OPERATOR’S AND UNIT MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST
FOR

DECONTAMINATING APPARATUS: PORTABLE,
14 LITER, M13
(NSN 4230-01-133-4124)
AND
DECONTAMINATING APPARATUS: PORTABLE,
14 LITER, M13 (PRACTICE)
(NSN 4230-01-345-5172)

HEADQUARTERS
DEPARTMENT OF THE ARMY
AUGUST 1992

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DESTRUCTION NOTICE. Destroy by any method that will prevent disclosure of contents or reconstruction of the document.
WARNING

Use extreme caution AT ALL TIMES when handling DS2.

DS2 is a combustible solution. Severe chemical burns can result if personnel fail to observe ALL safety precautions. DS2 can damage eyes and skin, and if inhaled, can cause illness. DS2 can damage the NBC protective overgarment. Long term contact with DS2 (about 24 hours) can damage the NBC protective gloves, hood, and overboots.

To avoid injury:

Wear protective NBC clothing including mask, hood and rubber gloves AT ALL TIMES when handling DS2.

DS2 degrades the overprotective qualities of the overgarment care should be taken to prevent contact of DS2 with the overgarment.

In extremely cold temperatures, wear rubber gloves INSIDE arctic mittens.
WARNING

To avoid injury:

- Change mittens if they become soaked with DS2 since DS2 can damage the rubber gloves.

- Use the M2 Toxicological Agent Protective Apron, if available.

- DO NOT allow DS2 to spray on personnel.

- DO NOT allow DS2 to spray on NBC protective clothing.

- DO NOT use DS2 to decontaminate personnel. It is harmful to the skin and eyes.

- DO NOT inhale DS2 fumes, you may start coughing and become ill.

- DO NOT use the DS2 filled M13 DAP or the DS2 filled, green-painted container for training.
WARNING

To avoid injury:

DS2 makes surfaces slippery use caution to avoid falling.

DO NOT spray DS2 on hot exhaust, hot surfaces, or open flames as it can cause fire.

Keep fluid container on the same level as operator is standing as it can tip over and cause injury.

The M13 DAP filled with DS2 weighs 54 lbs. and the M13 Practice DAP filled with training stimulant weighs 46 lbs. To avoid injury use two people when lifting 4 feet or higher.

Never add DS2 to the M13 Practice DAP or the Training Container.

For general first aid refer to FM 21-11. Specific first aid medical information on DS2 is on the next page.
### FIRST AID

<table>
<thead>
<tr>
<th>If DS2 comes in Contact with:</th>
<th>Emergency Treatment Follow</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SKIN</strong></td>
<td>remove it from the skin by wiping and then flush the affected area with water. DS2 may not give any immediate reaction; therefore, wash the affected area even if no discomfort is felt or no irritation is noted.</td>
</tr>
<tr>
<td><strong>EYES</strong></td>
<td>flush them with large amounts of water immediately. After flushing the eyes for 20 to 30 minutes, seek medical attention immediately, DS2 can damage the eyes after a few seconds of exposure.</td>
</tr>
<tr>
<td><strong>MOUTH</strong></td>
<td>or is swallowed, rinse the mouth out immediately and SPIT OUT, then drink large amounts of water and seek medical attention immediately. Do not induce vomiting.</td>
</tr>
<tr>
<td><strong>NOSE (fumes/vapor)</strong></td>
<td>if you inhale enough to cause coughing, leave the area immediately. If breathing difficulties continue, seek medical attention.</td>
</tr>
</tbody>
</table>
REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can 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 letter or DA Form 2029 (Recommended Changes to Publications and Blank Forms) direct to Commander, US Army CRDEC, ATTN: SMCCCR-MAT, Aberdeen Proving Ground, MD 21010-5423. A reply will be furnished to you.

°This manual supersedes TM 3-4230-214-12&P, April 1986.
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</tbody>
</table>
HOW TO USE THIS MANUAL

You can use this manual for the operation and maintenance of the M13 DAP and the M13 Practice DAP.

Every part and assembly is illustrated and given a callout number on pages 2-0 through 2-3. The same callout number is used throughout the manual, except for Appendix C.

The Decontaminating Apparatus Portable, M13 (Practice) shall be used for training.

Any expendable supplies you will need are listed in Appendix F. Except for a funnel, these items should already be available to you.
CHAPTER 1
INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE

a. Type of Manual. This is an Operator’s and Unit Level maintenance manual including a Repair Parts and Special Tools List.
b. Equipment Name. Two end items are covered in this TM.

Decontaminating Apparatus Portable, 14 Liter, M13
Decontaminating Apparatus Portable, 14 Liter, M13 (Practice)

After this paragraph, the TM will use the shorter names M13 DAP and M13 Practice DAP.
c. Purpose of Equipment. The purpose of the M13 DAP is to spray DS2 onto selected surfaces of vehicles and similar equipment to reduce the levels of chemical agents. The purpose of the M13 Practice DAP is to make it possible to simulate using the M13 DAP without using DS2.
1-2. MAINTENANCE FORMS AND PROCEDURES. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750 as contained in the Maintenance Management Update.

1-3. CORROSION PREVENTION AND CONTROL. Corrosion Prevention and Control (CPC) of Army Materiel is a growing concern. It is important that any corrosion problems with this item be reported so that the problem can be addressed and improvements can be made to prevent the problem in future items.

NOTE: Use of key words such as ‘corrosion”, “rust”, ‘deterioration”, or “cracking” will assure that the information is identified as a CPC problem.

a. Definition. While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

b. Reporting. Such problems should be reported using SF 366 (Quality Deficiency Report). Send the form to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD (R), Rock Island, IL 61299-6000.
1-4. DESTRUCTION TO PREVENT ENEMY USE. Refer to TM 43-0002-31 for instructions to destroy the M13 DAP and the M13 Practice DAP to prevent enemy use. Refer to TM 43-0003-28 on Demilitarization Procedures for DS2.

1-5. REPORTING EQUIPMENT IMPROVEMENTS RECOMMENDATIONS (EIRs). If your M13 DAP or M13 practice DAP needed improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don’t like about your equipment. Let us know why you don’t like the design or performance. Put it on an SF 366 (Quality Deficiency Report), Mail it to Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD (R), Rock Island, IL 61299-6000. We’ll send you a reply.

1-6. NOMENCLATURE CROSS REFERENCE LIST.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Official Nomenclature</th>
</tr>
</thead>
<tbody>
<tr>
<td>M13 DAP</td>
<td>Decontaminating Apparatus, Portable, 14 Liter, M13</td>
</tr>
<tr>
<td>M13 Practice DAP</td>
<td>Decontaminating Apparatus Portable, 14 Liter, M13 (Practice)</td>
</tr>
<tr>
<td>Brush</td>
<td>Brush, Decontaminating</td>
</tr>
</tbody>
</table>
### Section II. EQUIPMENT DESCRIPTION

1-7. EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES. Used to decontaminate or simulate the decontamination of selected surfaces of the vehicle/equipment that personnel are most likely to contact. Both M13 end items are man-portable, manually operated, and stored/mounted on vehicle/equipment for which they are authorized. Each end item consists of seven components: a 14-liter container (filled with DS2 on M13 DAP or empty on M13 Practice DAP), a manual pump, a hose, two wand sections, an attachable brush, and an accessory container, which holds all six of the other components. When unassembled and stored in the accessory container, each DAP can be stored in the standard five-gallon can mounting bracket,
1-8 DIFFERENCES BETWEEN MODELS. The M13 DAP is used to spray DS2; the M13 Practice DAP is used for training. The M13 DAP contains a green container that is pre-filled with D32 whereas the M13 Practice DAP contains a black plastic container that can be filled by the user with water or with a mixture of water and antifreeze (training stimulant).

1-9. EQUIPMENT DATA

Weight
- Empty: 24 lbs. (M13 DAP)  
  16 lbs. (M13 Practice DAP)
- Filled: 54 lbs. (M13 DAP)  
  46 lbs. (M13 Practice DAP)

Coverage
- 1200 sq. ft. at 75 deg. F  
  111.5 sq. meters at 24 deg. C

Usable Temperature Range
- Low: -25 deg. F (-31.6 deg. C)
- High: 120 deg. F (49 deg. C)

Dimensions (unpacked but not assembled)
- Length: 14.8 in.
- Width: 6.63 in.
- Height: 18.75 in.

Storage Requirements
- Cubic storage area (undated): 1.5 cu. ft.
Section I. DESCRIPTION AND USE OF COMPONENTS

2-1. DESCRIPTION AND USE OF OPERATOR’S CONTROLS

1. Brush - Used for scrubbing DS2 (M13 DAP) or training simulant (M13 Practice IMP). The scraper on top of brush in used to remove mud or soil from equipment.

2. Wand, Brush Half - provides attachment for brush and extends reach for scrubbing.

3. Wand, Pump Half - Another extension, for scrubbing.

4. Pump - Manually operated, delivers the DS2 (M13 DAP) or training simulant (M13 Practice DAP).

5. Hose - Feeds content of DS2 or training containers to pump.

NOTE: Items 6 and 6a are not to be interchanged.

6. DS2 Container - Holds the DS2. It’s pm-filled at the factory and is not refilled by tile user.
2-1. DESCRIPTION AND USE OF OPERATOR'S CONTROLS (Cont)
6a. Training Container - Holds training simulant and is filled by the user.

7. Accessory Container - Stores all parts during transport and storage.

8. Pump Valve - Permits or prevents the flow of DS2 (M13 DAP) or training simulant (M13 Practice DAP) to the pump (shown in closed position).

9. Quick-disconnect Couplers - Connect hose to pump and DS2 container or training container.

10. Fluid Cap Assembly - Must be on when hose is not attached.

11. Link-lock - secures accessory container cover.

12. Quick-connect plug - Connects with hose quick-disconnect coupler

13. Acoessory Container Cover - Keeps parts secure,

14. Clip - Engages lock clip to lock together accessory container and DS2 or training container.
2-1. DESCRIPTION AND USE OF OPERATOR’S CONTROLS (Cont)

15. Lock Clip - Engages clip to lock together accessory container and DS2 or training container.

16. Lifting Handle - Enables you to carry the item.

17. Vent Plug - Vents DS2 or training container. Must be removed before removing fluid cap assembly.

18. Tethers - Keep vent plug or fluid cap assembly and piercing device from getting lost.

19. Piercing Device - Used to puncture the disk at the bottom of the quick-connect plug, which seals in the DS2. (There is no disk on the training container).

20. Shrink Plastic Band - Secures piercing device, vent plug, and fluid cap assembly on the DS2 container. (There is no shrink plastic band on the training container).
Section II. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2—2. GENERAL

Preventive Maintenance Checks and Services (PMCS) means systematic caring, inspecting, and servicing of equipment to keep it in good condition and to prevent breakdowns. As the item’s operator, your mission is to:

a. Always do your PMCS in the same order, so it gets to be a habit. Once you’ve had some practice, you’ll quickly spot anything wrong.

b. Do your MONTHLY PMCS on a month.

c. Do your QUARTERLY (Qtrty) PMCS every three months.

d. Use DA Form 2404 (Equipment Inspection and Maintenance Worksheet) to record any faults that you discover before operation, unless you can fix them. You DO NOT need to record the faults that you fix.

e. Be prepared to assist unit maintenance when they lubricate the item. Perform any other services when required by unit maintenance.
2-4. PMCS PROCEDURES.

a. Your Preventive Maintenance Checks and Services, Table 2-1, lists inspections and care required to keep the item in good operating condition.
b. The “INTERVAL” column of Table 2-1 tells you when to do a certain check or service.
c. The “PROCEDURE” column of Table 2-1 tells you how to do required checks and services. carefully follow the instructions. If the procedure tells you to, notify your supervisor.

d. The “NOT FULLY MISSION CAPABLE IF:” column in Table 2-1 tells you when the item is non-mission capable and why the item cannot be used.
e. If the item does not perform as required, refer to Chapter 3, Section 11, Troubleshooting.
f. If anything looks wrong and you can’t fix it, write it on your DA Form 2404. IMMEDIATELY, report it to your supervisor.

Terms "ready/available" and "mission capable" refer to status: Equipment is on hand and ready to perform its combat missions (see DA Pam 738-750).
Table 2-1. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES FOR M13 DAP AND PRACTICE DAP

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Interval</th>
<th>Item to check/Service</th>
<th>Procedure</th>
</tr>
</thead>
</table>

**WARNING**
Use extreme caution at all times when handling DS2.
Read WARNINGS on pages a through c.

- **Monthly DS2 CONTAINER**
  - Remove DS2 container (6) from accessory container (7).
  - Check container for dents, cracks, and/or leaks.
  - DS2 container is dented, cracked, or leaking.
Table 2-1. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES FOR M13 DAP AND PRACTICE DAP (Cent)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Interval</th>
<th>Item to check/Service</th>
<th>Procedure</th>
<th>Not Fully Mission Capable if:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Monthly</td>
<td>PUMP</td>
<td>Check that pump valve (8) opens and closes. Make sure pump (4) extends and closes fully. Check pump pressure/suction by placing finger over outlet/inlet openings; pump valve should be open. You should feel air pressure/suction on your finger as you pump.</td>
<td>Valve won’t open and/or close. Pump doesn’t work.</td>
</tr>
<tr>
<td>Item No.</td>
<td>Interval</td>
<td>Item to Service</td>
<td>Procedure</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Monthly</td>
<td>PUMP</td>
<td>If pump loses suction, check outlet button valve. Remove any foreign material stuck in the valve.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(tint)</td>
<td>If pump operates with difficulty, refer to Chapter 3, Section III, Operator Maintenance Procedures, for lubrication instructions.</td>
<td></td>
</tr>
</tbody>
</table>
Table 2-1. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES FOR M13 DAP AND PRACTICE DAP (Cont)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Interval</th>
<th>Item to service</th>
<th>Procedure</th>
<th>Not Fully Mission Capable if:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Qtrly</td>
<td>M13 DAP/ M13 PRACTICE DAP</td>
<td>Open accessory container cover (13) and make sure no parts are missing. Check all painted surfaces for chipped or cracked paint, and for corrosion. See Chapter 3, Section III, Operator Maintenance Procedures, for instructions on painting.</td>
<td>Parts are missing.</td>
</tr>
<tr>
<td>Item No.</td>
<td>Interval</td>
<td>Item to Service</td>
<td>Procedure</td>
<td>Not Fully Mission Capable If:</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Qtrly</td>
<td>M13 DAP M13 PRACTICE DAP (Cent)</td>
<td>Make sure cover (13) is securely latched and that dip (14) engages look clip (15) on container.</td>
<td>Assemblies cannot be securely latched.</td>
</tr>
</tbody>
</table>
Table 2-1. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES FOR M13 DAP AND PRACTICE DAP (Cont)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Interval</th>
<th>Item to check/Service</th>
<th>Procedure</th>
<th>Not Fully Mission capable If:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Qtrly</td>
<td>HOSE</td>
<td>Check that O-ring in each quick-disconnect is present, end is not cracked or sticky. Make sure hose (5) is not broken or cracked. Attach each end of hose to pump (4) to make sure quick-disconnects (9) are connecting securely.</td>
<td>O-rings are missing or unserviceable. Hose is broken or cracked. Hose does not connect properly.</td>
</tr>
</tbody>
</table>
Table 2-1. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES FOR M13 DAP AND PRACTICE DAP (Cont)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Interval</th>
<th>Item to Service</th>
<th>Procedure</th>
<th>Not Fully Mission Capable If:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Qtrly</td>
<td>WANDS</td>
<td>Make sure that O-ring on large end of wand, pump half (3), and inside wand, brush half (2) we present and are not cracked or sticky. Check threads on both wands (2 and 3) by screwing wand, pump half, into pump (4) and into each other.</td>
<td>O-rings are missing or unserviceable. Wanda won’t screw together.</td>
</tr>
</tbody>
</table>

![Diagram of wands and components]
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Interval</th>
<th>Item to check/Service</th>
<th>Procedure</th>
<th>Not Fully Mission Capable If:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Qtrly</td>
<td>WANDS (Cent)</td>
<td>If threads on the wands bind, refer to Chapter 3 Section III, Operator Maintenance Procedures, for lubrication instructions.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 2-1. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES FOR M13 DAP AND PRACTICE DAP (Cont)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Interval</th>
<th>Item to Service</th>
<th>Procedure</th>
<th>Not Fully Mission capable If:</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Qtrly</td>
<td>BRUSH</td>
<td>Check that brush (1) is not warped or cracked. Make sure the threads, molded into the brush, are not stripped. Check that O-ring in brush is present and not cracked or sticky. Brush bristles must be no less than 1&quot; long.</td>
<td>Brush is warped, cracked, or threads are stripped. O-ring is missing, cracked or sticky. Bristles are less than 1&quot; long.</td>
</tr>
</tbody>
</table>

**NOTE**
Replace all items in accessory container as shown on page 2-33.
Section III. OPERATION UNDER USUAL CONDITIONS

WARNING

Use extreme caution AT ALL TIMES when handling DS2 observe warnings on pages a through c. Don protection clothing. Use M2 Toxicological Agent protective Apron, if available.

NOTE

DS2 is for the M13 DAP only! DS2 is not to be used with the M13 Practice DAP.

NOTE: The DS2 container or training container can be used either (A) standing and attached to the accessory container, (B) standing alone, or (C) removed from the accessory container and lying horizontally.

The DS2 or training container is easier to carry in position (B). For assembly purposes, however, the DS2 or training container will be shown in position (A).
2-4 FILLING THE TRAINING CONTAINER

WARNING

DO NOT use the green painted, DS2 container for training

The M13 DAP will not be used during training. The M13 Practice DAP, which has a black training container, will be used during training. The training container can be filled only with a training simulant of either all water or a mixture of equal amounts of water and antifreeze (item 1, app F).

NOTE: Prior to training, you must clear the use of this training simulant with your local environmental coordinator.

NOTE: Do not train lower than 35 deg. F (1.7 deg. C) without adding antifreeze. With antifreeze, the M13 DAP operates in temperatures down to -25 deg. F (-31.6 deg. C).

NOTE: Steps 1 through 4 are for the M13 Practice DAP only. For the M13 DAP, start with paragraph 1, section 2-5 on page 2-19.
2-4 FILLING THE TRAINING CONTAINER (Cont)

1. You will need to obtain a funnel, common laboratory (item 2, app F).

2. Remove the vent plug (17) and the fluid cap assembly (10) of the training container (6a).

3. Insert the funnel in the quick-connect plug (12) and slowly fill training container (6a) with water. If water-antifreeze mixture is used, add 2 gallons of antifreeze to the training container (6a) and finish filling with water. A hose may also be placed directly over the quick-connect plug and used to fill the training container (6a).

4. Remove the funnel or hose and replace the vent plug (17) and fluid cap assembly (10).
1. Turn the link-lock (11) and raise cover (13). Remove brush (1) to remove the wand, brush half (2). Place brush (1) back in accessory container (7).
2. Slide the plastic adapter on the wand, brush half (2) away from the metal ring. Use end of wand with metal ring to pry off the shrink plastic band (20) on the DS2 container (6). Discard the shrink plastic band. (There is no shrink plastic band on the training container (6a).)
CAUTION: When removing vent plug (17), fluid cap assembly (10), and piercing device (19), be careful not to break tethers (18). The tethers will keep these items from getting lost during operation.

3. Use notched end of wand, brush half (2) to unscrew and remove vent plug (17).
4. Remove the brush (1), screw the plastic adapter on wand, brush half (2) into brush securing tightly.
5. Remove the wand, pump hall (3) and screw the two wands together.

CAUTION: Remove balance of items from the accessory container one at a time. Assemble each item as it is removed. Don't lay items on contaminated surfaces.
6. Remove the pump (4) and screw it onto wand, pump half (3).
7. Remove the hose (5) with free hand. Insert the brush end of the pump-wand brush assembly into the empty accessory container (7), allowing it to stand free by itself.

8. Be sure pump valve is in closed position. Line up the scribe lines on the hose coupling (9) to allow it to slip over the coupling plug. Connect hose (5) to pump (4). To lock it in place, turn the locking ring so the scribe lines are not lined up.
WARNING

Vent plug (17) must be removed before removing fluid cap assembly (10). Otherwise, DS2 may spray out when the piercing device (19) is inserted. This will only happen with the M13 DAP and not with the M13 Practice DAP.

9. Pull up the fluid cap assembly (10), which is a quick disconnect coupling.

10. Remove piercing device (19).

11. Place fluid cap assembly (10) over Y-portion of piercing device (19). Insert and rotate the piercing device (19) to rupture the disk at the bottom of the quick-connect plug (12). Remove piercing device from plug.
12. Line up scribe lines on hose coupling (9). Connect hose (5) to quick-connect plug (12). To lock in place, turn the locking ring so the scribe lines are not lined up. Make sure locking ring is fully seated.

13. Remove the DS2 container (6) or training container (6a) from the accessory container (7) by unhooking clip (14) from lock clip (15).
2-6. OPERATION PROCEDURES

WARNING

* Keep DS2 or training container on same level as operator is standing, as DS2 or training container can tip over easily.
* DO NOT direct spray on hot exhaust, hot surfaces or open flame.
* Coated surfaces are slippery; use caution to avoid falling.

NOTE: The warnings above must be followed during training.

1. Position brush (1) about three feet from contaminated area.

NOTE: Remove deposits of mud, soil, etc. with scraper part of brush (1).
2. Open pump valve (8) by turning it to in-line (open) position

**WARNING**

- DO NOT allow DS2 to spray on personnel or protective clothing.
- DS2 can penetrate clothing and can be harmful to the skin and eyes.
- To avoid pinching fingers, do not put finger between pump back and pump housing.
- Avoid splashback of DS2 when operating the pump.
NOTE: When using the M13 Practice DAP, the warnings above must be followed.

3. Pump until DS2 or training simulant flows from brush (1). Then pump one stroke, sweeping an arc of seven to eight feet while spraying DS2 or training simulant and close pump valve (8).
2-6. OPERATING PROCEDURES (Cont)

**NOTE** You will only decontaminate those surfaces most likely to be touched by the crew... doors, hatches, etc.

4. Use brush (1) to scrub DS2 or training simulant over contaminated or simulated contaminated surfaces.

5. Keep repeating steps one through four until surface being decontaminated is wet.

6. Whenever possible, those items that have been scrubbed with DS2 or training simulant should be rinsed with water.
2-7. DECALS AND INSTRUCTION PLATES

NSN: DECONTAMINATING APPARATUS:
PORTABLE, 14 LITER, M13

CONTRACT NO:
LOT NO:
MFR:
DATE OF MFG:

14 LITERS DS2
Alkaline liquid, n.o.s. (Diethyleneetriamine,
Ethylene Glycol Monomethyl Ether, Sodium
Hydroxide) NA 1719 (Caustic alkali liquids,
n.o.s. UN 1719)
FLASH POINT: 168 degrees F
WT 43  
CU .8

HAZARDOUS
CORROSIVE EYE AND SKIN
COMBUSTIBLE LIQUID

DANGER: CAUSES (SEVERE) BURNS
DO NOT GET IN EYES, ON SKIN, OR
CLOTHING. AVOID BREATHING VAPOR OR MIST.
WASH THOROUGHLY AFTER HANDLING LIQUID.
USE WITH ADEQUATE VENTILATION AND WITH FACE
SHIELD, RUBBER GLOVES AND APRON, AND RESPIRATOR.
IN CASE OF FIRE, USE CO2 OR ALCOHOL FOAM.
KEEP AWAY FROM EXCESSIVE HEAT, OPEN FLAME OR
OXIDANTS.
IN CASE OF SPILL, ABSORB WITH VERMICULITE AND
NEUTRALIZE WITH SODIUM BISULFATE.

FIRST AID. IN CASE OF CONTACT, IMMEDIATELY FLUSH
EYES OR SKIN WITH PLENTY OF WATER FOR AT LEAST 15
MINUTES. REMOVE CONTAMINATED CLOTHING OR SHOES;
AND WASH CLOTHING BEFORE REUSE. BUT DISCARD
SHOES. IF SWALLOWED, DRINK MUCH WATER OR MILK;
BUT DO NOT VOMIT. SEEK MEDICAL AID IN EVENT OF
ANY PERSONAL CONTACT WITH DS2.

2-31
2-7. DECALS AND INSTRUCTION PLATES (Cont)

NSN: 
DECONTAMINATING APPARATUS: 
PORTABLE, 14 LITER. M13 (PRACTICE) 
CONTRACT NO: 
LOT NO: 
MFR:
2-8. PREPARATION FOR MOVEMENT

WARNING

Use care when removing hose (5) so that DS2 does not spray over you. Drain hose carefully away from you as DS2 can penetrate your clothing.

1. Align scribe on quick-disconnect coupler (9) and remove hose (5) from quick-connect plug (12).

2. Replace piercing device (19), fluid cap assembly (10), and vent plug (17).

2-34
3. Drain out DS2 or training simulant from hosa (5) and pump (4) by pumping out excess on your equipment.
2-8. PREPARATION FOR MOVEMENT (Cont)

NOTE: If you don’t have any antifreeze, use water in step 4.

4. Put free end of hose (5) in a container of antifreeze (item 1, app F) or water and pump through the hose (5), pump (4), wands (2 and 3) and brush (1) to flush out DS2. Remove free end of hose from antifreeze container and work pump to remove solution from the system.

NOTE: Be sure to pump out on the ground away from where you are standing.
5. Line up the scribe lines on quick-disconnect coupler (9) and remove hose (5) from pump (4).

6. Hold up hose to drain out antifreeze or water completely.

NOTE: When replacing items in accessory container (7), locate them to match the stowage label on the inside of the cover.

7. Fold together hose (5) and replace it in accessory container (7) with the quick-disconnect (9) down.
8. Unscrew pump (4) from wand, pump half (3).

9. Operate pump (4) a few strokes with pump valve (8) open (in the in-line position) to remove any remaining antifreeze or water. Stow pump (4) in accessory container (7). Be sure the outlet end of pump (4) is up for storage.
10. Do not touch the brush bristles. Remove brush (1) from wand (2) and lay it across the DS2 container (6), the training container (6a), or on the accessory container (7).

11. Unscrew the two wands (2 and 3) end hold them upright to drain out antifreeze or water. Store wand, pump half (3) in accessory container (7). We notched end of wand, brush half (2) to tighten vent plug (17). Store wand, brush half (2) in the accessory container (7).
2-8. PREPARATION FOR MOVEMENT (Cont)

NOTE
Get a new brush (1) only when the DS2 container is empty, or if the brush bristles are less than one inch long. Discard the old brush in accordance with local unit SOP. Don’t discard the training container. Retain it for future training.

12. Get a new DS2 container (6) and hook it into the accessory container (7), or after training with the M13 Practice DAP just replace training container (6a) in accessory container. Dispose of DS2 container (6) when empty. Stow new brush (l). Close top of accessory container (7) and latch.
Section IV. OPERATION UNDER UNUSUAL CONDITIONS

2-9. OPERATION IN ADVERSE WEATHER

**WARNING**

In extreme cold, wear NBC protective rubber gloves inside arctic mittens. Change mittens if they become soaked with DS2 since DS2 can damage rubber gloves.

**CAUTION**

Do not expose the unit to salt spray. It can cause corrosion.

The M13 DAP and M13 Practice DAP are designed to perform in a temperature range of -25 deg. F to 120 deg. F (-31.6 deg. C to 40 deg. C). They will not be affected by humidity or rain.
2-10. DECONTAMINATION OF THE M13 DAP

An M13 DAP which has been stored on the outside of a contaminated vehicle will require decontamination itself before you go on to decontaminate the vehicle. Proceed as follows:

1. Do not remove the M13 DAP from its mounting bracket.

2. Open the accessory container (7), remove and assemble the accessories (follow the procedures on pages 2-19 through 2-26), Do not remove the DS2 container (6). Rehook the DS2 container (6) and the accessory container (7) and latch together,

3. Spray DS2 on the exterior of the M13 DAP and scrub all remaining surfaces thoroughly, Remove M13 DAP from mounting bracket and scrub all remaining surfaces of the M13 DAP.

NOTE

When performing these operations during training, do not train below 35 deg. F without using antifreeze in the training container (6a). Refer to appendix A for listing of field manuals that contain additional information on decontamination,
CHAPTER 3
OPERATOR MAINTENANCE INSTRUCTIONS

Section I. LUBRICATION INSTRUCTIONS

Lubricating instructions for the pump and the wands are found in Section III, Operator Maintenance Procedures, Page 3-8.

Section II. TROUBLESHOOTING PROCEDURES

3-1 INTRODUCTION. The troubleshooting table lists the common malfunctions which you may find during operation of the M13 DAP or M13 Practice DAP. You should perform the tests/inspections in the order listed.

This manual cannot list all malfunctions that may occur, nor all tests or inspections or corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.
Table 3-1. TROUBLESHOOTING TABLE

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

1. APPARATUS WON'T PUMP DS2 OR TRAINING SIMULANT

**Step 1.** Check that valve (8) is open.

Open valve (8). If it won’t open fully, notify your supervisor.

**Step 2** Check that vent plug (17) was removed.

Remove vent plug (17).

**Step 3.** Check tightness of both quick-disconnect coupler (9) connections.

If both quick-disconnect coupler (9) connections won’t fit properly, notify your supervisor.
<table>
<thead>
<tr>
<th>MALFUNCTION</th>
<th>TEST OR INSPECTION</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. APPARATUS WON’T PUMP DS2 OR TRAINING SIMULANT (Cont)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 4.</strong> Check hose (5) for leaks, kinks, and breaks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If hose (5) is leaking, notify your supervisor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 5.</strong> Check for the blockage in hose (5) or wands (2 and 3). Don’t forget to check discharge hole in brush (1).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove blockage. If unable to, replace blocked assembly. If discharge hole is plugged, discard the brush (1) and notify your supervisor.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3-1. TROUBLESHOOTING TABLE (Cont)

<table>
<thead>
<tr>
<th>MALFUNCTION</th>
<th>TEST OR INSPECTION</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
</table>

1. APPRATUS WON'T PUMP DS2 OR TRAINING SIMULANT (Cont)

**Step 6.** Be sure the outlet button valve is seated and no foreign matter is under the valve.

Remove any foreign material present and reset button valve on pump outlet.

**Step 7.** Check for suction by disconnecting hose (5), placing a finger over the hole and operating the pump (4), Pump valve (8) should be open.

If there is no suction, notify your supervisor,
Table 3-1. TROUBLESHOOTING TABLE (Cont)

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

1. APPARATUS WON'T PUMP DS2 OR TRAINING SIMULANT (Cont)

   **Step 8.** Cheek pump pressure by disconnecting wand (3) and placing a finger over hole while pumping. Pump valve (8) should be open.

   If there is no pressure in the pump (4), notify your supervisor.
### Table 3-1. TROUBLESHOOTING TABLE (Cent)

<table>
<thead>
<tr>
<th>MALFUNCTION</th>
<th>TEST OR INSPECTION</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. BRUSH LEAKS OR DOES NOT STAY ON WAND</td>
<td>Check brush threaded socket and O-ring for damage and consequent leakage; check wand end for missing retaining ring and adapter for damaged threads.</td>
<td>If brush (1) or wand, brush half (2) is faulty, notify your supervisor.</td>
</tr>
</tbody>
</table>

![Diagram of brush and wand with labeled parts: O-RING, RING, ADAPTER, and numbers 1 and 2.]
<table>
<thead>
<tr>
<th>MALFUNCTION</th>
<th>TEST OR INSPECTION</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. DS2 OR TRAINING SIMULANT LEAKS FROM WANDS</td>
<td>Check threaded joints on both wands (2 and 3) for dirt and rust. Check threads for cross threading. Check for missing or damaged O-rings,</td>
<td>Clean up joints. If either wand half is damaged, notify your supervisor.</td>
</tr>
<tr>
<td>4. HOSE QUICK-DISCONNECT COUPLERS WON&quot;T ENGAGE</td>
<td>Check quick-disconnect couplers (9) for obstructions on locking ring. Check inade of couplers for dirt obstructing opening. Check that scribe lines are lined up and that locking ring is fully seated.</td>
<td>Clean up couplers. If couplers are damaged and hose (5) is unusable, notify your supervisor.</td>
</tr>
</tbody>
</table>
If the pump (4) on the M13 DAP/M13 Practice DAP operates with difficul~,
fully extend the pump (4) and lubricate pump piston with lubricating compound,
Silicone (item 3, app F). Operate the pump (4) to work lubrication into the pump
housing.

If the threads on the wands (2 and 3) bind, spray with lubricating compound,
Silicone (item 3, app F). If the threads have corrosion on them, remove
corrosion with steel wool (item 6, app F) and spray with lubricating compound.

If corrosion is present on painted surfaces, remove with steel WOOI (item 6,
app F), then apply primer coating (item 5, app F) and spot paint (item 4,
app F), following instructions in TM 43-0139.
CHAPTER 4
UNIT MAINTENANCE

Section I. REPAIR PARTS AND SPECIAL TOOLS LIST, TMDE, AND SUPPORT EQUIPMENT.

Repair Parts are listed in Appendix C. There are no special tools, TMDE, or support equipment required to operate and maintain either the M13 DAP or the M13 Practice DAP.

Section II. SERVICE UPON RECEIPT.

4-1. INSPECT FOR DAMAGE. The following steps will be taken to inspect the M13 DAP M13 Practice DAP prior to storage and before issues to the user.

4-2 CHECK FOR COMPLETENESS.

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ITEM</th>
<th>ACTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Container</td>
<td>M13 DAP 01</td>
<td>Unpack</td>
<td>a. inspect the equipment for damage incurred during shipment.</td>
</tr>
<tr>
<td></td>
<td>M1 3 Practice DAP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 4-2 CHECK FOR COMPLETENESS (Cont)

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ITEM</th>
<th>ACTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If the equipment has been damaged, report the damage on SF 388, Quality Deficiency Report.

b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies on SF 384, Report of Discrepancy, in accordance with the instructions in DA PAM 738-750,

The equipment has 7 components: container (M13 DAP) or training container (M13 Practice DAP); accessory container; brush; wand, brush half; wand, pump half; pump; and hose.

c. Check to see whether the equipment has been modified.

Refer to DA PAM 25-30.
<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ITEM</th>
<th>ACTION</th>
<th>REMARK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>d. Perform Operator PMCS. See Chapter 2, Section II.</td>
<td>For the M13 DAP only; if there is a leakage of DS2, dispose of DS2 IAW TB CML 113.</td>
</tr>
</tbody>
</table>
Section III. UNIT PREVENTIVE MAINTENANCE
CHECKS AND SERVICES

Table 4-1. UNIT PMCS FOR M13 DAP AND M13 PRACTICE DAP

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Interval</th>
<th>Item to service</th>
<th>Procedure</th>
<th>Not Fully Mission Capable if:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Monthly</td>
<td>DS2 CONTAINER</td>
<td>Check that container (6) is not dented, cracked, or leaking DS2.</td>
<td>Container is dented, cracked or leaking DS2.</td>
</tr>
<tr>
<td>2.</td>
<td>Monthly</td>
<td>M13 DAP/ M13 PRACTICE DAP</td>
<td>Open accessory container cover (13); make sure no parts are missing. Check all painted surfaces for cracked paint, and for corrosion.</td>
<td>Parts are missing.</td>
</tr>
</tbody>
</table>

**NOTE:** If DS2 container is leaking, dispose of IAW TB CML 113.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Interval</th>
<th>Item to Service</th>
<th>Procedure</th>
<th>Not Fully Mission Capable If:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Monthly</td>
<td>M13 DAP/ M13 PRACTICE DAP (Cent)</td>
<td>Remove all rust with steel wool (item 6, app F) then apply primer coating (item 5, app F) and apot paint (item 4, app H), Make sure cover (13) is securely latched and that clip (14) engages lock clip (15) on container.</td>
<td>Assemblies cannot be securely latched,</td>
</tr>
</tbody>
</table>
Section IV. UNIT MAINTENANCE PROCEDURES

4-4. GENERAL MAINTENANCE. Unit level is authorized to replace defective components found by the operator during PMCS or troubleshooting. The operator removes the defective component and installs the new component as provided by the Unit level.

4-3. TROUBLESHOOTING. Unit level troubleshooting is identical to the Operator level troubleshooting. Unit level may wish to repeat the operator’s troubleshooting in order to confirm that the suspected damaged component needs to be replaced.
Section V. PREPARATION FOR STORAGE OR SHIPMENT

4-5. SECURITY. Security of the M13 DAP/M13 Practica DAP will be maintained in accordance with AR 190-13.

4-6. LONG TERM STORAGE. The M13 DAP will meet long term storage requirement of two years extendable without further preparation.

4-7. TROPICAL CONDITIONS Under tropical conditions, the M13 DAP/M13 Practice DAP must be stored indoors. Exposure to salt spray can cause corrosion.

4-8. ADMINISTRATIVE STORAGE Administrative storage will be in accordance with TB CML 113, Storage, Shipment, Handling and Disposition of Decontaminating Agent, DS2.
APPENDIX A
REFERENCES

A-1. FORMS

Equipment Inspection and Maintenance Worksheet ................................................. DA Form 2404
Quality Deficiency Report ...................................................................................... SF 388
Recommended Changes to DA Publications and Blank Forms .......................... DA Form 2028
Report of Discrepancy ........................................................................................... SF 364

A-2. FIELD MANUALS

First Aid For Soldiers .............................................................................................. FM 21-11
NBC Decontamination ........................................................................................... FM 3-5
NBC Contamination Avoidance ............................................................................. FM 3-3

A-0
A-3. TECHNICAL MANUALS

Painting Instructions for Army Materiel .................................................................TM 43-0139
Demilitarization Procedures for FSC 4230
  Decontaminating and Impregnating Equipment, FSC 4410
  Industrial Boilers, FSC 6810 Chemicals ..............................................................TM 43-0003-28
Destruction of Chemical Weapons and
  Defense Equipment to Prevent Enemy Use .......................................................TM 43-0002-31

A-4. MISCELLANEOUS PUBLICATIONS

Consolidated Index of Army Publications
  and Blank Forms ....................................................................................................DA PAM 25-30
Maintenance Management Update ..........................................................................DA PAM 733-750
The Army Physical Security Program ....................................................................AR 190-13
Storage, Shipment, Handling, and Disposition of
  Decontaminating Agent DS2 ................................................................................TB CML 113
APPENDIX B
MAINTENANCE ALLOCATION CHART (MAC)

Section I. INTRODUCTION

B-1. THE ARMY MAINTENANCE SYSTEM MAC.

a. This introduction (Section I) provides a general explanation of all maintenance and repair functions authorized at various maintenance levels under the standard Army Maintenance System concept.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels which are shown on the MAC in column (4) as:

   Unit - includes two subcolumns, C (operator/crew) and 0 (unit maintenance).

   c. Section III - Not Applicable.

B-0
d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS

Maintenance functions will be limited to and defined as follows:

a. **Inspect.** To determine the availability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel),

b. **Service.** Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids or gases.

c. **Replace.** To remove an unserviceable item and install a serviceable counterpart in its place. ‘Replace’ is authorized by the MAC and assigned maintenance level is shown as the 3rd position oode of the SMR code.

d. **Repair.** The application of maintenance services including fault boation/troubleshooting, removal/ installation, and disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.
B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II.

a. Column (1), Group Number. Lists functional group code numbers, to identify maintenance significant components with the next higher assembly.

b. Column (2), Component/Assembly. Contains the item names of components, for which maintenance is authorized.

c. Column (3), Maintenance Function. Lists the functions to be performed on the item listed in column (2),

d. Column (4), Maintenance Level. Specifies each level of maintenance authorized to perform each function listed in Column 3, by indicating work time required (expressed as man-hours in whole hours or decimals) in the appropriate subcolumn. This work-time figure represents the active time required to perform that maintenance function. The work-time figure represents the average time required to restore an item to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions. The symbol designations for the various maintenance levels are as follows:
e. **Column (5), Tools and Equipment** Not Applicable.

f. **Column (6), Remarks** This column contains a letter code, which is keyed to the remarks contained in Section IV.

### 54. TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III.

Not Applicable

### B-6. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV.

a. **Column (1), Reference Code.** The code recorded in column 6, Section II.

b. **Column (2), Remarks.** Lists information to the maintenance function being performed as indicated in the MAC, Section II.
## Section II MAINTENANCE ALLOCATION CHART

FOR

DECONTAMINATING APPARATUS PORTABLE, M13/M13 (PRACTICE)

<table>
<thead>
<tr>
<th>GROUP NO.</th>
<th>COMPONENT/ASSEMBLY</th>
<th>MAINT FUNCTION</th>
<th>(4) MAINTENANCE LEVEL</th>
<th>(5) TOOLS AND EQPT REF CODE</th>
<th>(6) REMARKS CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Decontaminating Apparatus</td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Insp. Service</td>
<td>UNIT: C O</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace Repair</td>
<td>DIR SPRT: 0.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GENL SPRT: 0.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DEPOT: 0.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section IV. REMARKS

<table>
<thead>
<tr>
<th>REMARKS CODE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Organizational inspection is for M13 DAP only.</td>
</tr>
</tbody>
</table>
APPENDIX C
UNIT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS UST

Current as of 08 July 1992

SECTION I. INTRODUCTION

C-1. SCOPE
This RPSTL lists and authorizes spares and repair parts required for performance of Unit maintenance of the M13 DAP and M13 Practice DAP. It authorizes the requisitioning, issue, and disposition of spares, repair parts as indicated by the source, maintenance and recoverability (SMR) codes.

C-2 GENERAL
This Repair Parta and Special Tools List is divided into the following sections:
C-2. GENERAL (CONT.).

   a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence.

   b. Section III. Special Tools List. Not Applicable.

   c. Section IV. Cross-referance Index. A list, in National Item Identification Number (NIIN) sequence, of all National Stock Numbers (NSN) appearing in the listings, followed by a separate list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

C-3. EXPLANATION OF COLUMNS (Sections II and III).

   a. ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.
b. SMR CODE Column (2). The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout.

<table>
<thead>
<tr>
<th>Source code</th>
<th>Maintenance code</th>
<th>Recoverability code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st two</td>
<td>XX</td>
<td>X</td>
</tr>
<tr>
<td>xx positions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Source Code**: How you get an item.
- **Maintenance Code**: 3rd position, Who can install, replace, or use the item.
- **Recoverability Code**: 4th position, Who can do complete repair on the item.

*Complete Repair Maintenance capacity, capability and authority to perform all corrective maintenance tasks of the “Repair” function in a use/user environment in order to restore serviceability to a failed item.

(1) **Source Code**. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment.
C-3. EXPLANATION OF COLUMNS (Section II and III) (CONT.).

<table>
<thead>
<tr>
<th>Code</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the level indicated by the code entered in the 3d position of the SMR code.</td>
</tr>
<tr>
<td>PA</td>
<td>NOTE Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded “XA”.</td>
</tr>
<tr>
<td>PC</td>
<td>(2) Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows:</td>
</tr>
</tbody>
</table>

   (a) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance.

C-4
<table>
<thead>
<tr>
<th><strong>Code</strong></th>
<th><strong>Application/Explanation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>- Unit or Aviation Unit level can remove, replace, and use the item, (b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair. This position will contain one of the following maintenance codes.</td>
</tr>
<tr>
<td>Z</td>
<td>- Non reparable. No repair is authorized, (3) Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows</td>
</tr>
</tbody>
</table>
C-3. EXPLANATION OF COLUMNS (Section II and III) (CONT.).

<table>
<thead>
<tr>
<th>Codes</th>
<th>Application/Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z</td>
<td>-Nonreparable item, When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3d position of SMR Code.</td>
</tr>
<tr>
<td>A</td>
<td>-Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous materiel). Refer to appropriate manuals/directives for specific instructions.</td>
</tr>
</tbody>
</table>

c. CAGEC (Column (3)). The Commercial and Government Entity Code (CAGEC) is a 5-digit code which is used to identify the manufacturer, distributor, or Government agency, that supplies the item.

d. PART NUMBER (Column (4)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.
NOTE: When you use an NSN to requisition an item, the item you receive may have a different part number from the part listed.

e. DESCRIPTION AND USABLE ON CODE (UOC) (Column (5)). This column includes the following information:

(1) The Federal item name and, when required, a minimum description to identify the item.

(2) The usable on code, when applicable (see paragraph 5, Special information).

(3) The statement “END OF FIGURE” appears just below the last item description in Column 5 for a given figure in both Section II and Section III.

f. QTY (Column (6)). The CITY (quantity per figure column) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group.

C-4. EXPLANATION OF COLUMNS (Section IV).

a. NATIONAL STOCK NUMBER (NSN) INDEX
C-4. EXPLANATION OF COLUMNS (Section IV) (CONT.).

(1) STOCK NUMBER column. This column lists the NSN by National Item Identification Number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN i.e.

\[
\begin{array}{c}
\text{NSN} \\
5305-01-674-1467 \\
\text{NIIN}
\end{array}
\]

When using this column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

(2) FIG. column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and III.

(3) ITEM column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

b. PART NUMBER INDEX Part numbers in this index are listed by part number in ascending alphanumeric sequence.

(1) CAGEC column. The Commercial and Government Entity Code (CAGEC) is a 5-digit code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

C-8
(2) **PART NUMBER column.** Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

(3) **STOCK NUMBER column.** This column lists the NSN for the associated pari number and manufacturer identified in the PART NUMBER and CAGEC columns to the left.

(4) **FIG. column.** This column lists the number of the figure where the item is identified/located in Section II and III.

(5) **ITEM column.** The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

C-6. **SPECIAL INFORMATION**

a. **USABLE ON CODE.** The usable on code appears in the lower left corner of the Description column heading. Usable on codes are shown a “UOC . . .” in the description Column (justified left) on the first line applicable item description/nomenclature. Uncoded items are applicable to all models. Identification of
C-5. SPECIAL INFORMATION (CONT.).

the usable on code used in the RPSTL are:

<table>
<thead>
<tr>
<th>Code</th>
<th>Used On</th>
</tr>
</thead>
<tbody>
<tr>
<td>R83</td>
<td>Model M13</td>
</tr>
</tbody>
</table>

C-6. HOW TO LOCATE REPAIR PARTS.

a. When National Stock Number or Part Number is Not Known.

(1) **FIRST** Use figure covering assembly to identify items on figure and note item number. Refer to Repair Parts List for item number noted on figure to find part number.

(2) **SECOND.** Refer to Part Number Index to find NSN, if assigned,

b. When National Stock Number or Part Number is Known:

(1) **FIRST** Using Index of National Stock Numbers and Part Numbers, find pertinent National Stock Number or Part Number. The NSN index is in C-10
National Item Identification Number (NIIN) sequence (see 4.a(1)). The part numbers in Part Number index are listed in ascending alphanumeric sequence (see 4.b.). Both indexes cross-reference you to, illustration figure and item number of item you are looking for.

(2) **SECOND.** After finding figure and item number, verify that item is one you’re looking for, then locate item number in repair parts list for figure.

C-7. **ABBREVIATIONS.** Not applicable.
Figure C-1. Decontaminating Apparatus: Portable, M13/M13 (Practice)
SECTION II.

<table>
<thead>
<tr>
<th>ITEM NO</th>
<th>SMR CODE</th>
<th>CAGEC</th>
<th>PART NUMBER</th>
<th>DESCRIPTION AND USABLE ON CODE (UOC)</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PAOZZ 81381</td>
<td></td>
<td>5-51-598</td>
<td>CONTAINER, TRAINER A</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>PAOZZ 81361</td>
<td></td>
<td>D5-51-560</td>
<td>HOSE ASSEMBLY, NONME</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>PAOZZ 81361</td>
<td></td>
<td>D5-51-540</td>
<td>PUMP, RECIPROCATING</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>PCOZZ 81361</td>
<td></td>
<td>C5-51-555</td>
<td>TUBE ASSEMBLY, METAL</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>PCOZZ 81381</td>
<td></td>
<td>C5-51-537</td>
<td>TUBE AND FITTINGS, M</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>PAOZZ 81381</td>
<td></td>
<td>D5-51-561</td>
<td>BRUSH, WINDOW</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>PAOZZ 81361</td>
<td></td>
<td>E5-51-529</td>
<td>CONTAINER, DECONTAMINATING</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>PAOZA 81381</td>
<td></td>
<td>D5-51-575</td>
<td>DECONTAMINATING AGE UOC: R83</td>
<td>1</td>
</tr>
</tbody>
</table>

GROUP 00: DECONTAMINATING APPARATUS: PORTABLE, M13/M13 (PRACTICE)

END OF FIGURE
## SECTION IV.

### NATIONAL STOCK NUMBER AND PART NUMBER INDEX

#### NATIONAL STOCK NUMBER INDEX

<table>
<thead>
<tr>
<th>STOCK NUMBER</th>
<th>FIG.</th>
<th>ITEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>6850-01-136-8888</td>
<td>C-1</td>
<td>8</td>
</tr>
<tr>
<td>4710-01-136-8890</td>
<td>C-1</td>
<td>4</td>
</tr>
<tr>
<td>4230-01-136-8891</td>
<td>C-1</td>
<td>7</td>
</tr>
<tr>
<td>7920-01-136-8892</td>
<td>C-1</td>
<td>6</td>
</tr>
<tr>
<td>4710-01-136-8893</td>
<td>C-1</td>
<td>5</td>
</tr>
<tr>
<td>4320-01-136-8894</td>
<td>C-1</td>
<td>3</td>
</tr>
<tr>
<td>4720-01-136-9028</td>
<td>C-1</td>
<td>2</td>
</tr>
<tr>
<td>4230-01-298-1044</td>
<td>C-1</td>
<td>1</td>
</tr>
</tbody>
</table>

C-1-1
SECTION IV.

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

PART NUMBER INDEX

<table>
<thead>
<tr>
<th>CAGE</th>
<th>PART NUMBER</th>
<th>STOCK NUMBER</th>
<th>FIG.</th>
<th>ITEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>81361</td>
<td>(25-51-537</td>
<td>4710-01-136-8693</td>
<td>C-1</td>
<td>5</td>
</tr>
<tr>
<td>81361</td>
<td>C5-51-555</td>
<td>4710-01-136-6690</td>
<td>C-I</td>
<td>4</td>
</tr>
<tr>
<td>81361</td>
<td>D5-51-540</td>
<td>4320-01-136-6694</td>
<td>C-1</td>
<td>3</td>
</tr>
<tr>
<td>81361</td>
<td>D5-51-560</td>
<td>4720-01-136-9028</td>
<td>C-1</td>
<td>2</td>
</tr>
<tr>
<td>81361</td>
<td>D5-51-561</td>
<td>7920-01-136-6692</td>
<td>C-1</td>
<td>6</td>
</tr>
<tr>
<td>81361</td>
<td>D5-51-575</td>
<td>6850-01-136-6866</td>
<td>C-1</td>
<td>8</td>
</tr>
<tr>
<td>81361</td>
<td>E5-51-529</td>
<td>4230-01-136-6691</td>
<td>C-1</td>
<td>7</td>
</tr>
<tr>
<td>81361</td>
<td>5-51-598</td>
<td>4230-01-296-1044</td>
<td>C-1</td>
<td>1</td>
</tr>
</tbody>
</table>
APPENDIX D
COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

D-1. SCOPE

This appendix lists components of end item and basic issue items for the M13 DAP/M13 Practice DAP to help you inventory items required for safe and efficient operation.

D-2. GENERAL

There are no Components of End Items in this manual. The Basic Issue Items List is explained below.

Section II. Basic Issue items. These essential items are required to place the M13 DAP/M13 Practice DAP in operation, operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the M13 DAP/M13 Practice DAP during operation and when it is transferred between property accounts. This list is your authority to request/requisition them for replacement based on authorization of the end item by the TOE/MTOE.

D-0
D-3 EXPLANATION OF COLUMNS

a. Column (1) Illustration Number. Not Applicable

b. Column (2) - National Stock Number. Not Applicable

c. Column (3) - Description. Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the Commercial and Government Entity code (CAGEC) (in parentheses) and the part number.

d. Column (4) - Unit of Issue (U/I). Not Applicable

e. Column (5) - Quantity Required (Qty Rqr). Indicates the quantity required.
### Section II. BASIC ISSUE ITEMS

<table>
<thead>
<tr>
<th>(1) Illus Number</th>
<th>(2) National Stock Number</th>
<th>(3) Description</th>
<th>(4) U/1</th>
<th>(5) Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TM 3-4230-214-12&amp;P Operator's and Unit Maintenance Manual including repair parts and special tools list for Decontaminating Apparatus: Portable, M13/M13 (Practice)</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**APPENDIX E, Additional Authorization List - Not Applicable.**

D-2/E-1
APPENDIX F
EXPENDABLE AND DURABLE ITEMS UST

Section I. INTRODUCTION

F-1. SCOPE.

This appendix lists expendable and durable items that you will need to operate and maintain the M13 DAP and M13 Practice DAP. This listing is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (except medical, class V repair parts, and heraldic items).

F-2. EXPLANATION OF COLUMNS.

a. Column 1. Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the item (e.g. “Use antifreeze, item 1, Appendix F”).

b. Column 2. Level. This column identifies the lowest level of maintenance that requires the item.
F-2. EXPLANATION OF COLUMNS (CONT.).

c. Column 3. National Stock Number. This is the national stock number assigned to the item which you can use to requisition it.

d. Column 4. Item Name, Description, Commercial and Government Entity Code (CAGEC), and part number. This provides the other information you need to identify the item.

e. Column 5. Unit of Measure. This code shows the physical measurement or count of an item.
### Section II EXPENDABLE/DURABLE ITEMS LET

<table>
<thead>
<tr>
<th>(1) ITEM NUMBER</th>
<th>(2) LEVEL</th>
<th>(3) NATIONAL STOCK NUMBER</th>
<th>(4) ITEM NAME, DESCRIPTION CAGEC, PART NUMBER</th>
<th>(5) U/M</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>6850-00-181-7929</td>
<td>Antifreeze, (81349), MILA46153</td>
<td>GL</td>
</tr>
<tr>
<td>2</td>
<td>C</td>
<td>6640-00-889-7023</td>
<td>Funnel, Common Laboratory, (81348), NNNFOO1652</td>
<td>EA</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
<td>9150-00-823-7860</td>
<td>Lubricating Compound, (92381), SILCONE 7</td>
<td>CN</td>
</tr>
<tr>
<td>4</td>
<td>C</td>
<td>8010-01-229-9561</td>
<td>Polyurethane Coating, (81349), MIL-C-53039, Green, 383</td>
<td>GL</td>
</tr>
</tbody>
</table>
### Section II. EXPENDABLE/DURABLE ITEMS LIST CONT

<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>LEVEL</th>
<th>NATIONAL STOCK NUMBER</th>
<th>ITEM NAME, DESCRIPTION CAGEC, PART NUMBER</th>
<th>U/M</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>C</td>
<td>8010-01-193-0520</td>
<td>Primer Coating, (81349), MIL-P-53030</td>
<td>KT</td>
</tr>
<tr>
<td>6</td>
<td>C</td>
<td>5350-00-242-4403</td>
<td>Wool, Metallic, (81348), FF-W-1825</td>
<td>EA</td>
</tr>
</tbody>
</table>
DID WE GOOF?
DO YOU KNOW A BETTER WAY?
DON'T KEEP THOSE GRIPES TO YOURSELF.

USE DA FORM
2028 OR WHATEVER
YOU HAVE HANDY

WRITE TO US:

COMMANDER
US ARMY CHEMICAL RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
ATTN: SMCCR-MAT
ABERDEEN PROVING GROUND, MD 21010-5423
By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army

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