TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, AND DIRECT SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS)

DISPERSER, RIOT CONTROL AGENT, PORTABLE: M33A1

(NSN 1040-00-148-9824)

This copy is a reprint which includes current pages from Change 1

H E A D Q U A R T E R S , D E P A R T M E N T O F T H E A R M Y

SEPTEMBER 1978

WARNINGS

Wear protective mask and rubber gloves when operating or servicing the disperser with riot control agent. Wear protective hood, if available. Filling must be done in a safe area as designated by the local commander.
Never direct riot control agent at friendly personnel or fire into the wind.
If the disperser was used with CS dry agent, decontaminate (para 4-16) before performing troubleshooting or maintenance where possible. If the disperser was pressurized, ensure that all air pressure is relieved.
Secure the air cylinder and both ends of the charging hose before operating the compressor to prevent injury.
Do not fire the disperser indoors when using dry riot control agent. Open flame or a spark can cause a dust explosion.
The large amount of riot control agent contained in the disperser and the speed with which it can be released requires alertness on the part of the operator and local commander to ensure that the target area is not covered with an excessive concentration of riot control agent.
Assume the air cylinder is pressurized. Ensure that all air pressure is relieved.

CHANGE }
No. 1 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *16 March, 1982*

Operator's, Organizational, And Direct Support Maintenance Manual
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)
DISPERSER, RIOT CONTROL AGENT, PORTABLE: M33A1
(NSN 1040-00-148-9824)

The major purpose of this change is to add use of CR Liquid Agent.
TM 3-1040-262-13&P is changed as follows:
1. Delete warnings on back of front cover with pen and ink.
2. New or changed material is indicated by a vertical bar in the margin of the page. A changed illustration is indicated by a miniature pointing hand.
3. Remove old pages and insert new pages as indicated below:

Remove Pages	*Insert Pages*
None	A/(B blank)
1-1 and 1-2	1-1 and 1-2
1-3 thru 1-7 (reverse blank)	1-3 thru 1-7 (reverse blank)
2-3 and 2-4	2-3 and 2-4
3-3 and 3-4	3-3 and 3-4
4-1 thru 4-10	4-1 thru 4-10.1
4-13 and 4-14	4-13 and 4-14
A-1/(A-2 Blank)	A-1/(A-2 Blank)

4. File this change sheet in front of the publication for reference purposes.

By Order of the Secretary of the Army:

EDWARD C. MEYER
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Brigadier General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-28, Operator maintenance requirements for Riot Control Agent Disperser, Portable.

WARNINGS

Wear protective mask and rubber gloves when operating or servicing the disperser with riot control agent. Wear protective hood, if available. Filling must be done in a safe area as designated by the local commander. Never direct riot control agent at friendly personnel or into the wind.

If the disperser was used with CS dry or CR liquid agent, decontaminate (para 4-16) before troubleshooting or performing maintenance. Ensure that all air pressure is relieved from disperser to avoid possibility of explosion.

Secure the air cylinder and both ends of the charging hose before operating the compressor to prevent injury. Do not operate the disperser indoors when using dry riot control agent. Open flame or a spark can cause a dust explosion. The large amount of riot control agent contained in the disperser and the speed with which it can be released requires alertness on the part of the operator and local commander to ensure that the target area is not covered with an excessive concentration of riot control agent. Assume the air cylinder is pressurized. Ensure that all air pressure is relieved .

CR liquid agent causes tearing and a painful burning sensation of the eyes, nose, throat, and skin. It can cause difficult breathing. Personnel filling an agent container assembly with CR liquid agent must wear protective masks, gloves, and hoods. Wash hands thoroughly before eating or smoking after using CR liquid agent.

When dispersing CS dry agent under low humidity conditions, stand on static strap to provide maximum grounding. This will prevent buildup of static electricity charges.

MEA is a corrosive liquid and will damage eyes and skin on contact. Wear protective mask, rubber gloves, and hood when handling MEA.

TECHNICAL MANUAL
No. 3-1040-262-13&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 25 September 1978

OPERATOR'S ORGANIZATIONAL, AND DIRECT SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS) DISPERSER, RIOT CONTROL AGENT, PORTABLE: M33A1 (NSN 1040-00-148-9824)

Current as of July 1978

Reporting Errors and Recommending Improvements. You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publication and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, Attn: DRSAR-MAS-C, Aberdeen Proving Ground, MD 21010. A reply will be furnished to you.

LIST OF ILLUSTRATIONS

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope.

These instructions are for use by the operator, organizational, and direct support maintenance personnel. They apply to the Disperser, Riot Control Agent, Portable, M33A1 and identify the Service Kit, Portable, Disperser, Riot Control Agent, M254. Hereinafter, this equipment will be referred to as disperser and the M254 service kit respectively. In this manual CS or CR riot control agents are referred to as agents, CS dry agents, and CR liquid agents respectively.

1-2. Record and Report Forms.

a. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750.

b. Use SF 364 (Report of Discrepancy) to report damage or improper shipment of materiel.

1-3. Use.

The disperser is used to discharge CS dry agent and CR liquid agent into the atmosphere or on personnel to control uprisings, disturbances, and riots.

1-4. Description.

a. Disperser. The disperser (fig. 1-1) consists of a frame and harness assembly, a compressed gas cylinder (agent container assembly), an air pressure assembly, a gun and hose assembly, multijet spray unit, and check valve assembly.

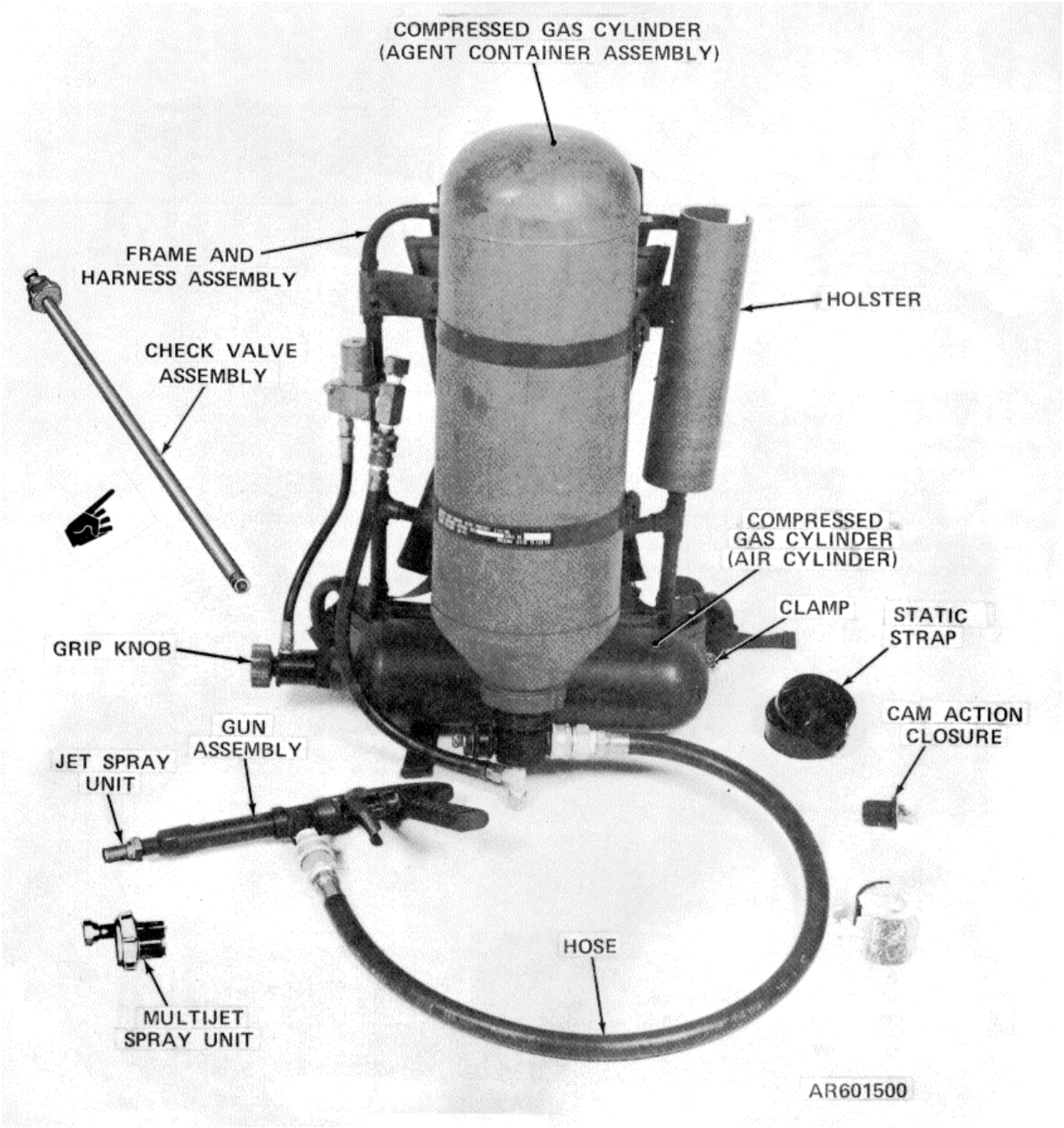


Figure 1-1. M33A1 Portable Riot Control Agent Disperser.

b. Frame and Harness Assembly. The frame and harness assembly is shown in figure 1-2. The frame and harness assembly provides the means for the operator to carry the disperser.

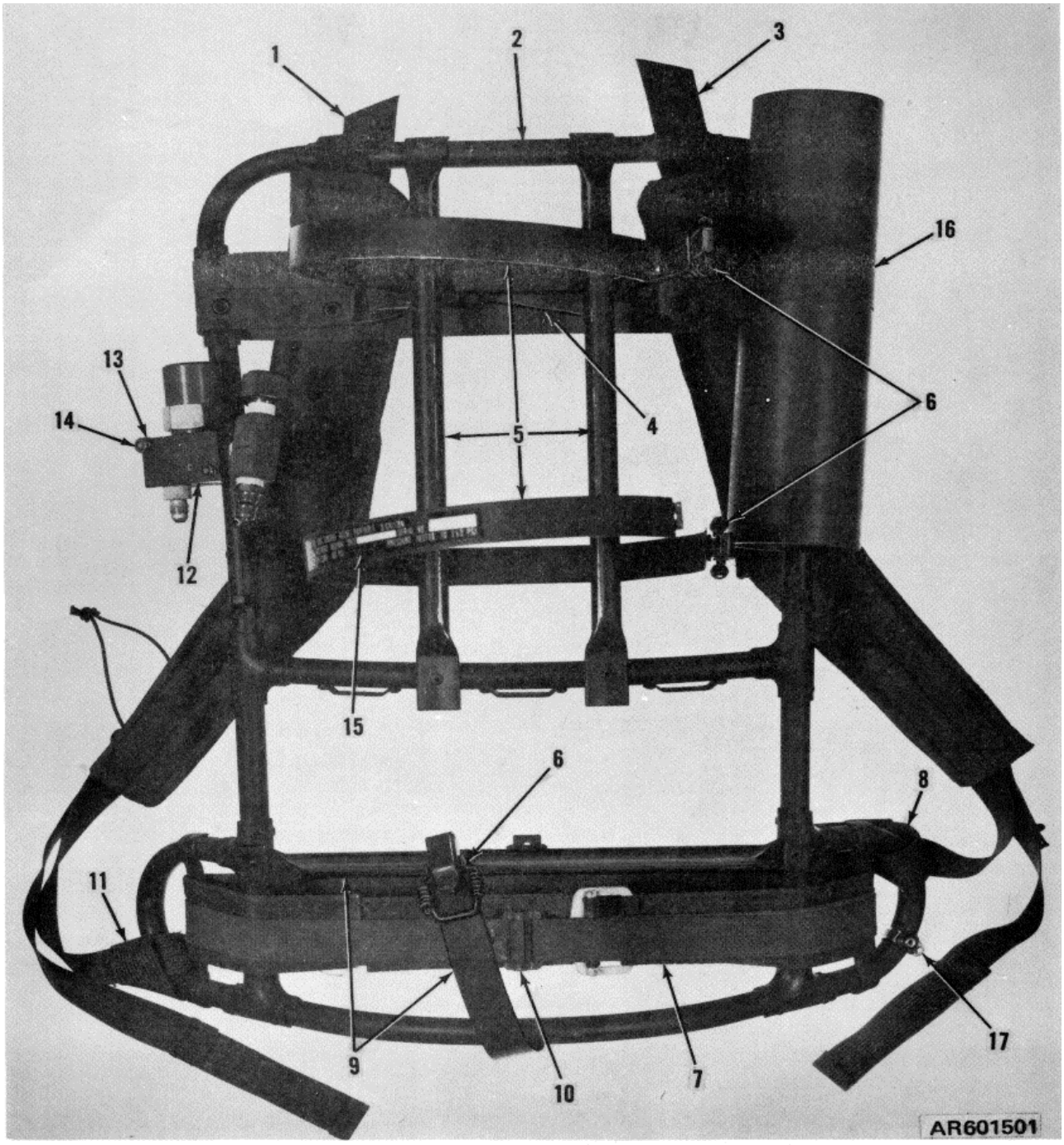


Figure 1-2. Frame and harness assembly

1 left shoulder strap
2 Frame assembly
3 Right shoulder strap
4 Upper back strap
5 Agent container support and straps
6 Spring loaded clamps (quantity 3)
7 Lower back strap
8 Right shoulder strap billet
9 Air cylinder support and strap
10 Waist Strap
11 Left shoulder strap billet
12 Regular clip
13 Screw
14 Nut
15 Identification decal
16 Holster
17 Snap (for static grounding strap) (see basis issue item list)

c. Compressed Gas Cylinder (Agent Container Assembly). The compressed gas cylinder is shown on figure 1-3. The official name of this assembly is compressed gas cylinder. In this manual it will be referred to as agent container assembly. The agent container holds the supply of agent.

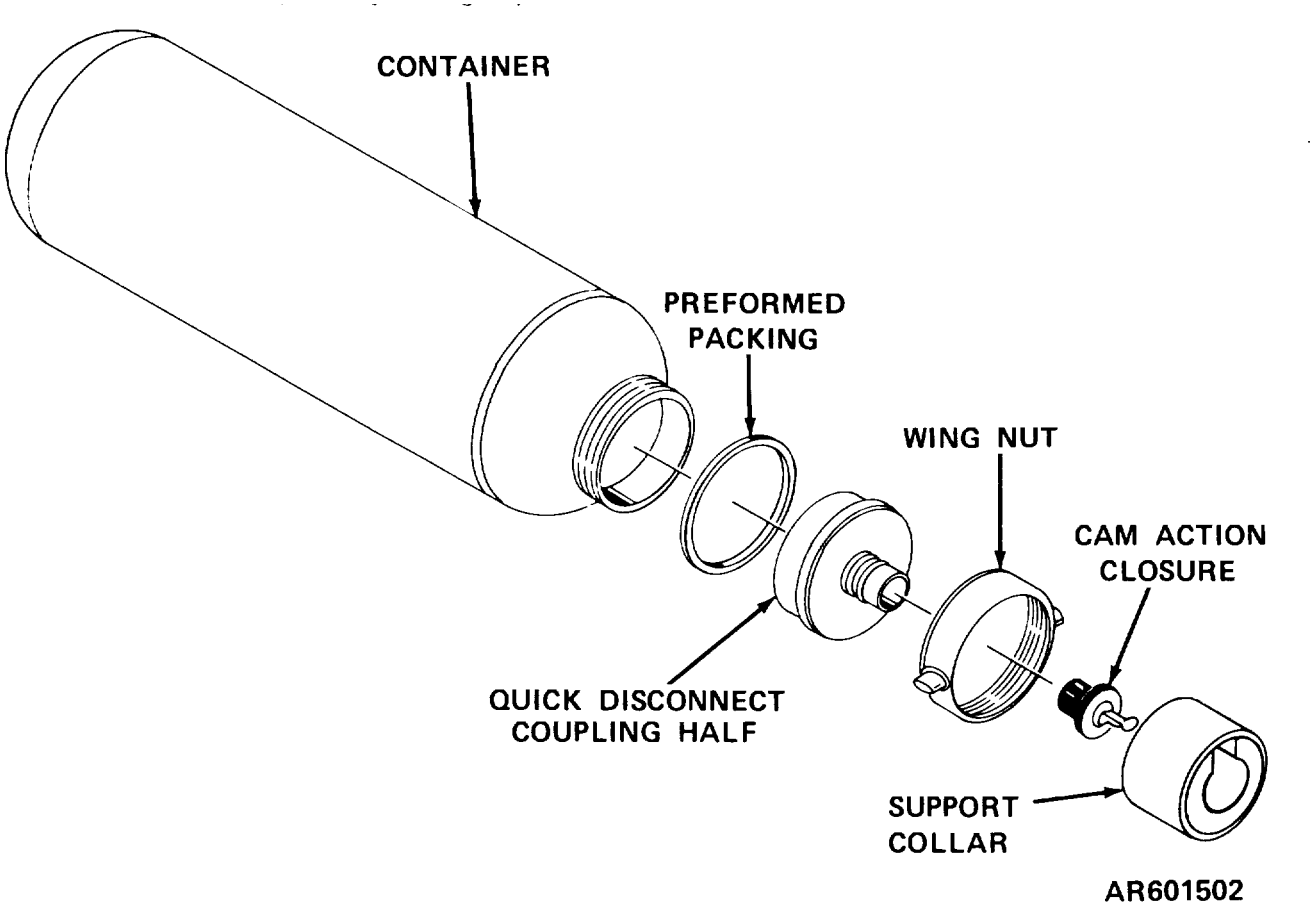


Figure 1-3. Compressed Gas Cylinder (agent container assembly).

d. Air Pressure Assembly. The air pressure assembly is shown in figure 1-4. The air pressure assembly stores and supplies the pressurized air to drive the agent from the agent container. When using CS dry agent, the check valve assembly (dry) is used. With CR liquid agent the check valve assembly (liquid) is used. The official name of this assembly is compressed gas cylinder. In this manual it will be referred to as air cylinder. The air cylinder holds the supply of pressurized air.

1 Grip knob
2 Nonmetallic hose assembly (high pressure)
3 Tube to boss straight adapter (strainer assembly)
4 Fluid pressure regulating valve (pressure regulator)
5 Safety relief valve (low pressure)
6 Pipe tee
7 Quick-disconnect coupling half (Male)
8 Quick-disconnect coupling half (Female)
9 Nonmetallic hose assembly (low pressure)
10 Compressed gas cylinder (air cylinder)
11 Check valve assembly (dry)
12 Check valve assembly (liquid)
13 Coupler assembly (valve actuating)
14 Nipple assembly
15 Rupture disk assembly (high pressure)
16 Drain cock
17 Drain cock cap assembly
18 Nipple
19 Coupler assembly (manifold)
20 Tube to boss tee
21 Tube cap

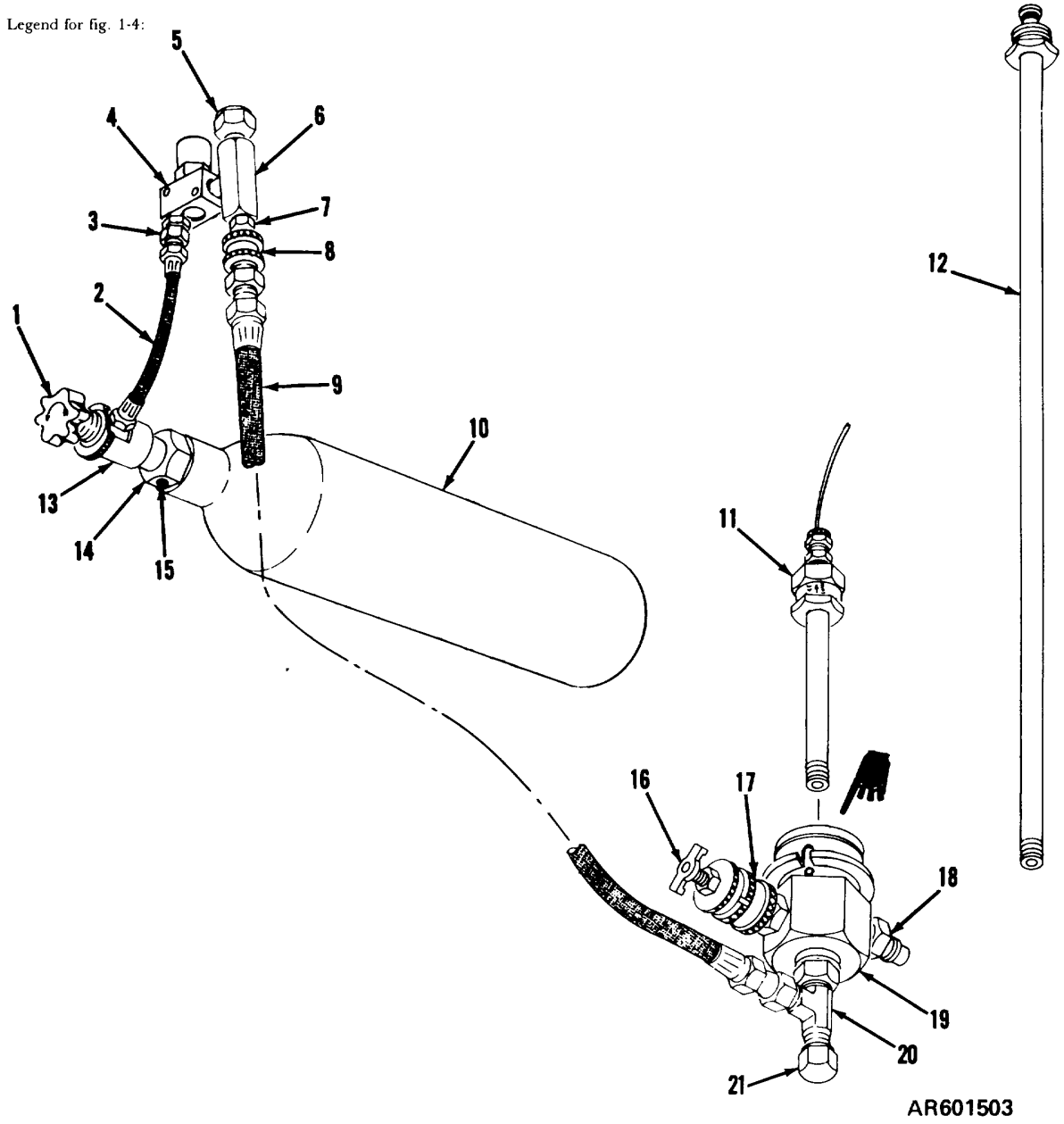


Figure 1-4. Air Pressure Assembly.

e. Gun Assembly Group.

(1) *General* The gun assembly group (fig. 1-5) consists of a gun assembly and a discharge hose assembly. The gun and hose assembly directs the discharge of CS dry agent toward the target.

(2) *Gun assembly*. For use with dry agent a jet spray unit is screwed on the nozzle housing and tubing assembly. For use with CR liquid agent, a multijet spray unit is screwed on the nozzle housing and tubing assembly.

(3) *Discharge hose assembly*. The discharge hose consists of two quick-disconnect female coupling halves and hose assembly.

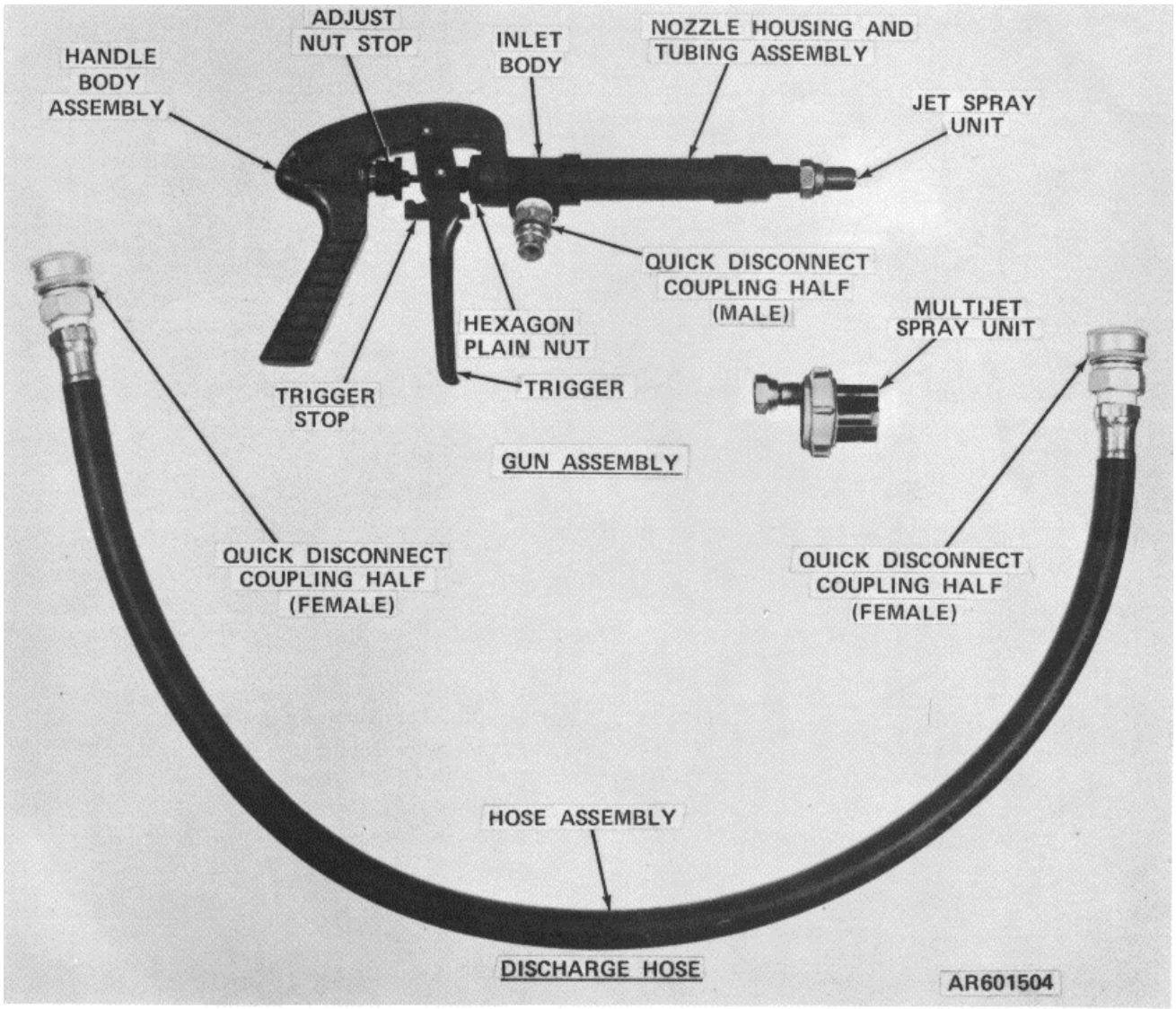


Figure 1-5. Gun assembly group

f Basic Issue Items (Accessories). The basic issue items are shown in figure B-1. The clamp, cam action closure, static strap, and support collar are shown in figure 1-1. The spare air cylinder and the agent n container assembly are shown only in figure B-1.

g. Identification. An identification decal (fig. 1-6) is cemented to the lower agent container strap of the frame and harness assembly.

DISPERSER, RIOT CONTROL AGENT, PORTABLE, 3 GALLON, M33A1 MANUFACTURED BY DATESERIAL NO,SERVICE PRESSURE 180 PSI PRESSURE TESTED TO 350 PSI

AR601505

Figure 1-6. Identification decal.

1-5. Tabulated Data

All data are approximate.

a. Packaged Disperser (M33A).

Weight	59 lb (26.8 kg)
Cube	5.4 cu ft (0.15 m3)
Dimensions	30 ¼ X20X15 ¼in (76.8x50.8x38.7 cm)

b Unpacked Disperser.

Weight, empty	22 lb (9.98 kg)
Weight, filled dry agent	30 lb (13.6 kg)
Weight, filled liquid agent	26 lb (11.8 kg)
Length	26 in. (66 cm)
Width	17 5/16 in. (44 cm)
Depth	12 1/8 in. (30.8 cm)
Operating pressure	180 (± 20) psi (12.6 kg/cm2)
Air cylinder pressure	2, 100 (± 100) psi (146.5 kg/cm2)

c Performance Characteristics.

Duration of continuous firing:

CR liquid agent	60 sec (max)
CS dry agent	120 sec (max)
Range	50 ft (max) (15.2)

CHAPTER 2
OPERATING INSTRUCTIONS

Section I. CONTROLS AND INSTRUMENTS

2-1. Controls

a Trigger.

(1) *Location* The trigger is located on the gun assembly (fig. 1-5).

(2) *Purpose*. When the trigger is squeezed, agent is discharged through the gun. Maximum discharge is obtained when the trigger is pulled all the way back. A trigger stop on the trigger permits locking of the trigger in the open (or discharge) position. A slight additional pull (or squeeze) on the trigger disengages the trigger stop. Release of the trigger stops agent discharge.

b. Valve Actuating Coupler Assembly.

(1) *Location*. The valve actuating coupler assembly (13, fig. 1-4) with a grip knob (1), is located at the lower left side of the disperser.

(2) *Purpose.* When the grip knob (1) is turned counterclockwise to the open position (arrow plus word OPEN on the knob) pressurized air in the air cylinder (10) is released. Clockwise movement of the grip knob stops release of pressurized air from the air cylinder. The valve actuating coupler assembly (13) cannot be removed when the grip knob is in the OPEN or partially open position.

c.Jet Spray Unit

(1) *Location.* The jet spray unit is shown in figure 1-5.

(2) *Purpose*. The jet spray unit is for use when dispersing CS dry agent.

d. Multijet Spray Unit.

(1) *Location*. The multijet spray unit is shown in figure 1-5. It consists of four orifice tips held in place by a tip holder.

(2) *Purpose*. The multijet spray unit is used when dispersing CR liquid agent and provides three varying size streams of CR liquid agent or a spray.

2-2. Instruments

No instruments are required for operation of the disperser.

Section II. OPERATING UNDER USUAL CONDITIONS

2-3. Operation

a. Perform Before Operation Preventive Maintenance Checks and Services, Table 3-1.

b. Donning the Disperser and Adjustment.

(1) Place arms through the shoulder straps.

(2) Adjust the harness for correct fit by use of the slide buckles of the shoulder and waist straps (1, 3, and 10, fig. 1-2).

(3) Adjust straps until the disperser feels comfortable to the operator, yet is held snugly so that it does not shift around when the operator moves or changes position.

c.Carrying Disperser. Best results are achieved when the disperser is carried and fired while the agent container is in as near vertical position as possible. The operator may carry and fire from any position that provides enough stability and freedom for him to aim at the target.

WARNING

Wear protective mask and rubber gloves when operating or servicing the disperser with riot control agent. Wear protective hood, if available. Filling must be done in a safe area as designated by the local commander.

WARNING

Never direct riot control agent at friendly personnel or fire into the wind.

d. Pressurizing the Agent Container. Insure that the gun trigger is unlocked and is not in depressed position. Rotate the grip knob (1, fig. 1-4) counterclockwise (in the direction marked by arrow and the word OPEN on the grip knob) until resistance is felt (approximately one turn).

e. Aiming. There are no sights on the disperser. Point the gun so that the wind will carry the riot control agent to the target area. Effect of wind must be considered when firing the disperser. Best results are achieved with a tail wind. Crosswinds deflect the discharged riot control agent with possible bad effects to the operator or to friendly personnel.

f. Range. The disperser will project riot control agent up to a distance of 50 feet in still air. Any tail wind will carry riot control agent greater distances depending upon wind velocities.

NOTE

Familiarization firing by the operator can be accomplished using talc (Items 4 or 5, App F.).

g. Firing. Place the left hand on the nozzle housing and assembly and the right hand on the trigger and handle body assembly of the gun. Depress the trigger with the fingers of the right hand. Discharge of agent begins as soon as the trigger is pulled. Short bursts are more effective. Each operator should practice fire the disperser using harmless talc before using the disperser on a mission.

WARNING

Do not fire the disperser indoors when using dry riot control agent. Open flame or a spark can cause a dust explosion.

WARNING

The large amount of riot control agent contained in the disperser and the speed with which it can be released requires alertness on the part of the operator and local commander to ensure that the target area is not covered with an excessive concentration of riot control agent.

2-4. On Site Replacement of Agent Container

a. Close the grip knob (fig. 2-1). Disconnect the quick-disconnect female coupling half from the quick-disconnect male coupling half.

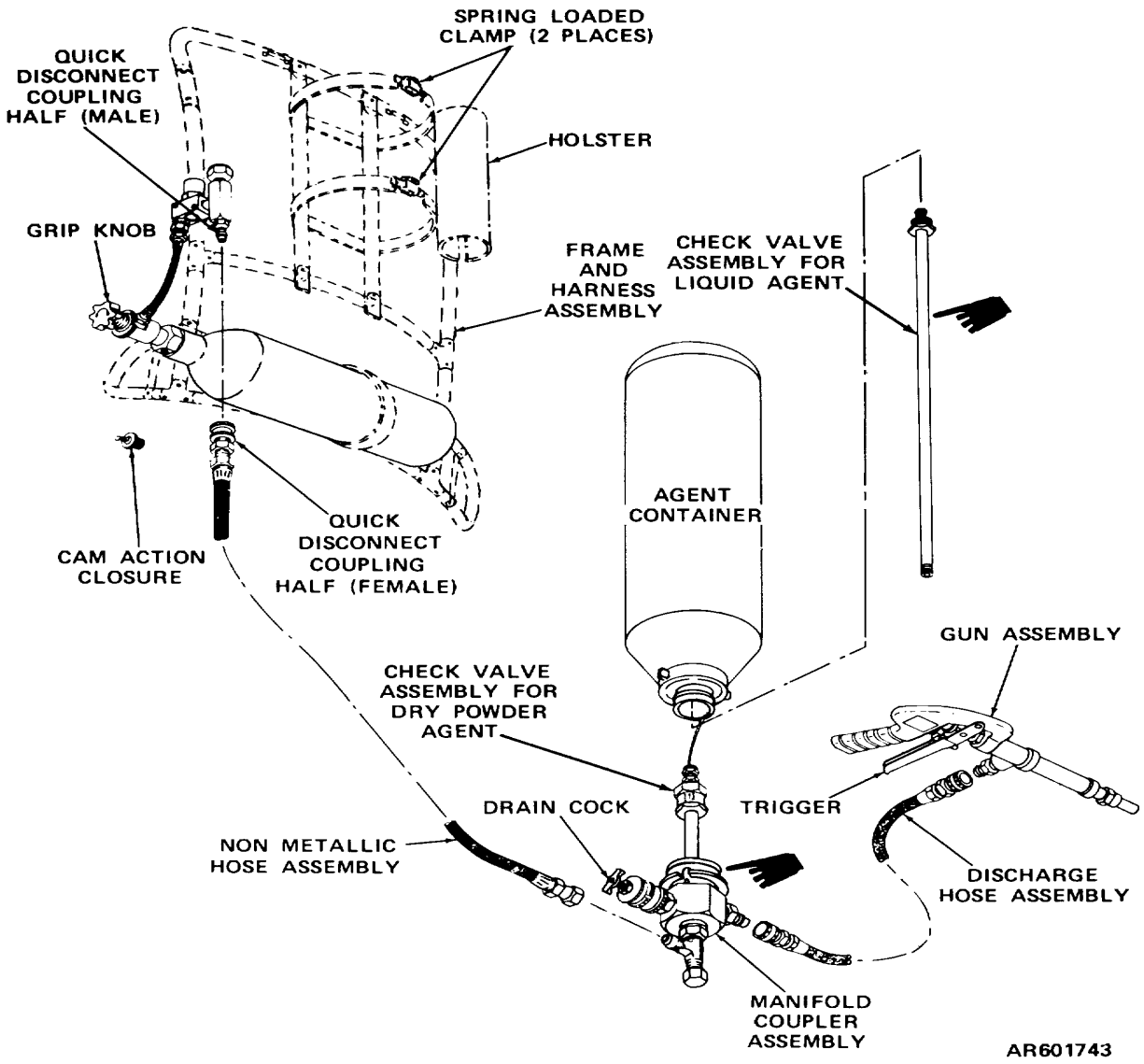


Figure 2-1. On Site Separation of Empty Agent Container Assembly from Frame and Harness Assembly

b. Open the spring loaded clamps (2 places) that hold the agent container on the frame and harness assembly.

c. Remove the agent container assembly from the frame and harness assembly. The manifold coupler assembly hoses, and gun are still attached to the agent container.

d. The cam action closure and the support collar are on the full agent container assembly. However, in figure 2-1, they are shown separate from the agent container.

e. Move the empty agent container (with the manifold coupler assembly, hoses, and gun still attached) as a unit away from the frame and harness assembly to prevent contamination of these parts.

f. Invert the agent container so that the filling neck is upward and slowly open the drain cock.

g. After pressure has been released, squeeze the trigger while aiming gun away from friendly personnel.

h. Release the trigger and close the drain cock.

i. Disconnect the manifold coupler assembly (with the hoses and gun attached) from the quickdisconnect coupling half of the agent container assembly. Do not allow the disconnected manifold coupler assembly, hoses, gun, and quickdisconnect coupling half to become contaminated by dirt or foreign matter.

j. Hold the full agent container upright. Remove support collar and cam action closure from the full agent container assembly.

k. Install the cam action closure and the support collar on the removed agent container assembly. Place the cam action closure in the quickdisconnect coupling half. The cam action closure is adjustable. Turn the center stem clockwise to tighten snugly before closing the stem. Lock the closure in place and install the support collar to prevent spillage of residual agent.

NOTE

Perform the procedure at end of table 3-1 to make or break manifold coupler assembly connection in step 1 below.

l. Hold the full agent container upright; insert the check valve assembly into the full agent container assembly. Connect the manifold coupler assembly to the quick-disconnect coupling half of the full agent *container assembly.*

m. Install the agent container assembly to the frame and harness assembly. The nonmetallic hose assembly should be on the grip knob side.

n. Fasten the spring loaded clamps (2 places) to secure the agent container assembly on the frame and harness assembly.

o. Connect the quickdisconnect coupling half female to the quickdisconnect coupling half male.

p. Insert the gun into the holster.

2-5. On Site Replacement of Air Cylinder

a. Close grip knob (1, fig. 1-4).

b. Invert the disperser and slowly open the drain cock (16).

c. After pressure has been released, close the drain cock.

d. Disconnect the valve actuating coupler assembly (13) from the nipple assembly (14).

e. Open the spring loaded clamp (6, fig. 1-2). Slide the air cylinder (10, fig. 1-4) clear of the frame assembly (2, fig. 1-2).

f. Obtain a charged air cylinder and slide it into position on the frame assembly.

g. Fasten the spring loaded clamp to secure the air cylinder to the frame assembly.

h. Connect the valve actuating coupler assembly (13, fig. 1-4) to the nipple assembly (14).

2-6. After Operation Services

Perform After Operation Preventive Maintenance Checks and Services, Table 3-1.

Section III. OPERATION UNDER UNUSUAL CONDITIONS

2-7. Climate Extremes

The disperser is not intended for use in temperatures below +20°F. and above + 125°F.

2-8. Snow, Mud, or Rain

The disperser will operate in snow or rain. Care must be taken to keep snow, mud, or ice out of the working parts and to keep the spray unit nozzles clear. Foreign material or ice in the multijet spray unit or jet spray unit may cause malfunction. Refer to Operator's Troubleshooting, Table 3-2.

WARNING

When dispersing CS dry agent under low humidity conditions, stand on static strap to provide maximum grounding. This will prevent buildup of static electricity charges.

2-9. Low Humidity

When using CS dry agent under dry atmospheric conditions (low humidity) the static strap (fig. 1-1) should be snapped on to the frame of the carrier 17, fig. 1-2). To attach the static strap to the frame of the disperser, it is first necessary to install the clamp. (The clamp is provided in the basic issue items list (BIIL).) No special precautions are necessary when using CR liquid agent in dry atmospheric conditions.

CHAPTER 3
OPERATOR'S MAINTENANCE INSTRUCTIONS

Section I. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-1. General

The operator must perform preventive maintenance checks and services (table 3-1) regularly to make certain that the disperser operates properly. Correct deficiencies if authorized or report them to organizational maintenance personnel.

3-2. Purpose

Table 3-1 lists the required maintenance services the operator must perform and prescribes the interval and sequence.

Table 3-1. Operator's Preventive Maintenance Checks and Services.

NOTE

Within designated interval, these checks are to be performed in the order listed.

B-Before Operation A-After operation

Item No.	Interval B	Interval A	Item to be inspected	Procedures Check and have repaired or adjusted as necessary	For readiness reporting equipment is not ready/ available if
1	•		OVERALL VISUAL	Inspect the disperser to make sure that all parts are clean, properly installed, and serviceable. Insure that all hose connections are tight. Check the three lock ring equipped quick-disconnect couplings. These are: quick-disconnect male couplinq half (fig. 1-5) of the gun to the quick-disconnect female coupling of the discharge hose; the discharge hose quick-disconnect female coupling connection to the nipple (18, fig. 1-4); and the drain cock cap assembly (17) to the manifold coupler assembly (19). (See NOTE at end of table 3-1.) Check the remaining quick-disconnect coupling connections. These connections are as follows: manifold coupler assembly (19) to quick-disconnect male coupling half (fig. 1-3); valve actuating coupler assembly (13, fig. 1-4) to nipple assembly (14) and quick-disconnect female coupling half (8) to quick-disconnect male coupling half (7). If overall inspection reveals deficiencies in the hose connections, notify organizational maintenance personnel. Inspect the agent container assembly (fig. 1-3) to make sure that it is not damaged. Make certain that the drain cock (16, fig. 1-4) is closed (fully clockwise). Visually inspect the threaded and quick-disconnect coupling connections on the high-	

Table 3-1. Operator's Preventive Maintenance Checks and Services - Continued

B - Before Operation A - After Operation

Item No.	Interval B	Interval A	Item to be inspected	Procedures Check and have repaired or adjusted as necessary	For readiness reporting equipment is not ready/ available if
			OVERALL VISUAL (Cont.)	pressure hose assembly (2), pressure regulator (4), and low pressure hose assembly (19) to make sure they are in serviceable condition. Check the air cylinder and other hardware of the air pressure assembly for loose connections. Check that the high pressure rupture disk assembly (15, fig. 1-4) and the safety relief valve (low pressure) (5) are not blown out. Inspect the frame and harness assembly (fig. 1-2) to make sure that the agent container straps and the air cylinder strap fasten the agent container and the air cylinder to the frame. Make sure that the spring loaded clamps are fully closed. Verify that shoulder straps and waist strap are in serviceable condition, free of excessive wear, and that no slide buckles are missing or broken. Inspect the frame for damage or missing identification (fig. 1-6). Check that screws and nuts securely fasten the pressure regulator to the frame. If inspection reveals deficiencies in the frame and harness assembly, notify organizational maintenance personnel.	
2	•		GUN ASSEMBLY	Inspect the disperser to determine that the nozzle is installed. If the disperser is being used with CS dry agent, the jet spray unit must be installed on the gun. If the disperser is being used with CR liquid agent, the multijet spray unit (fig. 1-1) must be installed on the gun. Turn the grip knob (1, fig. 1-4) clockwise until resistance is felt (approximately I full turn) to make sure that the high-pressure air is shut off. Make sure that hole in jet spray unit is not plugged.	

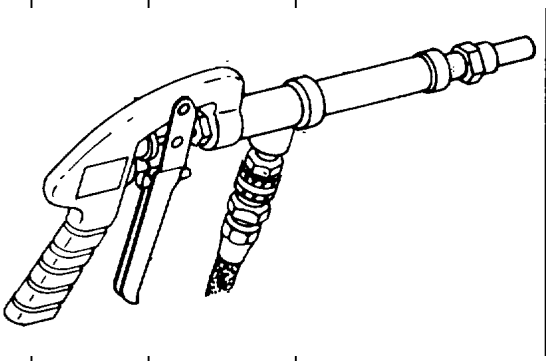


Table 3-1. Operator's Preventive Maintenance Checks and Services. - Continued

B - Before Operation A - After Operation

Item No.	Interval B	Interval A	Item to be inspected	Procedures Check and have repaired or adjusted as necessary	For readiness reporting equipment is not ready/ available if
			GUN ASSEMBLY (Cont.)	Make sure that trigger is operable. Squeeze and release trigger two or three times. If the trigger returns freely after each squeeze, the gun is operating properly. Make sure that adjust nut is screwed tight against handle body.	
3	•		AIR PRESSURE ASSEMBLY	Check that air cylinder is charged and tagged with content and date.	
					
4	•		AGENT CONTAINER ASSEMBLY	Check that agent container is tagred as filled.	
					
5	•		AFTER OPERATION SERVICES	Before turning in the disperser to organizational maintenance personnel, in an area designated as safe by the local commander, open the grip knob (1, fig. 1-4). Slowly open the drain cock (16). After pressure has been released, squeeze the trigger while aiming the gun away from friendly per-	

Table 3-1. Operator's Preventive Maintenance Checks and Services. - Continued

B - Before Operation A - After Operation

Item No.	Interval B	Interval A	Item to be inspected	Procedures Check and have repaired or adjusted as necessary	For readiness reporting equipment is not ready/ available if
			AFTER OPERATIONS SERVICES - (Cont.)	sonnel. Release trigger and close drain cock. Any release of pressure through the gun indicates that the drain cock is clogged. Advise organizational maintenance of drain cock condition upon turn in of equipment. Record serial number of disperser in logbook. If all of the agent in the agent container was not expended during the mission, report this fact to organizational maintenance personnel when the disperser is turned in.	

NOTE

To make or break the three lock ring quick disconnect coupling connections, rotate the sleeve ring until the slot in the sleeve ring is alined with the lock ring pin. Pull back the sleeve ring and make or break the connection. Release the spring loaded sleeve ring to secure the quick-disconnect coupling connection. Rotate the sleeve ring so that the slot in it is not alined with lock ring pin to lock the connection.

Section II. TROUBLESHOOTING

3-3. General

This section contains troubleshooting information for locating and correcting most troubles (problems) which may develop in the disperser. For all components that require maintenance beyond that of inspection, notify organizational maintenance personnel.

3-4. Troubleshooting Table

Troubleshooting information is presented in table 3-2.Table 3-2 lists the malfunction, test or inspection, and corrective action or the disperser or its components Perform the tests or inspections and corrective actions in the order listed.

Table 3-2. Operator's Troubleshooting.

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

1. AGENT IS NOT RELEASED WHEN TRIGGER IS SQUEEZED
   - *Step 1.* Air is not turned on.
     Turn grip knob counterclockwise to open.
   - *Step 2.* Gun nozzle clogged.
     Clear gun nozzle.
   - *Step 3.* Air cylinder empty.
     Replace air cylinder (para 2-5).
   - *Step 4.* Agent container empty.
     Replace agent container (para 2-4).
   - *Step 5.* Defective disperser.
     Notify organizational maintenance personnel.
2. AGENT LEAKING FROM GUN SECTION
   - *Step 1.* Defective gun.
     Notify organizational maintenance personnel.
3. WEAK OR SLOW DISCHARGE OF RIOT CONTROL AGENT
   - *Step 1.* Air not turned on.
     Turn grip knob open.
   - *Step 2.* Clogged agent container.
     Lightly tap agent container to agitate agent.
   - *Step 3.* Gun nozzle partially clogged
     Clear gun nozzle.
   - *Step 4.* Air cylinder not fully charged.
     Replace air cylinder (para 2-5).
   - *Step 5.* Defective disperser.
     Notify organizational maintenance personnel.
4. AGENT OR AIR LEAK
   - *Step 1.* Loose wing nut.
     Handtighten wing nut. If leakage persists, notify organizational maintenance personnel.
   - *Step 2.* Loose threaded hose connections.
     Tighten hose connections.
   - *Step 3.* Close the grip knob (1, fig. 1-4). Notify organizational maintenance personnel.

CHAPTER 4
ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIEL

4-1. New Materiel

a. Disperser. Each disperser is packed completely inert in two reusable packing chests (fig. 4-1). One box contains the complete disperser assembly, multijet spray unit, check valve assembly, static strap, clamp, cam action closure support collar, and a copy of TM 3-1040-262-13&P. A spare air cylinder and a spare agent container assembly are packed in the other box. Inspect the disperser for missing or damaged parts (table 4-1).

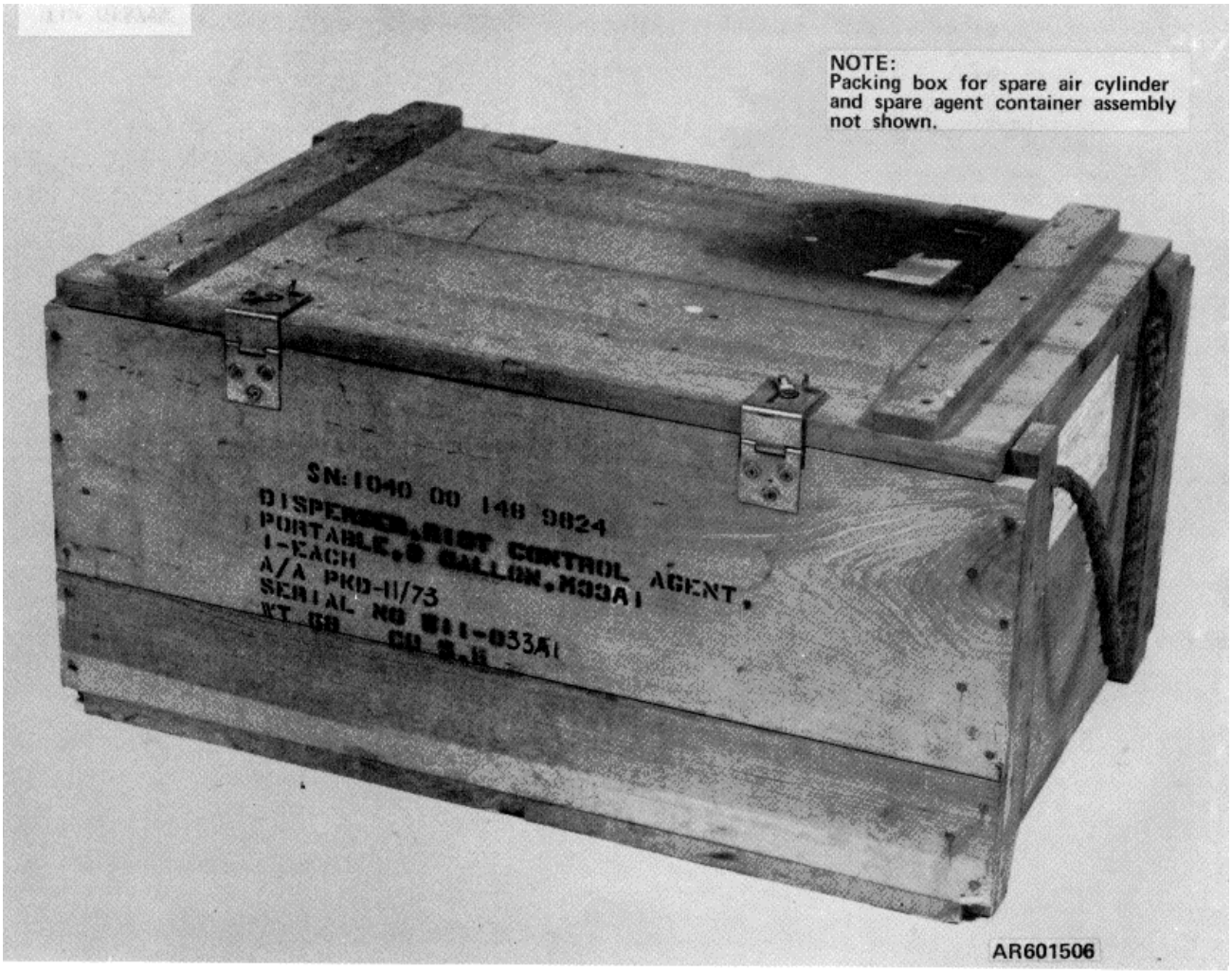


Figure 4-1. Disperser Pack Chest

b. Service Kit, M254. The service kit is not a component of the disperser. The service kit is an end item issued separately. It is required for operation of the disperser, however, and is discussed here for clarity. The contents of the service kit are as shown in figure 4-2 and contained in SC 1040-95-CL-A01. Inspect the service kit for damaged or missing parts (para 4-5).

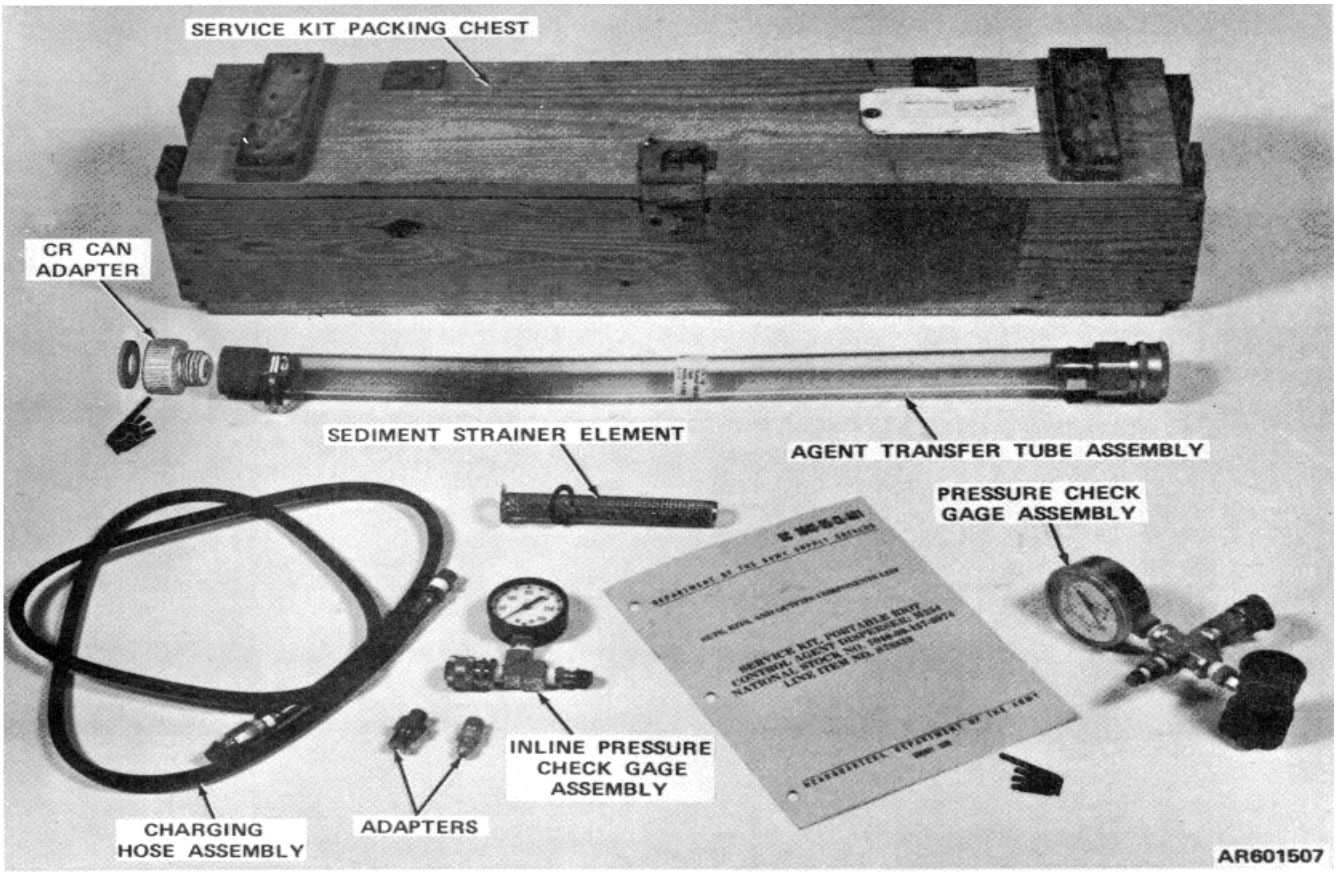


Figure 4-2. Service Kit, M254.

4-2. Used Materiel.

Inspect used equipment as prescribed in Table 4-1.

4-3. Shipment and Storage Data for CS Dry Agent

Shipment and storage data for CS riot control agent is contained in TM 3-250.

Section II. TOOLS AND EQUIPMENT

4-4. Tools

No special tools are required for the disperser at organizational level.

4-5. Equipment

The M254 portable riot control agent disperser service kit (fig. 4-2) (SC 1040-95-CL-AOI) consists of the following items:

a. Pressure Check Gage Assembly.

(1) *Description.* The pressure check gage assembly has a dial indicating pressure gage with scale 0to 4, 000 psi.

(2) *Use.* This gage is used during air cylinder charging. It shows the amount of air pressure contained in the air cylinder during charging. Also, it is used to check the amount of air pressure in any charged air cylinder.

b. Inline Pressure Check Gage Assembly.

(1) *Description.* The inline pressure check gage assembly has a dial indicating pressure gage with scale O-to 300 psi.

(2) *Use.* This gage shows the setting of the pressure regulator.

c. Nonmetallic Hose Assembly (Charging)

(1) *Description.* The charging hose assembly consists of a flexible hose, nipple on one end, and quickdisconnect coupling half on the other end.

(2) *Use.* The hose assembly may be used to connect air cylinders to an air supply for charging.

d. Agent Transfer Tube Assembly.

(1) *Description.* The agent transfer tube assembly is a clear plastic tube with a quickdisconnect coupling half on one end and a threaded connection on the other end.

(2) *Use*. The tube assembly is used to transfer agent from the plastic container into the agent container assembly.

NOTE

The tube assembly may be used to recover unused agent from the agent container back to the screw cap container.

e. Sediment Strainer Element and Gasket.

(1) *Description*. The sediment strainer element is a wire mesh circular screen.

(2) *Use*. When using CS dry agent the sediment strainer element screens lumps from the agent during its transfer from the plastic container into the agent container assembly.

f. Adapter Straight Pipe to Tube.

(1) *Description.* The adapter has pipe threads on one end and tube threads on the other.

(2) *Use*. When used with the male quickdisconnect coupling from the nonmetallic hose assembly it allows charging of the air cylinder using the 3000 psi, 4 cfm, wheel mounted reciprocating air compressor.

g. Adapter Straight Pipe to Tube.

(1) Description. The adapter has pipe threads on one end and tube threads on the other.

(2) *Use*. This adapter screws into a quickdisconnect coupling half (h below) on one end and screws into the free end of the nonmetallic hose (charging hose) of the AN-M4 series of compressor (TM 3-4310-100-10).

h. Quick Disconnect Coupling Half

(1) *Description*. The male quickdisconnect coupling half comes attached to one end of the charging hose.

(2) *Use.* It is used to connect to the pressure check gage assembly and the straight pipe to tube adapter.

i. CR Can Adapter

(1) *Description* The adapter has pipe threads on one end and tube threads on the other.

(2) Use. This adapter screws into a three gallon can for use of CR liquid agent.

j. Supply Catalog.

(1) *Description* The supply catalog is SC 1040-95-CL-AO1.

(2) *Use*. It is used to identify and order components of the M254 service kit when required.

Section III. ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES

4-6. General

The purpose of organizational preventive maintenance checks and services for organizational maintenance personnel is to detect the first signs of failure in the disperser. Also to ensure that appropriate corrective action is taken before time consuming repairs and replacement are required.

4-7. Explanation of Columns

A number under quarterly in the interval column indicates that the service opposite the number must be performed in numerical sequence at the prescribed time. Defects should be corrected immediately, if corrective action is authorized or reported to direct support maintenance.

Table 4-1. Organizational Preventive Maintenance Checks and Services

Quarterly Schedule - Time required: 1.1 Total time required: 2.2 hours
Prior to Issue - Time required: 1.1

Quarterly	Prior to Issue		Work time (M/H)
1		Publications and Records Make sure that a copy of TM 3-1040-262-13&P is with the disperser. Make sure that all gages from the service kit, M254 are calibrated as required (TB 43-180).	0.1
2	8	Disperser Inspect the disperser for cleanliness and serviceability. See that all connections are tight.	0.2
3	9	Frame and Harness Assembly Make sure that all straps (fig. 1-2) are present and are in serviceable condition. Inspect spring loaded clamps for proper operation.	0.1
4	10	Air Pressure Assembly Visually inspect the air pressure assembly (fig. 1-4) nonmetallic hose assembly-(high-pressure) (2) and nonmetallic hose assembly (low pressure) (9), the quickdisconnect couplings (8 and 17), the high pressure rupture disk assembly	0.3

Table 4-1. Organizational Preventive Maintenance Checks and Services-Continued

Quarterly Schedule - Time required: 1.1 Total time required: 2.2 hours
Prior to Issue - Time required: 1.1

Quarterly	Prior to Issue		Work Time (M/H)
		(15), a safety relief valve (low pressure) (5), and the fluid pressure regulating valve (4) for damage or missing parts. Ensure proper installation of air cylinder to the frame and harness assembly. Tighten fluid pressure regulating valve mounting screws if necessary. Check air cylinder expiration date for hydrostatic and volumetric testing.	
	11	Using the pressure check gage assembly (fig. 4-2), check that the air cylinder is fully charged.	0.1
5	12	Agent Container Assembly Inspect the agent container assembly (fig. 1-3) for damage and missing parts. Ensure that the agent container assembly is securely mounted on the frame and harness assembly and that it is properly connected to the air pressure assembly. Check that the agent container is filled and that the proper check valve assembly is installed.	0.1
6	13	Gun Assembly Inspect the discharge hose (fig. 1-5) for damage and missing parts. A slight amount of flattening of the hose assembly will not affect performance. Inspect the gun for trigger operation and automatic release Inspect that proper jet spray unit is installed and that it is not clogged.	0.2
	14	Turn the adjust nut stop (fig. 1-5) all the way back toward the handle to ensure trigger operation.	0.1
7		Records Complete logbook forms (TM 38-750).	0.1

Section IV. ORGANIZATIONAL TROUBLESHOOTING

WARNING

If the disperser was used with CS dry or CR liquid agent, decontaminate (para 4-16) before performing troubleshooting or maintenance where possible. If the disperser was pressurized, ensure that all air pressure is relieved.

4-8. General

Troubleshooting procedures for organizational maintenance are presented in Table 4-2.

4-9. Troubleshooting Table

Table 4-2 tabulates the malfunction, test or inspection, and corrective action information useful in diagnosing and correcting unsatisfactory operation or failure.

Table 4-2. Organizational Troubleshooting

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
1. WEAK OR NO DISCHARGE OF AGENT WHEN TRIGGER IS SQUEEZED
Step 1. Clogged or defective gun assembly. Repair or replace gun assembly (para 4-17.)
Step 2. Low pressure (Air Pressure Assembly). Check regulating valve (pressure regulator) setting using inline pressure check gage assembly (para 4-10*a*). Replace pressure regulator if necessary (para 4-21*c*). Check the nonmetallic hose assembly (low pressure) (para 4-24) and manifold coupler assembly (para 4-26) for restriction or blockage.
Step 3. Clogged tube to boss straight adapter (strainer assembly) (air pressure assembly). Clean or replace tube to boss straight adapter (strainer assembly) (para 4-21*b*).
2. AGENT LEAKING FROM GUN ASSEMBLY
Step 1. Packing screw loose. Tighten packing screw (26, fig. 4-5).

Table 4-2 Organizational Troubleshooting-Continued

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
Step 2 Defective packing. Disassemble gun (para 4-19) and replace packing (20 or 25, fig. 4-5). *Step 3.* Defective discharge hose connections. Repair or replace discharge hose (para 4-18).
3. AGENT OR AIR LEAK FROM AIR PRESSURE ASSEMBLY *Step 1.* Preformed packings damaged or missing. Replace preformed packings (para 4-21, 4-24, and 4-26). *Step 2.* Quick-disconnect male coupling halves damaged or loose. Replace quick-disconnect couplings (para 4-22, 4-24, and 4-26) as required. *Step 3.* High pressure rupture disk in nipple assembly is ruptured or it is loose. Replace air cylinder. Report defective air cylinder to direct support maintenance. *Step 4.* Safety relief valve is loose or ruptured. Tighten or replace safety relief valve (para 4-21).
4. LEAKAGE BENEATH WING NUT ON AGENT CONTAINER ASSEMBLY *Step 1.* Loose wing nut. Hand tighten wing nut. *Step 2* Damaged threads on either the wing nut or the agent container. Replace wing nut (para 4-20) or agent container assembly (para 4-20). *Step 3* Defective preformed packing. Replace (para 4-20).

Section V. TESTING AND SERVICING

4-10. Pressure Regulator Test

a. Install a charged air cylinder (para 2-5*d* through *h*).

b. Disconnect the female quickdisconnect coupling half (8, fig. 1-4) from the male quickdisconnect coupling half (7).

c. Install the inline pressure check gage assembly (fig.4-2) to the female quickdisconnect coupling half (8, fig.1-4).

d. Connect the inline pressure check gage assembly to the male quickdisconnect coupling half (7).

e. Check that trigger is released and the drain cock (16) is closed.

f. Rotate the grip knob (fig. 4-3) counterclockwise (in the direction marked by arrow and the work OPEN on the grip knob) until resistance is felt.

g. Squeeze the trigger and fire a short burst. Release the trigger and observe the inline pressure check gage reading. Reading should be 180 (± 20) psig.

h. Repeat squeezing the trigger and firing a short burst to check the gage reading.

i. Turn the grip knob (fig. 4-3) clockwise until resistance is felt to stop the flow of high pressure air to the pressure regulator assembly.

j. Release the pressure from the agent container by squeezing the trigger.

k. Replace the faulty regulator assembly, if required (para 4-21). Report the defective regulator assembly to direct support maintenance.

4-10.1 Filling Agent Container Assembly with CR Liquid Agent

WARNINGS

Personnel filling an agent container assembly with CR liquid agent must wear protective masks, gloves, and hoods. Filling must be done in a safe area designated by the local commander. CR liquid agent causes tearing and a painful burning sensation in the eyes, nose, throat, and skin. It can cause difficult breathing. Wash hands thoroughly before eating or smoking after using CR liquid agent.

a. CR liquid agent is available in 3 gallon metal containers.

b. Remove the agent container assembly from the frame and harness assembly (para 2-4, steps a through i).

c. Secure or have the agent container held in an upright position.

d. Obtain a metal container filled with 3 gallons of CR liquid agent.

e. Remove the shipping tape from the screw cap. Discard tape.

f. Remove the screw cap from the pouring spout on the CR liquid agent container.

g. Use the agent transfer tube assembly (from the M254 service kit), and screw the filling adapter end on the pouring spout.

h. Couple the quickdisconnect coupling end of the agent transfer tube assembly to the male coupling half on the empty agent container.

i. Raise the CR liquid agent metal container to a 450 angle above the agent container with the agent transfer tube assembly fully extended.

j. Repeat the lowering and raising of the CR liquid agent metal container until it is empty.

k. When transfer of CR liquid agent is completed, disconnect the agent transfer tube assembly from the agent container male quickdisconnect coupling half.

l. Insert the cam action closure in the agent container male coupling half. Make sure that the cam action closure is adjusted to insure a tight fit when locked. Install support collar.

m. Disconnect the agent transfer tube assembly from the empty metal container. Install the screw cap on the pouring spout of the metal container.

n. Decontaminate the agent transfer tube assembly (para 4-16). Return the tube assembly to the M254 service kit packing chest (para 4-5).

o. Retain the empty metal container for use if residua CR liquid agent in the agent container needs to be "backfilled" into the metal container after mission is completed.

p. If the filled agent container assembly is to be assembled to a frame and harness assembly, perform procedure in paragraph 2-4, steps I through p.

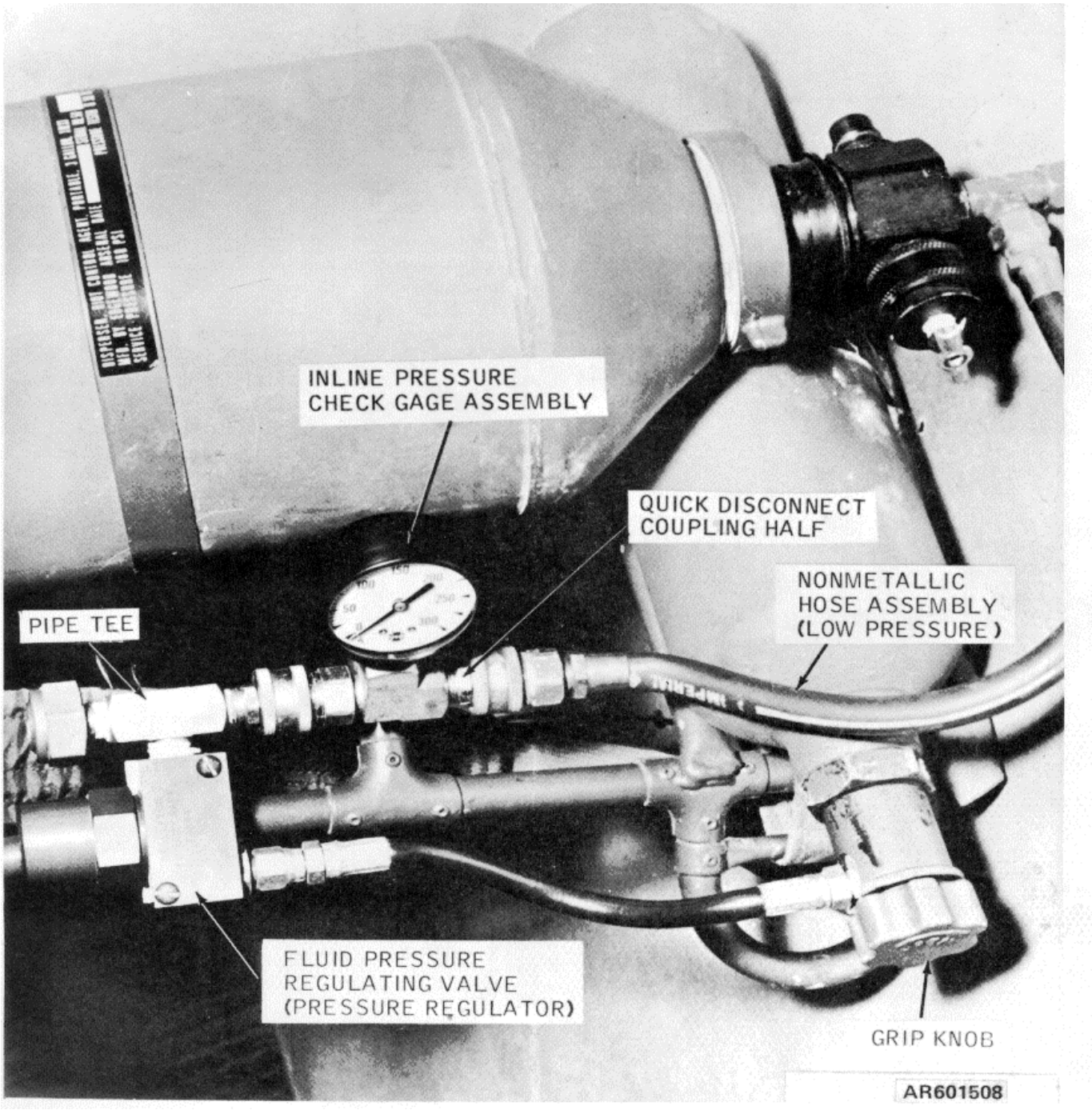


Figure 4-3. Connections for checking pressure regulator setting

4-11. Filling Agent Container Assembly with CS Dry Agent

a. General. CS dry agent is available in 3 gallon plastic containers or plastic bags. The procedure used to fill the agent container is dependent on the type of packaging.

WARNING

Wear protective mask and rubber gloves when operating or servicing the disperser with riot control agent. Wear protective hood, if available.

Filling must be done in a safe area as designated by the local commander.

b. Filling from the Plastic Container (3 Gallon)

(1) Remove the agent container assembly from the frame and harness assembly (para 2-4).

(2) Secure or have the agent container held in an upright position.

(3) Obtain a plastic container of CS dry agent.

(4) Before opening the plastic container vigorously shake the container to break up any lumps.

(5) Remove the shipping tape from the screw cap on the plastic container and remove the screw cap from the pouring spout.

(6) Insert the sediment strainer element (fig. 4-2) into the neck of the plastic container.

(7) Screw the filling adapter end of the agent transfer tube assembly (fig. 4-2) on the pouring spout.

(8) Couple the quickdisconnect coupling end of the agent transfer tube assembly to the male coupling half on the agent container.

(9) Raise the plastic container of agent to a 450 angle (approx.) above the agent container (fig. 1-3) with the agent transfer tube assembly fully extended. Repeat the lowering and raising of the plastic container until it is empty.

(10) When transfer of CS dry agent is completed lower the agent transfer tube assembly and then disconnect it from the agent container male coupling half.

(11) Place the cam action closure in the quickdisconnect coupling half. The cam action closure is adjustable. Turn the center stem clockwise to tighten snugly before closing the stem. Lock the closure in place to prevent spillage of residual CS dry agent. Clean any spilled CS dry agent off the exterior of the agent container with a rag soaked in the decontaminating solution. Install support collar.

(12) Shake residuals of agent that are inside the agent transfer tube assembly back into the plastic container. Remove the agent transfer tube assembly from the plastic container.

(13) Install the screw cap on the pouring spout of the plastic container. Retain the plastic container for use if residual CS dry agent in the agent container needs to be "backfilled" into the plastic container after mission is completed.

(14) Decontaminate the agent transfer tube assembly and the sediment strainer element (para 4-16).

c. Filling from the Plastic Bag.

(1) Remove the agent container assembly from the frame and harness assembly (para 2-4).

(2) Secure or have the agent container held in an upright position.

(3) Unscrew the wing nut (fig. 1-3) from the container and remove the quickdisconnect coupling with preformed packing.

(4) Obtain a plastic bag of CS dry agent and cut a corner off of the bag. Carefully pour the CS dry agent into the agent container.

(5) When the transfer is complete, install the quickdisconnect coupling back into the container and secure in place using the wing nut.

(6) Insert the cam action closure, decontaminate, and install the support collar. Place the cam action closure in the quickdisconnect coupling half. The cam action closure is adjustable. Turn the center stem clockwise to tighten snugly before closing the stem. Lock the closure in place to prevent spillage of residual CS dry agent. Clean any spilled CS dry agent off the exterior of the agent container with a rag soaked in the decontaminating solution.
Install support collar.

4-12. Filling Agent Container With Talc

Talc is used for training. Filling procedures are the same as for CS dry agent. (Talc is item number 4 or 5 in appendix F.)

4-13. Charging Air Cylinder

a. General. The air cylinder can be charged using the following compressors:

(1) AN-M4 Series compressors.

(2) The 3,000 psi, 4 cfm, wheel mounted reciprocating air compressor.

WARNING

Secure the air cylinder and both ends of the charging hose before operating the compressor to prevent injury.

b. AN-M4 Series Compressors.

(1) Remove the air cylinder from the frame and harness assembly (para 2-5).

(2) Connect the pressure check gage assembly (fig. 4-2) from the M254 service kit to the nipple assembly of the air cylinder (fig. 4-4).

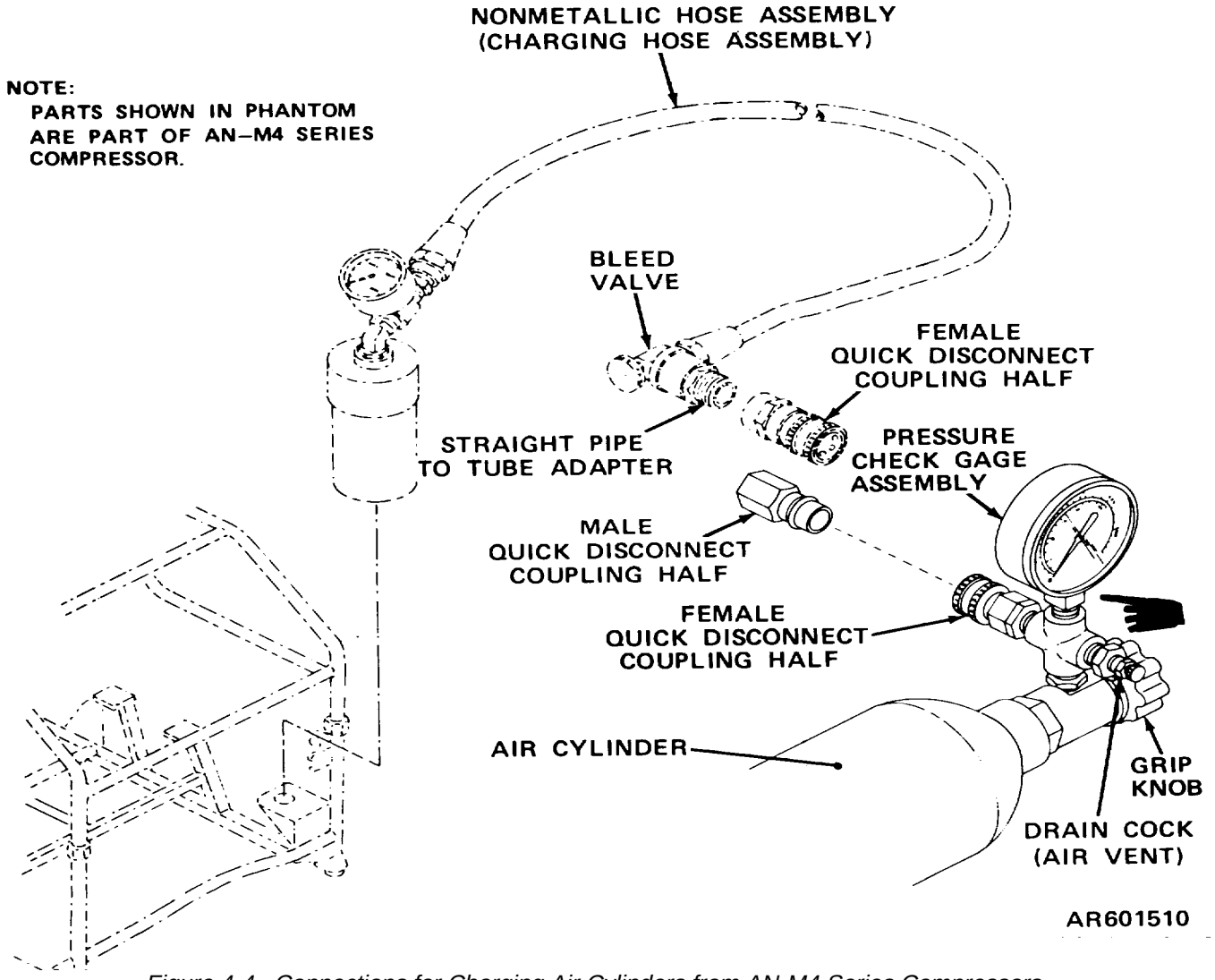


Figure 4-4. Connections for Charging Air Cylinders from AN-M4 Series Compressors.

(3) Remove the female quickdisconnect coupling half from the compressor nonmetallic hose assembly (charging hose assembly) (TM 3-4310-100-10).

(4) Remove the male quickdisconnect coupling half from the charging hose assembly of the M254 service kit (fig. 4-2) and screw it on the straight pipe to tube adapter of the compressor charging hose assembly (fig. 4-4).

(5) Connect the male quickdisconnect coupling half to the female quickdisconnect coupling half of the pressure gage assembly.

(6) Close the drain cock (air vent) on the pressure check gage assembly.

WARNING

Secure the air cylinder and both ends of the charging hose before operating the compressor to prevent injury.

(7) Secure the air cylinder and both ends of the charging hose.

(8) Turn the grip knob of the pressure check gage assembly to open position. Operate the compressor in accordance with instructions in the compressor manual and charge the cylinder to 2100 ± 100 psig.

(9) Close the grip knob.

(10) Bleed residual air pressure from the charging hose assembly by turning the drain cock (air vent) (fig. 4-4) counterclockwise.

(11) Disconnect the pressure check gage assembly from the air cylinder.

(12) Tag the air cylinder as charged.

(13) Disconnect the pressure check gage assembly and the male quickdisconnect coupling half from the charging hose assembly. Attach the female quick-disconnect coupling half back on to the charging hose assembly.

Store the pressure check gage assembly and male quickdisconnect coupling half in the M254 service kit (fig. 4-2).

(14) Install air cylinder on the frame and harness assembly (para 2-5).

NOTE

After charging has been completed, and the air cylinder cools, the pressure often drops as much as 200 psi. If time allows, the air cylinder should be "topped off" before use.

c. 3, 000 psi, 4 CFM, Wheel Mounted Reciprocating Air Compressor.

(1) Remove air cylinder from frame and harness assembly (para 2-5).

(2) Connect the pressure check gage assembly (fig. 4-4) onto the nipple assembly of the cylinder.

(3) Remove the charging chuck from the end of the compressor charging hose assembly (TM 5-4310-275-27P).

(4) Install one of the straight pipe to tube adapters of the M254 service kit in the end of the compressor charging hose assembly.

(5) Remove the male quickdisconnect coupling half from the charging hose assembly of the M254 service kit and install on the straight pipe to tube adapter.

(6) Close the bleed valve on the pressure check gage assembly.

(7) Secure the air cylinder and both ends of the charging hose.

(8) Connect the male quickdisconnect to the pressure check gage assembly.

(9) Turn the grip knob of the pressure check gage assembly to open position. Operate the compressor in accordance with instructions in the compressor manual and charge the cylinder to 2100 100 psi.

(10) Perform the procedures in paragraph 4-13*b* (9) through (14).

Section VI. AFTER OPERATION SERVICES

4-14. Recovery of Residual CS Dry Agent

WARNING

Wear protective mask and rubber gloves when operating or servicing the disperser with riot control agent. Wear protective hood, if available.

a. If all of the CS dry agent was not used, return that portion of CS dry agent to the plastic container.

b. Screw the threaded end of the agent transfer tube assembly (fig. 4-2) on the neck of the empty plastic container.

c. Remove the container assembly from the frame and harness assembly (para 2-4*a* through 1).

d. Install the quickdisconnect coupling half end of the agent transfer tube assembly (fig. 4-2) on the quickdisconnect coupling half of the agent container.

e. Hold the agent container directly above and at an angle of approximately 450 over the plastic container while keeping the agent transfer tube assembly straight.

f. Tap on or shake the agent container to dislodge residual agent.

g. After completing the transfer, disconnect the transfer tube assembly from the agent container.

h. Unscrew the threaded end of the agent transfer tube assembly from the plastic container. Several small quantities can be "back-filled" into the same plastic container until it contains 3 gallons as indicated by container graduations. When all back fill operations are complete, install cap. Install tape over the plastic cap of the plastic container. Place the container in its storage container.

i. Decontaminate the transfer tube assembly (para 4-16) and return it to the M254 service kit packing chest (para 4-5).

j. If you have filled the agent container from a plastic bag you must disconnect the manifold coupler assembly.

Take the wing nut and the quick-disconnect coupling half off the agent container.

k. Empty the contents of the agent container into a suitable storage container.

4-14.1 Recovery of Residual CR Liquid Agent.

WARNING

Wear protective mask and rubber gloves when operating or servicing the disperser with riot control agent. Wear protective hood. CR liquid agent causes tearing and a painful burning sensation in the eyes, nose, throat, and skin. It can cause difficult breathing. Wash hands thoroughly before eating or smoking after using CR liquid agent.

a. If all the CR liquid agent was not used, return the remaining portion to the metal container.

b. Screw the threaded end of the agent transfer tube assembly filling adapter (fig. 4-2) onto the neck of the metal container.

c. Remove the agent container assembly from the frame and harness assembly (para 2-4*a* thru *i*).

d. Install the filling adapter half end of the agent transfer tube assembly (fig. 4-2) onto the quickdisconnect coupling half of the agent container.

e. Hold the agent container directly above and at an approximate 450 angle over the metal container while keeping the agent transfer tube assembly straight.

f. Pour the CR liquid agent back into the metal container.

g. After completing the transfer, disconnect the transfer tube assembly from the agent container.

h. Unscrew the threaded end of the agent transfer tube assembly from the metal container. Several small quantities can be "back filled" into the same metal container until it contains 3 gallons as indicated by container graduations. When all back fill operations are completed, install cap. Install tape over the screw cap of metal container.

Place container in its storage container.

i. Decontaiminate the transfer tube assembly (para 4-16.1) and return it to the M254 service kit packing chest (para 4-5).

4-15. Preparation of Decontaminating Solution.

a. Expendable materials used in this procedure are as follows:

WARNING

MEA is a corrosive liquid and will damage eyes and skin on contact. Wear protective mask, rubber gloves, and hood when handling MEA.

(1) Technical monoethanolamine (MEA), item 3, Appendix F.

(2) Wetting agent, item 7, App. F.

WARNING

When mixing the decontaminating solution, add MEA to the water, not the water to the MEA. This will prevent splattering of MEA.

b. In a suitable container (55 gal. drum), mix a decontaminating solution in the following proportions: I gallon of MEA (a(1l) above); nine gallons of water, and one-half cup of wetting agent (a(2) above).

4-16. Decontamination - CS Dry Agent

a. Remove the wing nut and the quickdisconnect coupling half from the agent container assembly.

b. Disconnect the quickdisconnect couplings from the gun, hose assembly, and manifold coupler assembly.

c. Disassemble the gun (para. 4-17).

d. Submerge the items in steps a through c above. Also include the agent transfer tube assembly and the sediment strainer element (if used).

e. Soak for 30 minutes.

NOTE

Use a small bristle brush as an aid to clean residual CS dry agent from parts.

f. Remove parts from decontamination solution. Rinse the decontaminated parts in clear water and allow h all parts to air dry.

g. Assemble the gun (para 4-20). Assemble the disperser. Return the agent transfer tube assembly and the sediment strainer element to the M254 service kit.

h. Pour the decontamination solution in an open end 55 gallon drum and store, leaving the drum end off.

4-16.1 Decontamination - CR Liquid Agent

WARNING

CR liquid agent causes tearing and a painful burning sensation of the eyes, nose, throat, and skin. It can cause difficult breathing. Wash hands thoroughly with soap and water after handling contaminated equipment. If eyes are exposed to CR, flush with water. If irritation continues, contact doctor.

NOTE

Decontamination in this paragraph means cleaning CR liquid agent from the equipment. It does not mean detoxification or neutralization of the agent.

a. Close grip knob on air pressure container.

b. Invert disperser so that drain cock is up.

c. Open drain cock to release air pressure from agenitank, hose, and gun assembly.

d. Remove quickdisconnect safety relief valve.

e. Drain hose and gun into agent container by holding upright and actuating trigger.

f. Remove gun assembly from discharge hose assembly.

g. Remove discharge hose assembly from manifold coupler assembly.

h. Remove manifold coupler assembly and wipe check valve assembly with a wet rag as it is removed. Rinse this assemblies three times with water and wipe the assemblies with a dry rag.

i. Insert closure plug into quickdisconnect coupling! half on agent container.

j. Remove agent container and wipe exterior of the container, carrier, and other parts of the disperser with dry rag.

NOTE

If residual agent remains in agent container, transfer agent back into agent shipping container using the transfer tube assembly from the M254 service kit as described in para 4-14.1.

k. Rinse interior of agent tank with water. Three washings, one quart each washing.

l. Rinse hose by filling and emptying four times.

m. Rinse gun eight times by filling and emptying. Be sure to rinse through all nozzles that were used.

n. Rinse off closure plug.

NOTE

If M254 transfer tube assembly was used, rinse by filling and emptying four times with water.

o. If possible, allow separate parts to air dry before assembly. Then assemble hookup, charge air tank, close drain cock, and discharge one bottle of air through empty assembled unit.

NOTE

An alternate method of decontamination would be to use 2-propanol and/or propylene glycol in place of water if these solutions are available to you. Rinse at a safe location with one of these solutions to reduce the amount of water necessary to remove CR.

Section VII. GUN ASSRMBLY GROUP

4-17. Gun Assembly Group

The gun assembly group is comprised of the gun assembly and the discharge hose (fig. 1-5).

a. Maintenance. Organizational maintenance personnel are authorized to disassemble, clean, and inspect the gun, discharge hose, quickdisconnect coupling halves, and preformed packings in tip. Replace damaged components. Gun disassembly procedure is described in b below. Procedure for assembly of gun is described in c below.

NOTE

Tape, antiseize (item 6, app F) is to be used on all threaded connections.

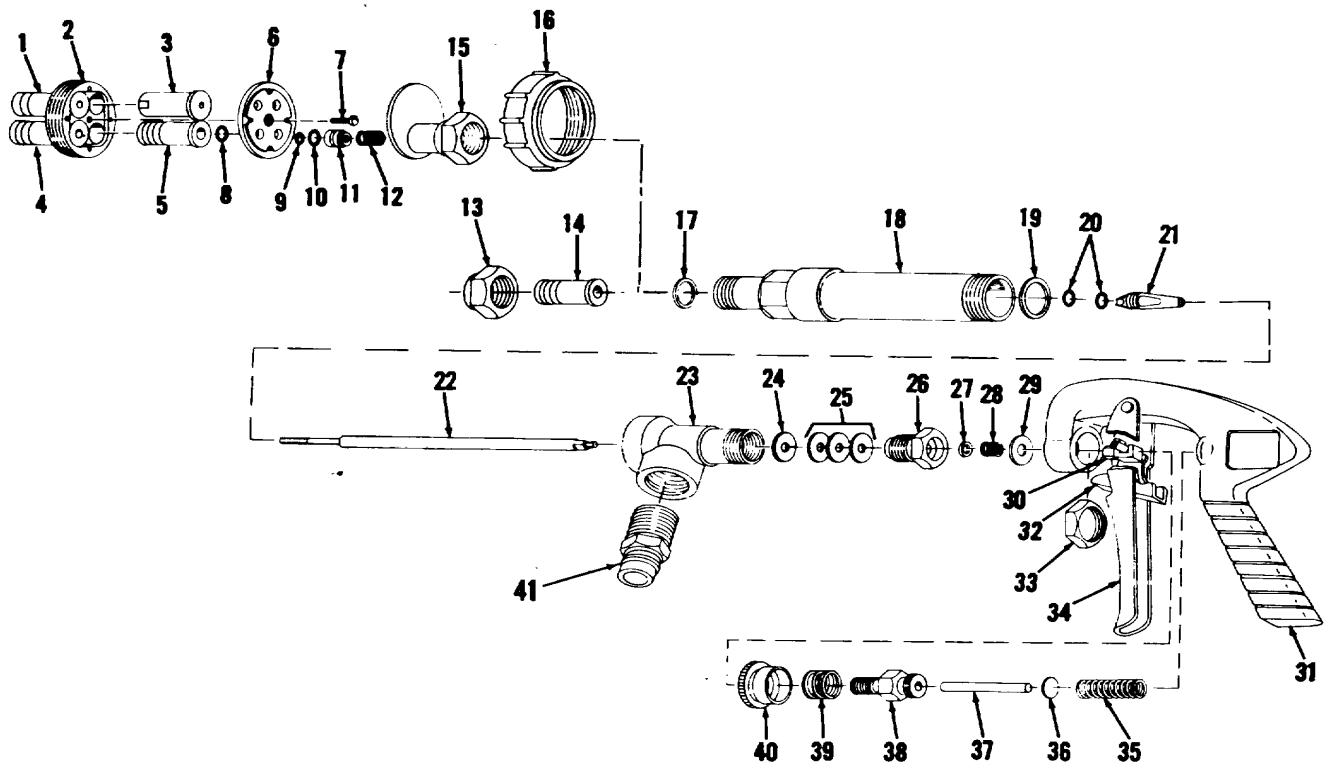
b. Gun Disassembly.

(1) Place handle body assembly (31, fig. 4-5) in a vise. Mark the position of the quickdisconnect coupling half (41) in relation to the handle body assembly (31), so that when gun is reassembled, the correct angle of inlet body (23) and quickdisconnect coupling half (41) to handle body assembly is retained.

(2) Inspect the quickdisconnect coupling half (41) and replace if damaged.

(3) Remove the jet spray unit from the gun by unscrewing the cap (13) from the nozzle housing and tubing assembly (18).

(4) Make sure the adjust nut stop (40) is all the way back. Lock the trigger open (34) with the trigger stop (32).



1 Orifice tip (2 grooves)
2 Tip holder
3 Orifice tip (stainless steel)
4 Orifice tip (3 grooves)
5 Orifice tip (4 grooves)
6 Backup plate
7 Screw
8 Preformed packing (4 required)
9 Quad ring
10 Preformed packing
11 Seat follower
12 Spring
13 Cap
14 Orifice tip (4 grooves)
15 Inlet subassembly
16 Retainer ring
17 Gasket
18 Nozzle housing and tubing assembly
19 Gasket
20 Preformed packings
21 Seat plug
22 Stem
23 Inlet body
24 Flat washer
25 Teflon packings
26 Packing screw
27 Flat washer
28 Helical compression spring
29 Flat washer
30 Trigger guide
31 Handle body assembly
32 Trigger stop
33 Hexagon plain nut
34 Trigger
35 Main spring
36 Spring guide washer
37 Spring stud
38 Spring screw
39 Adjust nut spring for stop
40 Adjust nut stop
41 Quick-disconnect coupling half

Figure 4-5. Gun, exploded view.

(5) Secure the inlet body (23) with a pair of pliers and remove the nozzle housing and tubing assembly (18), and aluminum gasket (19), and the hexagon plain nut (33).

(6) Inspect the preformed packings (20) and replace if damaged.

(7) Unscrew the stem (22) from the trigger guide (30).

(8) Remove the inlet body (23) and stem (22) as one piece.

(9) Remove the flat washers (27 and 29), helical compression spring (28), and the hexagon plain nut (33).

(10) Remove the packing screw (26). Pull the stem (22) out of the inlet body (23).

(11) Remove the old teflon packings (25) and the flat washer (24) from the inlet body (23).

c. Gun Reassembly.

(1) Insert the flat washer (24) and new teflon packings (25) in the inlet body (23).

(2) Insert the stem (22) into the inlet body (23) and through the teflon packings (25).

(3) Screw the packing screw (26) into the inlet body (23) and tighten it wrench tight.

(4) Hold the hexagon plain nut (33) between the trigger (34) and the hole in the handle body assembly (31). Place the flat washer (29) on the trigger guide (30). Place the helical compression spring (28) over the trigger guide (30). Place the flat washer (27) on the stem (22).

(5) Screw the stem (22) into the trigger handle guide (30). Insert the inlet body (23) in the handle body assembly (31).

(6) Screw the hexagon plain nut (33) up finger tight. Check the alinement of the marks of the original position (b(l) above). Hold the alinement and tighten the hexagon plain nut (33).

(7) Place the gasket (19) in the inlet body (23).

Hold the gun in a vertical position (with the stem pointing upward)to keep the gasket seated in the inlet body.

Screw the nozzle housing and tubing assembly (18) on the inlet body (23) wrench tight.

(8) Inspect the gasket (17) and install the jet spray unit on the nozzle housing and tubing assembly (18).

(9) For storage, release the trigger and run adjust nut stop (40) forward until the adjust nut stop covers all the threads on the spring screw (38).

d. Test. Test fire the disperser to ensure correct operation of the gun.

4-18.Nonmetallic Hose Assembly (Discharge Hose)

a. Maintenance. Maintenance on the nonmetallic hose assembly is limited to replacement of the preformed packings and replacement of the entire hose assembly.

b. Preformed Packing Replacement The preformed packings are located inside the quick-disconnect coupling halves on both ends of the discharge hose. If replacement is required, install a new preformed packing with the open side down. Make sure the new preformed packing is in its groove.

Section VIII. COMPRESSED GAS CYLINDER (AGENT CONTAINER ASSEMBLY) GROUP

4-19. General

Organizational maintenance personnel are authorized to replace the wing nut, preformed packing, quick-disconnect coupling half and the entire agent container assembly.

4-20. Agent Container Assembly

a. Disassembly.

(1) Unscrew the wing nut from the neck of the agent container. (fig. 1-3).

(2) Pull the quick-disconnect coupling half out of the neck of the agent container.

(3) Inspect the preformed packing to see if it is damaged or loose.

(4) Inspect the agent container and the wing nut for damaged threads.

(5) Inspect the agent container neck to see that it is not damaged.

(6) Inspect the quick-disconnect coupling half for damage.

b. Reassembly.

Assembly of the agent container is reverse of the disassembly procedure (a above). If the agent container is damaged, the entire assembly must be replaced.

Section IX. AIR PRESSURE ASSEMBLY GROUP

4-21. Regulator Assembly

Organizational maintenance personnel are authorized to replace the safety relief valve, preformed packing, and the pressure regulator.

NOTE

Tape, antiseize (Item 6, App F) must be used on all threaded connections.

a. Safety Relief Valve.

(1) Unscrew the damaged safety relief valve (5, Fig. 1-4) from the pressure regulator.

(2) Obtain a new safety relief valve.

(3) Screw the new safety relief valve into the pressure regulator and tighten it wrench tight.

b. Preformed Packing.

(1) Removal

(a) Unscrew the nonmetallic hose assembly (high pressure) (2, Fig 1-4) from the tube to boss straight adapter (3).

(b) Unscrew the adapter (3) from the pressure regulator (4).

(c) Inspect the preformed packing on the adapter. Replace, if damaged.

(2) Installation.

Installation procedure is the reverse of removal procedure.

c. Pressure Regulator.

(1) Removal.

(a) Disconnect the quick-disconnect coupling half (female) (8, Fig 1-4) from the quick-disconnect coupling half (male) (7).

(b) Unscrew the nonmetallic hose assembly (high pressure) (2) from the tube to boss straight adapter (3).

(c) Remove the two screws (13, Fig 1-2) and nuts (14) that fasten the regulator assembly to the frame and harness assembly (2).

(2) Installation.

Installation procedure for the pressure regulator is the reverse of removal procedure.

4-22. Coupler Assembly and Nonmetallic Hose Assembly

Organizational maintenance personnel are authorized to replace the coupler assembly and nonmetallic hose assembly (high pressure).

NOTE

The coupler assembly cannot be removed from the air cylinder unless the grip knob is closed.

a. Removal

(1) Close the grip knob (1, Fig 1-4).

(2) Unfasten the coupler assembly (13) from the nipple assembly (14).

(3) Unscrew the nonmetallic hose assembly (2) from the tube to boss straight adapter (3).

(4) Unscrew the hose assembly (2) from the coupler assembly (13).

(5) Replace damaged coupler assembly or faulty hose.

b. Installation. Installation procedure is the reverse of removal procedure.

4-23. Air Cylinder

Organizational maintenance personnel are authorized to replace the air cylinder.

a. Removal Remove the air cylinder from the frame and harness assembly (para 2-5, *(a)* through *(e)*).

b. Installation.

(1) Slide an air cylinder (10, Fig 1-4) into position on the frame assembly.

(2) Fasten the spring loaded clamp (6, Fig 1-2) to secure the air cylinder to the frame and harness assembly.

(3) Connect the valve actuating coupler assembly (13, Fig 1-4) to the nipple assembly (14).

4-24. Nonmetallic Hose Assembly and Preformed Packing

Organizational maintenance personnel are authorized to replace the nonmetallic hose assembly (low pressure) and preformed packing.

a. Removal

(1) Disconnect the female quick-disconnect coupling half (8, Fig 1-4) from the male quick-disconnect coupling half (7).

(2) Unscrew the nonmetallic hose assembly (1, Fig 4-6) from the run tee (15).

(3) Inspect the preformed packing (2). Replace, if damaged.

b. Installation. Installation procedure for the hose assembly is the reverse of the rermoval procedure.

1. Nonmetallic hose assembly
2. Preformed packing
3. Agitator
4. Retainer
5. Preformed packing
6. Preformed packing
7. Check valve
8. Steel pipe
9. Check valve assembly
10. Preformed packing (teflon)
11. Preformed packing
12. Preformed packing
13. Nipple
14. Preformed packing
15. Run tee
16. Coupler assembly
17. Quickdisconnect coupling half (male)
18. Manifold coupler assembly
19. Preformed packing
20. Drain cock cap assembly

Legend for fig. 4-6:

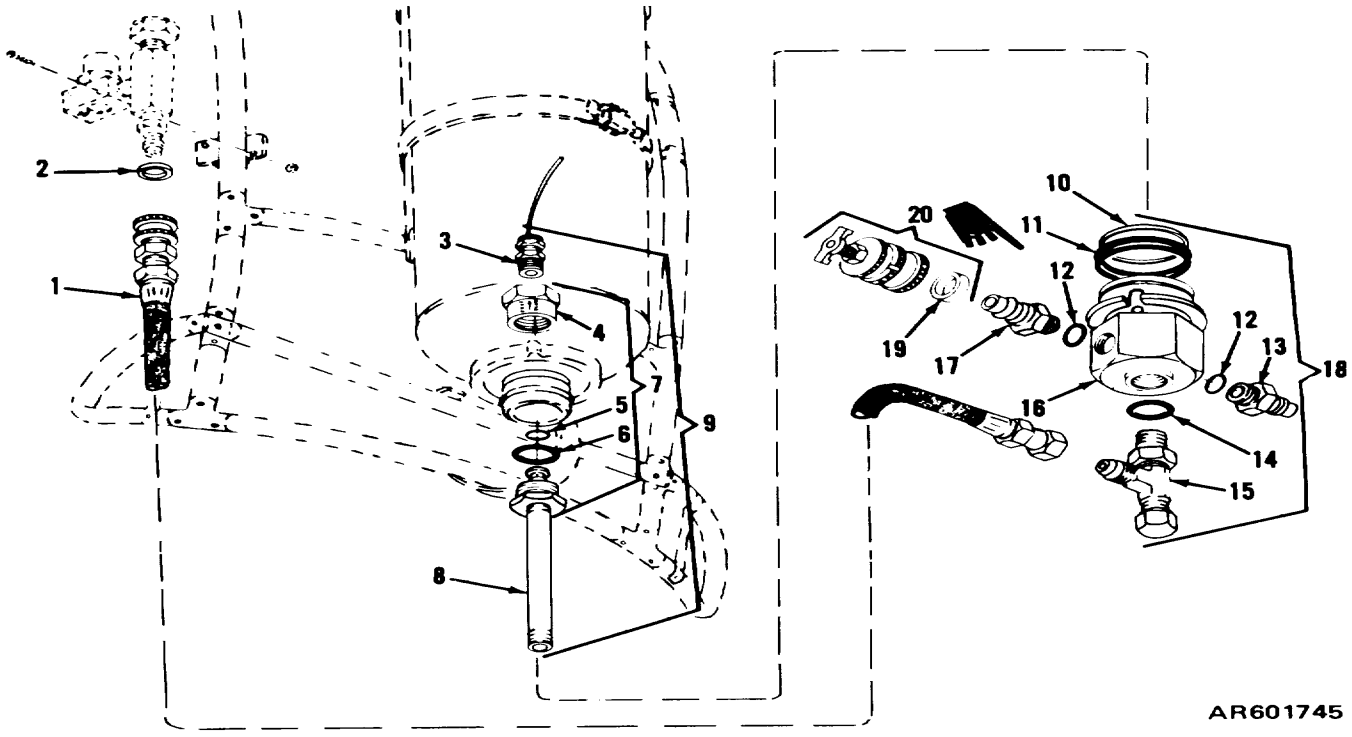


Figure 4-6. Air pressure Assembly Group, Hose, .fanifold Coupler, Drain Cock, Cap, and Check Valve Assembly.

4-25. Check Valve Assembly

Organizational maintenance personnel are authorized to replace the agitator, preformed packings, and the entire check valve assembly.

a. Removal

(1) Disconnect the female quick-disconnect coupling half (8, fig 1-4) from the male quick-disconnect coupling half (7).

(2) Disconnect the manifold coupler assembly (18, Fig. 4-6) from the agent container assembly.

(3) While securing run tee (15), turn steel pipe (8) counterclockwise and remove the pipe from the manifold coupler assembly.

(4) Unscrew the retainer (4) from the steel pipe (8).

(5) Unscrew the agitator (3) from the retainer (4).

(6) Inspect agitator (3). Replace, if damaged.

(7) Inspect preformed packings (5 and 6). Replace, if damaged.

b. Installation. Installation procedures are the reverse of the removal procedures.

4-26. Manifold Coupler Assembly

Organizational maintenance personnel are authorized to replace the drain cock cap assembly, preformed packings, and the entire manifold coupler assembly.

a. Drain Cock Cap Assembly.

(1) Removal

(a) Disconnect drain cock cap assembly (20, Fig 4-6) from the male quick-disconnect coupling half (17).

(b) Inspect the preformed packing (19) and drain cock cap. Replace, if damaged.

NOTE

Install the preformed packing with the open side down.

(2) Installation. Installation procedure is the reverse of removal procedure.

b. Preformed packings.

(1) Removal

(a) Disconnect the female quick-disconnect coupling half (8) from the male quick-disconnect coupling half (7).

(b) Disconnect the manifold coupler assembly from the agent container assembly.

(c) Unscrew the nonmetallic hose assembly (1, Fig 4-6) from the run tee (15).

(d) While securing the run tee (15), turn the steel pipe (8) counterclockwise and remove the steel pipe from the manifold coupler assembly.

(e) Unscrew the run tee (15) from the coupler assembly (16).

(f) Disconnect the discharge hose and unscrew the nipple (13) from the coupler assembly (16).

(g) Unscrew the coupling half (17) from the coupler assembly (16).

(h) Inspect preformed packings (10, 11, 12 (qty2), and 14). Replace if damaged.

(2) Installation. Installation procedures are the reverse of removal procedures.

c. Manifold Coupler Assembly.

(1) Removal

(a) Disconnect the female quick-disconnect coupling half (8) from the male quick-disconnect coupling half (7).

(b) Disconnect coupler assembly (18, Fig 4-6) from the agent container assembly.

(c) Disconnect the female quick-disconnect coupling half on the discharge hose from nipple (13).

(d) Unscrew the nonmetallic hose assembly (1) from the run tee (15).

(e) While securing the run tee (15), turn the steel pipe (8) counterclockwise and remove the steel pipe from the manifold coupler assembly.

(2) Installation. Installation procedures are the reverse of removal procedures.

Section X. FRAME AND HARNESS ASSEMBLY GROUP

Organizational maintenance personnel are authorized to replace the screw (3, fig. E-7) and nut (4) and the entire frame and harness assembly group.

CHAPTER 5
DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

Section I. HYDROSTATIC AND VOLUMETRIC TESTING

5-1. Hydrostatic and Volumetric Testing
Check the hydrostatic and volumetric test dates on the air cylinder.

5-2. Scheduled Tests
Direct support maintenance personnel are to perform the specific tests every four years (TM 3-1040-251-15).

Section II. AIR PRESSURE ASSEMBLY GROUP

5-3. Air Cylinder Rupture Disk and Attaching Parts
Direct support maintenance personnel are authorized to remove and replace the rupture disk and attaching parts.

WARNING

Assume the air cylinder is pressurized. Ensure that all air pressure is relieved.

a. Removal

(1) Relieve air pressure (5, table 3-1).

(2) Disconnect the valve actuating coupler assembly (13, Fig. 1-4) from nipple assembly (14).

(3) Open spring loaded clamp (6, Fig 1-2) and slide the air cylinder clear of the frame (2).

(4) Place the air cylinder in a vise.

(5) With the rupture disk assembly in the nipple assembly (1, fig. E-5) facing away from personnel, remove the hexagon socket plug (4).

(6) Remove rupture disk (3) and gasket (2).

(7) Discard the rupture disk (3), gasket (2), and socket plug (4).

b. Installation. Installation procedures are the reverse of removal procedures.

c. Test Perform air cylinder test (para 5-2).

5-4. Air Cylinder Preformed Packing
Direct support personnel are authorized to replace the air cylinder preformed packing (5, Fig. E-5).

WARNING

Assume the air cylinder is pressurized. Ensure that all air pressure is relieved.

a. Removal

(1) Perform removal procedures (Para 5-3*a* (1) through (6)).

(2) Remove nipple assembly (1, Fig E-5), from cylinder (6).

(3) Replace gasket (5).

b. Installation. Installation procedures are the reverse of removal procedures.

c. Test Perform air cylinder test.

5-5. Pressure Regulator Assembly
Direct support personnel are authorized to replace the pipe tee and quick-disconnect coupling half of the pressure regulator assembly.

a. Removal.

(1) Disconnect the female quick-disconnect coupling half (8, fig. 1-4) from the male quick-disconnect coupling half (7).

(2) Unscrew the quick-disconnect coupling half (8, Fig. E-4) from the pipe tee (7).

(3) Unscrew the safety relief valve (6) from the pipe tee (7) and retain safety relief valve (6).

(4) Unscrew the pipe tee (7) from the regulating valve (9).

b. Installation

NOTE

Tape, antiseize, (Item 6, App F) must be used on all threaded connections.

Installation procedure for the pressure regulator assembly is the reverse of the removal procedure.

c. Test Perform pressure regulator test (para 4-10).

5-6. Calibration of Gages From Service Kit, M254
All gages are required to undergo calibration as prescribed in TB 43-180 and at the scheduled interval.

APPENDIX A
REFERENCES

CTA 50-970	Expendable Items (except: Medical, Class V, Repair Parts, and Heraldic Items)
FM 3-9	Military Chemistry and Chemical Compounds
FM 5-25	Explosives and Demolitions
FM 19-15	Civil Disturbances
SC 1040-95-CL-A01	Sets, Kits, and Outfits Components List, Service Kit, Portable Riot Control Agent Disperser, M254
SF 364	Report of Discrepancy
TM 3-220	Chemical, Biological, and Radiological (CBR) Decontamination
TM 3-250	Storage, Shipment, Handling, and Disposal of Chemical Agents and Hazardous Chemicals
TM 3-1040-251-15	Operator, Organizational, DS, GS, and Depot Maintenance Manual, Test Set, Flame Thrower-Riot Control Agent Disperser, Hydrostatic and Volumetric, 6,000 psi, M5
TM 3-4310-100-10	Operator's Manual; Compressor Unit, Reciprocating, Power-Driven, Flame Thrower, 3V2 CFM, AN-M4, AN-M4B, AN-M4C, and AN-M4D
TM 5-4310-273-15	Operator's, Organizational, Direct Support, General Support, and Depot Maintenance Manual: Compressor, Reciprocating, Power Driven, Air, Wheel Mounted, 2-wheel, Pneumatic Tires w/Towbar and Lunette Eye Gasoline Engine: 4 CFM, 3000 PSI (Walter Kidde and Co., Inc. Model 892960) FSN 4310-728-2030
TM 5-4310-226-15	Operator's Organizational, Direct Support, General Support, and Depot Maintenance Manual: Compressor, Reciprocating, Power-Driven, Air; Wheel Mounted; Gasoline Engine Driven, 4 CFM, 3,000 PSI, FSN 4310-690-0060
TM 5-4310-275-14	Operator, Organizational, Direct and General Support Maintenance Manual: Compressor, Reciprocating, GED, 2 Wheel MTD, W/Towbar, 4 CFM, 3,000 Psi
TMNI-5-4310-335-14	Operator, Organizational, Direct and General Support Maintenance Manual: Compressor, Reciprocating, Air 2 Wheel MTD, W/Towbar, Lunette Eye, 4 CFM, 3,000 Psi
TM 5-4310-275-25P	Organizational, DS, GS, and Depot Maintenance Repair Parts and Special Tools List: Compressor, Reciprocating GED, Wheel MTD, Pneumatic Tires, W/Towbar, Lunette Eye, 4 CFM, 3,000 Psi, FSN 4310-878-7969
TM 8-285	Treatment of Chemical Agent Casualities and Conventional Military Chemical Injuries
TM 9-1375-213-12	Demolition Materials
TM 38-750	The Army Maintenance Management System (TAMMS)
TM 43-0002-31	Destruction of Chemical Weapons and Defense Equipment To Prevent Enemy Use
TM 43-0139	Painting Instructions for Field Use
TB 43-180	Calibration Requirements for the Maintenance of Army Materiel
TM 740-90-1	Administrative Storage of Equipment

APPENDIX B
COMPONENTS OF END ITEM LIST

Section I. INTRODUCTION

B-1. Scope
This appendix lists basic issue items for the M33A1 Disperser to help you inventory items required for safe and efficient operation.

B-2. General
This Components of End Item List is divided into the following sections:

a. Section II. Integral Components of the End Item. Not applicable.

b. Section III. Basic Issue Items. These are the minimum essential items required to place the M33A1 Disperser in operation, to operate it, and to perform emergency repairs. Although shipped separately packed they must accompany the M33A1 Disperser during operation and whenever it is transferred between accountable officers. The illustrations will assist you with hard-to-identify items. This manual is your authority to requisition replacement Bll, based on MTOE authorization of the end item.

B-3. Explanation of Columns
a. Illustration Item Number-Column 1. Indicates the callout number used to reference the item in the illustration.

b. National Stock Number. Indicates the National Stock Number assigned to the item and which will be used for requisitioning.

c. Description Location-Column 3.

(1) Part Number. Indicates the primary number used by the manufacturer, 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.

(2) Description Indicates the Federal item name and, if required, a minimum description to identify the item.

(3) Location. The physical location of each item listed is given in this column. The lists are designed to inventory all items in one area of the major item before moving on to an adjacent area.

(4) Usable On Code. " USABLE ON". Not applicable.

d. Quantity Required (Qty Reqd). This column lists the quantity of each item required for a complete major item.

e. Quantity. This column is left blank for use during an inventory. Under the Rec'd column, list the quantity you actually receive on your major item. The Date columns are for your use when you inventory the major item at a later date; such as for shipment to another site.

Section III. BASIC ISSUE ITEMS LIST

(1) Illus Item No.	(2) National stock No.	(3) Description and Location Part No. Usable on code	(4) Qty Reqd	(5) Quantity Recd	Date	Date
1		CLAMP: C116-3-120	1			
2	1040-00-116-0355	CYLINDER COMPRESSED GAS (Container Assembly: Agent) D116-3-74	1			
3	1040-00-229-8985	CLOSURE, CAM ACTION: S-1009A	1			
4	1040-00-198-4924	CYLINDER, COMPRESSED GAS: C116-3-64	1			
5		STRAP STATIC: C116-3-119	1			
6		SUPPORT COLLAR C116-3-137	1			

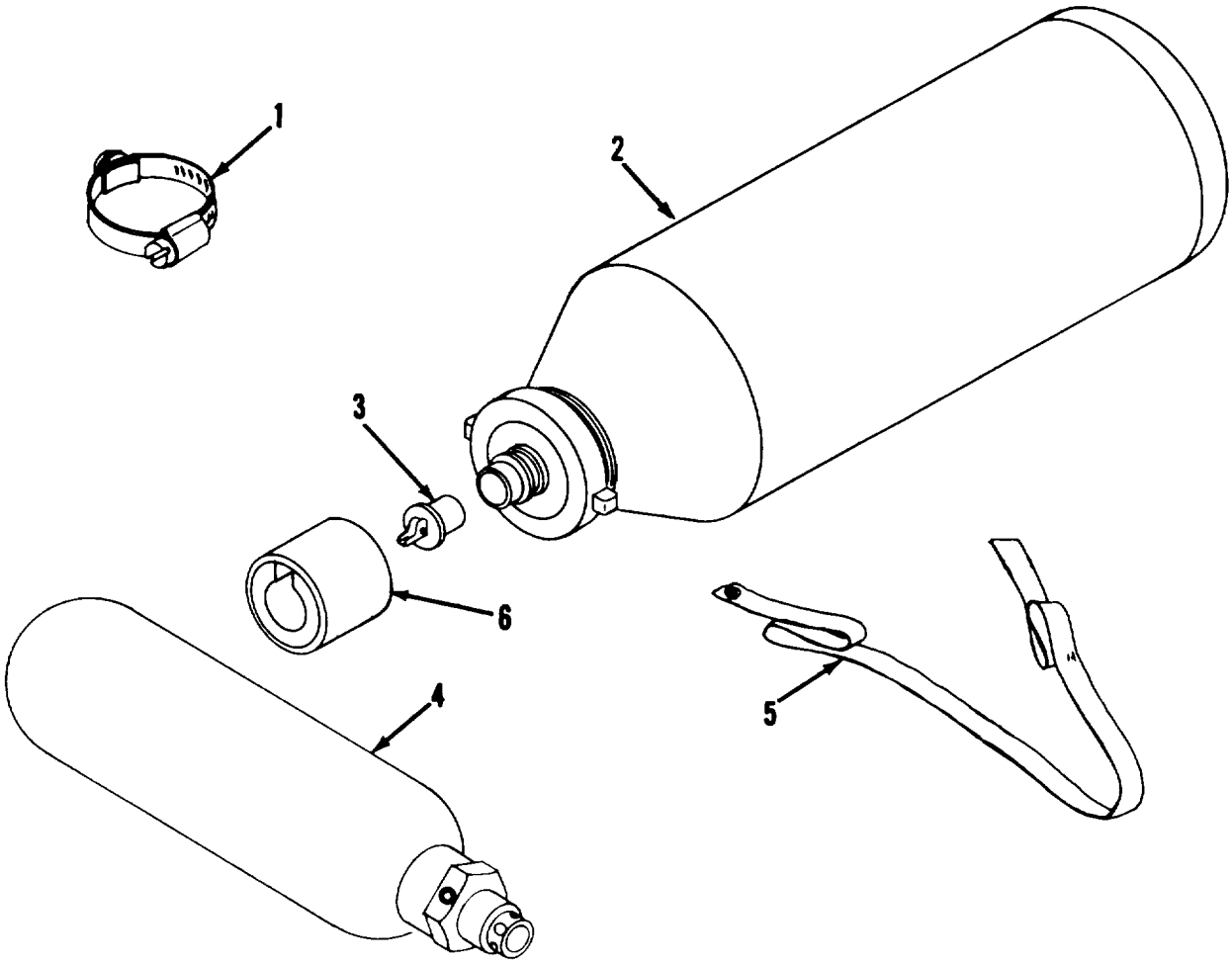


Figure B-1. Basic issue items list

APPENDIX D
MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

D-1. General

a. This appendix provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

c. Section III lists the special tools and test equipment required for each maintenance function as referenced from Section II.

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

D-2. Maintenance Functions

a. Inspect To determine the serviceability of an item by comparing its physical, mechanical and/or electrical characteristics with established standards through examination.

b. Test To verify serviceability and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d Adjust To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Align To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g Install The act of emplacing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services or other maintenance actions to 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.

j. Overhaul. That maintenance effort (services/actions) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publication. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipments/components.

D-3. Explanation of Columns in the MAC, Section II

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. (For detailed explanation of these functions, see para D-2).

d. Column 4, Maintenance Level. Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform the maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate "work time" figures will be shown for each level. The number of manhours specified by the" work time" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating condition. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart.

This time will be expressed in manhours (MH) and carried to one decimal place (tenths of hours). The symbol designations for the various maintenance levels are as follows:

C.....Operator or crew
0.....Organization maintenance
F .....Direct support maintenance

e. Column 5, Tools and Equipment Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in Section IV.

D-4. Explanation of Columns in Tool and Test Equipment Requirements. Section III

a. Column 1, Reference Code. The tool and TMDE reference code correlates with a code used in the MAC, Section II, Column 5.

b. Column 2, Maintenance Level The lowest level of maintenance authorized to use the tool or test equipment.

c. Column 3, Nomenclature. Name or identification of the tool or test equipment.

d. Column 4, National Stock Number. The National Stock Number of the tool or TMDE.

e. Column 5, Tool Part Number. The manufacturer's part number.

D-5. Explanation of Columns in Remarks Section IV

a. Reference Code. The code recorded in column 6, section II, maintenance function being performed as indicated in the MAC, section II.

b. Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, section II.

SECTION II.
MAINTENANCE ALLOCATION CHART FOR DISPERSER, RIOT CONITROL AGENT, PORTABLE, M33A1

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
100	GUN ASSEMBLY								
	Gun, Portable, Riot	Inspect	0.1						
	Control Agent	Replace		0.1					
	Disperser	Repair		0.5				2	
	HOSE ASSEMBLY, NON-	Inspect	0.1						
	METALLIC (Discharge	Replace		0.1					
	Hose)	Repair		0.1				2	
	Multijet Spray	Inspect	0.1						
	Unit	Replace		0.1					
		Repair		0.1				2	
200	AGENT CONTAINER ASSEMBLY								
	Cylinder, Compressed	Inspect	0.1						
	Gas (Container Assem-	Service		0.7					
	bly)	Replace	0.1						
		Repair		0.1					
300	AIR PRESSURE ASSEMBLY								
	Coupler Assembly	Inspect	0.1						
	(Valve Actuator)	Replace		0.1					
		Repair		0.2					
	Regulator Assembly	Inspect		0.1					A
		Test		0.5				1,3	
		Replace		0.3					
		Repair			0.8			2	
	Cylinder, Compressed	Inspect	0.1						
	Gas Assembly	Test			1.0			1,3	B
		Service		0.2					
		Replace	0.1						
		Repair			0.5			2&4	

SECTION II.
MAINTENANCE ALLOCATION CHART FOR DISPERSER, RIOT CONTROL AGENT PORTABLE, M33A1

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
300	AIR PRESSURE ASSEMBLY (Cont.)								
	Hose Assemblies	Inspect	0.1						
	Nonmetallic	Replace		0.1				2	
	(high and low pressure)								
	Manifold Coupler	Inspect	0.1						
	Assembly	Replace		0.1				2	
		Repair		0.1					
	Check Valve Assemblies	Inspect	0.1						
		Replace		0.1					
		Repair		0.1				2	
	Drain Cock Cap	Inspect	0.1						
	Assembly	Replace		0.1					
		Repair		0.1				2	
400	FRAME AND HARNESS ASSEMBLY								
	Frame and Harness	Inspect	0.1						
	Assembly	Service	0.2						
		Replace		0.2				2	

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) Reference code	(2) Maintenance Category	Nomenclature	(3) Number	(4) National Stock Number	(5) Tool Part
1	0		Service Kit, Portable Riot Control Agent Disperser, M254	1040-00-157-6974	
2	O/F		Tool Kit, General Mechanic	5180-00-672-2611	
3	F		Test Set, Flame Thrower, Riot Control Agent Disperser, Hydrostatic and Volumetric, 6000 PSI, M5	1040-00-050-7952	
4	F		Tool Kit, Automotive Mechanic, Light weight	5180-00-754-0641	

Section IV. REMARKS

Reference code	Remarks
A	Upon receipt and test quarterly
B	Test every four years

APPENDIX E
ORGANIZATION AND DIRECT SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LISTS

Section I. INTRODUCTION

E-1. Scope

This appendix lists spares and repair parts required for performance of organizational, and direct support maintenance of the M33A1 Disperser. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

E-2. General

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List A list of spares and repair parts authorized 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 numeric sequence, with the parts in each group listed in figure and item number sequence.

b. Section III. Special Tools List Not applicable.

c. Section IV. National Stock Number and Part Number Index. A list, in National Item Identification Number (NIIN) sequence, of all National Stock Numbers (NSN) appearing in the listings, followed by a list in alphameric 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.

E-3. Explanation of Columns

a. Illustration This column is divided as follows: (1) Figure Number. Indicates the figure number of the illustration on which the item is shown.

(2) Item Number. The number used to identify each item called out in the illustration.

b. Source, Maintenance, and Recoverability (SMR) Codes.

(1) Source Code. Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code	*Definition*
PA	Item procured and stocked for anticipated or known usage.
KF	An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
AO	Item to be assembled at organizational level.
XA	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB	Item is not procured or stocked if not available through salvage, requisition.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

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

Code	*Application/Explanation*
C	Crew or operator maintenance performed within organizational maintenance.
O	Support item is removed, replaced, used at the organizational level.
F	Support item is removed, replaced, used at the direct support level.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes:

Code	*Application/Explanation*
O	The lowest maintenance level capable of complete repair of the support item is the organizational level.
F	The lowest maintenance level capable of complete repair of the support item is the direct support level.
Z	Nonreparable. No repair is authorized.

(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Recoverability

Codes	*Definition*
Z	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
O	Reparable item. When uneconomically reparable, condemn and dispose at organizational level.
F	Reparable item. When uneconomically repairable, condemn and dispose at the direct support level.

Recoverability codes *Definition*

c. National Stock Number. Indicates the national stock number assigned to the item and which will be used for requisitioning.

d. Part Number. 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 a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB-708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

f. Description Indicates the Federal item name and, if required, a minimum description to identify the item.

Items that are included in kits and sets are listed below the name of the kit or set with the quantity of each item in the kit or set indicated in the quantity incorporated in unit column.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr, etc.). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. Quantity Incorporated in Unit Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group.

E-4. Special Information

Repair parts kits appear as the last entries in the repair parts listing for the figure in which its parts are listed as repair parts.

E-5. How to Locate Repair Parts

a. When National Stock Number or Part Number is Unknown:

(1) First. Using the table of contents, determine the functional group within which the item belongs.

This is necessary since illustrations are prepared for functional groups, and listings are divided into the same groups.

(2) Second. Find the illustration covering the functional group to which the item belongs.

(3) Third. Identify the item on the illustration and note the illustration figure and item number of the item.

(4) Fourth. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

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

(1) First Using the Index of National Stock Numbers and Part Numbers, find the pertinent national stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

E-6. Abbreviations Not Applicable.

(Next printed page is E--4)

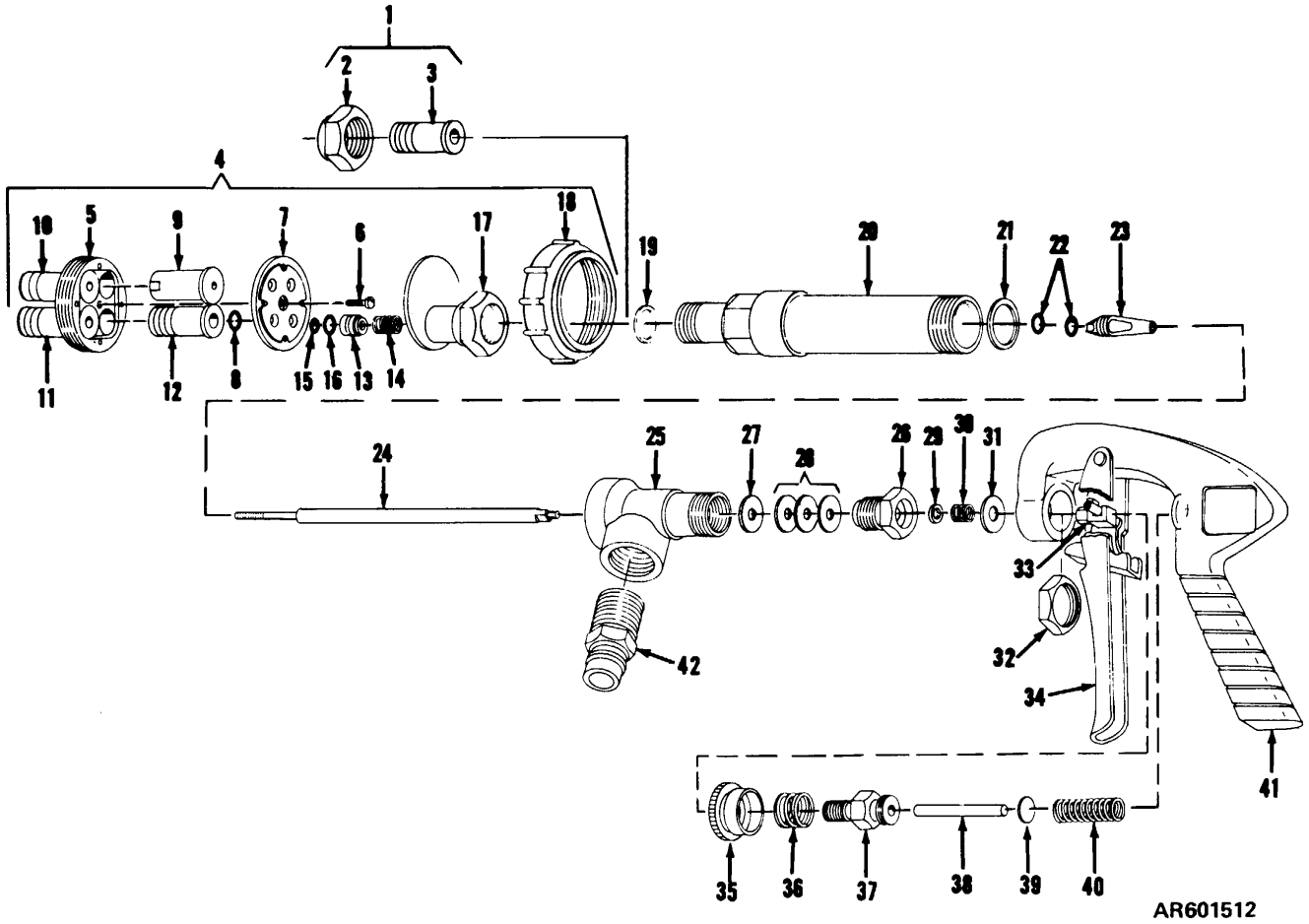


Figure E-1. Gun assembly group, gun.

SECTION II. REPAIR PARTS LIST

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 100-GUN ASSEMBLY		
E-1		PAOOO		D116-3-123	81361	GUN, PORTABLE, RIOT CONTROL AGENT DISPERSER	EA	1
E-1	1	PAOOO	1040-00-164-2693	D116-3-96	81361	JET SPRAY UNIT	EA	1
E-1	2	XBOZZ		1325	82247	CAP, ALUMINUM	EA	1
E-1	3	XBOZZ		12863-4	82247	TIP, SPRAY	EA	1
E-1	4	PAOOO		D116-3-95	81361	MULTIJET SPRAY UNIT	EA	1
E-1	5	XAOZZ		12308-NY	82247	TIP HOLDER, NYLON	EA	1
E-1	6	KFOZZ		12312-SS	82247	SCREW, STAINLESS STEEL, PART OF KIT P/N LM116-3-118	EA	1
E-1	7	XAOZZ		12306-NY	82247	BACK-UP PLATE, NYLON	EA	1
E-1	8	KFOZZ		7717-2-13	82247	PACKING, PREFORMED, PART OF KIT, P/N LM116-3-118	EA	4
E-1	9	XAOZZ		14350-SS5040	82247	TIP, ORIFICE	EA	1
E-1	10	XAOZZ		12683-2	82247	TIP, ORIFICE	EA	1
E-1	11	XAOZZ		12683-3	82247	TIP, ORIFICE	EA	1
E-1	12	XAOZZ		12683-4	82247	TIP, ORIFICE	EA	1
E-1	13	KFOZZ		12311-SS	82247	SEAT FOLLOWER, PART OF KIT, P/N LM 116-3-118	EA	1
E-1	14	KFOZZ		12313-SS	82247	SPRING, STAINLESS STEEL, PART OF KIT, P/N LM116-3-118	EA	1
E-1	15	KFOZZ		8394-Q-4010	82247	QUAD RING, PART OF KIT, P/N LM116-3-118	EA	1
E-1	16	KFOZZ		7717-2-11	82247	PACKING, PREFORMED, PART OF KIT, LM116-3-118	EA	1
E-1	17	XAOZZ		12303	82247	INLET SUBASSEMBLY	EA	1
E-1	18	XAOZZ		12307-NY	82247	RETAINER RING, NYLON	EA	1
E-1	19	KFOZZ		4743-NY	82247	GASKET, PLASTIC, NYLON, PART OF KIT P/N AB12770-12863-4-AL KIT	EA	1
E-1	20	XAOZZ		13146 and 12774	82247	NOZZLE HOUSING	EA	1
E-1	21	KFOZZ		6943 AL	82247	GASKET, ALUMINUM, PART OF KIT, P/N AB12770-12863-4-AL KIT	EA	2

SECTION II. REPAIR PARTS LIST

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 100-GUN ASSEMBLY (continued)		
E-1	22	KFOZZ		13147	82247	PACKING, PREFORMED, RUBBER	EA	2
E-1	23	XAOZZ		3145-AL	8224	SEAT PLUG		
E-1	24	XAOZZ		10574-SS	2247	STEM, STAINLESS STEEL	EA	1
E-1	25	XAOZZ		12776-AL	82247	INLET BODY, ALUMINUM	EA	1
E-1	26	XAOZZ		6600-AL	82247	PACKING, SCREW	EA	1
E-1	27	KFOZZ		6601-SS	82247	WASHER, PACKING, PART OF KIT, P/N AB12770-12863-4 AL KIT	EA	1
E-1	28	KFOZZ		6602-TEF	82247	PACKING, TEFLON,PART OF KIT, P/N AB 12770-12863-4 AL KIT	EA	3
E-1	29	KFOZZ		CP7709	82247	WASHER, FLAT, PART OF KIT, P/N AB 12770-12863-4 AL KIT	EA	1
E-1	30	XAOZZ		6594-SS	82247	SPRING, ADJUSTMENT	EA	1
E-1	31	KFOZZ		7991-ICP	82247	WASHER, STEEL, PART OF KIT, P/N AB 12770-12863-4 AL KIT	EA	1
E-1	32	KFOZZ		6599-1ZP	82247	LOCK NUT, STEEL, PART OF KIT, P/N AE 12770-12863-4 AL KIT	EA	1
E-1	33	XAOZZ		6597-INP	82247	TRIGGER GUIDE	EA	1
E-1	34	XAOZZ		6509-INP	82247	TRIGGER	EA	1
E-1	35	XAOZZ		6589-ICP	82247	STOP ADJUSTMENT NIJT	EA	1
E-1	36	XAOZZ		6595-SS	82247	SPRING, TRIGGER STOP	EA	1
E-1	37	XAOZZ		6588-SS	82247	SCREW, SPRING	EA	1
E-1	38	XAOZZ		6591-SS	82247	SPRING STUD	EA	1
E-1	39	XAOZZ		6592-SS	82247	WASHER, SPRING GUIDE	EA	1
E-1	40	XAOZZ		6593-2-SS	82247	MAIN SPRING	EA	1
E-1	41	XAOZZ		12775-AL	82247	HANDLE, BODY	EA	1
E-1	42	PAOZZ	4730-00-062-6068	C150-1-3 TYPE 1, PLAIN CLASS 2, END STYLE B	81361	COUPLING HALF, QUICK-DISCONNECT	EA	1
E-1		PAOZZ		LM116-3-118	81361	PARTS KIT, JET SPRAY UNIT	EA	1
E-1	6	KFOZZ				SCREW	EA	1
E-1	8	KFOZZ				PACKING, PREFORMED	EA	4
E-1	13	KFOZZ				SEAT FOLLOWER	EA	1

SECTION II.REPAIR PARTS LIST

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 100-GUni ASSEIMBLY (continued)		
						PARTS KIT, JET SPRAY UNIT (cont.)		
E-1	14	KFOZZ				SPRING	EA	1
E-1	15	KFOZZ				QUAD RING	EA	1
E-1	16	KFOZZ				PACKING PREFORMED	EA	1
E-1		PAOZZ	1040-00-113-6001	AB12770-12863-4-AL KIT	82247	PARTS KIT, GUN	EA	1
E-1	19	KFOZZ				GASKET, PLASTIC, NYLON	EA	1
E-1	21	KFOZZ				GASKET, ALUMINUM	EA	2
E-1	22	KFOZZ				PACKING, PREFORMED, RUBBER	EA	2
E-1	27	KFOZZ				WASHER, PACKING	EA	1
E-1	28	KFOZZ				PACKING, TEFLON	EA	3
E-1	29	KFOZZ				WASHER, FLAT	EA	1
E-1	31	KFOZZ				WASHER, STEEL	EA	1
E-1	32	KFOZZ				LOCK NUT, STEEL	EA	1

SECTION II. REPAIR PARTS LIST

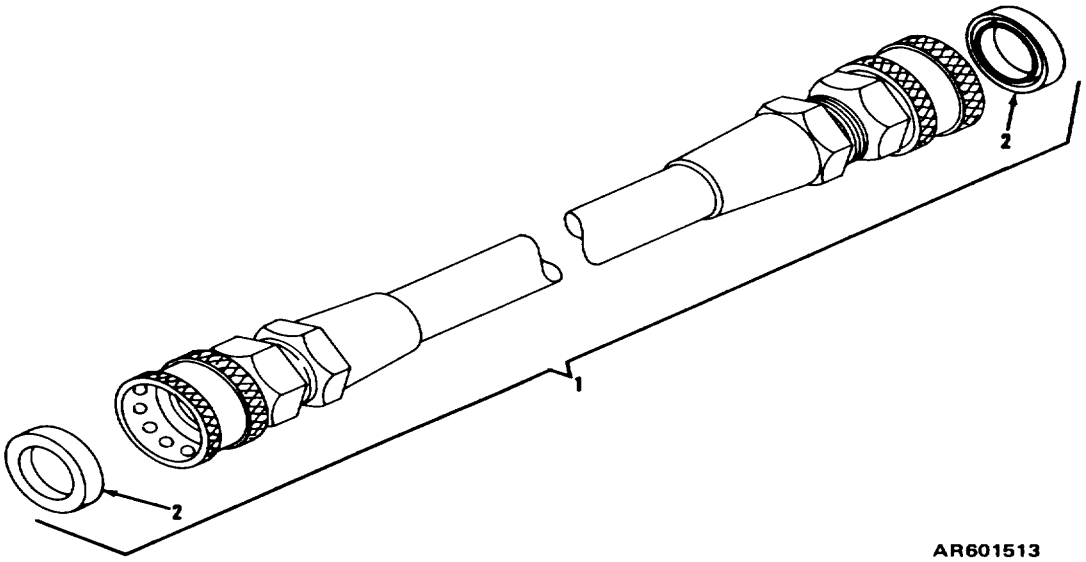


Figure E-2. Gun assembly group, hose assembly.

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 100-GUN ASSEMBLY (continued)		
E-2	1	PAOOO	4720-00-022-2472	C116-3-61	81361	HOSE ASSEMBLY, NONMETALLIC	EA	1
E-2	2	PAOZZ	5330-00-702-6048	H8-56A	78357	PACKING, PREFORMED	EA	2

SECTION II. REPAIR PARTS LIST

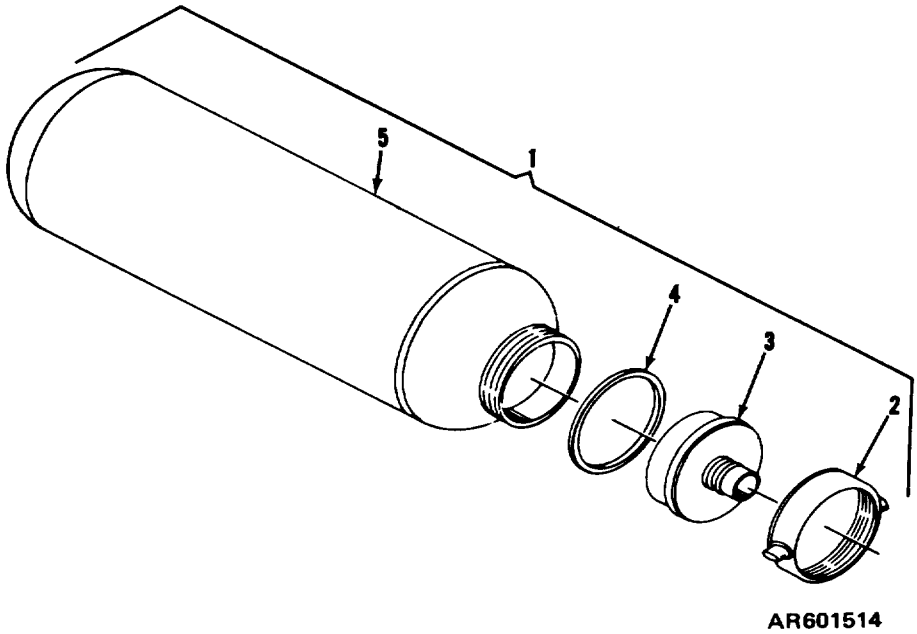


Figure E-3. Cylinder, compressed gas(agent container assembly) group.

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 200-AGENT CONTAINER ASSEMBLY		
E-3	1	PAO00	1040-00-116-0355	D116-3-74	81361	CYLINDER, COMPRESSED GAS (CONTAINER ASSEPMBLY, AGENT)	EA	1
E-3	2	PAOZZ	5310-00-008-5793	6014	28470	NUT, PLAIN WING	EA	1
E-3	3	PAOZZ	4730-00-762-1201	4382-3	78357	COUPLING HALF, QUICK-DISCONNECT	EA	1
E-3	4	PAOZZ	5330-00-291-3073	MS29513-231	96906	PACKING PREFORMED, SYNTHETIC RUBBER	EA	1
E-3	5	XAOZZ		D116-3-101	81361	CONTAINER	EA	1

SECTION II REPAIR PARTS LIST

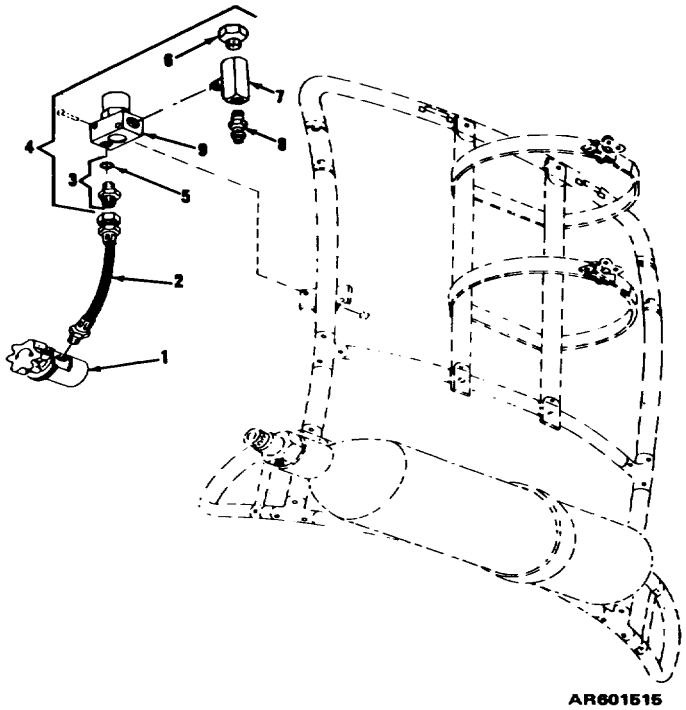


Figure E-4. Air pressure assembly group, regulator, hose and coupler assemblies.

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 300-AIR PRESSURE ASSEMBLY		
E-4	1	PAOZZ	1040-00-180-5003	4200-2	78357	COUPLER ASSEMBLY	EA	1
E-4	2	PAOZZ	4720-00-250-9316	C116-3-70-1	81361	HOSE ASSEMBLY, NONMETALLIC	EA	1
E-4	3	PAOo0o	4730-00-760-3525	C116-3-71	81361	ADAPTER, STRAIGHT, TUBE TO BOSS	EA	1
E-4	4	PAOFF	1040-00-109-5671	C116-3-114	81361	REGULATOR ASSEMBLY	EA	1
E-4	5	PAOZZ	5330-00-263-8028	'S29512-04	96906	PACKING, PREFORMED	EA	1
E-4	6	PAOZZ	4820-00-652-2215	77-DCP-003	07477	VALVE, SAFETY, RELIEF	EA	1
E-4	7	PAFZZ	4730-00-088-8666	207317	28265	TEE PIPE	EA	1
E-4	8	PAFZZ	4730-00-959-7790	C150-1-1 CLASS 1, END STYLE B	78357	COUPLING HALF, QUICK DISCONNECT	EA	1
E-4	9	XAOFZ		C116-3-92	81361	VALVE, REGULATING	EA	1

SECTION II REPAIR PARTS LIST

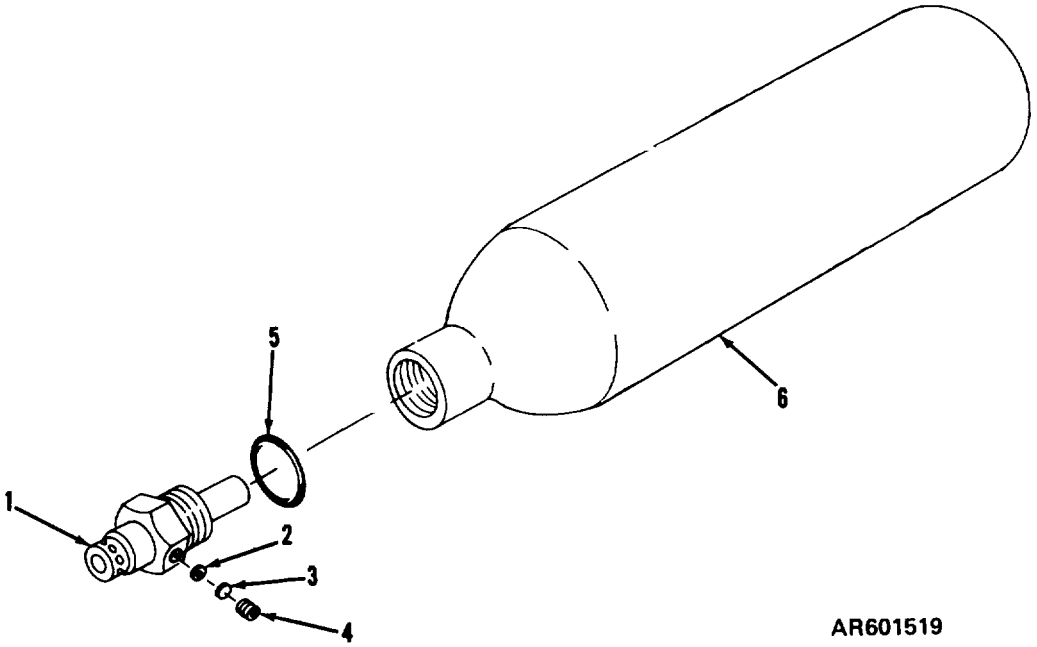


Figure E-5. Air pressure assembly group, compressed gas cylinder (air cylinder).

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 300 - AIR PRESSURE ASSEMBLY (continued)		
E-5		PAOEF.	1040-00-198-4924	C116-3-64	81361	CYLINDER, COMPRESSEN GAS (AIR CYLINDER) EA 1		
E-5	1	XAFZZ		4200-4	73357	NIPPLE ASSEMIBLY	EA	1
E-5	2	KFFZZ		P1222-15C	58553	GASKET, DEAD SOFT, COPPER,PART OF KIT, P/N P1222-25W	EA	1
E-5	3	KFFZZ		P1222-9A	58553	DISK, RUPTIIRE, PART OF KIT, P/N P1222-25W	EA	1
E-5	4	KFFZZ		P1222-7W	58553	PLUG, HEXAGON SOCKET, BRASS, PART OF KIT, P/N P1222-25W	EA	1
E-5	5	PAFZZ	5330-00-263-8034	MS29512-16	96906	PACKING, PREFORMED	EA	1
E-5	6	XAFZZ		C116-3-240	81361	CYLINDER	EA	1
E-5		PAFZZ	1040-00-113-5990	P1222-25W	58553	REPAIR KIT, RUPTURE DISK ASSEMBLY	EA	1
E-5	2	KFFZZ				GASKET, DEAD SOFT	EA	1
E-5	3	KFFZZ				DISK, RUPTURE	EA	1
E-5	4	KFFZZ				PLUG, HEXAGON SOCKET, BRASS	EA	1

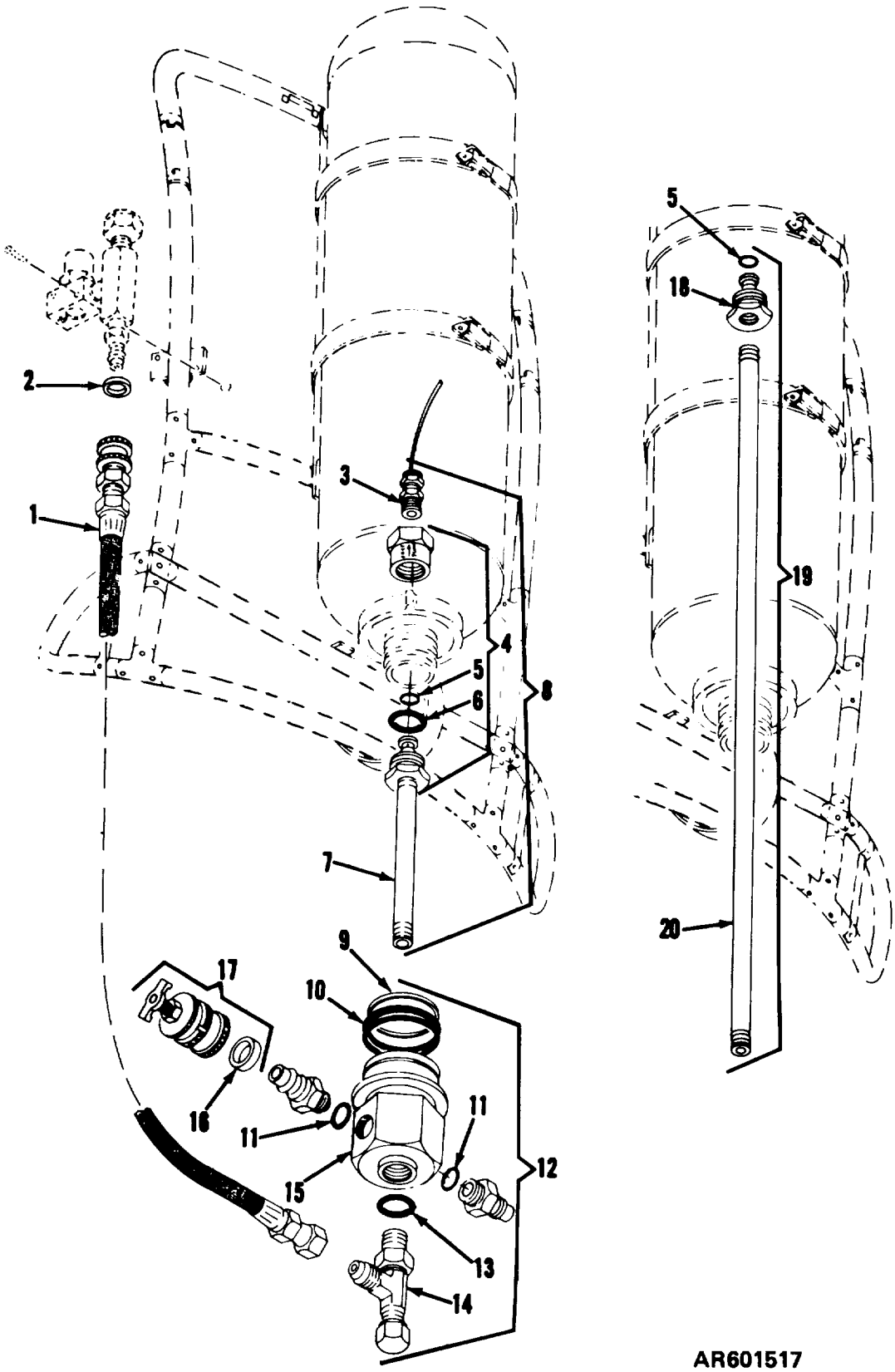


Figure E-6. Air pressure assembly group hose, manifold coupler, drain cock, cap and check value assemblies

SECTION II. REPAIR PARTS LIST

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 300 - AIR PRESSURE ASSEMBLY (continued)		
E-6	1	PAOZZ	4720-00-022-1659	C116-3-115	81361	HOSE ASSEMBLY, NONMETALLIC.....	EA	1
E-6	2	PAOZZ	5330-00-808-7611	1825-6	78357	PACKING, PREFORMED, RUBBER.....	EA	1
E-6	3	PAOZZ	1040-00-167-3491	C116-3-106	81361	AGITATOR, RIOT CONTROL	EA	1
E-6	4	XAOZZ		CV 1-8	29267	CHECK VALVE	EA	1
E-6	5	KFOZZ		2-108	29265	PACKING, PREFORMED, BUNA-A, PART OF KIT, P/N LM116-3-134	EA	2
E-6	6	KFOZZ		MS29513-14	96906	PACKING, PREFORMED, PART OF KIT, P/N LM 116-3-134	EA	1
E-6	7	XAOZZ		WW-P-404	81348	PIPE, STEEL, 1/8-n NOM PIPE ..... SIZE, 4 IN LG	EA	1
E-6	8	PAOOO	1040-00-107-8086	C116-3-72	81361	CHECK VALVE ASSEMBLY	EA	1
E-6	9	KFOZZ		6710-74-00-0	78357	BACK UP RING, TEFLON, PART OF KIT,..... P/N LM 116-3-134	EA	1
E-6	10	KFOZZ		MS28775-217	96906	PACKING, PREFORMED, PART OF KIT, P/N LM 116-3-134	EA	1
E-6	11	KFOZZ		MS28778-8	96906	PACKING, PREFORMED, PART OF KIT, P/N LM 116-3-134	EA	1
E-6	12	PAOOO	1040-00-113-6008	C116-3-116	81361	COUPLER ASSEMBLY, MANIFOLD.....	EA	1
E-6	13	KFOZZ		MS29512-06	96906	PACKING, PREFORMED, PART OF KIT,.....1 LM 116-3-134		
E-6	14	XAOZZ		C116-3-66	81361	TEE, RUN.....	EA	1
E-6	15	XAOZZ		4377-8	78357	COUPLER ASSEMBLY.....	EA	1
E-6	16	PAOZZ	5330-00-702-6048	H8-56A	78357	PACKING, PREFORMED.....	EA	1
E-6	17	PAOOO	1040-00-229-8973	C116-3-91	81361	DRAIN COCK CAP ASSEMBLY.....	EA	1
E-6	18	XAOZZ		CV 1-8	29267	CHECK VALVE	EA	1
E-6	19	PAOOO		C116-3-73	81361	CHECK VALVE ASSEMBLY	EA	1
E-6	20	XAOZZ		WW-P-404	81348	PIPE, STEEL, 1/8-n NOM PIPE ..... SIZE, 21 IN LG	EA	1
E-6		PAOZZ		LM116-3-134	81361	REPAIR PARTS KIT, MANIFOLD ..... COUPLER AND CHECK VALVE ASSEMBLY	EA	1
E-6	5	KFOZZ				PACKING PREFORMED.....	EA	1
E-6	6	KFOZZ				PACKING PREFORMED.....	EA	1

SECTION II. REPAIR PARTS LIST

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 300 - AIR PRESSURE ASSEMBLY (continued)		
						REPAIR PARTS KIT, MANIFOLD COUPLER AND CHECK VALVE ASSEMBLY (continued'		
E-6	9	KFOZZ				BACKUP RING, TEFLON.....	EA	1
E-6	10	KFOZZ				PACKING PREFORMED.....	EA	1
E-6	11	KFOZZ				PACKING PREFORMED.....	EA	1
E-6	13	KFOZZ				PACKING, PREFORMED.....	EA	1

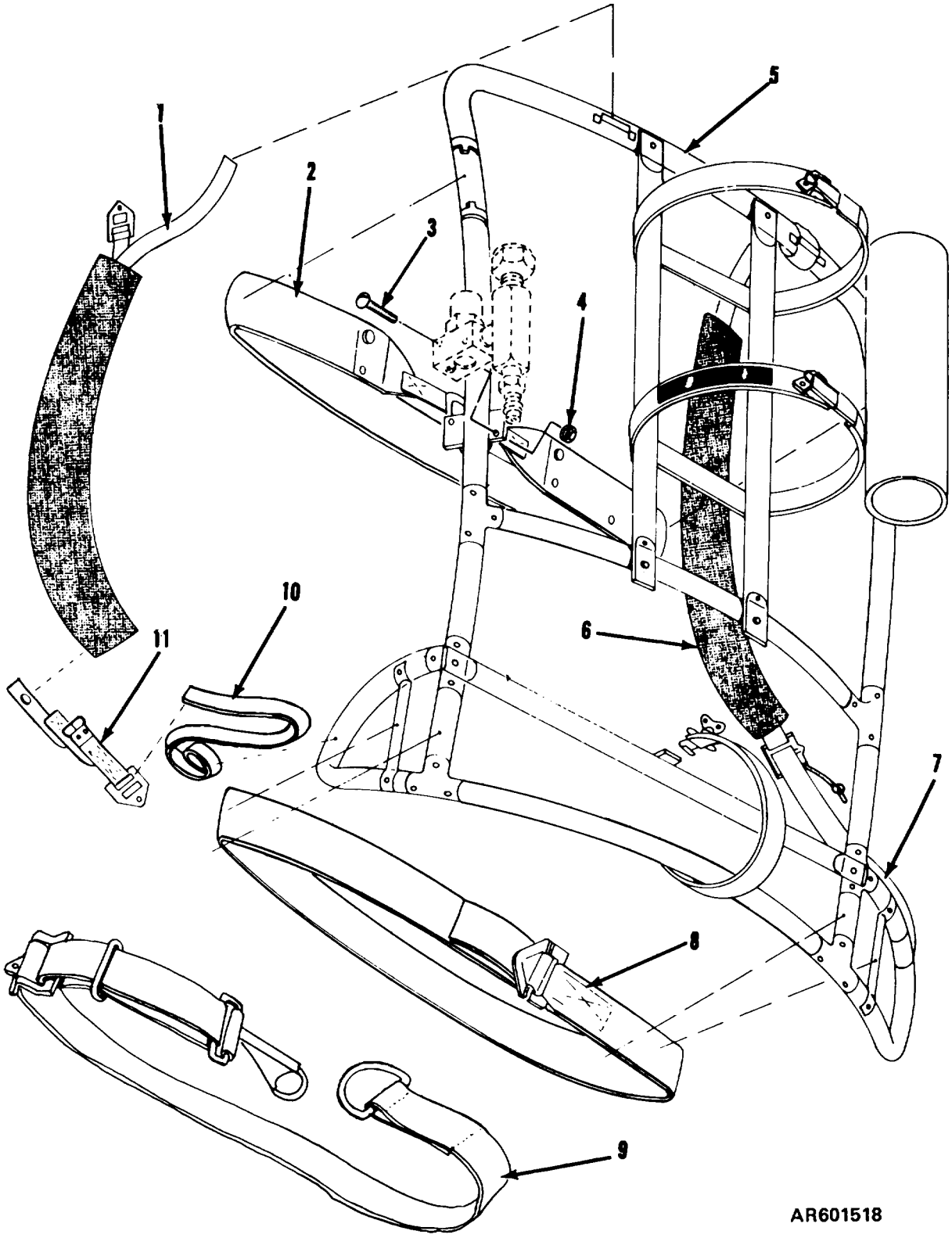


Figure E-7. Frame and harness assembly group.

SECTION II. REPAIR PARTS LIST

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 400 - FRAME AND HARNESS ASSEMBLY		
E-7		PAOOO		D116-3-130	81361	CARRIER, RIOT CONTROL AGENTEA1 DISPERSER, PORTABLE		
E-7	1	XBOZZ		D2-3-166	81337	SHOULDER STRAP, LEFT	EA	1
E-7	2	XBOZZ		D2-3-168	81337	BACK STRAP, UPPER	EA	1
E-7	3	PAOZZ	5305-00-995-3441	MS35207-269	96906	SCREW, MACHINE	EA	2
E-7	4	PAOZZ	5310-00-877-5797	MS21044-N3	96906	NUT, SELF-LOCKING, HEXAGON	EA	2
E-7	5	XBOZZ		E116-3-131	81361	FRAME ASSEMBLY	EA	1
E-7	6	XBOZZ		D2-3-166	81361	SHOULDER STRAP, RIGHT	EA	1
E-7	7	XBOZZ		D2-3-164	81337	SHOULDER STRAP, BILLET, 24 in Long	EA	1
E-7	8	XBOZZ		D2-3-168	81337	BACK STRAP, LOWER	EA	1
E-7	9	XBOZZ		D2-3-285	81337	WAIST STRAP	EA	1
E-7	10	XBOZZ		D2-3-164	81337	SHOULDER STRAP, BILLET, 30 IN. LG	EA	1
E-7	11	XBOZZ		D2-3-168	81337	SHOULDER STRAP, LEFT, QUICK RELEASE	EA	1

Section IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER	FIG. NO.	ITEM NO.
5310-00-008-5793	E-3	2
4720-00-022-1659	E-6	1
4720-00-022-2472	E-2	1
4730-00-062-6068	E-1	42
4730-00-088-8666	E-4	7
1040-00-107-8086	E-6	8
1040-00-109-5671	E-4	4
1040-00-113-5990	E-5	2
	E5	2
1040-00-113-6001	E-1	
1040-00-113-6008	E-6	12
1040-00-116-0355	E-3	1
1040-00-164-2693	E-1	1
1040-00-167-3491	E-6	3
1040-00-180-5003	E-4	1
1040-00-198-4924	E-5	
1040-00-229-8973	E-6	17
4720-00-250-9316	E-4	2
5330-00-263-8028	E-4	5
5330-00-263-8034	E-5	5
5330-00-291-3073	E-3	4
4820-00-652-2215	E-4	6
5330-00-702-6048	E-2	2
	E-6	16
4730-00-760-3525	E-4	3
4730-00-762-1201	E-3	3
5330-00-808-7611	E-6	2
5310-00-877-5797	E-6	4
4730-00-959-7790	E-4	8
5305-00-995-3441	E-7	3

PART NUMBER	FSCM	FIG. NO.	ITEM NO.
AB12770-12863	2247	E-1	
4-AL-Kit			
CP7709	82247	E-1	29
CV 1-8	29267	E-6	4
		E-6	18
C116-3-61	81361	E-2	1
C116-3-64	81361	E-5	
C116-3-66	81361	E-6	14
C116-3-70-1	81361	E-4	2
C116-3-71	81361	E-4	3
C116-3-72	81361	E-6	8
C116-3-73	81361	E-6	19
C116-3-91	81361	E-6	17
C116-3-92	81361	E-4	9
C116-3-96	81361	E-1	1
C116-3-106	81361	E-6	3
C116-3-114	81361	E-4	4
C116-3-115	81361	E-6	1
C116-3-116	81361	E-6	12
C116-3-240	81361	E-5	6
C150-1-1	81361	E-4	8
CLASS 1 END			
STYLE B			
C150-1-3	81361	E-1	42
D116-3-74	81361	E-3	I
D116-3-101	81361	E-3	5
D116-3-95	81361	E-1	4
D116-3-122	81361		
D116-3-123	81361	E-1	
D116-3-130	81361	E-7	
D2-3-164	81337	E-7	7
		E-7	10
D2-3-166	81337	E-7	1
		E-7	6
D2-3-168	81337	E-7	2
		E-7	8
		E-7	11
D2-3-285	81337	E-7	9
E116-3-131	81361	E-7	5
H8-56A	78357	E-2	2
		E-6	16
LM116-3-118	81361	E-1	
LM116-3-134	81361	E-6	
MS21044-N3	96906	E-7	4
MS28778-8	96906	E-6	11
MS28775-217	96906	E-6	10
MS29512-04	96906	E-4	5
MS29512-06	96906	E-6	13
MS29513-14	96906	E-6	6
MS29512-16	96906	E-5	5
MS29513-231	96906	E-3	4
MS35207-269	96906	E-7	3
P1222-15C	58553	E-5	2
P1222-25W	58553	E-5	
P1222-7W	58553	E-5	4
P1222-9A	58553	E-5	3
WW-P-404	81348	E-6	7
		E-6	20
10574-SS	82247	E-1	24
12303	82247	E-1	17
12306NY	82247	E-1	7
12307NY	82247	E-1	18
12308NY	82247	E-1	5
12311-SS	82247	E-1	13
12312-SS	82247	E-1	6
12313-SS	82247	E-1	14
12683-2	82247	E-1	10
12683	82247	E-1	11
12683-4	82247	E-1	12
12775-AL	82247	E-1	41
12776-AL	82247	E-1	25
12863-4	82247	E-1	3
13146 and 12774	82247	E-1	20
13147	82247	E-1	22
1325	82247	E-1	2
1/4MMSB	45681	E-4	7
14350-SS	82247	E-1	9
5040			
1825-6	78357	E-6	2
207317	28265	E-4	7
2-108	29265	E-6	5
3145-AL	82247	E-1	23
4200-2	78357	E-4	1
4200-4	78357	E-5	1
4377-8	78357	E-6	15
4382-3	78357	E-3	3
4743NY	82247	E-1	19
6014	28470	E-3	2
6509IMP	82247	E-1	34
6588-SS	82247	E-1	37
6589ICP	82247	E-1	35

Section IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
6591-SS	82247	E-1	38	6602-TEF	82247	E-1	28
6592-SS	82247	E-1	39	6710-74	78357	E-6	9
6593-2-SS	82247	E-1	40	00-0			
6594-SS	82247	E-1	30	6943-AL	82247	E-1	21
6595-SS	82247	E-1	36	77-DCP-003	07477	E-4	6
6597-INP	82247	E-1	33	7717-2-11	82247	E-1	16
65991ZP	82247	E-1	32	7717-2-13	82247	E-1	8
6600-AL	82247	E-1	26	7991-ICP	82247	E-1	31
6601-SS	82247	E-1	27	8394-Q-4010	82247	E-1	15

APPENDIX F
EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

F-1. Scope

This appendix lists expendable supplies and materials you will need to maintain the M33A1 disperser. These items are authorized to you by CTA 50-970, Expendable 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 material (e.g., "Use enamel, olive drab, item 1, App F).

b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.

C - Operator/Crew
O - Organizational Maintenance

c. Column 3 - National Stock Number. This is the National Stock Number assigned to the item; use it to request or requisition the item.

d. Column 4 - Description. Indicates the Federal item name and, if required, a description to identify the item. The last line of each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. Column 5 - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. LIST OF EXPENDABLE SUPPLIES AND MATERIALS

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) UNIT OF MEAS
1	O	8010-00-297-0560	Enamel, olive drab 1 gal MIL-E-5556 81349 TTE 527 81348	cn
2	O	8415-00-266-8677	Gloves, Chemical Protective, size 10ZZ-G-381 81348	pr
3	C		Monoethanolamine, Technical	
		6810-00-075-6876	1 gal MIL-E-50011 81349	btl
		6810-00-922-0866	5 gal MIL-E-50011 81349	pl
		6810-00-270-6207	55 gal MIL-E-50011	dr
4	C	6810-00-543-7612	Talc, Technical, 348 lbs MIL STD 1444 96906	dr
5	C	6810-00-142-9849	Talc, Technical, 8 lbs EA-T-1044 81361	btl
6	O	8030-00-889-3535	Tap, Antiseizing, MIL-T-27730 81349 Size 2	ea
7	C	6850-00-456-1784	Wetting Agent 500 ml	btl

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By Order of the Secretary of the Army:

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