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TECHNICAL MANUAL

ARMY EQUIPMENT DATA SHEETS
AMMUNITION PECULIAR EQUIPMENT

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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HEADQUARTERS
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ARMY EQUIPMENT DATA SHEETS

AMMUNITION PECULIAR EQUIPMENT (APE)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. A reply will be furnished to you.

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*This manual supersedes TM 43-0001-47, 1 May 1989.

CHAPTER 1

INTRODUCTION

a. This manual is a reference published as an aid in training, familiarization, and identification of ammunition peculiar equipment (FSC 4925). There are no National Stock Numbers (NSN) for APE. They are identified by an Ammunition Peculiar Equipment (APE) Management Number (AMN) and are supplied by the Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-DSM-M, Rock Island, IL 61299-6000, to all authorized recipients.

b. The APE AMN consists of 4925 Federal Stock Class, AA special identifier, 1001 four digit APE Number, and 0000 end item, A001 major assemblies, E001 accessory kits, or 0001 components. An example of an APE 1001 end item would be AMN 4925-AA-10010000. Accessory kits are not normally supplied with end items. This manual is not to be used as authorization for requisitioning, stockage, maintenance, or issue of the materiel described herein.

CHAPTER 2

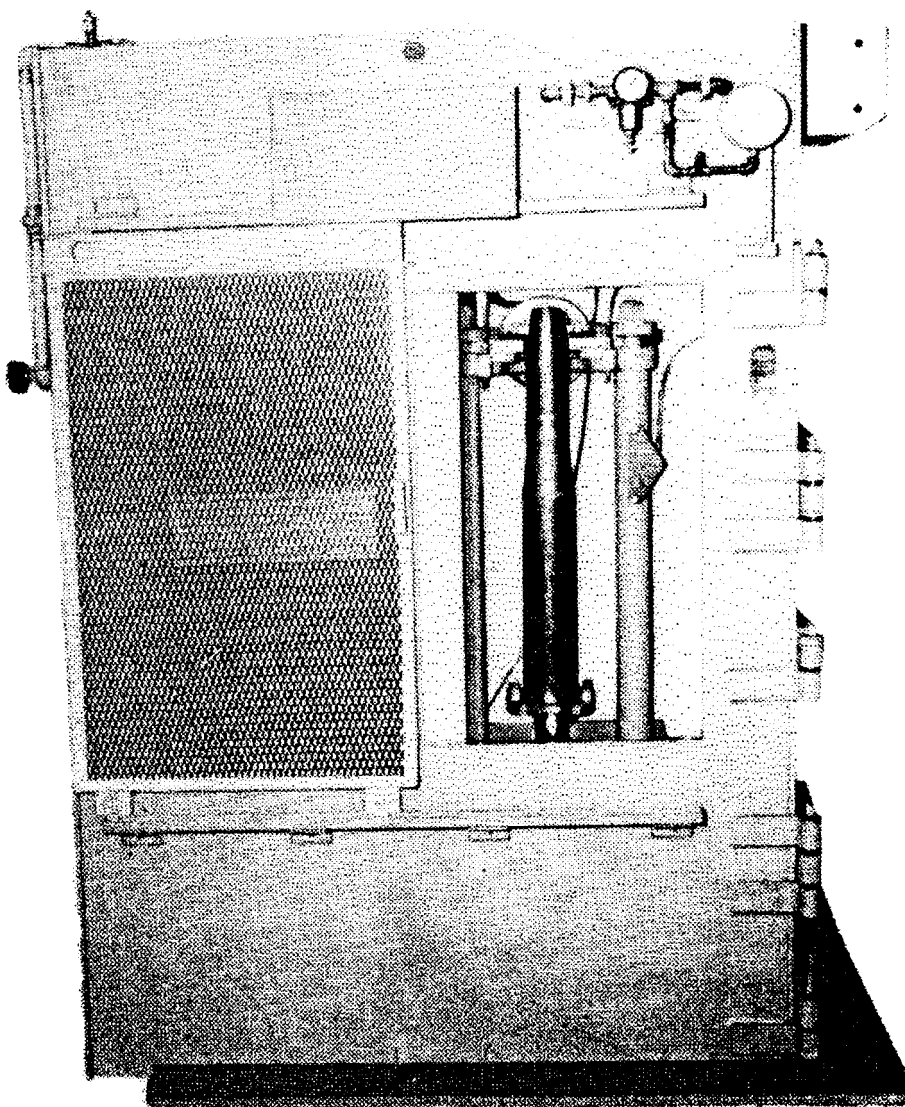
DATA SHEETS

The following Data Sheets are for those APE that are approved and used during regular daily ammunition operations to renovate, perform surveillance, demilitarize, and perform preservation and packaging functions. The data provided on each data sheet consists of equipment used, a brief description, difference between models, tabulated data, associated equipment, and available kits. Illustrations provided are for identification.

WARNING

ANY EXPLOSIVE CONTAMINATE ON MUST BE REMOVED FROM APE PRIOR TO CRATING AND SHIPMENT IAW DIRECTIVES IN DOD 5160.65-M AND PROCEDURES CONTAINED IN TB 700-4. EQUIPMENT WILL BE CERTIFIED FREE OF EXPLOSIVES AND TAGGED WITH DD FORM 2271. DECONTAMINATION IS NECESSARY TO PRECLUDE EXCLUSIVE HAZARDS.

APE 1001M1--MACHINE, VERTICAL PULL APART
(WITH 1001E091 DELUGE WITH SHIELD)



Use:

The vertical pull apart machine is a semi-automatic multipurpose machine used for processing 37MM through 106MM fixed artillery ammunition, Navy ammunition, 76MM/62, 3"/50, 5"/38, 5"/54, 6"/47 and rocket motors. It performs the following operations:

a. Separate projectile from cartridge case.

b. Assemble projectile to cartridge case.

Description:

APE 1001M1 is constructed with a base plate, operating table, three bolster rods, vise assembly, pull cylinder, and fulcrum arm assembly. The machine is powered by air. The operational shield is supplied with an installed deluge system to protect the operator.

Difference Between Models:

APE 1001M1 is the only approved configuration.

Tabulated Data:

APE No. 10010000M1

Unit of Issue Each

Installation Data:

BASIC MACHINE:

Length 60in.

Width 36in.

Height 62-1/2in.

Weight 2010 lbs

OPERATIONAL SHIELD:

Length 60in.

Width 50in.

Height 84in.

Weight 3320 lbs

Utilities Required:

Air at 100 psi and 130 cfm.

Production Capacity:

Varies with type of operation being performed.

Shipping Data:

BASIC MACHINE:

Length 66in.

Width 42in.

Height 72in.

Cube 115.0 cu ft

Weight 2480 lbs

OPERATIONAL SHIELD:

Length 66in.

Width 60in.

Height 96in.

Cube 220.0 cu ft

Weight 4142 lbs

Associated Equipment:

None.

Kits :

1001E005 KIT, Vise jaws & cartridge case shoes for pull apart of 105MM: M323, M325

1001E006 KIT, Pull apart, 105MM: M456

1001E007 KIT, Pull apart and resize 57MM: M306 and M307

1001E009 KIT, Rebuild 12-inch air cylinders

1001E019 KIT, Basic, for pull apart, resize, assembly and crimping of cartridges

1001E020 KIT, Pull apart, 37MM: M54, M59, M63, M92 w/M16 cartridge case

1001E021 KIT, Pull Apart, 37MM: M54, M59, M63, M92 w/M17 Cartridge Case

1001E022 KIT, Pull Apart, 40MM: MK2, MK11, M81, M91

1001E023 KIT, Pull Apart, 57MM: M306, M307, M308

1001E024 KIT, Pull Apart, 57MM: M303

1001E025 KIT, Pull Apart, 75MM: M48, M61, M64, M66, M338

1001E026 KIT, Pull Apart, 75MM: M309, M310, M311

1001E027 KIT, Pull Apart, 75MM: M349

1001E028 KIT, Pull Apart, 75MM: M334

1001E029 KIT, Pull Apart, 76MM: M42, M62, M93, M312, M315

1001E030 KIT, Pull Apart, 76MM: M319, M339, M340, M352, M361

1001E031 KIT, Pull Apart, 90MM: M71, M77, M79, M82, M133, M304, M313, M317, M318, M319, M332, M336, M431, M580

1001E032 KIT, Pull Apart, 105MM: M341

1001E033 KIT, Pull Apart, 105MM: M326

1001E034 KIT, Pull Apart, 105MM: M345

1001E035 KIT, Pull Apart, 106MM: M344

1001E036 KIT, Pull Apart, 106MM: M346, M581

1001E038 KIT, Resize Cartridge Case, 37MM: M16, M17

1001E039 KIT, Resize Cartridge Case, 40MM: M25, MK2

1001E060 KIT, Assembly & Crimp, 37MM w/M16 Cartridge Case

1001E061 KIT, Assembly & Crimp, 37MM w/M17 Cartridge Case

1001E062 KIT, Assembly & Crimp, 40MM: w/M25, MK2 Cartridge Case

1001E063 KIT, Assembly & Crimp, 57MM, w/M23 Cartridge Case

1001E067 KIT, Assembly & Crimp, 76MM, w/M88 or M101 Cartridge Case

1001E069 KIT, Assembly & Crimp, 105MM, w/M32 Cartridge Case

1001E070 KIT, Assembly & Crimp, 105MM, w/M90, M95 Cartridge Cases, and 106MM w/M94 Cartridge Case

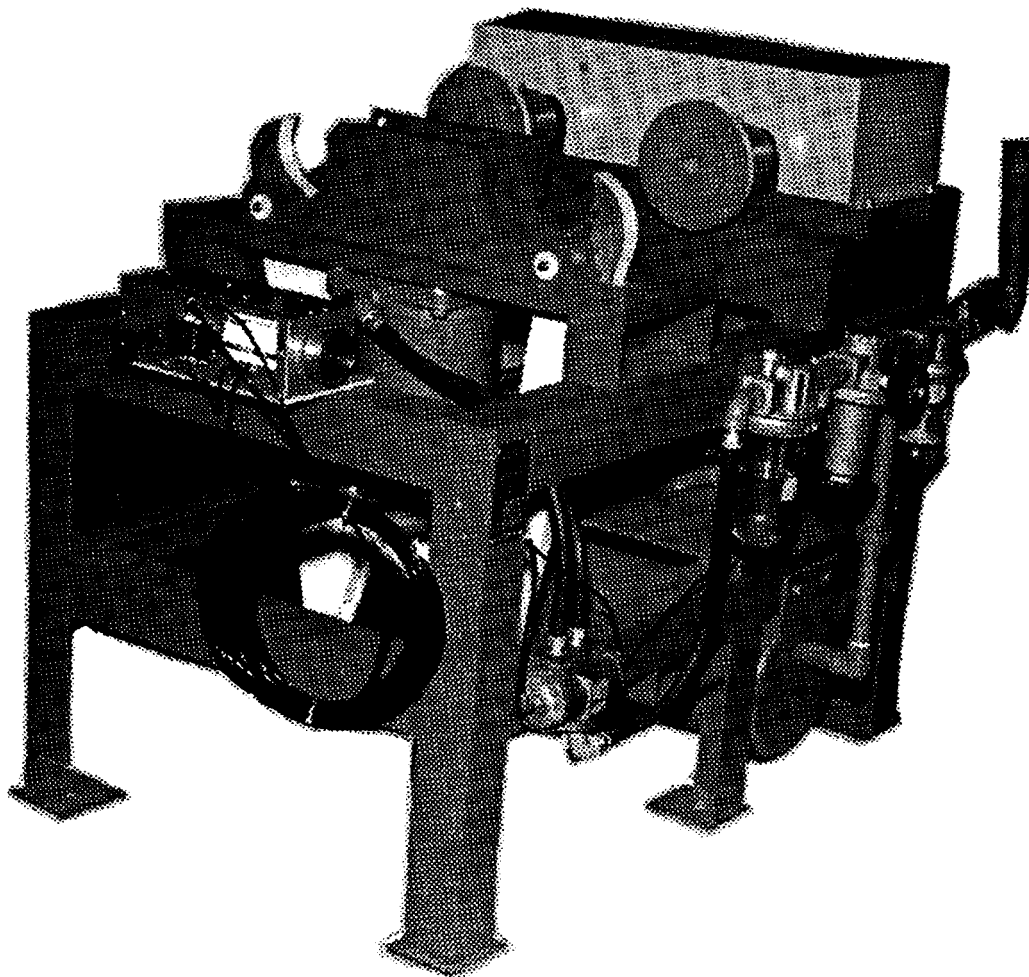
1001E073 KIT, Assembly & Crimp, 40MM: MK2

1001E074 KIT, Pull Apart 105MM HEP-T: M393A1, M416 & M494

1001E075 KIT, Pull Apart 90MM: M371

1001E077	KIT, Assembly M392A1, 105MM Projectile to M115B1 Cartridge Case	1001E092	KIT, Resize, Cartridge. Case 6"/47 Propelling Charge
1001E079	KIT, Resize Cartridge Case, 105MM: M148, M148A1B1, M150	1001E093	KIT, Resize, Cartridge Case, 5"/38 Propelling Charge
1001E081	KIT, Pull Apart, 37MM & 40MM w self-destroying tracer	1001E094	KIT, Resize, Cartridge Case 5"/54 Propelling Charge
1001E082	KIT, Pull Apart 66MM: M72 Rocket	1001E095	KIT, 5"/54, 5"/38, and 6"/47 Propelling Charge Cartridge Case
1001E087	KIT, Accessory for Pull Apart of 105MM APDS-T, M392, M728 Cartridge	1001E096	KIT, Base Plate
1001E088	KIT, Basic Accessories for Pull Apart of Navy Cartridge 76MM/62 Cal	1001E097	KIT, 2.75-inch Rocket Warhead XM274 Nose Cap and Retainer Removal
1001E089	GAGE, VPA Alinement	1001E098	KIT, 105MM: M360 Projectile Reseating
1001E090	KIT, Pull Apart Navy 3"/50	1001E099	KIT, Flue Roller Cartridge Case Resize
1001E091	KIT, Deluge w/Shield (not shown)	1001E100	KIT, 75MM thru 106MM Cartridge Case Flue Roller Resize

APE 1002M3--MACHINE, TWO SPINDLE, DEFUZING



Use:

The two spindle defuzing machine was developed for removing the point detonating or base detonating fuzes from 57MM through 106MM artillery projectiles, Navy ammunition, 3"/50 and 60MM and 81MM mortar projectiles. It's usage has also been expanded to remove base plates, plugs, tracers, from projectiles; disassemble certain projectiles; remove fuzes and plugs from fragment bombs; disassemble rockets; and booster fuzes.

Description:

APE 1002M3 consists of a steel frame with a vise assembly and retractor head assembly mounted to accommodate two fuzed projectiles at the same time. The retractor heads are chain driven by air motor. The direction of rotation of the retractor

heads is controlled by the hand throttle and/or the reversing valve on the air motor.

Difference Between Models:

The APE 1002M2 differs from the APE 1002M1 in that the APE 1002M2 has an air receiver tank, eleven tooth drive sprockets, and an elongated slot in the frame to provide exact adjustment in the vise assembly for the various size projectiles. A two-hand control has been added to the APE 1002M3 for greater operator safety and to comply with OSHA standards.

Tabulated Data:

APE No.	1002000M3
Unit of Issue	Each

Installation Data:

Length46in.
 Width33in.
 Height38in.
 Weight1220 lbs

Utilities Required:

Air at 100 psi and 80 cfm.

Production Capacity:

Depends upon type and condition of
 ammunition.

Shipping Data:

Length 55 in.
 Width 48 in.
 Height 48 in.
 Cube 73.4 cu ft
 Weight 1305 lbs

Associated Equipment:

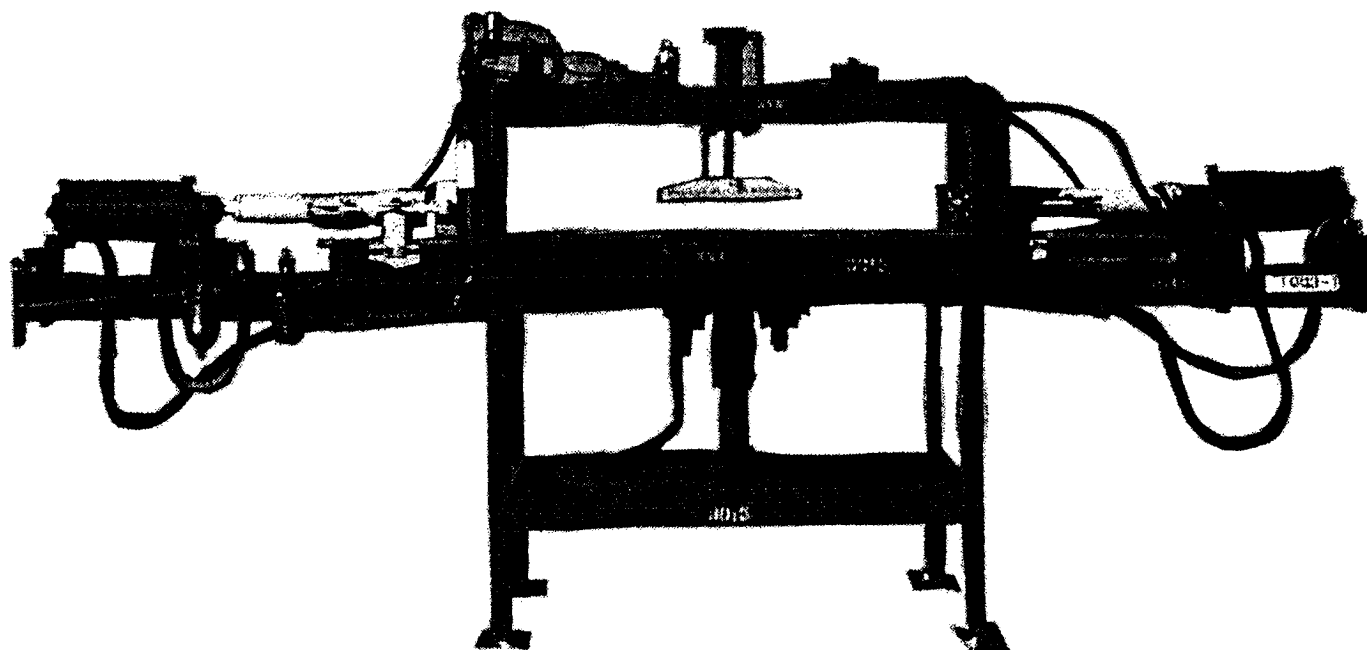
None.

Kits :

1002E001 KIT, Production Basic
 1002E002 KIT, SIMM, Remove BD Fuze
 1002E003 KIT, 75MM, Remove BD Fuze
 1002E004 KIT, 76MM, Remove BD Fuze
 1002E005 KIT, 75MM, Remove PD Fuze
 (except M334 Projectile)
 1002E006 KIT, 75MM: M334, Remove PD
 Fuze
 1002E007 KIT, 76MM, Remove PD Fuze
 1002E008 KIT, 90MM, Remove PD Fuze
 1002E009 KIT, 105MM, Remove PD Fuze
 1002E010 KIT, 90MM, Remove BD Fuze (ex-
 cept T142 Series Projectile)
 1002E011 KIT, 90MM, Remove BD Fuze T142
 Series Projectile
 1002E012 KIT, 105MM, Remove BD M92 Fuze
 (except T139E45 Projectile)
 1002E013 KIT, 105MM, 106MM, Remove BD
 Fuze, 105MM: T139E45, 106MM:
 T139E47
 1002E014 KIT, 60MM Mortar: M49 and
 M50, Remove Fuze M52, M82,
 M525, M527

1002E015 KIT, 60MM Mortar: M302, Re-
 move Fuze M52, M82, M525, and
 M527
 1002E016 KIT, 81MM Mortar: M43A1B1,
 Remove Fuze M52, M82, M525,
 and M527
 1002E017 KIT, 81MM Mortar: M362, Re-
 move Fuze M52, M82, M525, and
 M527
 1002E018 KIT, 81MM Mortar: M362, M374,
 M375, Remove Fuze M519 and
 M526, and M524
 1002E019 KIT, 20-23 lb Fragment Bomb,
 Remove Fuze
 1002E020 KIT, 20-23 lb Fragment Bomb,
 Remove Fuzewell Plug
 1002E021 KIT, 106MM: M345, Remove Base
 Plug
 1002E022 KIT, 105MM: M84 and 155MM,
 M116 BE Projectile. Remove
 Base Plate
 1002E023 KIT, 106MM: M344 Projectile,
 Disassembly
 1002E024 KIT, 105MM: M416, Remove
 Tracer and Base Fuze, M534
 1002E030 KIT, Disassemble M10 2.36-Inch
 Rocket
 1002E031 KIT, 57MM: M306A1, Remove
 M503 Fuze
 1002E036 KIT, to Remove M21A4 Booster
 from 76MM Artillery Projectile
 1002E038 KIT, Remove M21A4 Booster from
 Standard Contour Fuze
 1002E039 KIT, Remove Closing Plug 57MM:
 M307A1 Projectile
 1002E041 KIT, Remove Tracer from 40MM:
 HEI-T, MK2
 1002E042 KIT, Defuze 3"/50 Cartridge
 (Remote Control)
 1002E043 KIT, Remove Cartridge Case
 Locking Ring, 152MM
 1002E044 KIT, Remove Projectile Lifting
 Plug
 1002E045 KIT, Disassemble 106MM, M581
 APERS-T
 1002E046 KIT, Remove Propelling Charge
 from 4.2 Mortar
 1002E047 KIT, Disassemble 60MM Mortar,
 M720

APE 1003M1--LID REMOVER, PNEUMATIC



Use:

The pneumatic lid remover was designed to remove lids from single and double end fiber containers for 40MM through 105MM ammunition (except 105MM HEAT ammunition). It can also be used to remove lids from 120MM fiber containers and closing plugs from 120MM cartridge cases.

Description:

APE 1003M1 is of table type construction with a traveling cylinder and clamp shoe assembly on each end of the table. The

clamp shoe assemblies remove the lids when actuated by two button valves and a delay timer. The machine has two safety guards which prevent the operator from inserting more than one container at a time into the machine.

Difference Between Models:

The APE 1003M1 has improved safety features and is capable of removing lids from 120MM fiber containers and removing M2E3 closing plugs from 120MM cartridge cases.

Tabulated Data:

APE No. I0030000M1
 Unit of Issue Each
 Installation Data:
 Length 124-1/2 in.
 Width 46 in.
 Height 52 in.
 Weight 1422 lbs
 Utilities Required:
 Air at 100 psi and 100 cfm.
 Production Capacity:
 360 containers per hour.

Shipping Data:

Length 131 in.
 Width 51 in.
 Height 62 in.
 Cube 246 tuft
 Weight 1575 lbs

Associated Equipment:

APE 1004, 1088, and 1221.

Kits :

1003E001 KIT, Remove Lids from 4 OMM
 through 60MM Fiber Containers
 1003E002 KIT, Remove Lids from 75MM
 through 81MM Fiber Containers
 1003E003 KIT, Remove Lids from 90MM
 through 105MM Fiber Containers
 (except 105MM HEAT ammunition)
 1003E004 KIT, Remove Lids from 120MM
 Fiber Containers
 1003E005 KIT, Remove M2E3 Closing Plug
 from 120MM Cartridge Case