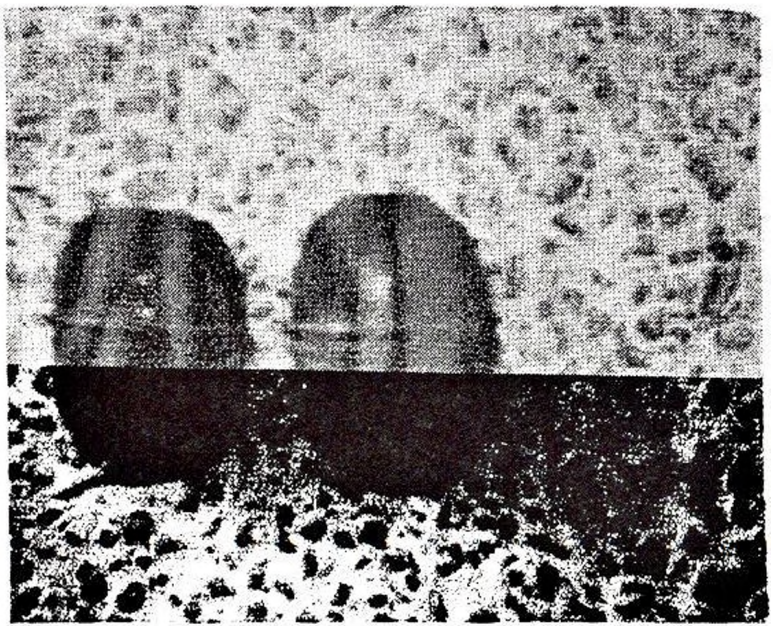
RENDER SAFE PROCEDURE: NORMAL DRILLS ARE REQUIRED; IF PIN IS MISSING DESTROY INSITU. IF GRENADE IS FOUND WITH PIN IN FUZE ENSURE PIN IS SPRAYED AND REMOVE DET/FUZE FROM GRENADE AND STORE SEPARATELY.

SPECIFICATION:

ORIGIN: SOVIET
LENGHT: 138MM
DIAMETER: 60MM
WEIGHT: N/K
FILLER WEIGHT: N/K

RGD-78 FRAGMENTATION GRENADE





F1 HAND GRENADE

DESCRIPTION - A DEFENSIVE HAND GRENADE WITH PREFRAGMENTED CAST IRON BODY. THE GRENADE BODY IS OLIVE GREEN WITH AN ALUMINIUM FUSE ASSEMBLY. THE BODY IS MARKED WITH Ф I Т (+ SERIAL NUMBER) AND THE FUSE ASSEMBLY SAFETY LEVER IS MARKED УЗРГМ.

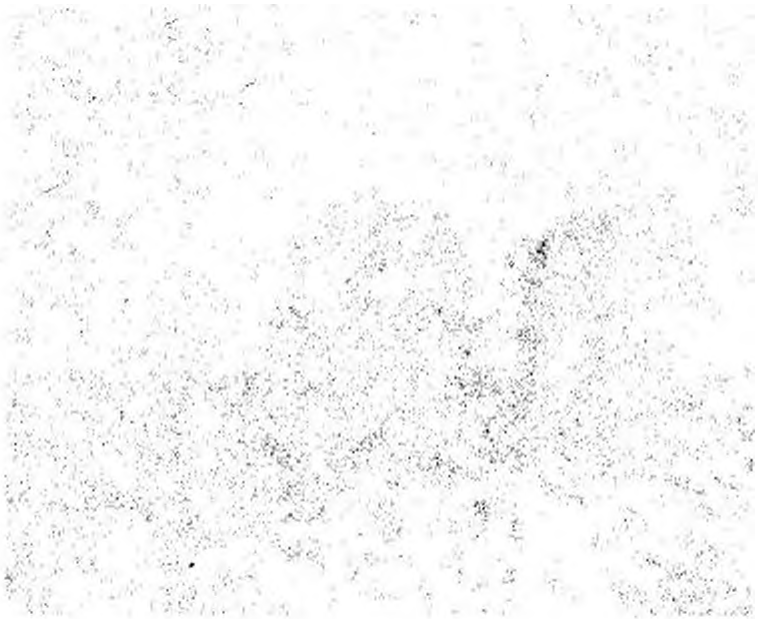
OPERATION - STANDARD GRENADE OPERATION UTILIZING PRIMER, FUSE CORD AND DETONATOR.

RSP - DEPENDS ON STATE OF THE GRENADE.

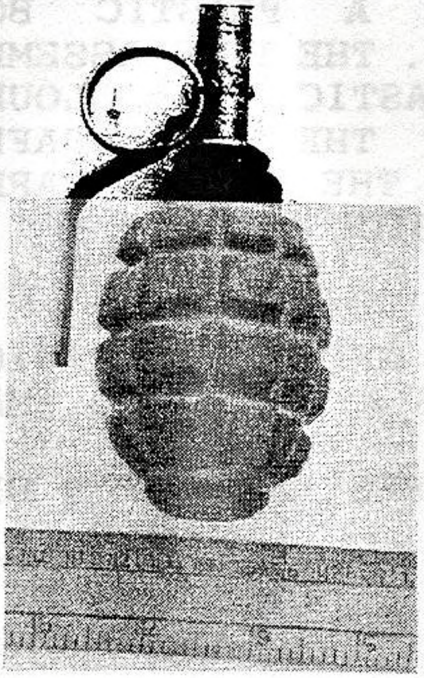
SPECIFICATIONS:

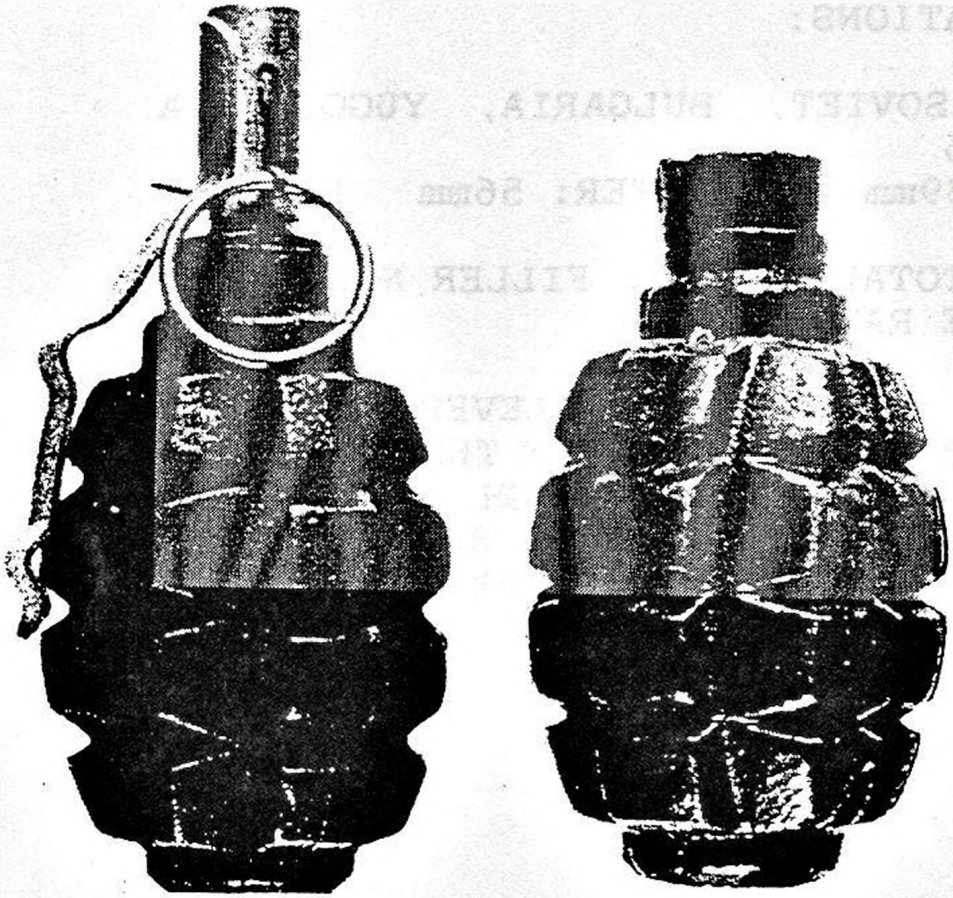
ORIGIN: SOVIET TYPE: F1 LENGTH: 124mm
FILLER: TNT DIA: 55mm NOMINAL DELAY: 0.13secs
WEIGHT: TOTAL 0.65kg FILLER 0.06kg
LETHAL RADIUS: 20m

CAUTION - THIS GRENADE MAY BE SUPPLIED WITH 4 DIFFERENT DELAY FUSES RANGING FROM 0-13 secs, AND IS KNOWN TO HAVE BEEN USED IN BOOBY TRAPS.



F1 HAND GRENADE





M-75 HAND GRENADE

DESCRIPTION - THIS GRENADE IS A COPY OF THE AUSTRIAN TYPE 73. AN OFFENSIVE HAND GRENADE WITH A PLASTIC BODY COLOURED OLIVE GREEN. THE FUSE ASSEMBLY IS ALSO MADE OF PLASTIC AND COLOURED OLIVE GREEN, WHILE THE FUSE SAFETY LEVER IS ALUMINIUM. THE BODY IS MARKED 6PM - 75 ON ONE SIDE AND CP6 ON THE OTHER.

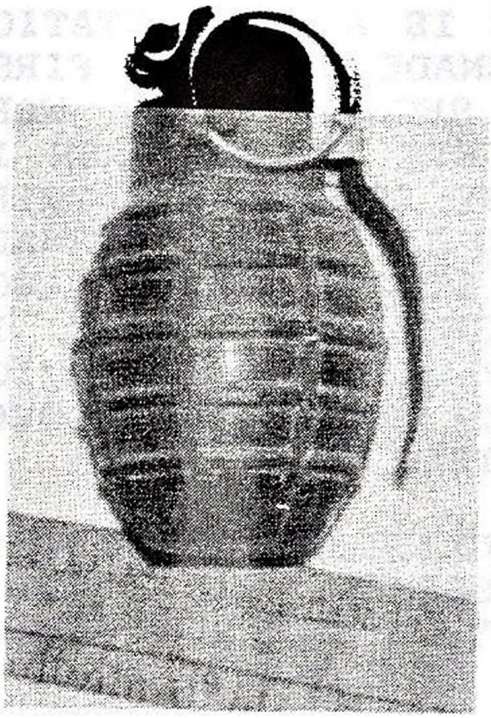
OPERATION - STANDARD GRENADE OPERATION. THE GRENADE DELIVERS APPROX 2600 SMALL STEEL BALLS.
RENDER SAFE PROCEDURES - DEPENDS UPON STATE OF GRENADE.

SPECIFICATIONS:

ORIGIN: SOVIET, BULGARIA, YUGOSLAVIA
TYPE: M75
LENGTH: 89mm DIAMETER: 56mm FILLER: PE7N
WEIGHT: TOTAL 0.35kg, FILLER N/K
EFFECTIVE RADIUS: 20m

NOTE - THE SAFETY LEVER IS NOT IRREVOCABLY DETACHED FROM THE MECHANISM UNTIL IT HAS MOVED THROUGH 45 DEGREES. IT IS STILL POSSIBLE TO RETURN IT TO THE SAFE POSITION AND RE-INSERT THE SAFETY PIN AT A LESSER ANGLE.

M-75 HAND GRENADE





M75 hand grenade

RG-42 ANTI PERSONNEL HAND GRENADE

DESCRIPTION - THIS IS A FRAGMENTATION CONCUSSION HAND GRENADE WHICH WAS FIRST USED DURING THE SECOND WORLD WAR. ALTHOUGH NOW OBSOLETE IN THE USSR IT HAS BEEN ADOPTED BY SEVERAL COUNTRIES INCLUDING CHINA AND IRAQ. THE GRENADE BODY IS A PLAIN STEEL, LIGHT GAUGE CYLINDER WITH NO SEPARATIONS. IT IS ENCLOSED IN A SEPARATE FRAGMENTATION SHEET THAT IS FORMED INTO A PRE GROOVED DIAMOND SHAPED PATTERN.

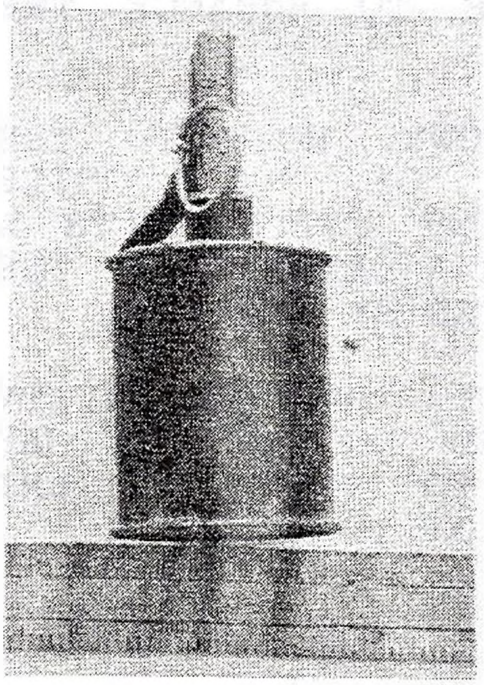
OPERATION - STANDARD GRENADE OPERATION, HOWEVER THE FUSE ASSEMBLY CAN COMPRISE OF A 1-18 sec DELAY, ALTHOUGH STANDARD FUSES HAVE A DELAY OF 3.3-4.3 sec.

RENDER SAFE PROCEDURE - DEPENDS ON STATE OF GRENADE.

SPECIFICATIONS:

ORIGIN: SOVIET TYPE: FRAGMENTATION
LENGTH: 121mm DIAMETER: 54mm
FILLING: PRESSED TNT
WEIGHT: TOTAL 463g, FILLER 118g
EFFECTIVE RADIUS: 25m

RG-42 ANTI PERSONNEL HAND GRENADE



RG-4 HAND GRENADE

DESCRIPTION - AN OFFENSIVE HAND GRENADE, BODY MADE OF STEEL. COLOUR AND MARKINGS NOT KNOWN. HOWEVER, A SIMILAR DESIGN COLOURED BLACK HAS BEEN ENCOUNTERED BUT IT IS THOUGHT TO CONTAIN PHOSPHOROUS. THIS PARTICULAR GRENADE MAY BE FITTED WITH A FRAGMENTATION SLEEVE TO ENHANCE THE EFFECTIVE RADIUS.

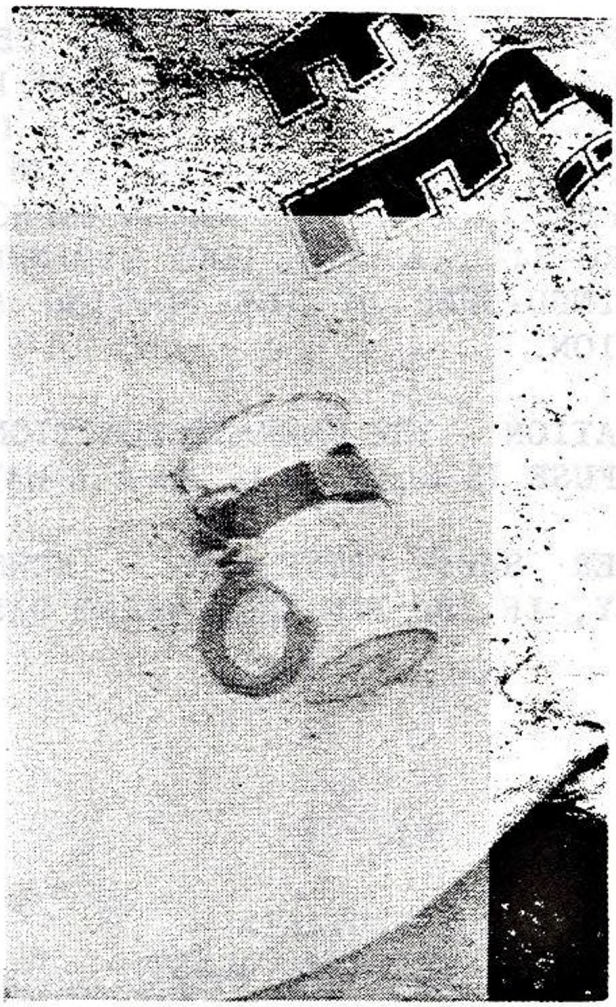
OPERATION - NOT KNOWN, HOWEVER, THE EXPLOSIVE CONSISTS OF TWO MOBILE BURSTING CHARGES, ONE FITTED WITH A STRIKER AND ONE WITH A DETONATOR. THE TWO ARE ONLY SEPARATED BY A SPRING.

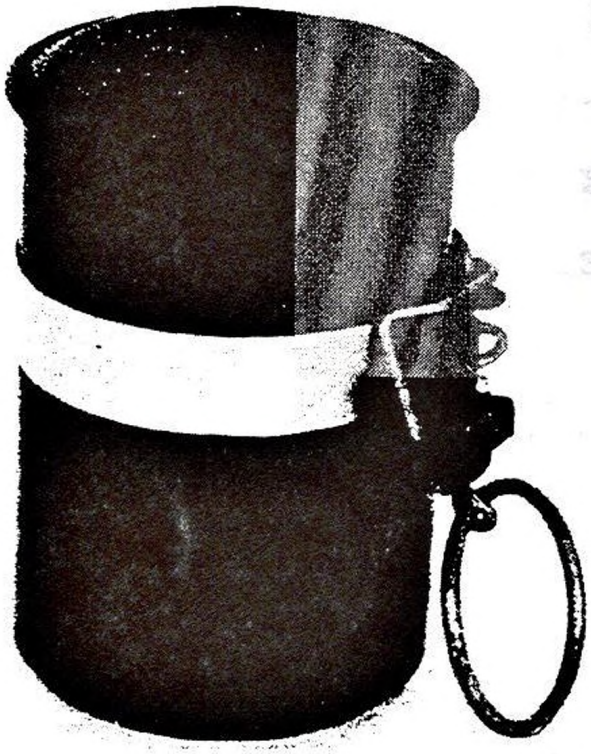
RENDER SAFE PROCEDURE - ONCE THE SAFETY PIN HAS BEEN REMOVED THE GRENADE MAY EXPLODE IF SUBMITTED TO SUFFICIENT SHOCK. THEREFORE BLOW IN SITU.

SPECIFICATIONS:

ORIGIN: CZECHOSLOVAKIA TYPE: RG-4
LENGTH: 84mm DIAMETER: 53mm FILLER: TNT
WEIGHT: TOTAL 0.32kg FILLER 0.105 kg
EFFECTIVE RADIUS: WITHOUT SLEEVE: 13m
WITH SLEEVE: 25m

RG-4 HAND GRENADE





RG-34 ANTI PERSONNEL HAND GRENADE

DESCRIPTION - THE RG-34 IS DESCRIBED AS AN OFFENSIVE GRENADE BUT THE SHEET METAL BODY ALSO PRODUCES SOME FRAGMENTATION. IF REQUIRED THE GRENADE CAN BE FITTED WITH AN EXTERNAL FRAGMENTATION SLEEVE WHICH IMPROVES LETHALITY. THE RG-34 IS A STEEL BODY CYLINDERICAL GRENADE, DISTINGUISHED BY THE FLUTING AROUND THE MID SECTION.

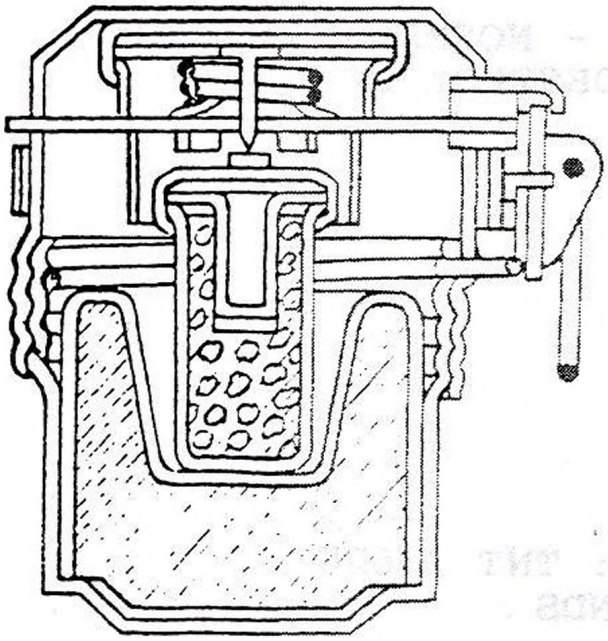
OPERATION - THE GRENADE FUNCTIONS UPON IMPACT. THE FUSE IS CLASSED AS AN ALL WAYS ACTING FUSE.

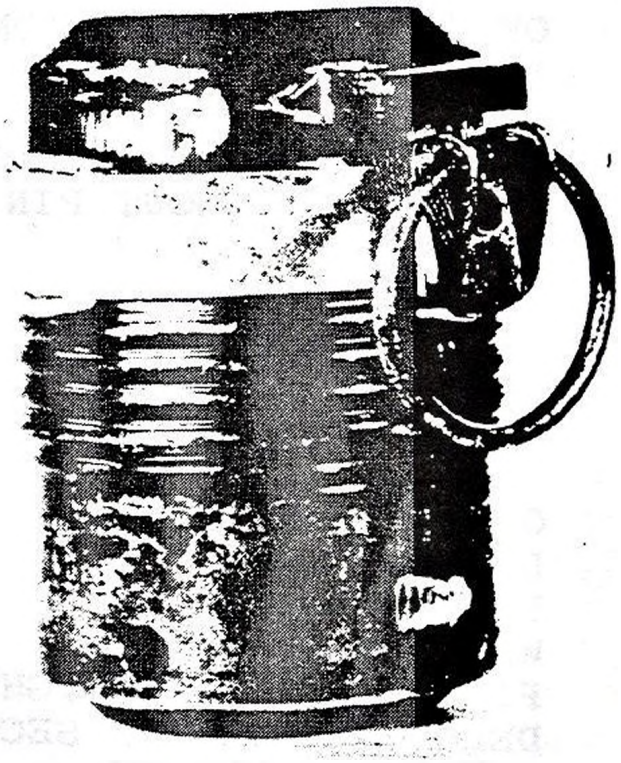
RENDER SAFE PROCEDURE - NORMAL PROCEDURES APPLY, IF THE PIN IS MISSING DESTROY IN SITU.

SPECIFICATIONS:

ORIGIN:CZECHOSLOVAKIA
TYPE:ANTI PERSONNEL BLAST
LENGTH: 76mm
DIAMETER: 64mm
FILLING: TNT
WEIGHT: TOTAL 340g, FILLING 100g
EFFECTIVE RANGE: 13m
FUSE: MODEL No N/K - ALWAYS FUSE

RG-34 ANTI PERSONNEL HAND GRENADE





Czechoslovak Model RG34 hand grenade

TYPE 82 HAND GRENADE

DESCRIPTION - THE 82 IS AN OFFENSIVE PATTERN GRENADE, ITS BODY IS INTENALLY SERRATED TO GIVE FRAGMENTATION CONTROL. THE GRENADE NORMALLY HAS A GREEN CLOSE FITTING PROTECTIVE CAP WHICH COVERS THE WORKING PARTS, LIGHT AND COMPACT, IT CAN BE THROWN FOR A CONSIDERABLE DISTANCE.

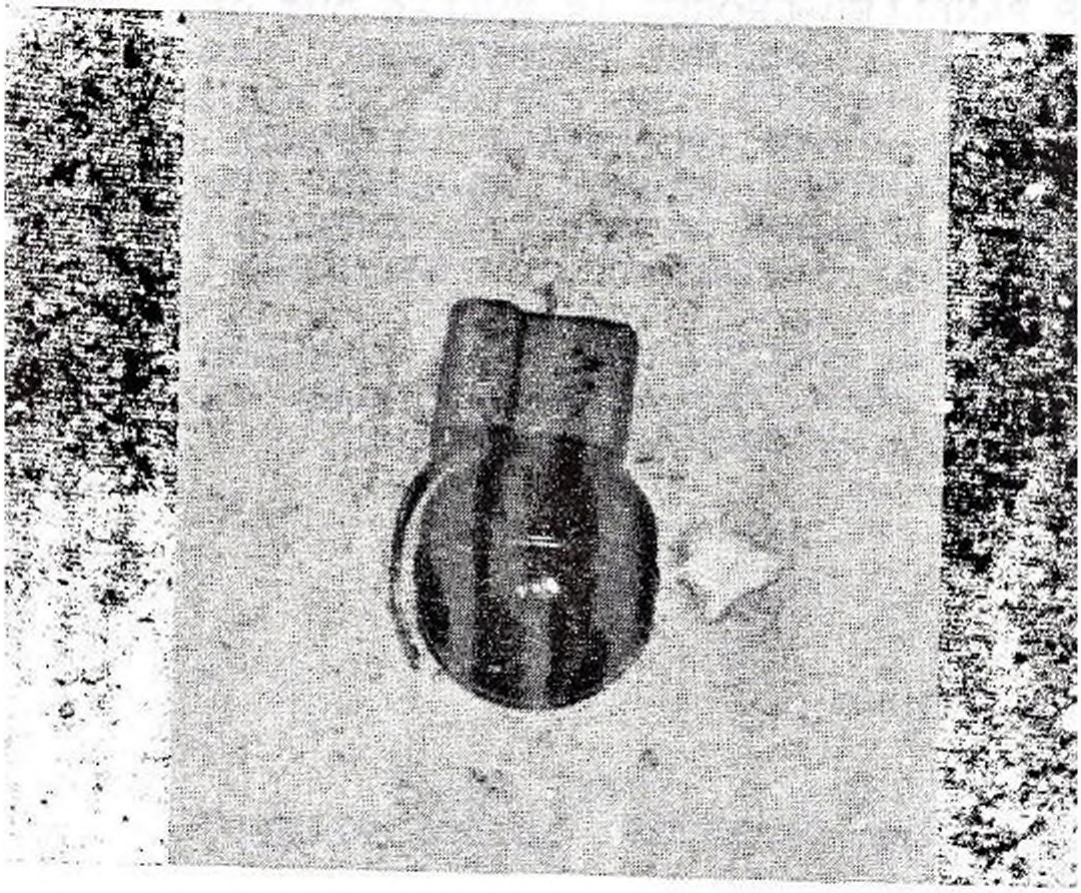
OPERATION - IGNITION IS BY THE USUAL PERCUSSION 'MOUSETRAP' IGNITER SYSTEM.

RENDER SAFE PROCEDURE - NORMAL RSP FOR GRENADES WITHOUT PIN DESTROY IN SITU.

SPECIFICATIONS:

ORIGIN: CHINA
LENGTH: 85MM
DIAMETER: 48MM
WEIGHT: 0.26KG
FILLING TYPE & WEIGHT: TNT / 62G
DELAY: 2.8 - 3.8 SECONDS
LETHAL RANGE: 6M

TYPE 82 HAND GRENADE



RKG-3 ANTI TANK HAND GRENADE

DESCRIPTION - A SHAPED CHARGE TYPE ANTI TANK HAND GRENADE USUALLY COLOURED BLACK. HOWEVER, OLIVE GREEN TYPES ARE KNOWN TO EXIST. MARKINGS ON THE BODY ARE РКГ-3.

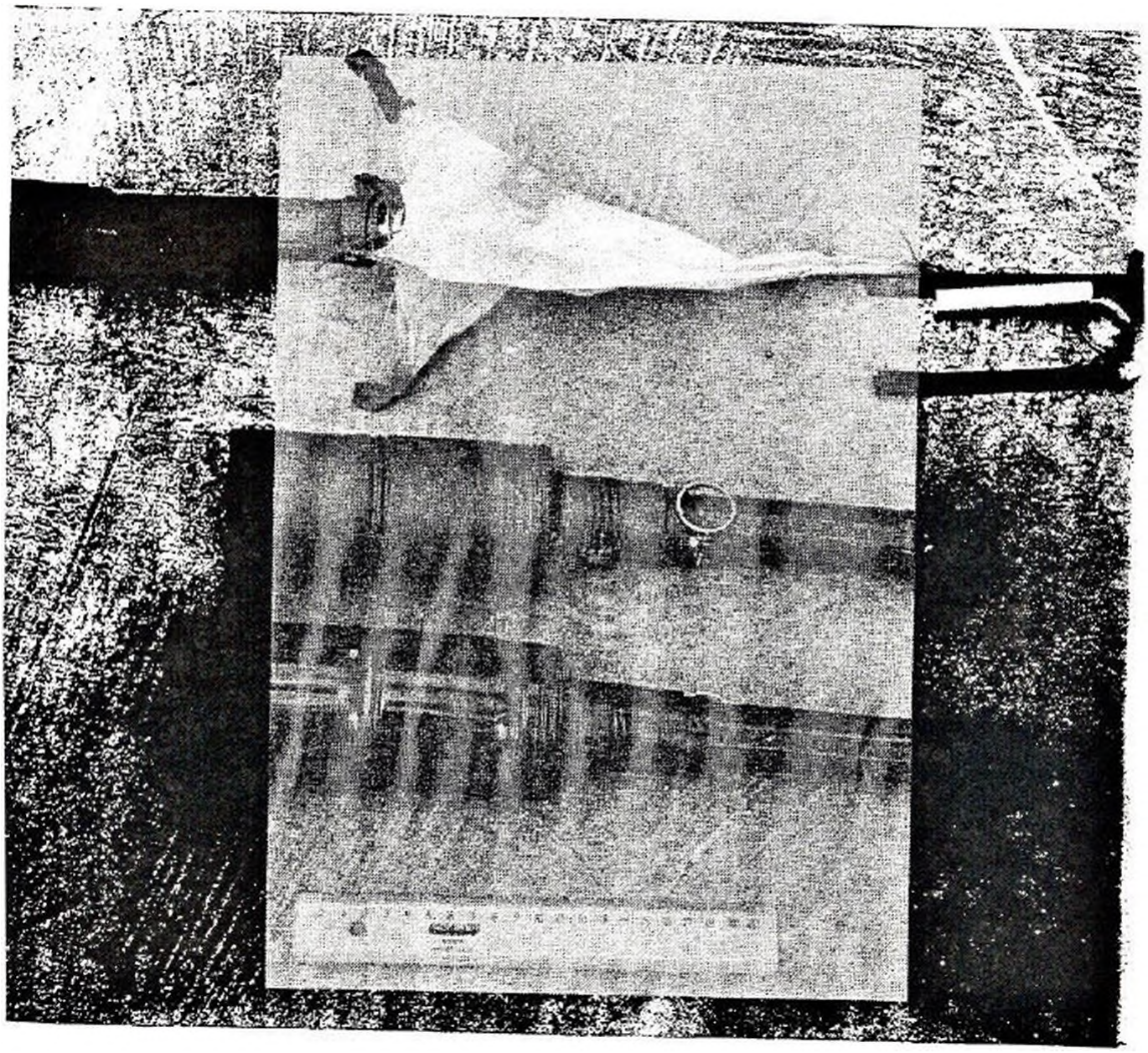
OPERATION - WHEN THE GRENADE IS THROWN, A FOUR PANELLED DROGUE IS PULLED OUT OF THE HANDLE, WHICH STABILISES THE GRENADE IN FLIGHT. THE STRIKER IS HELD BY A SPRING, AND ON IMPACT IS FORCED ONTO AN INERTIA PALLET CAUSING THE GRENADE TO EXPLODE ON IMPACT. THERE IS NO TIME DELAY FITTED TO THIS GRENADE.

RENDER SAFE PROCEDURE - ANY GRENADE WHICH HAS BEEN THROWN AND FAILED TO EXPLODE MUST BE DESTROYED IN SITU.

SPECIFICATIONS:

ORIGIN: SOVIET TYPE: RKG-3
LENGTH: 363mm DIAMETER: 55.6mm FILLER: TNT/RDX
WEIGHT: TOTAL 1.07kg, FILLER 0.567kg
LETHAL RADIUS: 20m ARMOUR PENETRATION: 160mm

RKG-3 ANTI TANK HAND GRENADE



LAUNCHED GRENADES

SOVIET GRENADE 40/85mm HEAT (MODEL PG-7M PROJECTILE)

DESCRIPTION - THIS IS A SHOULDER LAUNCHED, ROCKET ASSISTED, FIN STABILISED HIGH EXPLOSIVE ANTI TANK (HEAT) GRENADE. THE FUSE CONSISTS OF A PIEZOELECTRIC CRYSTAL, POINT INITIATING (PI) ELEMENT AND SETBACK ARMED, BASE DETONATING (BD) ELEMENT THAT CONTAINS A SELF DESTRUCT FEATURE.

MATERIAL - THE PI ELEMENT, WINDSHIELD AND WARHEAD BODY ARE ALUMINIUM. THE ROCKET MOTOR AND NOZZLE ARE STEEL. THE PROPELLING CHARGE IS WAXED PAPER.

MARKINGS - THE GRENADE OVERALL BODY COLOUR IS OLIVE DRAB WITH BLACK MARKINGS.

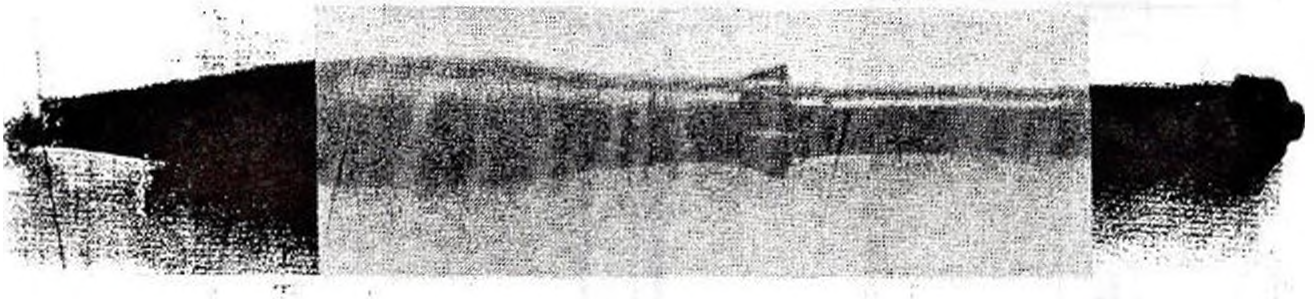
OPERATION - ON FIRING, A SELF DESTRUCT ELEMENT IS IGNITED AND THE FORCE ON SET BACK ARMS THE FUSE. ON IMPACT THE PIEZOELECTRIC CRYSTAL GENERATES CURRENT TO INITIATE THE ELECTRIC DETONATOR AND FIRING TRAIN. SHOULD THE GRENADE NOT FIRE ON IMPACT, THE SELF DESTRUCT ELEMENT WILL FUNCTION (SELF DESTRUCT APPROX 900m - 3.5 secs).

RENDER SAFE PROCEDURE - NONE IS REQUIRED IF THE GRENADE IS IN THE UNARMED CONDITION ALTHOUGH CARE SHOULD BE TAKEN IF GRENADE HAS BEEN INVOLVED IN A FIRE OR LEFT UNCOVERED IN DIRECT SUNLIGHT. IN ARMED OR DANGEROUS

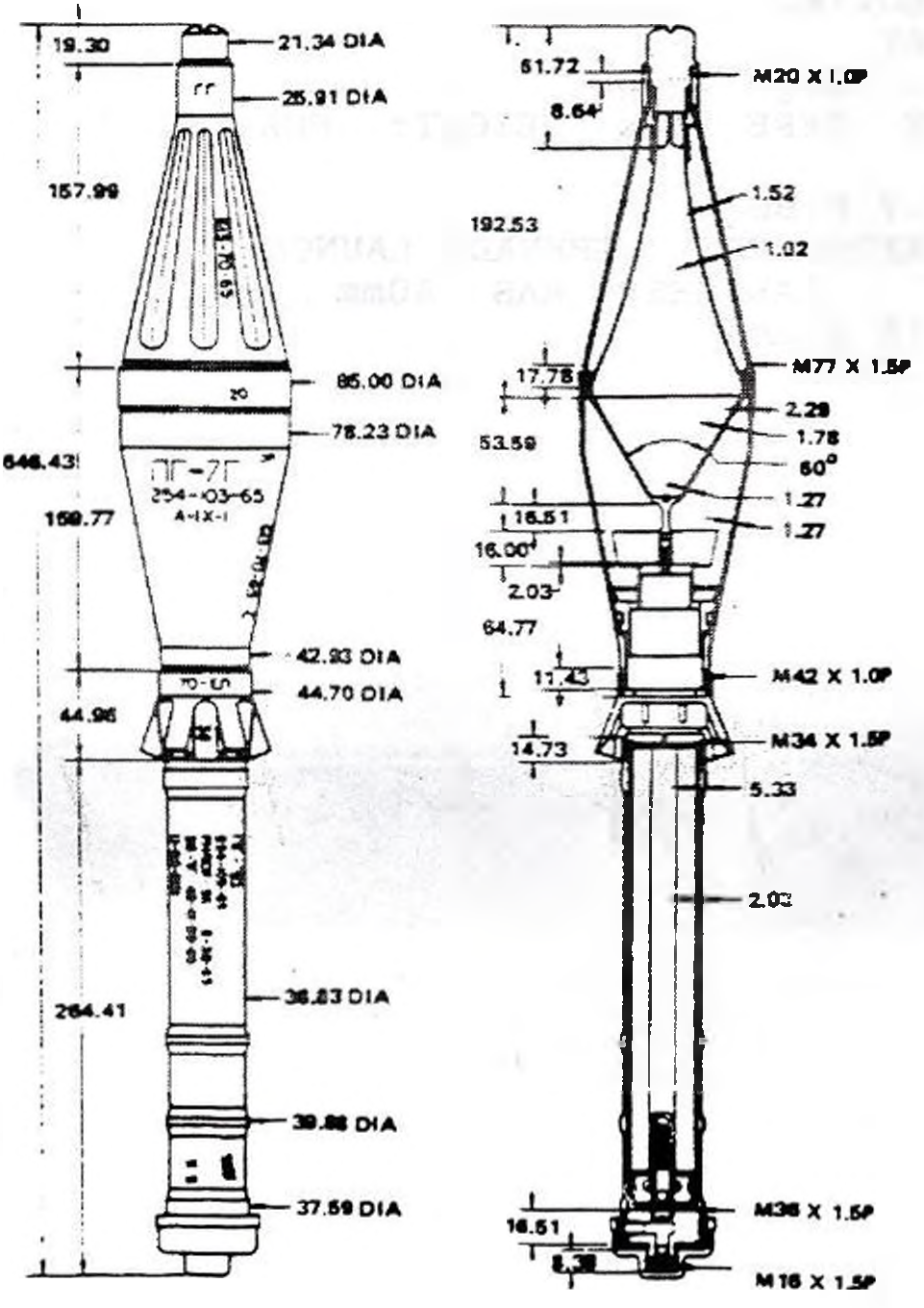
CONDITION DO NOT DISTURB OR TOUCH GRENADE, CARRY OUT NORMAL DEMOLITION PROCEDURES.

SPECIFICATIONS:

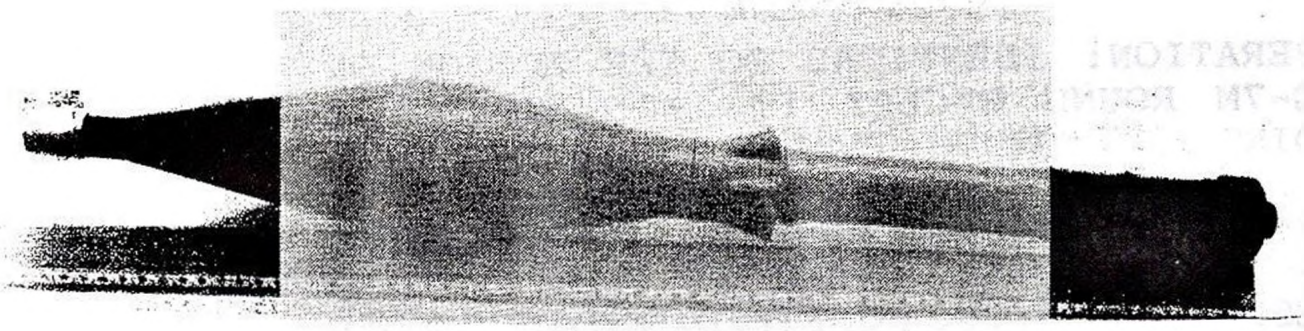
ORIGIN: SOVIET
TYPE: HEAT
WEIGHT: 1.75kg
EXPLOSIVE TYPE AND WEIGHT: RDX/TNT 0.3kg
FUSE: VP-7 PIBD
USING WEAPON: RPG 7 GRENADE LAUNCHER
REMARKS: LAUNCHER HAS 40mm BORE, WARHEAD IS 85mm.



SOVIET GRENADE 40/85MM HEAT (MODEL PG-7G PROJECTILE



SOVIET GRENADE 40/85mm HEAT
(MODEL PG-7G PROJECTILE)



NOTE: PG-7G DIFFERS FROM THE PG-7M IN THAT THE WINDSHIELD IS SERRATED. OTHER USUAL DIFFERENCES CAN CLEARLY BE SEEN ON THE PHOTOGRAPHS.

OG-7 ANTI PERSONNEL ROCKET

DESCRIPTION - THE ROUND IS BALLISTICALLY IDENTICAL TO THE STANDARD PG-7 HEAT ROCKET BUT USES THE 0.4m IMPACT FUSE THAT IS USED WITH THE 82mm MORTAR HE BOMB. ALTHOUGH THE PROJECTILE WAS FIRST USED IN ACTION IN AFGHANISTAN, DATED PROJECTILES FROM THE LATE 1970'S WERE FOUND.

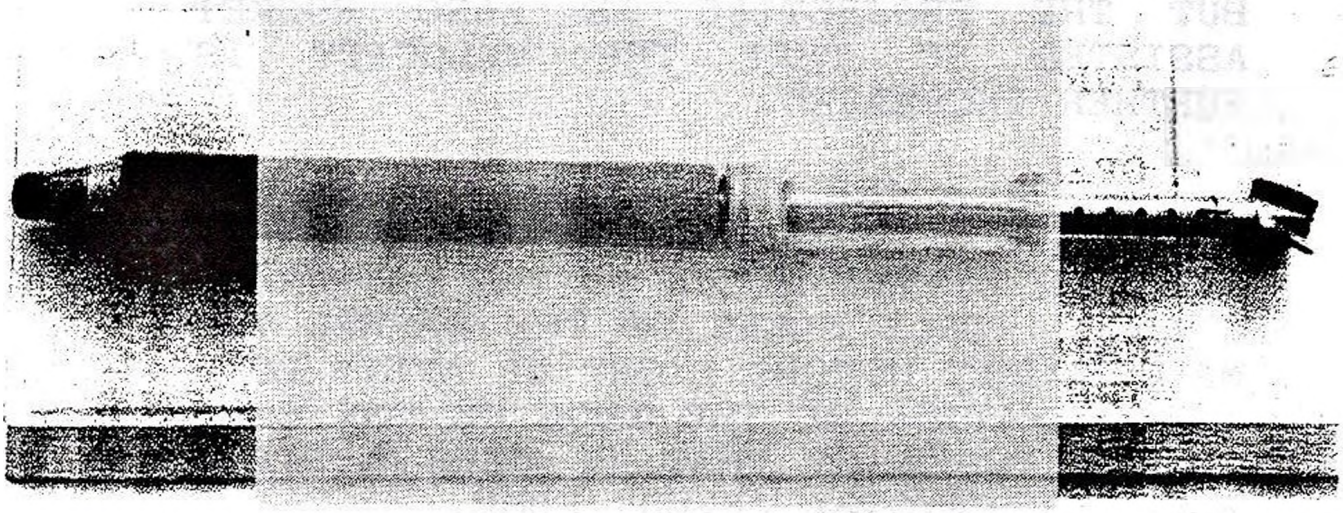
OPERATION: IDENTICAL TO THE ACTION OF PG-7M ROUND EXCEPT IT INCORPORATES A POINT DETONATING FUSE.

RENDER SAFE PROCEDURE - IF THE ROUND HAS BEEN FIRED TREAT AS A BLIND AND DESTROY IN SITU. UNFIRED ROUNDS SHOULD BE EXAMINED TO ENSURE THEY ARE SAFE TO MOVE.

SPECIFICATIONS:

ORIGIN: SOVIET TYPE: ANTI PERSONNEL
USING WEAPON: RPG-7
EXPLOSIVE TYPE AND WEIGHT: N/K
RANGE:

OG-7 ANTI PERSONNEL ROCKET



RD 73MM HEAT/FS PG-9

DESCRIPTION - THE PG-9 IS FIRED FROM THE 73MM SPG-9 RECOILLESS GUN. IT IS FIN STABILISED WITH A HEAT WARHEAD. THE PROPELLING CHARGE IS CARRIED IN A CASE ATTACHED BEHIND THE FINS. THIS SYSTEM PRODUCES A HIGH MUZZLE VELOCITY BUT THE PROJECTILE IS ALSO ROCKET ASSISTED SO THAT THE VELOCITY IS FURTHER INCREASED.

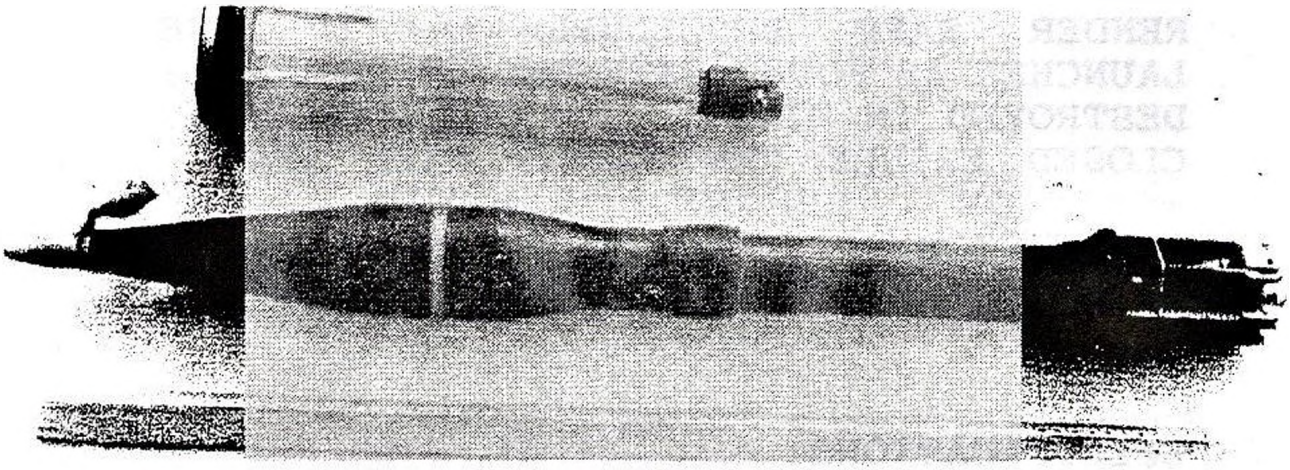
OPERATION - THE PROJECTILE IS GIVEN A SLOW RATE OF SPIN INSIDE THE BARREL BY MEANS OF OFFSET HOLES IN THE LAUNCHING CHARGE. ONCE CLEAR OF THE BARREL THE MAIN ROCKET MOTORS LIGHT UP AFETR 20M. THE OPERATION OF THE FUSE IS THE SAME AS THE PG-7M IN THAT IT USES A PIEZO ELECTRIC CRYSTAL (PIBD) FUSE.

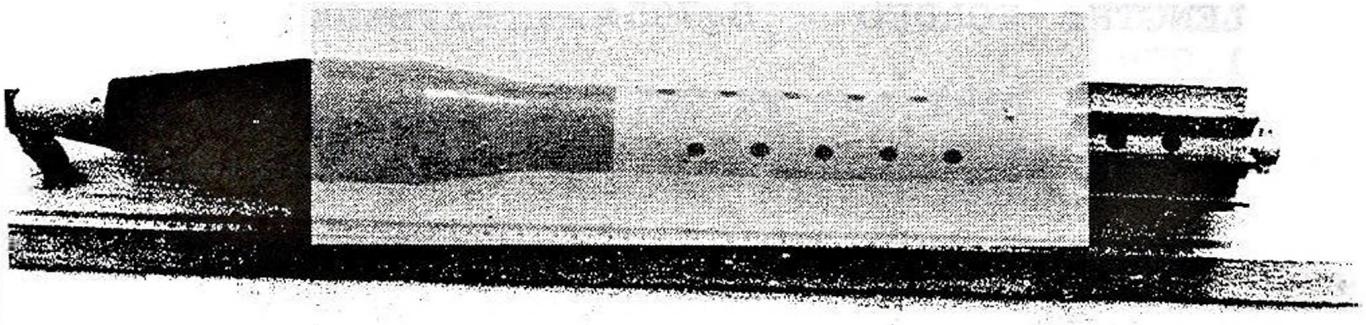
RENDER SAFE PROCEDURES - NONE IS REQUIRED IF THE PROJECTILE IS IN THE UNARMED POSITION, ALTHOUGH CARE SHOULD BE TAKEN IF THE PROJECTILE HAS BEEN DAMAGED, INVOLVED IN A FIRE OR EXPLOSION OR BEEN LEFT IN THE DIRECT SUNLIGHT. IN THE ARMED OR DAMAGED CONDITION DO NOT DISTURB OR TOUCH THE PROJECTILE. CARRY OUT NORMAL DEMOLITION PROCEDURE.

NOTE: CHANGE IN TEMPERATURE OR STRESS COULD CAUSE THE FUSE TO PRODUCE A FIRING CURRENT.

SPECIFICATIONS:

ORIGIN: SOVIET, BULGARIA, POLAND, EAST GERMANY OR HUNGARY
TYPE: ANTI TANK
LENGTH: 787MM
DIAMETER: 72MM
WEIGHT: TOTAL - 2.53 KG
FILLING - 0.320 KG
FILLING: RDX/WAX
FUSE: VP-9 PIEZO ELECTRIC PIBD





RPG-18 LIGHT ANTI ARMOUR WEAPON

DESCRIPTION - THE RPG-18 HAS BEEN CONFIRMED AS BEING A SMALL ROCKET WITH A MOTOR WHICH IS ALL BURNT ON LAUNCH. THE WARHEAD IS A SHAPED CHARGE WITH A CALIBRE OF 64mm. THE LAUNCHER IS EXTENDED BEFORE FIRING. THERE IS NO SHOULDER STOP AND THE FIRER MUST KNOW WHERE TO PUT HIS HEAD WHEN FIRING.

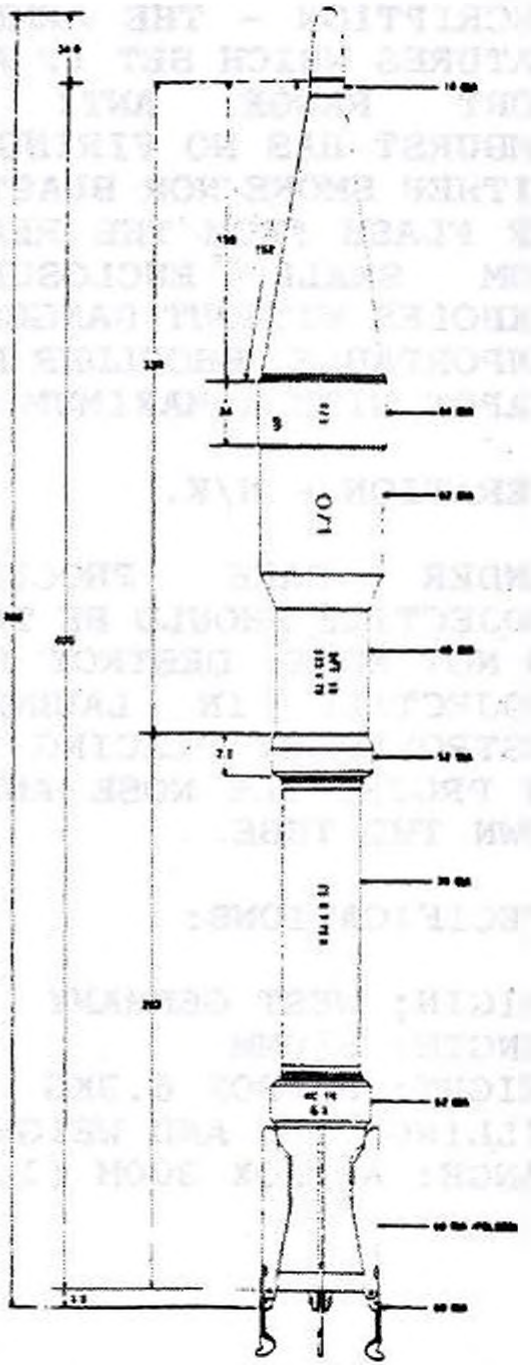
OPERATION - THE FIRING MECHANISM IS MECHANICAL. DETAILS OF THE FUSE ASSEMBLY ARE NOT KNOWN.

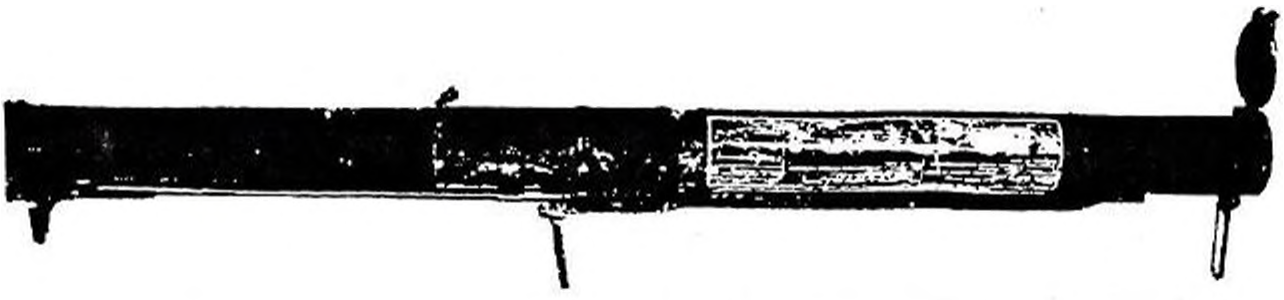
RENDER SAFE PROCEDURES - IF THE LAUNCHER IS FOUND EXTENDED IT SHOULD BE DESTROYED IN SITU. IF THE LAUNCHER IS CLOSED ENSURE THE SAFETY PINS ARE IN POSITION BEFORE REMOVING FOR DEMOLITION.

SPECIFICATIONS:

ORIGIN: SOVIET
TYPE: ANTI ARMOUR
LENGTH: FOLDED - 0.705m, EXTENDED - 1.05m
FILLING TYPE AND WEIGHT: N/K
FUSE: N/K
RANGE: 300m

RPG-18 LIGHT ANTI ARMOUR WEAPON





ARMBURST SHORT RANGE ANTI ARMOUR AND SELF DEFENCE WEAPON

DESCRIPTION - THE ARMBURST HAS UNIQUE FEATURES WHICH SET IT APART FROM OTHER SHORT RANGE ANTI TANK WEAPONS. ARMBURST HAS NO FIRING SIGNATURE, EMITS NEITHER SMOKE NOR BLAST FROM THE MUZZLE NOR FLASH FROM THE REAR, CAN BE FIRED FROM SMALL ENCLOSURES OR ROOFED FOXHOLES WITHOUT DANGER. ARMBURST IS A MANPORTABLE, SHOULDER FIRED, EXPANDABLE WEAPON WITH A MAXIMUM RANGE OF 1500M.

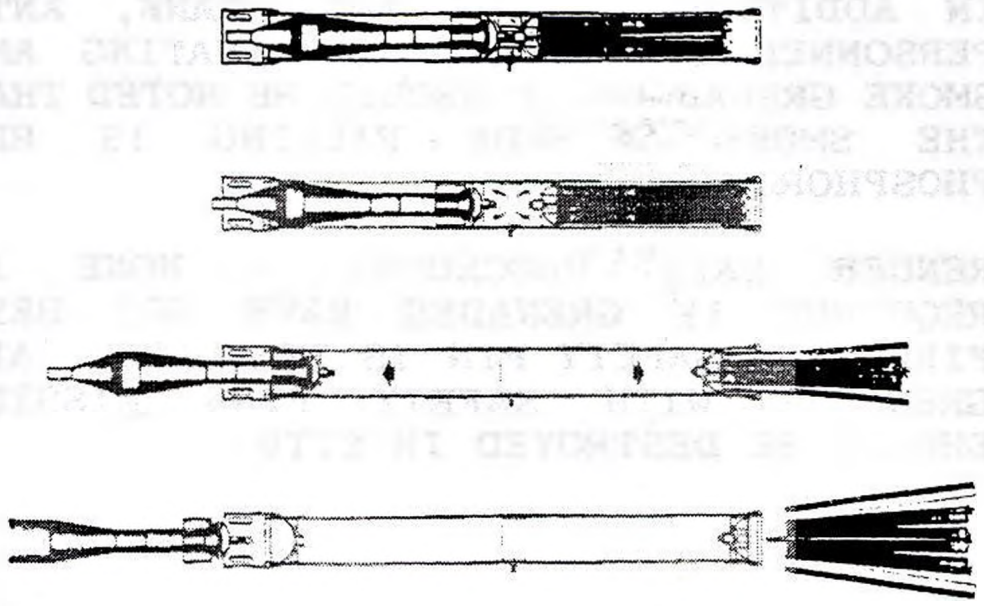
OPERATION - N/K.

RENDER SAFE PROCEDURE - BLIND PROJECTILE SHOULD BE TREATED AS NORMAL, DO NOT MOVE, DESTROY IN SITU. UNFIRED PROJECTILE IN LAUNCH TUBE TO BE DESTROYED BY PLACING TWO CHARGES, ONE ON PROJECTILE NOSE AND ONE APPROX 10" DOWN THE TUBE.

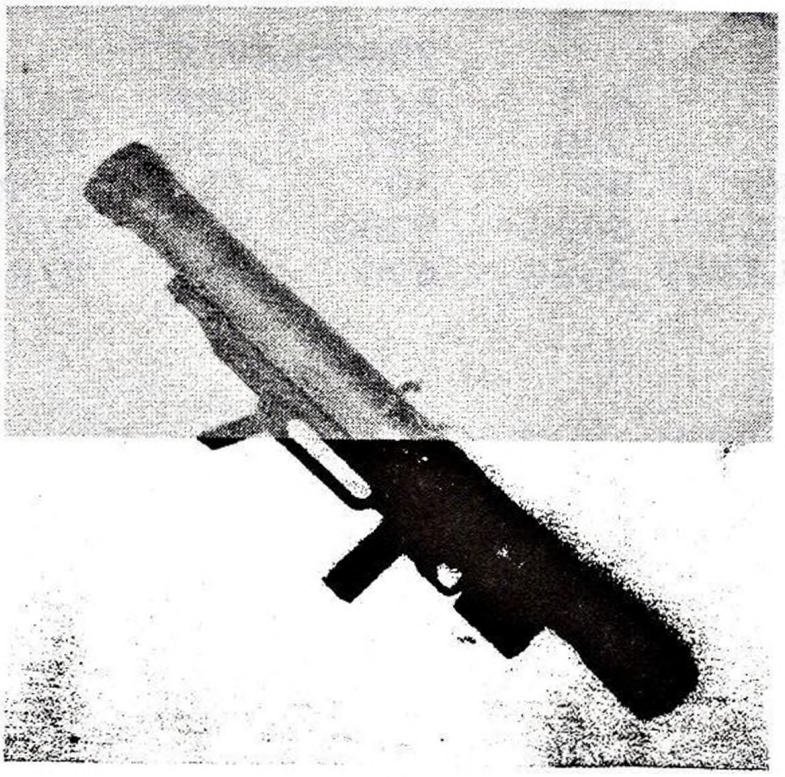
SPECIFICATIONS:

ORIGIN: WEST GERMANY
LENGTH: 850MM
WEIGHT: APPROX 6.3KG
FILLING TYPE AND WEIGHT: N/K
RANGE: APPROX 300M (1.5S)

ARMBURST SHORT RANGE ANTI ARMOUR AND SELF DEFENCE WEAPON



Firing sequence for Armbrust from pre-ignition (top) *to expulsion of missile and counter-mass with pistons locked* (bottom)



YUGOSLAVIA RIFLE GRENADES

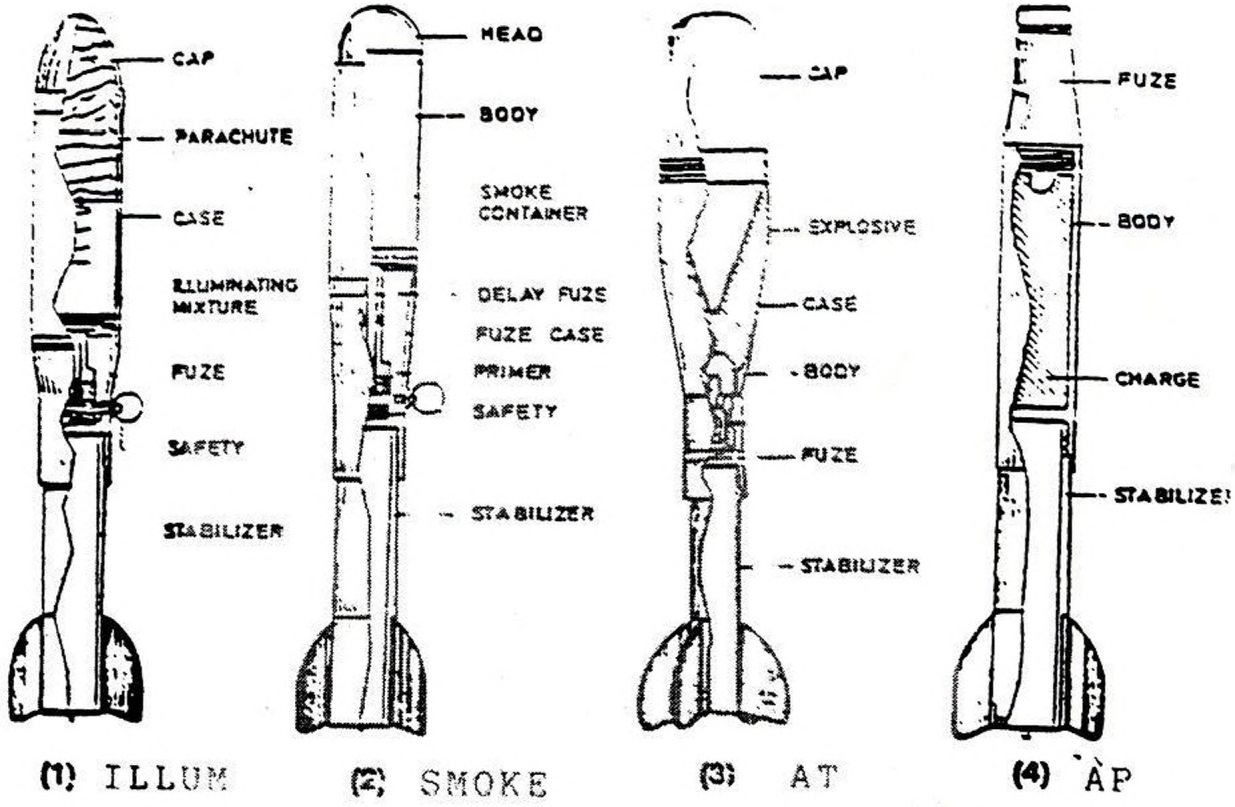
DESCRIPTION - THERE ARE 4 YUGOSLAVIA RIFLE GRENADES, ALL OF WHICH ARE CHARACTERISED BY THEIR SMALL DIAMETERS. IN ADDITION TO THE ANTI TANK, ANTI PERSONNEL THERE ARE ILLUMINATING AND SMOKE GRENADES. IT SHOULD BE NOTED THAT THE SMOKE GRENADE FILLING IS RED PHOSPHOROUS.

RENDER SAFE PROCEDURE - NONE IS REQUIRED IF GRENADES HAVE NOT BEEN FIRED AND SAFETY PIN IS IN PLACE. ALL GRENADES WITH SAFETY PINS MISSING SHOULD BE DESTROYED IN SITU.

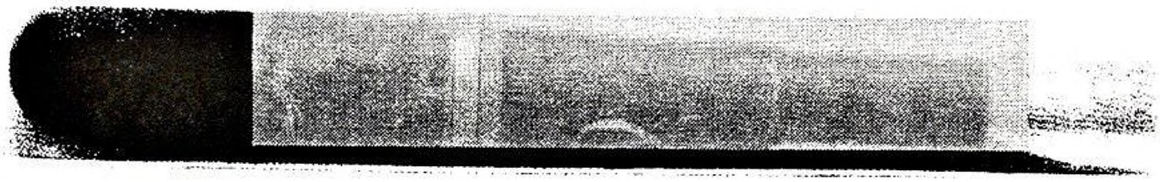
SPECIFICATIONS:

	M60	M60	M62	M62
ORIGIN:		YUGOSLAVIA		
TYPE:	A/T	A/P	SMK	ILLUM
LENGTH:	390	307	330	330MM
DIAMETER:	60	30	40	40MM
WT (TOTAL)	602G	520G	N/K	N/K
WT (FILLING)	235G	67G	N/K	N/K

YUGOSLAVIA RIFLE GRENADES









MISSILES

SAGGER ANTI TANK GUIDED MISSILE

DESCRIPTION - SAGGER IS A NATO CODENAME FOR SOVIET MANUAL COMMAND TO LINE OF SIGHT (MCLOS) ANTI TANK MISSILE, KNOWN AS AT-3. IT CAN BE USED 3 WAYS, AS A MAN PORTABLE MISSILE, MOUNTED ON A BRDM OR MOUNTED ON BMP. THE MISSILE HAS 2 PROPELLANT MOTORS AND INCORPORATES A HEAT DESIGN WARHEAD.

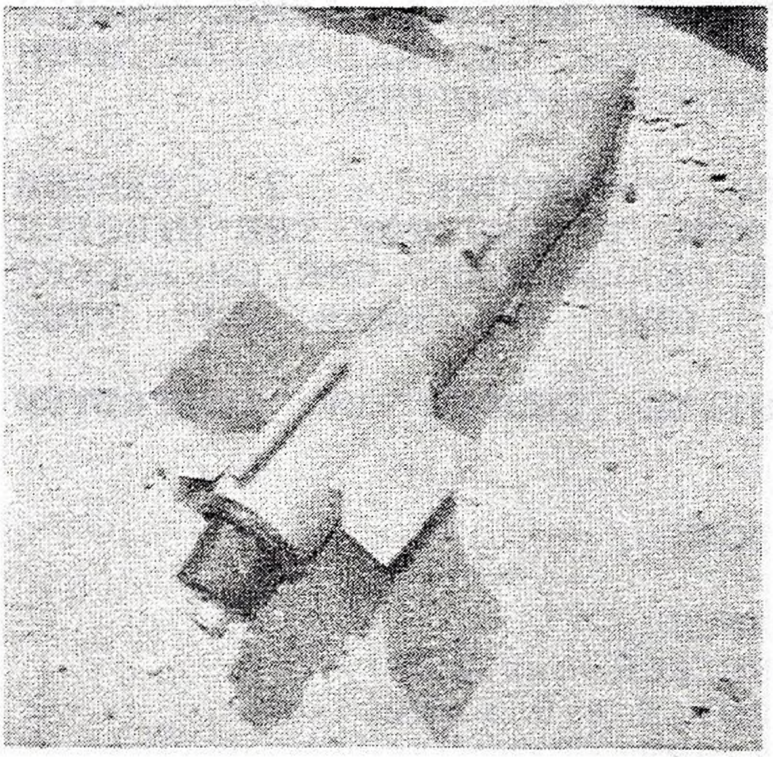
OPERATION - THE AT-3 IS A WIRE GUIDED ANTI TANK MISSILE WHICH INCORPORATES A PIEZO - ELECTRIC FUSE WHICH FUNCTIONS ON GRAZE OR IMPACT. IT IS NOT KNOWN IF THE MISSILE INCORPORATES A SELF DESTRUCT ELEMENT.

RENDER SAFE PROCEDURE - NONE IS REQUIRED IF MISSILE HAS NOT BEEN FIRED ALTHOUGH IF MISSILE IS FOUND ABANDONED ON LAUNCH SITE THE MISSILE MIGHT BE A MISFIRE AND SHOULD BE DESTROYED IN SITU. IN AN ARMED/FIRED OR DAMAGED CONDITION MISSILE SHOULD BE DESTROYED IN SITU.

NOTE: SUDDEN CHANGES IN TEMPERATURE OR STRESS COULD CAUSE THE FUSE TO PRODUCE A FIRING CURRENT.

SPECIFICATIONS:

ORIGIN: SOVIET
TYPE: W/GUIDED MCLOS ANTI TANK
LENGTH: 880MM
DIAMETER: 120MM
WEIGHT: TOTAL - 11.3 KG
FILLING - N/K
FILLING: N/K (ALTHOUGH POSS RDX/WAX)
FUSE: PIEZO ELECTRIC FUSE
RANGE: 500 - 3000M



APILAS LIGHT ANTI ARMOUR WEAPON

DESCRIPTION - APILAS (ARMOUR PIERING INFANTRY LIGHT ARM SYSTEM) IS A PRODUCT OF THE MATRA MANURHIN DEFENCE COMPANY. IT IS A DISPOSAL MANPORTAPLE LAUNCHER CONTAINING A PROJECTILE CARRYING A HEAT WARHEAD PROPELLED BY A FIRST BURNING ROCKET MOTOR.

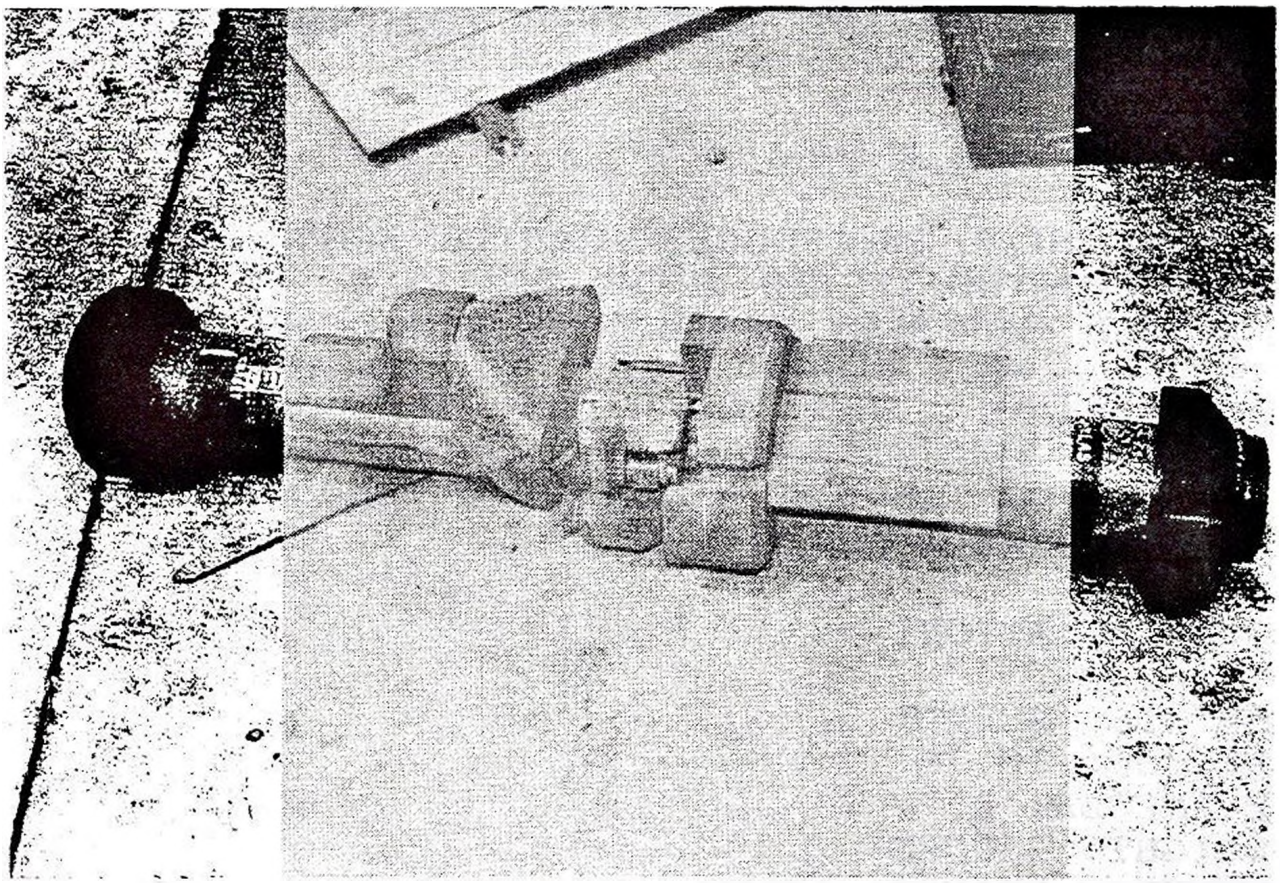
OPERATION - IN ORDER TO FIRE, THREE SUCCESSIVE ACTIONS ARE REQUIRED: ROTATION OF A SECURITY SWITCH WHICH IS MECHANICAL ARMING, PRESSURE ON AN ARMIMG SWITCH AND FINALLY PRESSURE ON THE TRIGGER. THE MISSILE IS UNARMED 10M FROM TUBE AND IS FULLY ARMED WITHIN 25M. FUSE ENSURES DETONATION ON BOTH GRAZE AND POINT DETONATING.

RENDER SAFE PROCEDURE - 3 CHARGES SHOULD BE USED TO DESTROY THE MISSILE IN TUBE ONE ON WARHEAD, ONE ON ROCKET MOTOR AND ONE ON REAR OF TUBE (VENTURI).
BLIND MISSILES SHOULD BE DESTROYED INSITU.

SPECIFICATIONS:

ORIGIN: FRANCE
LENGTH: LAUNCHER - 1.29M
MISSILE - 0.925M
DIAMETER: 112MM
WEIGHT: TOTAL (LAUNCHER + MISSILE) 9KG
MISSILE - 4.3KG FILLING - 1.5KG
FILLING TYPE: N/K RANGE: 330M

APILAS LIGHT ANTI ARMOUR WEAPON



SA-2 (GUIDELINE) SURFACE TO AIR TACTICAL GUIDED MISSILE

DESCRIPTION: THE SA-2 IS A MEDIUM RANGE ANTI-AIRCRAFT GUIDED WEAPON WHICH IS LAND MOBILE. GUIDANCE IS RADIO COMMAND AND INFRA-RED TERMINAL GUIDANCE. IT HAS A SOLID PROPELLANT BOOSTER WITH A LIQUID PROPELLANT SUSTAINER (OXIDISER NITRIC ACID).

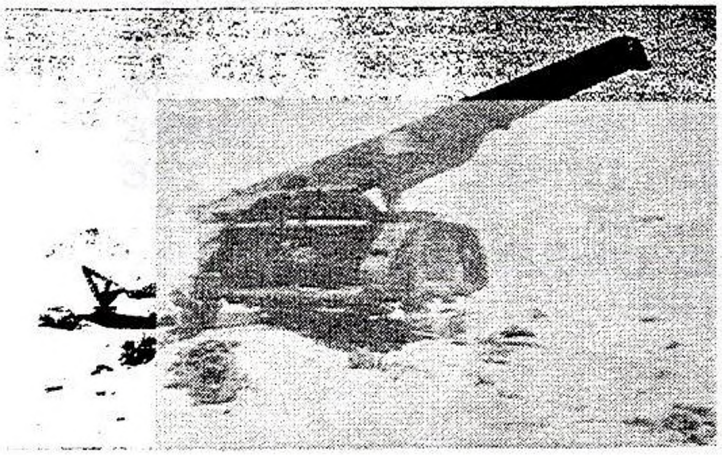
OPERATION: N/K

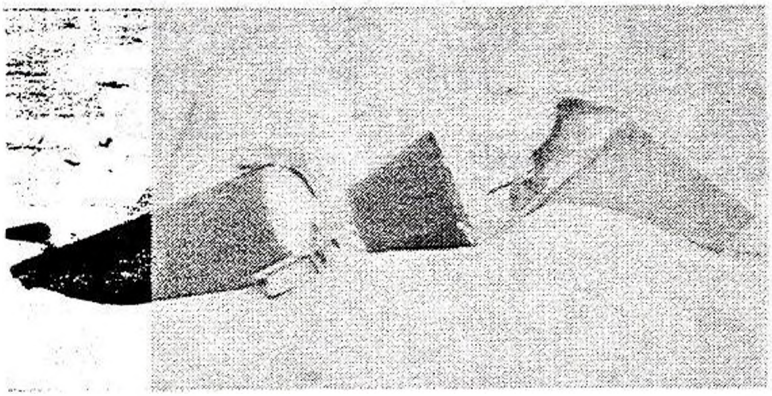
RENDER SAFE PROCEDURE: MISSILE SHOULD BE DESTROYED INSITU WHERE POSSIBLE, IF MISSILE HAS BEEN DAMAGED EXTREME CARE SHOULD BE TAKEN DUE TO LIQUID PROPELLANT. DUE TO NATURE OF THIS MISSILE AND PRESENCE OF LIQUID FUEL SPECIALIST ADVICE SHOULD BE SOUGHT BEFORE DEMOLITION.

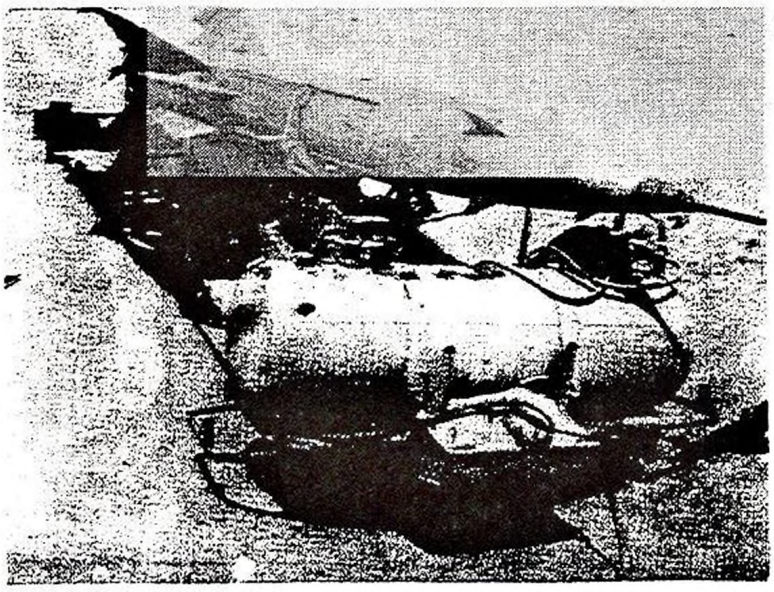
SPECIFICATION:

ORIGIN: SOVIET
LENGHT: 10.7M
DIAMETER: 0.7M
WEIGHT: 2300KG
WARHEAD WEIGHT: 136KG
FUZE: PROXIMITY

SA-2 (GUIDELINE) SURFACE TO AIR TACTICAL GUIDED MISSILE







SA-6 (GAINFUL) SURFACE TO AIR TACTICAL GUIDED MISSILE

DESCRIPTION: THE SA-6 IS A SINGLE STAGE BODY CONTAINING A DUAL THRUST INTEGRAL ROCKET-RAM JET PROPULSION SYSTEM. IT HAS 2 SETS OF CRUCIFORM FINS AT THE CENTRE AND TAIL OF THE MISSILE. THERE ARE 4 TUBE SHAPED INTAKES AROUND THE CENTRE SECTION OF THE MISSILE. GUIDANCE IS GROUND COMMAND PLUS A SEMI-ACTIVE RADAR HOMING.

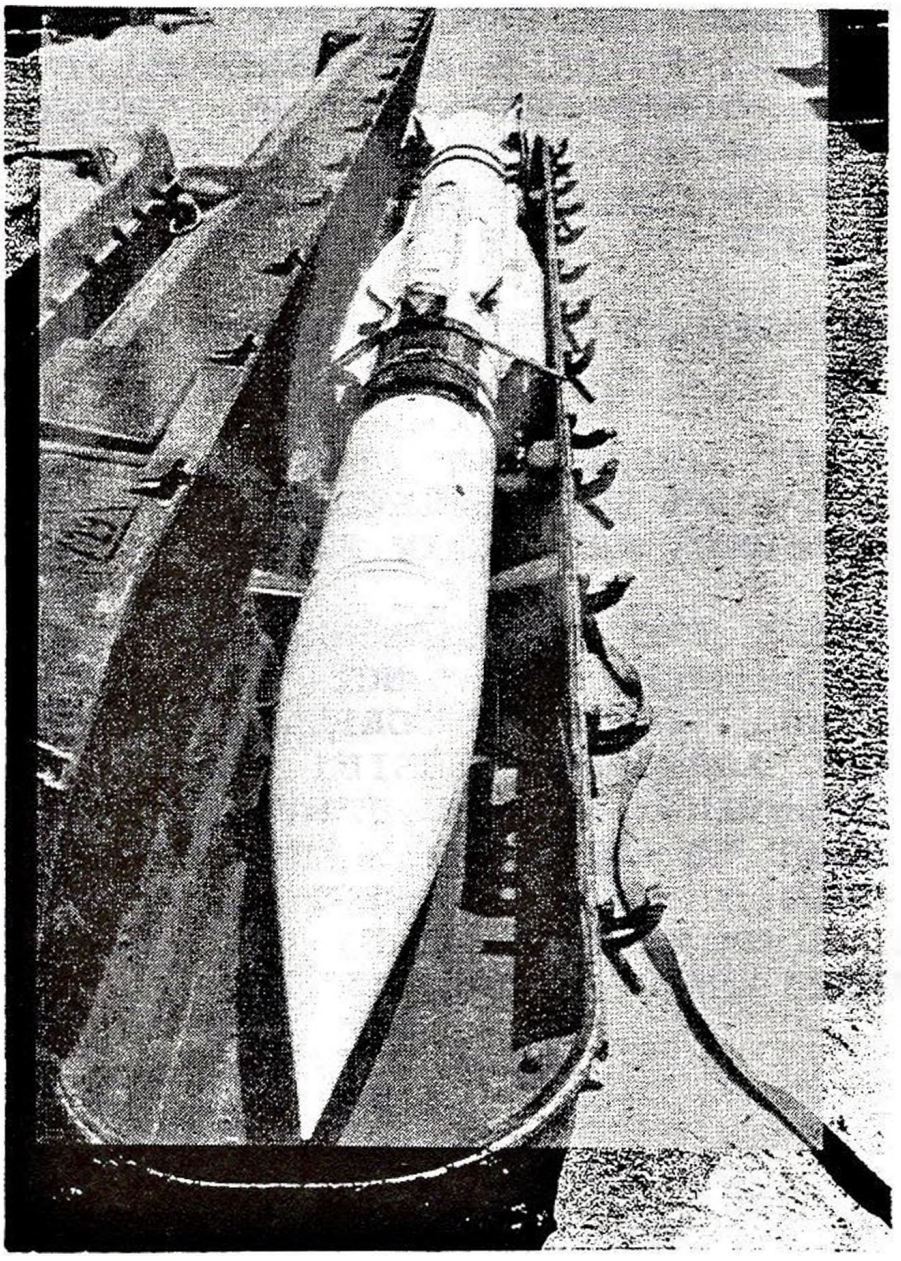
OPERATION: N/K

RENDER SAFE PROCEDURE: APPROACH MISSILE FROM REAR 1/4 OBSERVING RF PRECAUTIONS. WARHEAD IS IN THE SECOND SECTION OF THE MISSILE BEHIND THE CONE, EXPLOSIVES CHARGES ARE REQUIRED FOR BOTH THE WARHEAD AND THE MOTOR. IT IS ALSO IMPORTANT TO COLLAPSE THE VENTURI.

SPECIFICATION

ORIGIN: SOVIET
LENGHT: 6.2M
DIAMETER: 0.34M
WEIGHT TOTAL: 550KG
WARHEAD WEIGHT: 40KG

SA-6 (GAINFUL) SURFACE TO AIR TACTICAL GUIDED MISSILE



SURFACE TO AIR MISSILE SA - 7

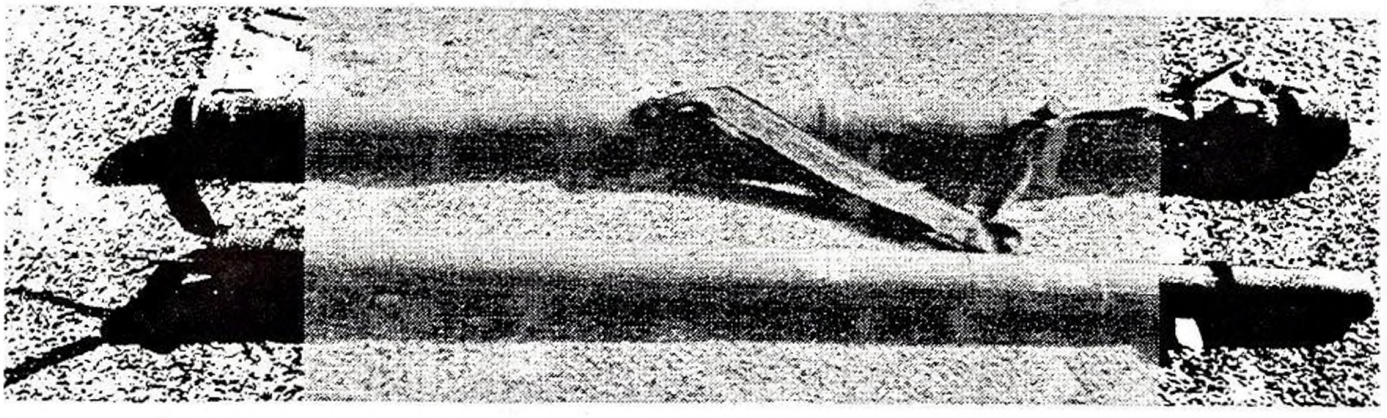
DESCRIPTION - THE SA - 7 IS A MAN PORTABLE LOW ALTITUDE TUBE LAUNCHED SURFACE TO AIR MISSILE. NATO CODENAME GRAIL. IT FIRST APPEARED DURING THE SIX DAY WAR IN EGYPT. IT IS VERY SIMILAR TO THE AMERICAN RED EYE MISSILE SYSTEM, WHICH DETAILS ARE BELIEVED TO HAVE FOUND THERE WAY TO THE SOVIET UNION. TWO MODELS ARE IN SERVICE, THE SA - 7A WHICH REACHES AN ALTITUDE OF 3 KM AT A SPEED OF 1600 KM/H. THE SA - 7B
TRAVELS FASTER AT 2000 KM/H AND FLIES FOR 5 KM.

OPERATION - GRAZE AND DIRECT ACTION FUSES HAVE BEEN ENCOUNTERED TO DATE NO PROXIMITY FUSES HAVE BEEN FOUND.

RENDER SAFE PROCEDURE - DUE TO S/D BLIND MISSILES ARE NOT NORMALLY ENCOUNTERED, ALTHOUGH DRILLS TO BE APPLIED: APPROACH MISSILE FROM THE REAR, OBSERVING RF PRECAUTIONS, PLACE CHARGE NEXT TO WAR HEAD. MISSILES IN TUBES SHOULD BE DESTROYED USING 3 CHARGES, 1 ON WARHEAD, 1 ON THE ROCKET MOTOR AND 1 ON THE VENTURI.

SPECIFICATION:

ORIGIN: SOVIET
TYPE: SAGW
LENGTH: 1.3M
DIAMETER: 0.07M
WEIGHT: TOTAL - 10.6 KG
FILLING - 1.1 KG
FILLING: RDX/AP
RANGE: 7A - 3 KM
7B - 5 KM
SELF DESTRUCT: 15 SEC



SURFACE TO AIR MISSILE SA - 16

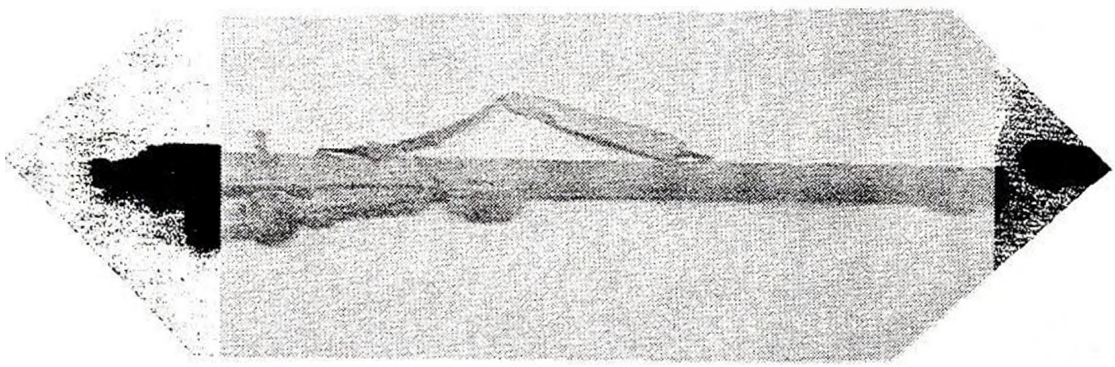
DESCRIPTION - THE SA 16 IS A MAN PORTABLE LOW ALTITUDE TUBE LAUNCHED SURFACE TO AIR MISSILE. VERY SIMILAR TO THE SA 14, THE MAIN DIFFERENCE IS A MORE SENSITIVE "SEEKER HEAD". IT HAS A SOLID BOOSTER AND SOLID SUSTAINER ROCKET MOTORS. THE WARHEAD IS RDX/AP AND THERE IS A GRAZE FUSE AS WELL AS DIRECT ACTION. UNCERTAIN WHETHER A PROXIMITY FUSE OR IFF HAVE NOW BEEN FITTED TO THE MISSILE. SELF DESTRUCT IN 15 SECS FLIGHT.

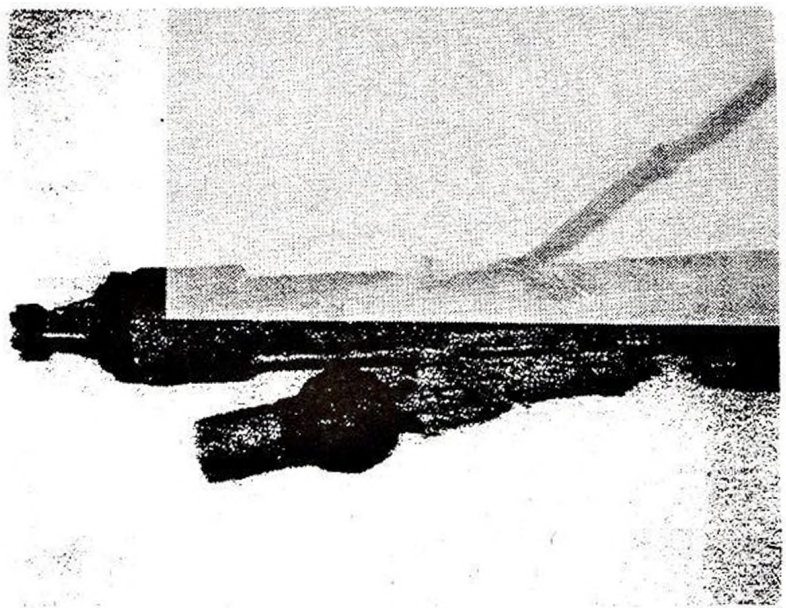
OPERATION -

RENDER SAFE PROCEDURES - DUE TO SELF DESTRUCT BLIND MISSILES ARE NOT FOUND ALTHOUGH NORMAL DRILLS WILL APPLY. APPROACH THE MISSILE FROM THE REAR. PLACE CHARGE ON THE WAR HEAD. MISSILES IN TUBES SHOULD BE DESTROYED BY 3 CHARGES, 1 ON THE WAR HEAD, 1 ON THE ROCKET MOTOR AND THE LAST CHARGE TO COLLAPSE THE VENTURI.

SPECIFICATIONS:

ORIGIN: SOVIET
TYPE: SAGW
LENGTH: 1.55M
DIAMETER: 0.08M
WEIGHT: TOTAL - 12.5 KG
W/HEAD - 2 KG
FILLING - RDX/AP
FUSE: TYPE N/K
RANGE: 5KM
SELF DESTRUCT: 15 SEC





IF YOU FIND ANY OF THESE OR SIMILAR,
FOLLOW THE "SANDI" RULE:

STOP
ASSESS AREA FOR MORE
NOTE AND MARK
DRAW BACK THE WAY YOU CAME
INFORM EOD THROUGH STAFF

SANDI SAYS .....

STAY ALIVE —
DON'T TOUCH !

