TM 3-1055-456-12

TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

LAUNCHER, ROCKET: 66MM, 4-TUBE,

M202A1 (NSN 1055-00-021-3909)

This copy is a reprint which includes current pages from Changes 1 through 4.

THE HEADQUARTERS, DEPARTMENT OF THE ARMY
MARCH 1975

WARNINGS

Do NOT use an M74 Rocket Clip when the barrier bag or molded foam overpack is damp or wet. Use of these clips may cause rocket motor blow-up and serious injury or DEATH.

Do NOT use rocket clips that are rusted or corroded. Use of these clips may cause rocket motor blow-up and serious injury or DEATH.

Do not use an M74 Rocket Clip if any of the following conditions exist; dispose of in accordance with local SOP's:

An M74 Rocket Clip shows any evidence of misuse and mishandling.

An M74 Rocket Warhead which has leaked TPA agent fill. This condition can be noted by a "built-up" mound of greyish white colored residue on the warhead surface.

Do not dispose of a LEAKING rocket by submerging in water. Thickened pyrophoric agent (TPA) reacts violently upon contact with water.

The M202A1 launcher may be unsafe to load and fire. This unsafe condition can exist if the firing pin mechanism assembly has been fully extended without a clip when the trigger handle assembly is in the stowed and locked position. This condition can cause a round to fire upon release of the trigger handle assembly from its stowed position.

This weapon generates a potentially hazardous noise level of 170 decibels. When firing the launcher, the gunner and others in the immediate area will wear earplugs which have been fitted by medical personnel.

Any launcher with serial numbers 7800 through 9700 and B71-7801 through B71-8605 must have a DA Form 2409 which states that *MWO 3-1055-456-50 AMC has been applied to prevent serious injury to personnel.

The rocket warhead TPA agent fill ignites spontaneously when exposed to air. If an M74 rocket clip is leaking and burning, immediately evacuate the area and take cover.

*Limited distribution, no copies available.

TECHNICAL MANUAL
No. 3-1055-456-12

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *14 March 1975*

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)
LAUNCHER, ROCKET: 66MM, 4-TUBE, M202A1 (NSN 1055-00-021-3909

LIST OF ILLUSTRATIONS

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

These instructions are for use by the operator and organizational maintenance personnel. They apply to the Launcher, Rocket: 66mm, 4-Tube, M202A1.

1–2. Record and Report Forms

a. Report accidents involving injury to personnel or damage to equipment (other than those involving ammunition) as specified in AR 385-40.

b. Report accidents or malfunctions involving ammunition, which occur in combat or training, as specified in AR 75–1.

c. Complete applicable Department of the Army record and report forms as prescribed in TM 38-750.

d. The reporting of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded directly to Commander, Edgewood Arsenal, Attn: SAREA–DE-ET, Aberdeen Proving Ground, Md 21010.

e. Administrative Storage. Refer to T M 740-90–1 for administrative storage instructions.

Section II. DESCRIPTION AND DATA

1-3. Description

a. *General*. The M202A1 rocket launcher (fig. 1-1, 1-2, and 1-3) is a lightweight, shoulder-fired, four-tube launcher equipped with front and rear hinged protective covers. A folding sight and trigger handle assembly provide compact carrying and storage capabilities. An adjustable sling is used to carry the launcher over the shoulder.

NOTE

All references to right, left, front, rear, top, or bottom indicate the side or end of the launcher as viewed in its firing position.

b. *Capabilities*. The rocket launcher is aim fired from the right shoulder from either the standing, kneeling, sitting, or prone position. Ammunition for the launcher is supplied in rocket clips (fig. 5–1). Each clip is issued preloaded with four rockets that slip-fit into the four launcher tubes, The launcher can fire from one to four rockets semiautomatically at a rate of one per second, and can be reloaded with a new rocket clip.

c. *Use*. The launcher fires the following ammunition:

Type	*Intended use*
N174 incendiary, thickened pyrophoric agent (TPA)	An incendiary system capable of delivering a pyrophoric payload on point or area targets,

d. *Major Components*.

(1) *Tube assembly*. The tube assembly (3, fig. 1–4) consists of four fiberglass launcher tubes. The- tubes are secured to bulkheads and inclosed by closure strips (4). A clip lock button (9) secures the rocket clip in the firing position.

(2) *Front cover*. The front cover (16) protects the muzzle end of the launcher and forms part of the front cover— trigger handle interlock (para 2–2e). The cover is hinged to the bottom of the forward bulkhead. The front cover latch (2) secures the cover in the closed position. The handle latch (17) engages with an interlock to secure the cover in the locked (open) position, When the cover is in the down and interlock position, the front cover handle (1) can serve as a forward support to steady the launcher when firing.

(3) *Rear cover*. The rear cover (11) is hinged to the bottom of the rear bulkhead. The rear cover latch (5) secures the rear cover in the closed position. When the cover is in the open (down) position, it becomes a shoulder support to position the launcher. A spare clip latch (10) is stored in the cover.

(4) *Trigger-handle assembly*. The trigger-handle assembly (14) consists of the trigger handle, trigger (15), trigger safety button (13), and linkage drive to the firing mechanism. The handle is extended by opening the front cover to the fully open (down) position, to disengage the

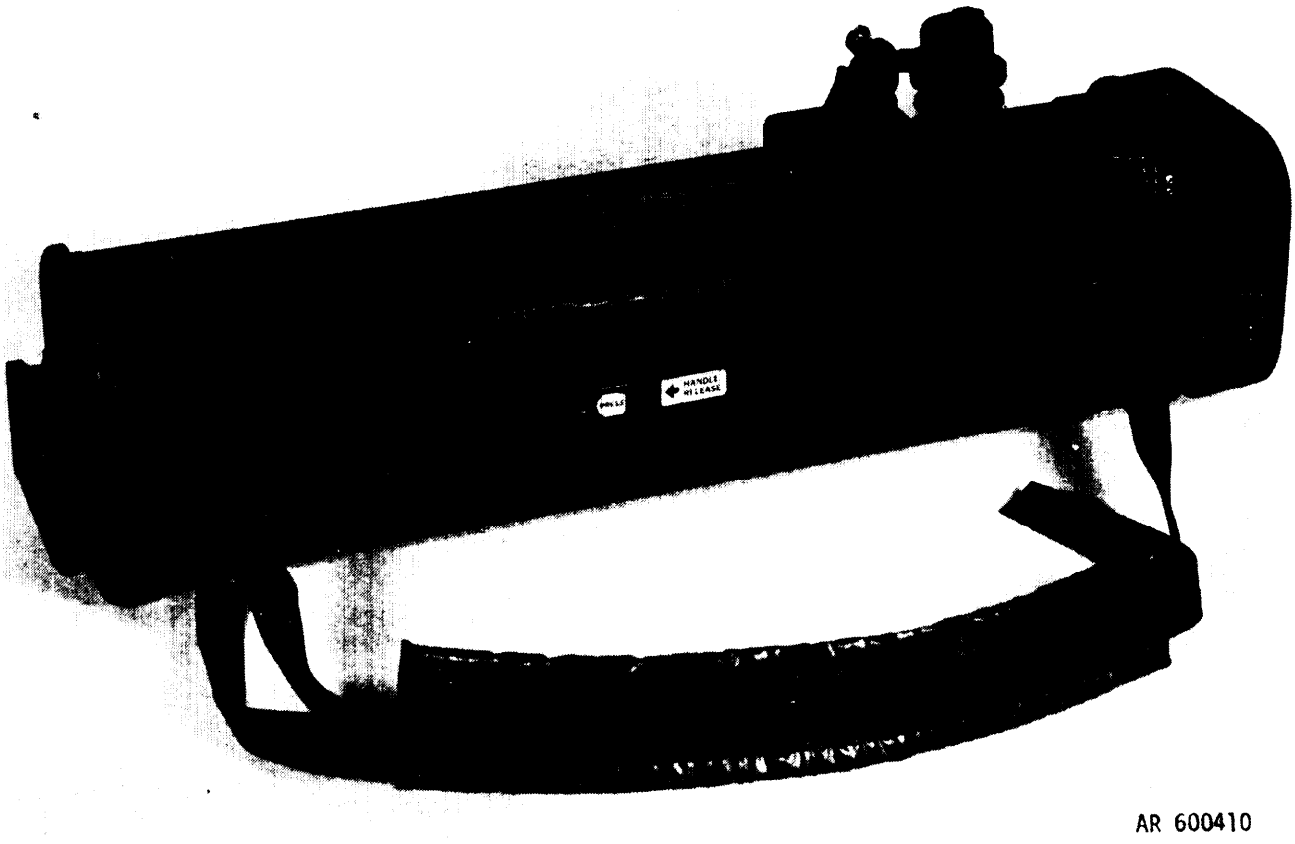


Figure 1-1. M202A1 rocket launcher—closed position.

interlock, and extending the trigger-handle assembly to the locked position. The handle is released by pressing the spring-loaded trigger-handle release button (12). The trigger safety button (13) is moved forward to the safe position or rearward to the fire position to safe or arm the trigger, The linkage drive between the handle assembly and the firing-pin-mechanism assembly (6) is a cable driven ratchet assembly. Each trigger pull rotates the ratchet 90 degrees, which rotates the cam-shaft assembly and releases one firing-pin assembly.

(5) *Firing-pin-mechanism assembly.*

(a) Clip attachment slot. A clip attachment slot (3, fig. 1–5) allows the rocket clip (fig. 5-1) to be secured to the firing-pin-mechanism assembly by the clip latch (6).

(b) *Firing-pin housing.* The firing-pin housing (4, fig. 1-5) encloses the four firing-pin assemblies each containing a firing pin (2), and a camshaft assembly. Each 90-degree rotation of the camshaft assembly safes the previously fired firing-pin and cocks and releases the next firing-pin.

(c) Alinement Pin. The align pin (1) alines the four round rocket clips with the firing pin mechanism assembly.

(6) *Reflecting-sight assembly.* The reflecting-sight assembly (fig. 1-6) consists of the reflecting sight (9) and sight lock (11) mounted on an aluminum mounting plate (1).

(a) Reflecting sight. The reflecting sight provides the optical line of sight by which the launcher is aimed in azimuth and elevation. The sight has a ladder-type reticle pattern (A, fig. 1-7) with curved stadia lines located on both sides of the vertical centerline. The stadia lines are used to obtain approximate range to targets of predetermined dimensions. The sight reticle has horizontal range lines graduated in 100-meter increments.

(b) Sight lock. The sight lock (11, fig. 1-6) is a spring-loaded arm. It positions the reflecting sight in the stored- or firing-position notches of the elevation adjustment plate (2)

(c) Mounting plate. The mounting plate (1) contains an elevation adjustment plate (2). The adjustment plate has notches, which are used

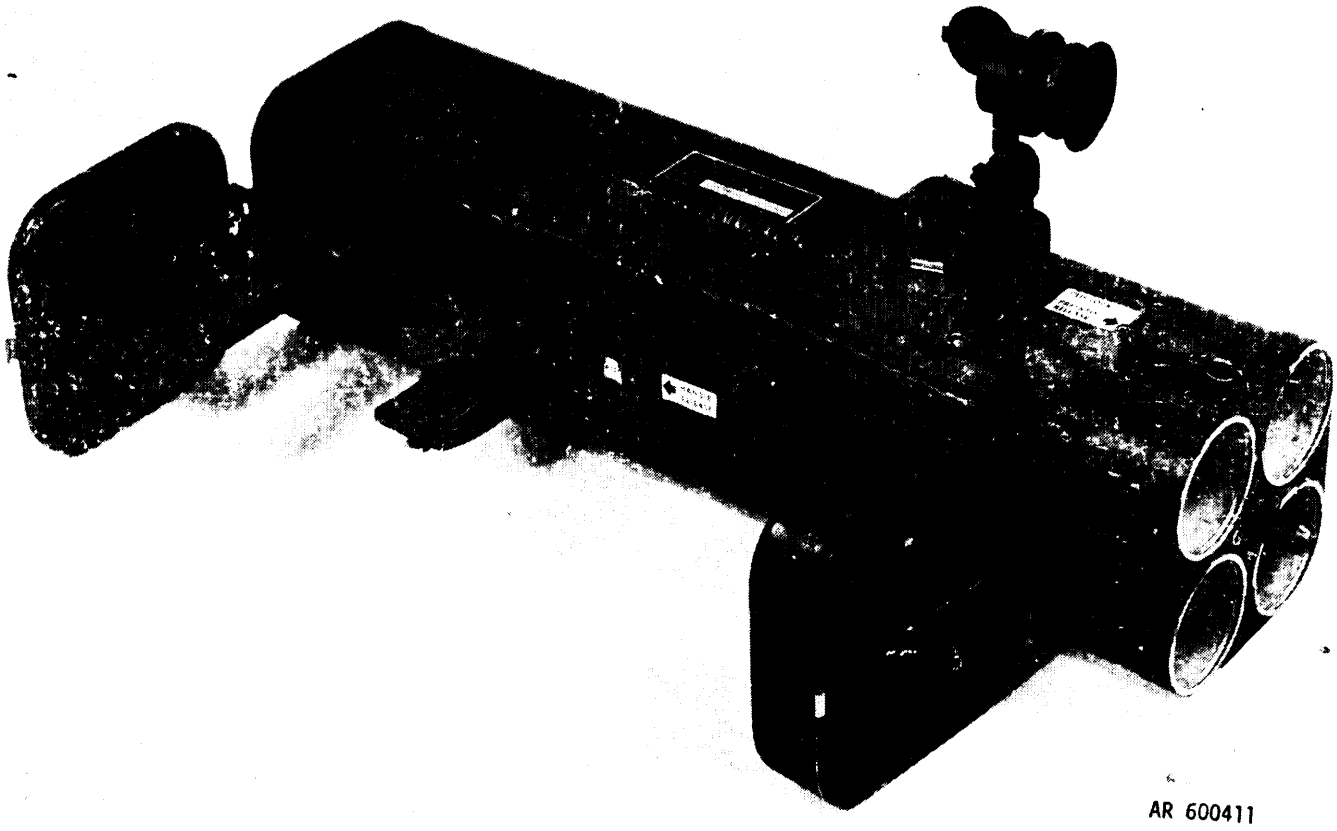


Figure 1-2. M202A1 rocket launcher — open position.

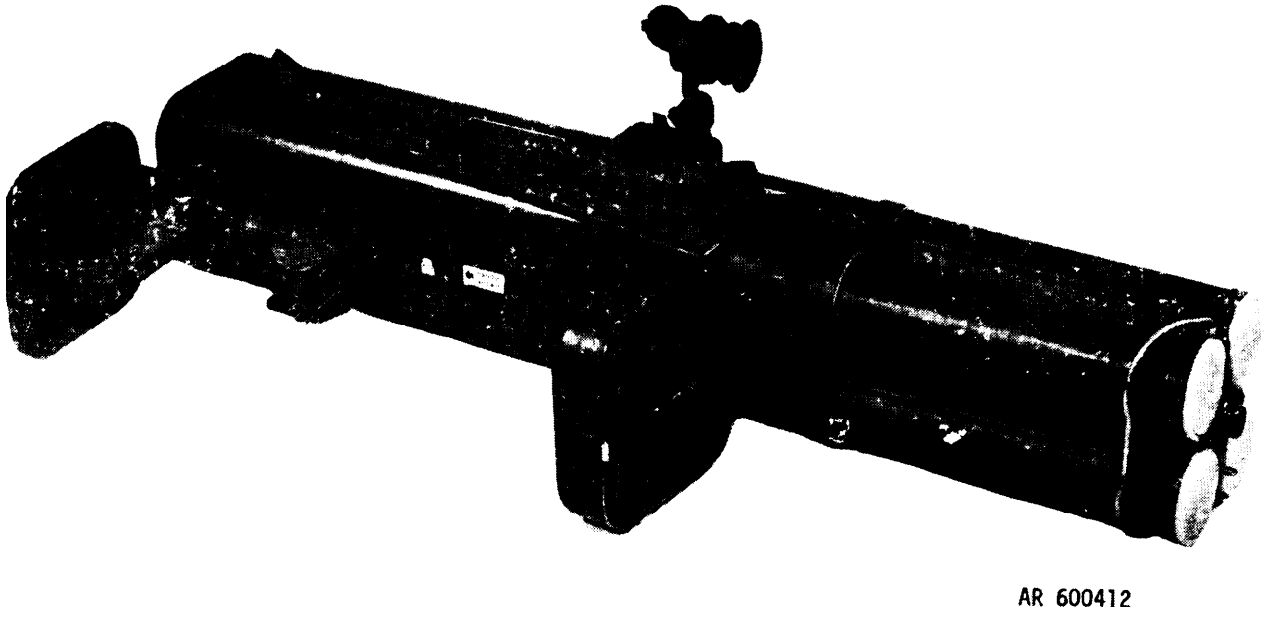
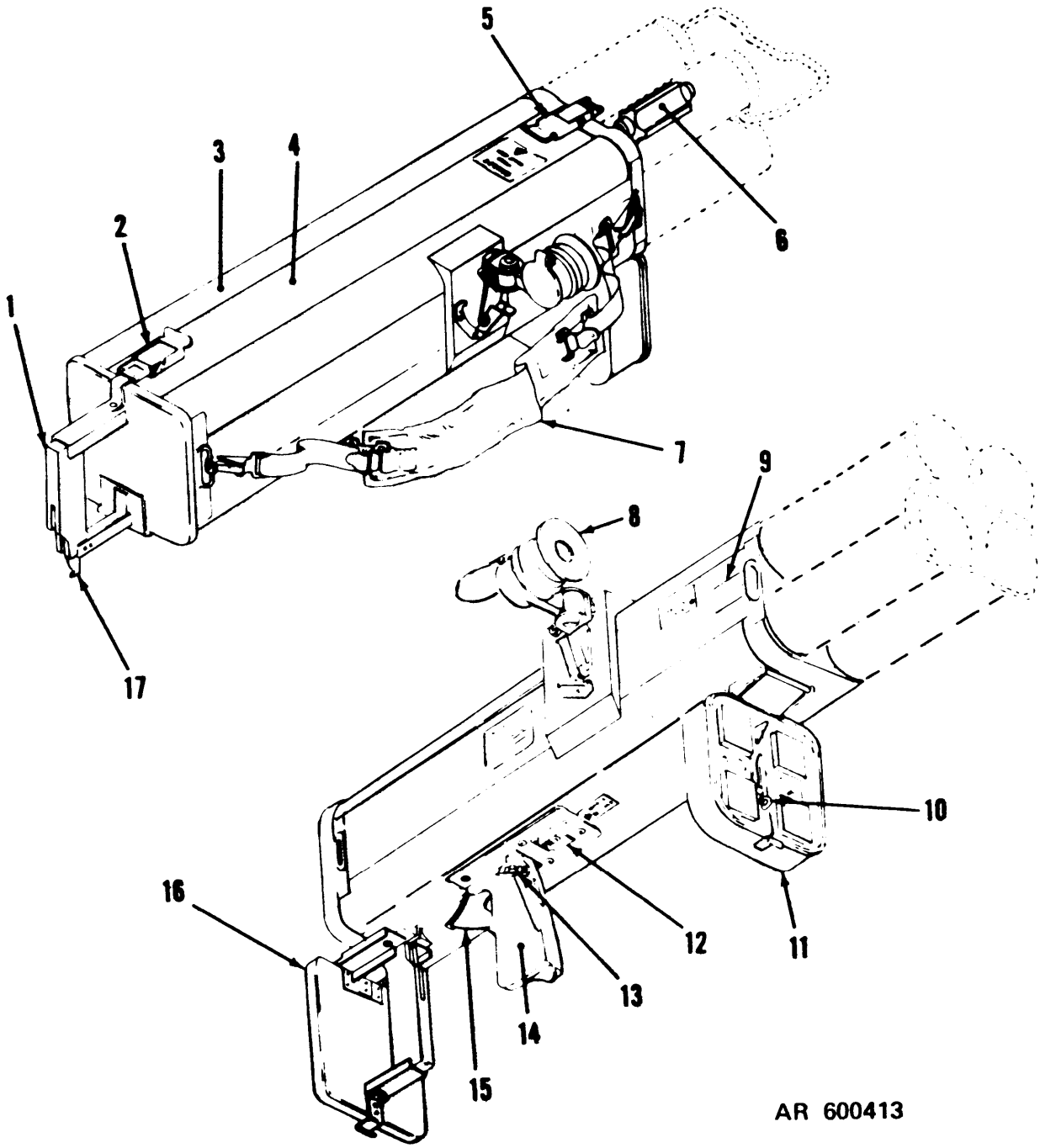
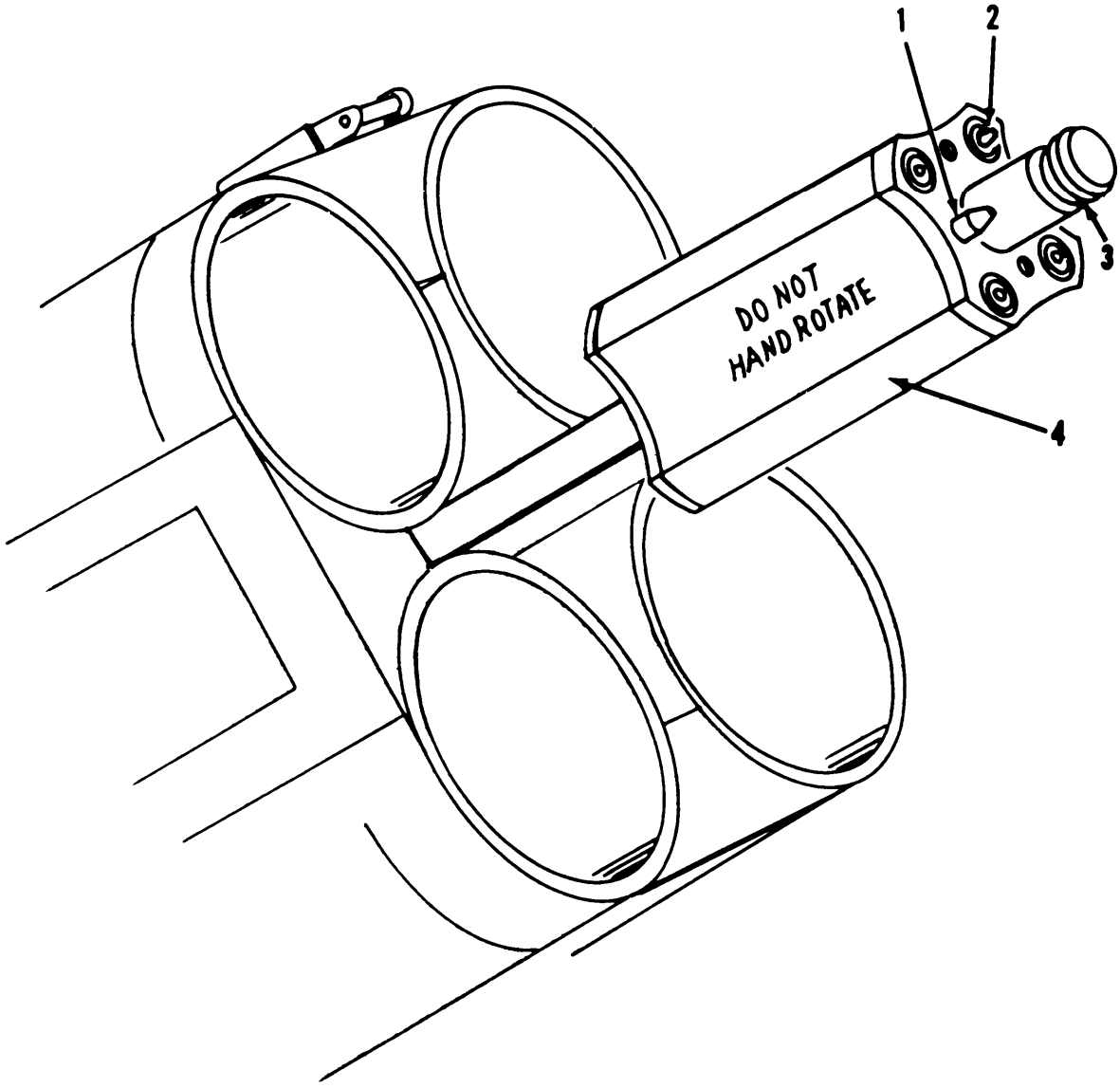


Figure 1-3. M202A1 rocket launcher with rocket clip — firing position.



1 Front cover handle
2 Front cover latch
3 Tube assembly
4 Closure strip
5 Rear cover latch
6 Firing-pin mechanism
7 Sling
8 Reflecting-sight assembly
9 Clip lock button
10 Clip latch (spare)
11 Rear cover
12 Trigger-handle release button
13 Trigger safety button
14 Trigger-handle assembly
15 Trigger
16 Front cover
17 Handle latch

Figure 1-4. M202A1 rocket launcher.



1 Alinement pin
2 Firing pin
3 Clip attachment slot
4 Firing-pin housing

Figure 1-5. Firing-pin-mechanism assembly.

to place the reflecting sight in the stored (forward notch) or firing position (rear notch). The adjustment plate allows for elevation adjustments of the sight. At the factory the launcher is boresighted; the mounting plate and adjustment plate are scribed with alinement marks (13) accordingly.

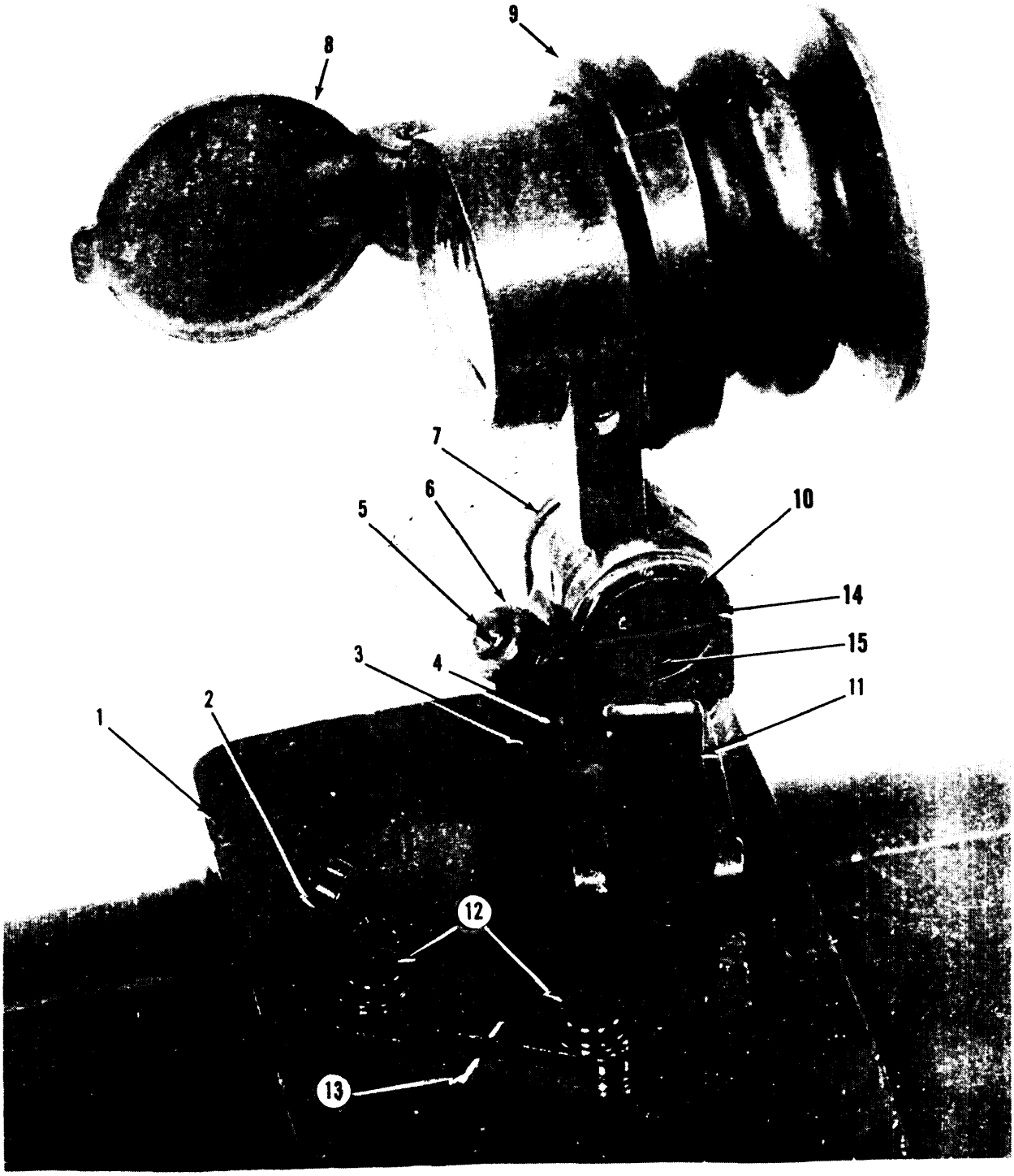
(7) *Sling assembly.* The sling assembly (fig. 1–8) consists of the pad (2) which has two spring-loaded buckles (1), and two webbed straps (3) which pass through the two pad buckles. Each strap has a snaphook (4) which attaches the sling assembly to the two rings on the right side of the launcher. The web straps are adjustable.

e. Rocket Clips. See paragraph 5–2.

f. Accessories. Boresight disks, and a wrench-screwdriver combination tool are packed with the rocket launcher. The boresight disks are used by organizational maintenance personnel during boresighting procedures (para 4-9). The wrench-screwdriver combination tool is used during maintenance.

1-4. Identification and Instruction Label

Figure 1-9 shows the location of launcher identification and instruction labels.



1 Mounting plate
2 Elevation adjustment plate
3 Sight mounting bushing
4 Curved washer
5 Stop screw
6 Stop screw nut
7 Hinge stud nut
8 Lens cover
9 Reflecting sight
10 Hinge stud
11 Sight lock (firing position)
12 Elevation plate screws
13 Sight alinement marks
14 Screwdriver slot
15 Indicator mark

Figure 1-6. Reflecting-sight assembly.

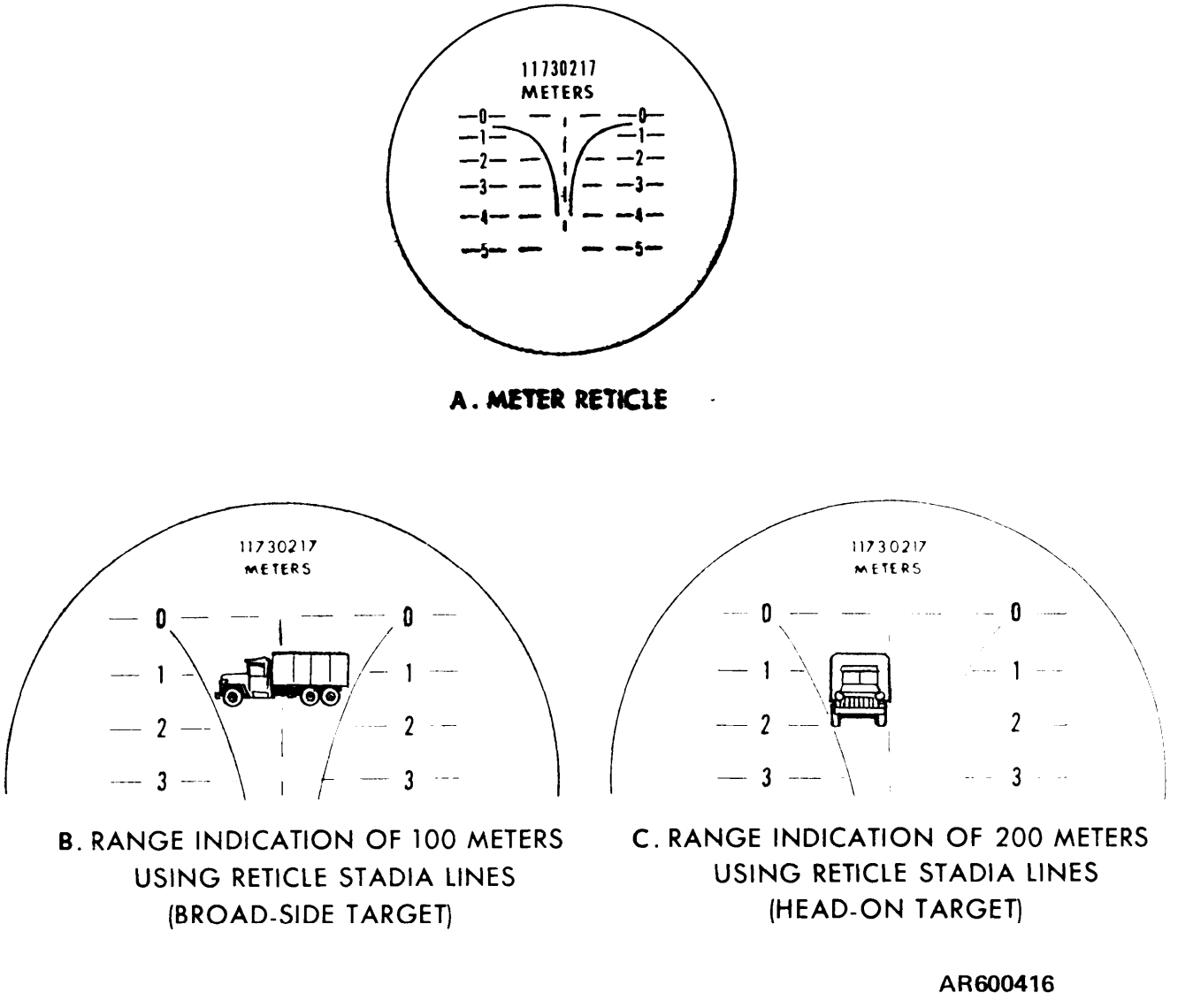


Figure1-7. Sight reticle patterns and indications.

1–5. Tabulated Data

a. M202Al Rocket Launcher.

Overall length, closed (approx.)	27 in.
Overall length, firing position (approx.)	35 in.
Weight (unloaded)	11.5 lb.
Operating temperature limits	-27°F. to + 140°F.

b. Ammunition. See paragraph 5-10.

1-6. Packing and Marking

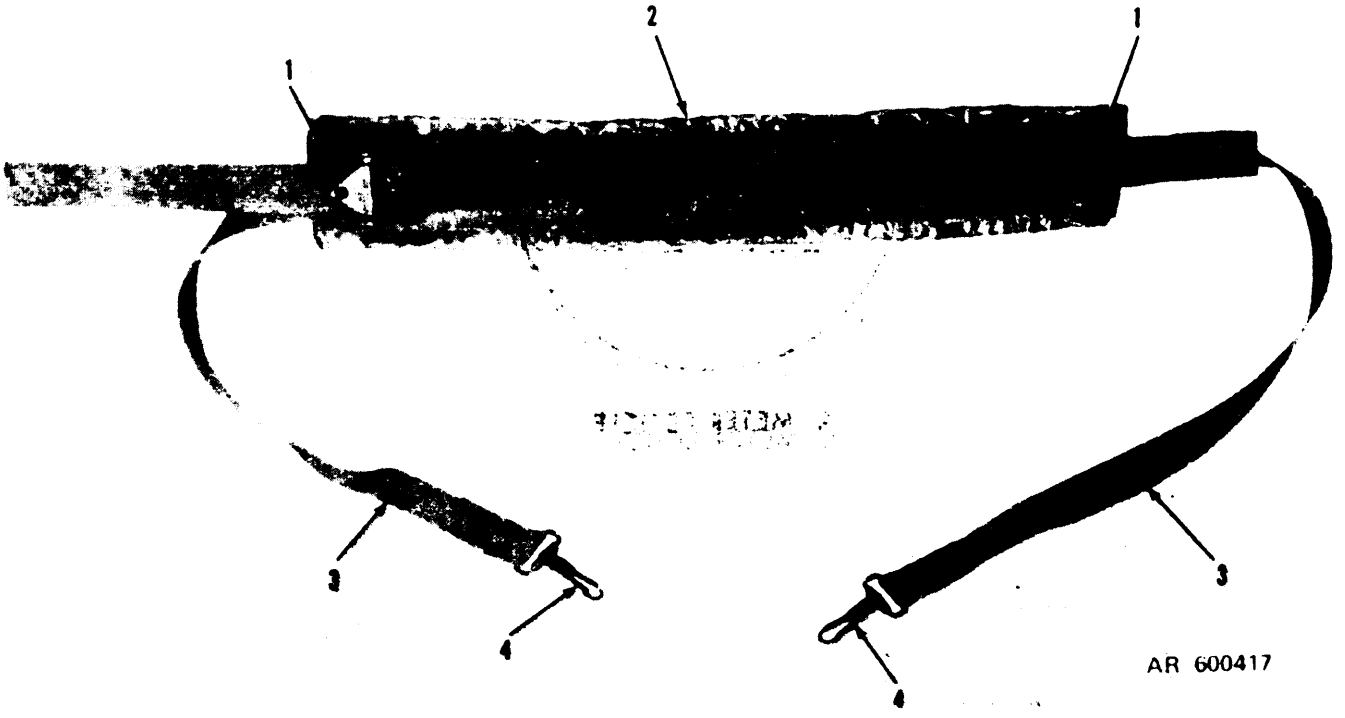
a. Packing. One rocket launcher and accessories are packed in a water-vaporproof barrier bag. The bag is packed in a hinged wood box (fig. 1-10) containing cushioning material. The wood box is approximately 33 by 12 by 14 inches and weighs approximately 40 pounds. Cubical displacement is approximately 3.2 cubic feet.

b. Marking. The unpainted wood packing box is marked in black with the following information:

(1) Lot number.
(2) Federal stock number.
(3) Gross weight.
(4) Cubical displacement.
(5) Nomenclature.
(6) Quantity and unit of issue.
(7) Level of protection and date packed.
(8) Contract number or purchase order number.
(9) Name and address of contractor.
(10) Serial number.

1–7. Expendable Items

a. Table 1–1 lists the expendable items required



1 Spring-loaded buckles
2 Pad
3 Webbed straps
4 Snaphooks

Figure 1-8. Sling assembly.

to properly maintain and operate the M202A1 rocket launcher.

b. The items listed are authorized in accordance with provisions of CTA 50-970 on expendable items.

Table 1-1. Expedable Items

Item No.	*Nomenclature*	*NSN*
1	Lusterless OD paint, 1 gal can	8010-00-297-2124
2	Antifogging Kit, Ml	6850-00-127-7193

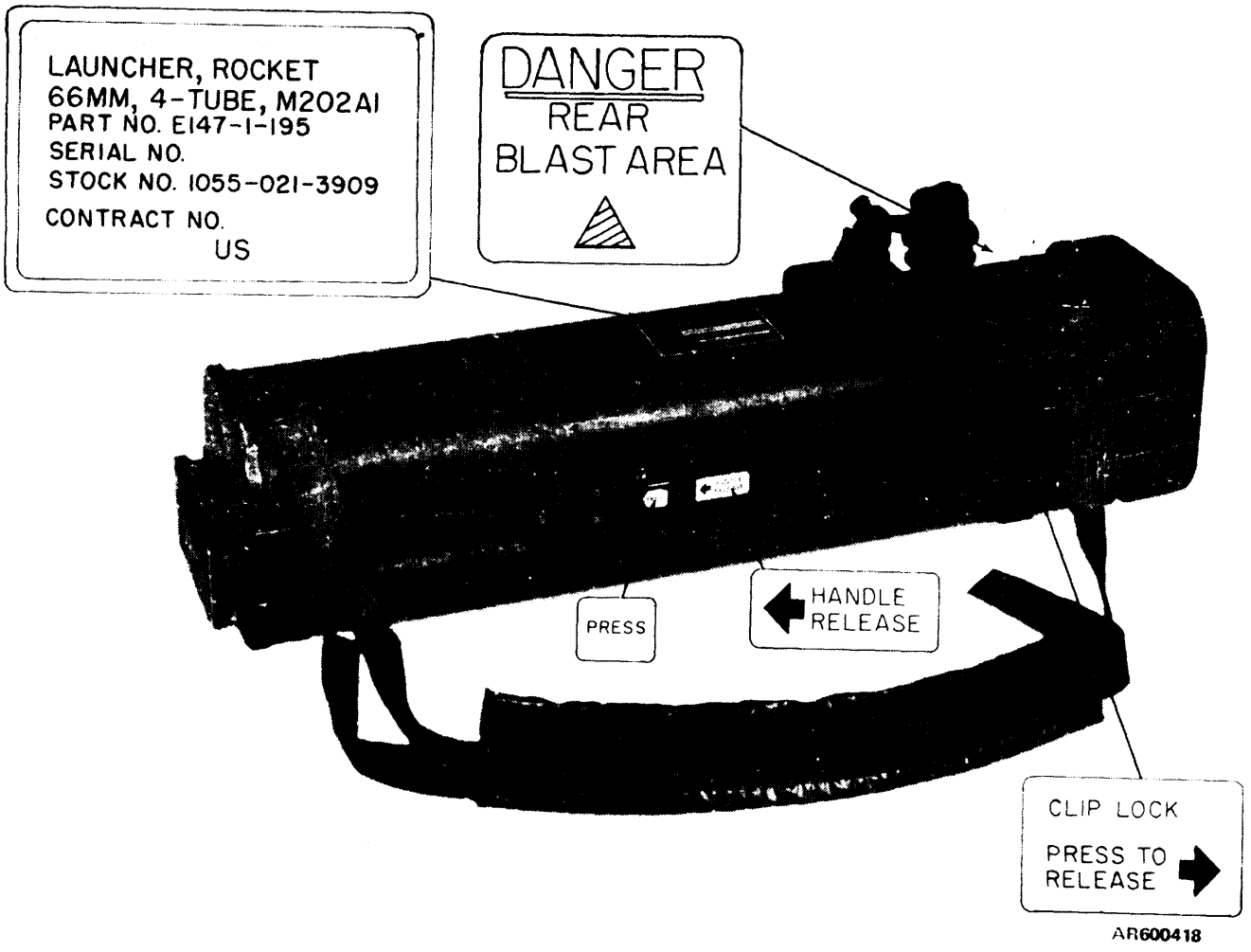


Figure 1-9. M202A1 rocket launcher identification and instruction labels.

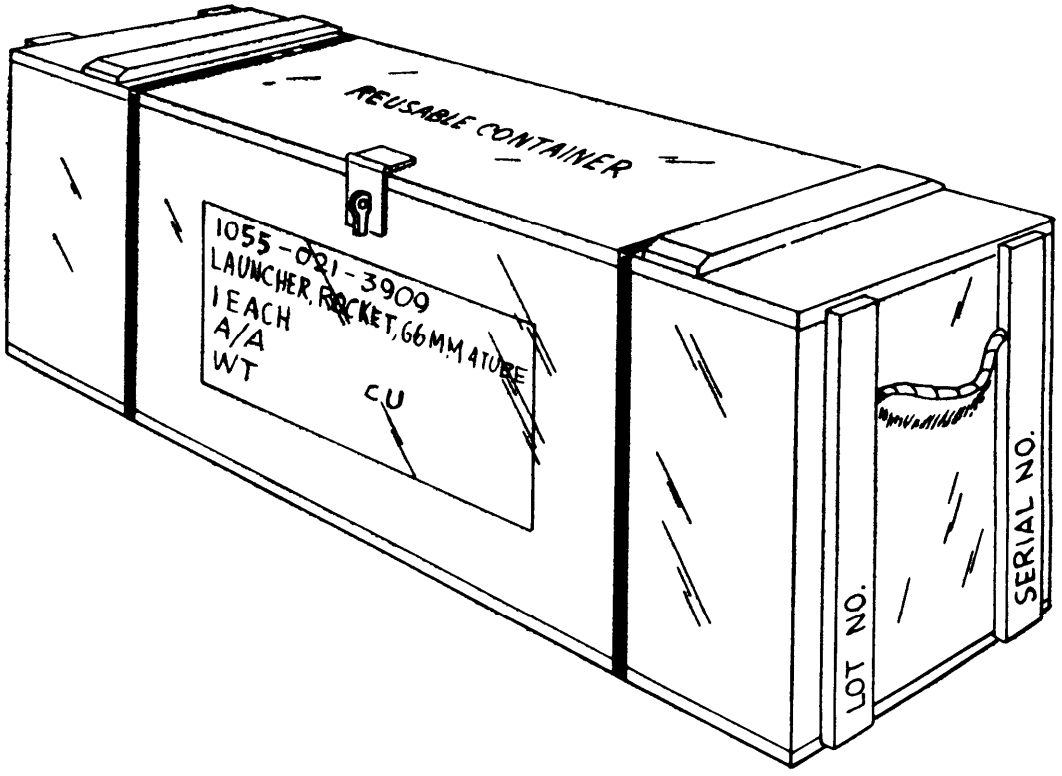


Figure 1-10. Packing and marking – M202A1 rocket launcher.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. CONTROLS AND INSTRUMENTS

2-1. General

This section describes, locates, and illustrates controls and instruments of the launcher.

2-2. Controls

a. Trigger-Handle Assembly.

(1) *Location.* The trigger (2, fig. 2-1) is located on the trigger-handle assembly of the launcher.

(2) *Purpose.* Each complete trigger pull cocks and releases one firing pin which strikes a rocket motor primer.

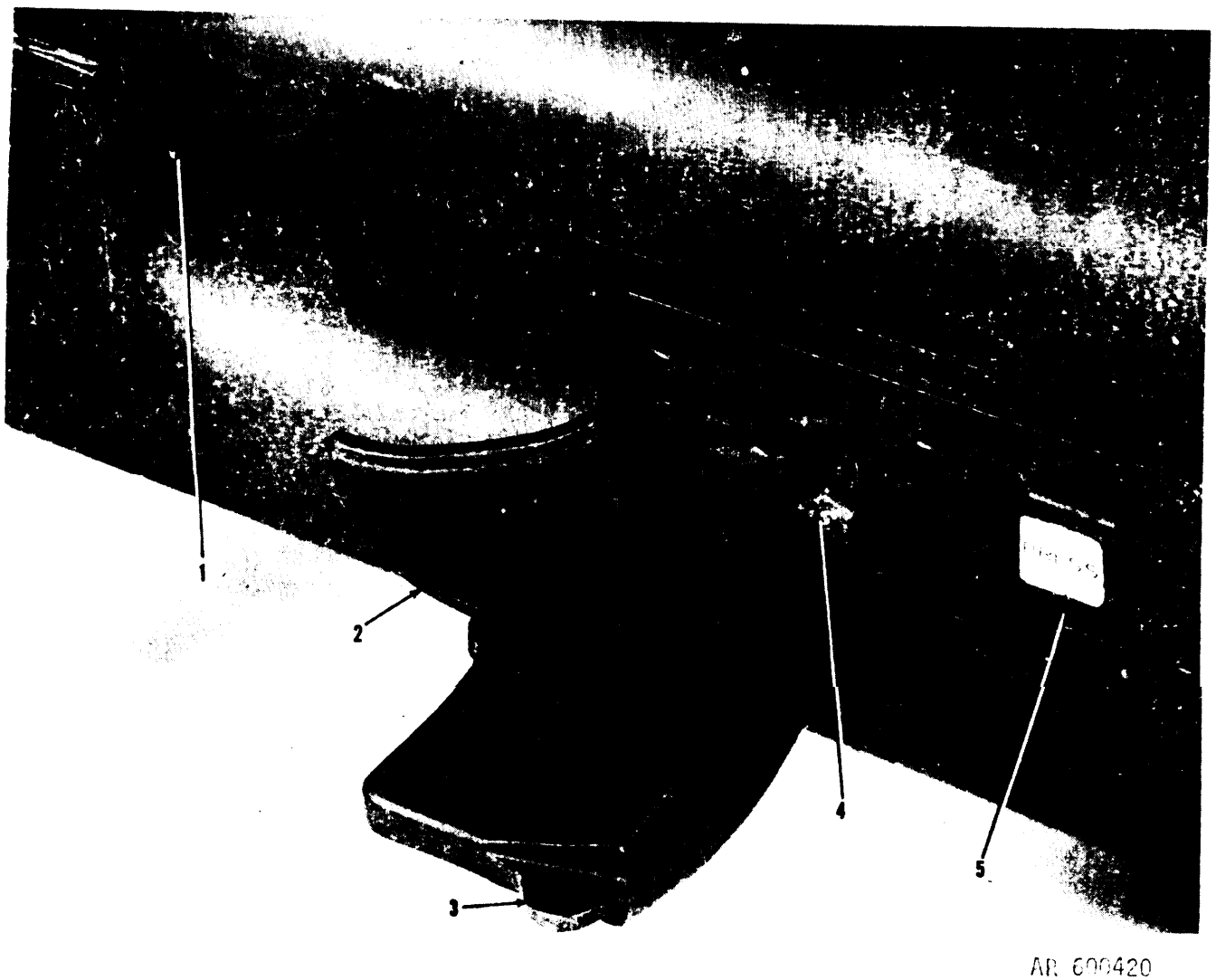
b. Trigger Safety Button.

(1) *Location.* The trigger safety button (4) is located on the left side of the trigger-handle assembly.

(2) *Purpose.* The trigger safety button safes or arms the trigger. The button has two positions:

(a) Safe (S) position. When the button is pushed forward it is in the safe position and the letter "S" is visible.

(b) Fire (F) position. When the button is



1 Toggle
2 Trigger
3 Trigger-handle latch
4 Trigger safety button (safe position)
5 Trigger-handle release button

Figure 2-1. Trigger-handle assembly.

pulled rearward it is in the fire position and the letter " F" is visible.

c. Trigger-Handk Release Button.

(1) *Location* The trigger-handle release button (5) is located at the rear of the trigger-handle assembly base.

(2) *Purpose*. The trigger-handle release button releases the trigger handle assembly from the locked extended position.

d. Clip Lock Button.

(1) *Location.* The clip lock button (9, fig. 1-4) is located on the left side of the launcher.

(2) *Purpose.* The clip lock button actuates a detent which holds the rocket clip in the extended firing position.

e. Front Cover—Trigger Handle Interlock.

(1) *Location.* The trigger handle interlock is located on the bottom of the front cover handle. The interlock retains the front cover in the fully open position when the trigger handle is released from its stowed position.

(2) *Purpose.* This positive safety interlock between the two assemblies assures the cover is fully open before the weapon can be fired.

f. Safety Guide.

(1) *Location.* The safety guide is located within the launcher.

(2) *Purpose*. It insures that the firing-pin will retract to a safe position when firing mechanism is fully retracted. Therefore, the firing-pins cannot strike the rocket motor primers when the clip is inserted in the launcher tubes.

2-3. Instrument

The reflecting-sight assembly (fig. 1-6) is the only instrument on the M202Al rocket launcher.

a. Location. The reflecting sight is located on the left side of the launcher.

b. Purpose. The sight is used to aim the launcher. The sight has two positions:

(1) *Stowed position.* The sight lock (11) is positioned in the forward detent and the sight folded against the launcher.

(2) *Firing position.* The sight is folded out from the launcher and the sight lock positioned in the rear detent. The lens cover is opened to view the target.

c. Reticle Markings. The sight reticle (a, fig l-7) is graduated in meters. The horizontal range lines of the reticle are graduated in 100-meter increments marked from 0 to 5. The verticle marks on zero azimuth represent 50 meter increments. The length of a horizontal dash and the distance between the dashes each represents 5 mils. Both the dashes and the distances between them are used to obtain estimated lead for targets in motion. The curved stadia lines are used to obtain an approximate range to l0-foot or 20-foot objects. For 20-foot targets, the elevation and azimuth of the launcher are adjusted until the ends of the target image just fit within the bounds of both stadia lines (B). For 10-foot targets, the launcher should be adjusted so that the edges of the target are superimposed between the bounds of the vertical centerline and one of the stadia lines (C) to determine approximate range. After obtaining the range, a stationary target must be centered; a moving target must be placed on the point or sector of the appropriate horizontal range line that will give the required lead.

d. Sight adjustment for temperature extremes. Normal sighting of the M202A1 Launcher when firing the M74 rocket will be done as outlined in para 2-3c. However, since the sight on the M202A1 Launcher cannot be adjusted for temperature extremes, the following aiming adjustments should be made for the temperatures and ranges listed below:

(1) In a temperature between 0°F and -25°F, with a target range of 250 meters or more, sight 50 meters beyond the estimated target range.

(2) In a temperature of 100°F and adove with a target range of 450 meters or more, sight 50 meters less than the estimated target range.

Section II. OPERATION UNDER USUAL CONDITIONS

2-4. General

This section contains instructions for operating the launcher under conditions of moderate temperatures and humidity.

2-5. Before-Mission Services

a. Remove spent clip or foam pad from launcher. Inspect launcher for damaged, loose/missing parts. Return launcher to organizational maintenance if loose/missing parts or damage is noted.

b. Inspect launcher tubes. The launcher will be considered unsafe for firing and returned to organizational maintenance if a visual inspection reveals any of the following conditions.

(1) Dented tubes.

(2) Cracked tubes.

(3) Unraveled, frayed, or loose fiberglass in any tube.

(4) Visible signs of burns on inside of any tube.

NOTE

The launcher tubes are made of translucent material and are painted. If the paint is chipped off the tubes, light will penetrate them. This is not considered an unsafe condition.

c. Perform following procedures for putting launcher in safe mode.

WARNING

The M202A1 launcher *may be unsafe to load and fire.* This unsafe condition can exist if the firing pin mechanism assembly has been fully extended without a clip when the trigger handle assembly is in the stowed and locked position. This condition can cause a round to fire upon release of the trigger handle assembly from its stowed position.

(1) Grasp the front cover handle and rotate it forward until it stops. Be sure the latch is clean.

(2) Release latch on top of the launcher to release the front cover.

(3) Rotate the cover down below the launcher tubes and lock it in the open position.

(4) Trigger handle should rotate freely without force, down to the locked (firing) position. If it does the launcher can be safely operated. If it does not move freely to the locked (firing) position, perform steps 5,6, and 7 below.

(5) Open rear cover. Remove empty clip, or foam pad. While applying pressure against the trigger handle in its stowed position, pull out the firing pin mechanism assembly to the fully extended position. This fully extended position must be maintained while performing the next step.

(6) While holding the firing pin mechanism in this fully extended position:

a. Lock the front door cover in the open position.

b. Rotate the trigger handle assembly into the firing position.

(7) Retract the firing pin mechanism assembly into the launcher. The launcher can now be safely operated.

(8) Make sure trigger safety button is in the forward (safe) position. Press trigger release button and rotate trigger handle assembly to unlock the front cover. Install empty clip or foam pad. Close front and rear covers.

d. Check operation of front cover trigger handle interlock. If the front cover interlock does not operate as outlined in (1) through (5) below the launcher is unsafe for use and will be returned to organizational maintenance.

(1) Release latch on top of launcher to release front cover.

(2) Grasp front cover handle and rotate it forward until it stops. Be sure latch (17, fig. 1-4) is clean.

(3) Rotate cover down below launcher tubes and lock it in open position. Use sufficient pressure to release trigger handle from stowed position.

(4) Return trigger handle to stowed position to release f rent cover from locked open position.

(5) Rotate front cover up and latch it in closed position.

e. Check operation of trigger, trigger safety, and firing mechanism. If the trigger, trigger safety and firing pin mechanism do not operate as outlined in (1) through (20) below the launcher is unsafe for use and will be returned to organizational maintenance.

(1) Release latch on top of launcher to release front cover.

(2) Be sure that latch (17, fig. 1-4) is clean. Grasp front cover handle and rotate it forward until it stops.

(3) Rotate cover down below launcher tubes and lock it in open position. Use sufficient pressure to release trigger handle from retracted position.

(4) Rotate trigger handle to the locked firing position.

(5) Place trigger safety button in forward (safe) position and pull trigger. Trigger should not function.

(6) Release latch on top of launcher to release rear cover.

(7) Rotate rear cover down and beneath launcher tubes.

(8) Grasp firing pin mechanism and fully extend mechanism from launcher keeping it in the same position it was when fully retracted in the launcher. Improper alignment of firing pin mechanism will prevent the trigger from functioning. Hold mechanism firmly while performing operations 9-12 below.

(9) Place trigger safety in rear (fire) position.

(10) Pull trigger four times to see that each spring-loaded firing pin releases. If firing pins do not release, slightly rotate firing-pin mechanism to align it (see 8 above) and repeat operation.

NOTE

The last firing pin released should be in its extended fired position.

(11) Place trigger safety in forward (safe) position.

(12) Pull trigger. Trigger will operate half of its travel and retract the last fired firing pin from its extended fired position, but should not release (fire) any firing pin.

(13) Repeat steps 9 through 11 above.

(14) Retract firing pin mechanism into launcher (see fig. 1-2).

(15) Check that all firing pins are retracted from their fired position. If any firing pin remains in its extended fired position, the launcher is unsafe for use. Do not load weapon.

(16) Place trigger safety in rear (fire) position. Pull trigger. Trigger will operate half of its travel, but should not release (fire) any firing pings.

(17) Place trigger safety in forward (safe) position.

(18) Install foam pad in launcher; or install spent clip.

(19) Close and latch rear cover.

(20) Press trigger release button and rotate trigger handle to unlock front cover. Close and latch front cover.

f. Perform the following checks. If any defect is

noted return launcher to organizational maintenance.

(1) Check reflecting sight for correct operation and defects such as bent, loose, or missing parts. Inspect condition of optics to insure clear target definition.

(2) Check that sight alinement marks (13, fig. 1-6) are lined up.

(3) Check sling for damage and adjust for operator.

2-6. Loading Weapon

a. Procedures for Putting Launcher in Safe Mode Before Loading.

WARNING

The M202A1 launcher *may be unsafe to load and fire.* This unsafe condition can exist if the firing pin mechanism assembly has been fully extended without a clip when the trigger handle assembly is in the stowed and locked position. This condition can cause a round to fire upon release of the trigger handle assembly from its stowed position.

The following procedures will correct the unsafe conditions described in the above Warning. Additional clips may be loaded and fired without performing the following procedures as long as the operator is positive that the firing pin mechanism assembly has not been extended with the clip removed and the trigger handle assembly in the stowed and locked position.

(1) Grasp the front cover handle and rotate it forward until it stops. Be sure the latch is clean.

(2) Release latch on top of the launcher to release the front cover.

(3) Rotate the cover down below the launcher tubes and lock it in the open position.

(4) Trigger handle should rotate freely without force, down to the locked (firing) position. If it does the launcher can be safely operated. If it does not move freely to the locked (firing) position, perform steps 5, 6, and 7 below.

(5) Open rear cover. Remove empty clip or foam pad. While applying pressure against the trigger handle in its stowed position, pull out the firing pin mechanism assembly to the fully extended position. This fully extended position *must* be maintained while performing the next step.

(6) While holding the firing pin mechanism in this fully extended position:

(a) Lock the front door cover in the open position.

(b) Rotate the trigger handle assembly into the firing position.

(7) Retract the firing pin mechanism assembly into the launcher. The launcher can now be safely operated.

(8) Make sure trigger safety button is in the forward (safe) position. Press trigger release button and rotate trigger handle assembly to unlock the front cover. Install empty clip or foam pad. Close front and rear covers.

b. Preparing Rocket Clip for Loading.

WARNING

Do not use an M74 rocket clip that is damaged, it may cause harm to personnel or launcher damage or rocket malfunction. Damaged rocket clips will be disposed of in accordance with local SOP's. Rocket clips with leaking warheads will be immediately disposed of in accordance with local procedures.

(1) Remove rocket clip from packing.

(2) Inspect rocket clip to ensure clip latch is installed on rear manifold.

NOTE

If clip latch is missing, a spare latch is stored in the rear cover of the launcher.

(3) Examine rocket clip for any defects.

c. Inserting Rocket Clip in Launcher.

WARNING

Before loading the launcher, make sure the trigger safety is in the forward (safe) position, the firing-pin mechanism assembly is retracted and no firing pin is in the extended fire position.

WARNING

Do NOT use an M74 Rocket Clip when the barrier bag or molded foam overpack is damp or wet. Use of these clips may cause rocket motor blow-up and serious injury or DEATH.

WARNING

Do NOT use rocket clips that are rusted or corroded. Use of these clips may cause rocket motor blow-up and serious injury or DEATH.

Figure 2-2. M202A1 rocket launcher - carrying position.

Figure 2-3. M202A1 rocket launcher – loading position.

(1) Place launcher on ground resting on closed front cover (fig. 2-3).

(2) Open rear cover by releasing rear cover latch on top of launcher. Rotate cover down and beneath launcher tubes.

(3) Remove spent rocket clip or foam shipping pad if it is in cover (para 2-11).

(4) Check that trigger safety is in the forward (safe) position, the firing pin mechanism assembly is retracted and no firing pin is in the extended fired position.

(5) Steady the launcher by holding the sight with left hand. Grasp bail handle and partially insert the rocket clip in the launcher tubes so the bail handle springs down toward the open rear door. Make sure bail handle is clear of the rocket clip tubes.

(6) Unsnap clip support strap assembly and discard.

(7) Slant rocket clip away from body, depress launcher clip lock button with left thumb and fully insert clip into launcher tubes. Make sure clip retainer is engaged properly to firing mechanism.

(8) Close and latch rear cover.

2–7. Carrying Launcher

The gunner should carry the closed loaded launcher with its muzzle end down. Position launcher over shoulder as shown in figure 2-2. Adjust sling on the shoulder for individual comfort.

2–8. Preparation for Firing

WARNING

This weapon generates a potentially hazardous noise level of 170 decibels. When firing the launcher, the gunner and others in the immediate area will wear earplugs which have been fitted by medical personnel.

a. Insert earplugs.

b. Opening Rear Cover. Rest front cover on ground. Open rear cover.

c. Extending Rocket Clip.

(1) Hold sight with left hand, grasp bail handle and pull clip until it is locked in the extended position. Listen and feel for the clip's locking detent to fall in place.

(2) Release bail handle and allow it to retract against clip's outer tubes. If bail handle will not retract, discard clip.

d. Positioning Weapon on Shoulder.

(1) Grasp clip tube with right hand and place left hand under launcher.

(2) Place weapon on right shoulder so that opened rear cover acts as shoulder support.

WARNING

During operation procedures in *e* through *i* below, keep the launcher pointed toward the target. Insure that all friendly personnel are clear of the rear danger zone area (fig. 2-4).

e. Opening Front Cover.

(1) Open front cover with left hand.

(2) Engage cover handle latch with interlock so the trigger handle releases.

f. Extending Trigger Handle.

WARNING

Position the trigger safety button in the forward (safe) position until ready to fire.

Extend trigger handle to the locked firing position. Be sure the trigger safety button is in the forward (safe) position.

g. Positioning Sight.

(1) Place sight assembly in firing position.

(2) Open sight lens cover.

h. Checking Rear Danger Zone. Check area to the rear of launcher to assure that all personnel, materiel, and obstructions are clear of the rear danger zone (fig. 2-4).

i. Aiming Weapon. Aim weapon by placing eye against sight. Paragraph 2–3 *c*.

2–9. Firing Weapon

WARNING

Do not place any portion of the body in front of or behind the launcher while it is in the firing mode.

WARNING

Do not fire the launcher if a rear vertical obstruction is within 5 meters. The rocket's exhaust gases and materials could be deflected toward the gunner or friendly personnel.

WARNING

Do not fire rockets at targets less than 20 meters forward of the launcher. The exploding warhead may injure the gunner.

WARNING

When firing from the prone position, insure that the body is at least 45 degrees to the line of fire in order to keep clear of the rear danger-zone area.

a. Launcher may be fired from four positions: prone (fig. 2-5 and 2-6), sitting (fig. 2-7, 2-8, and 2-9), kneeling (fig. 2-10 and 2–11), and standing (fig. 2-12 and 2-13).

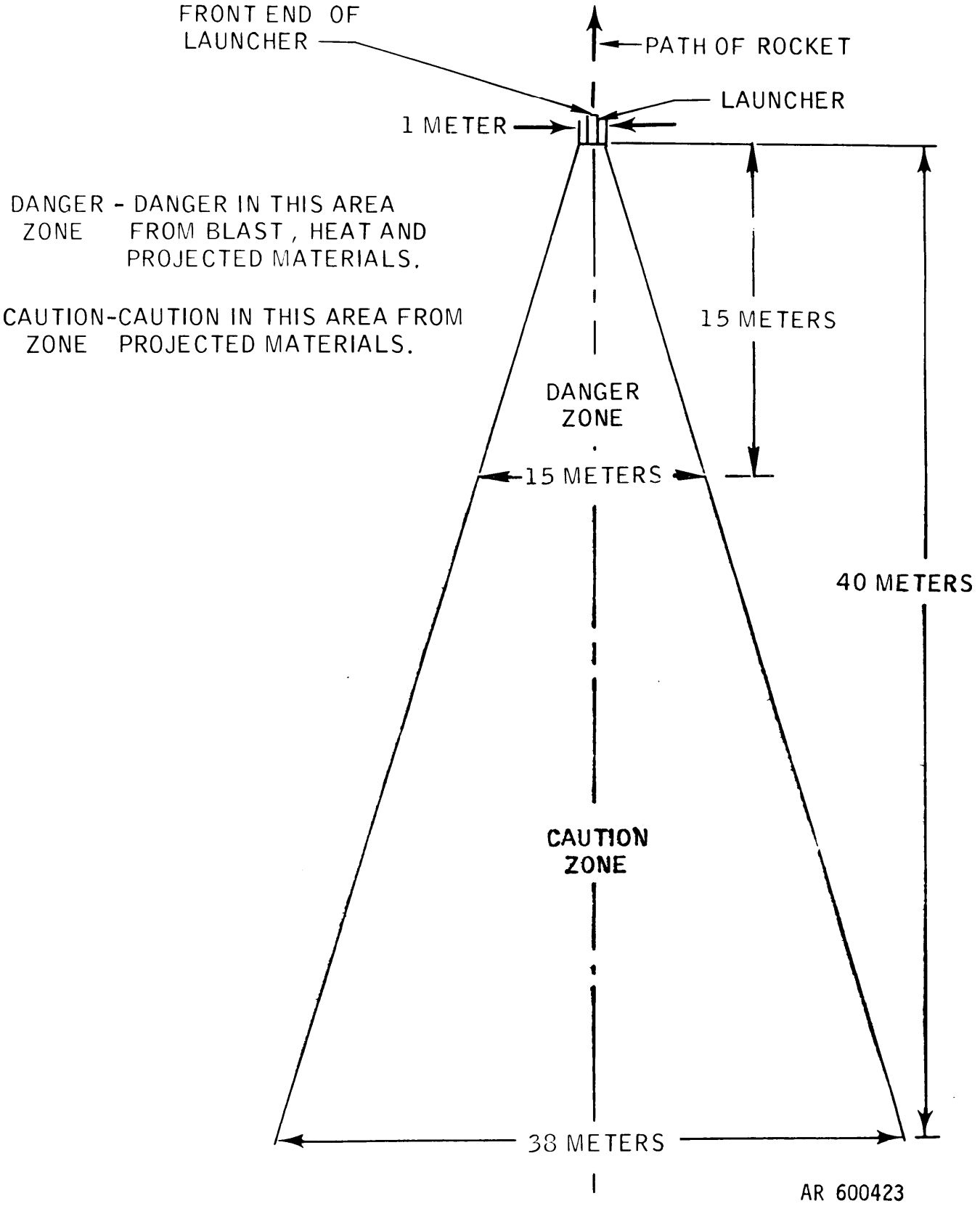


Figure 2-4. Rear danger-zone-area diagram.

Figure 2-5. Prone position — left hand on front cover handle.

Figure 2-6. Prone position - left hand on base of trigger handle.

b. Release the trigger safety by moving safety button to the rear (fire) position.

WARNING

Keep second and third fingers on the right hand spread apart to avoid pinching the third finger when trigger is fully pulled.

c. Squeeze trigger. Use two fingers with a smooth steady pressure. Each full squeeze of the trigger will fire one rocket.

NOTE

To insure rocket accuracy, sight picture should be maintained until rocket has impacted on target.

2–10. Post Firing

a. General. The following procedures apply to clips either empty or containing rockets.

WARNING

During the procedures in b through e below, keep the launcher pointed down range. Insure that all friendly personnel are clear of the rear danger zone area.

b. Position trigger safety button to forward (safe) position.

c. Return sight to stowed position.

d. Stow trigger assembly.

e. Close and latch front cover.

Figure 2-7. Sitting position – left hand on front cover handle.

Figure 2-8. Sitting position – left hand on base of trigger handle.

f. Position launcher on ground so it is resting on its closed front cover (fig. 2-3).

WARNING

If a rocket clip with unfired rockets cannot be easily retracted into the launcher, DO NOT ATTEMPT TO FORCE IT. Treat the condition as a misfire (para 2-12d (3) through (5)).

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Figure 2-9. Sitting position – left arm extended.

Figure 2-10. Kneeling position – left hand on front cover handle.

Figure 2-11. Kneeling position – left hand on base of trigger handle.

Figure 2-12. Standing position — left hand on front cover bundle.

g. Depress launcher clip lock button and fully insert clip into launcher tubes.

h. Close and latch rear cover.

i. To fire remaining rockets follow para 2-8 and 2-9.

2–11. Unloading Weapon

WARNING

When handling a launcher with an extended clip and unknown condition of either rocket or launcher, handle in accordance with procedures in paragraph 2-12d.

a. Position launcher on ground so it is resting on its closed front cover.

b. Open rear cover.

c. Remove clip latch.

d. Depress clip lock button and remove clip by using bail handle.

e. Reinsert clip latch on clip manifold.

Figure 2-13. Standing position – left hand on base of trigger handle.

f. Close and latch rear cover.

g. Return partially loaded clips to proper storage.

NOTE

If the weapon is being stored install foam or spent clip in launcher (para 2-6c).

2-12. Misfire, Hangfire, and Mechanical Delay

a. Misfire. A misfire is a complete failure of the rocket motor to fire. Although a misfire is not dangerous, it cannot be immediately distinguished from a delay in the functioning of the firing mechanism or from a hangfire. Therefore, it should be considered a delay in firing until such a possibility has been eliminated.

b. Hangfire.

WARNING

Do not assume that an initial failure of a round to fire is a misfire. It may be a hangfire or a mechanical delay.

A hangfire is a delay in the functioning of the rocket motor. The amount of delay, although unpredictable, in most cases will range between a split second and several minutes. Therefore, a hangfire cannot be immediately distinguished from a misfire.

c. Mechanical Delay.

WARNING

Do not assume that an initial failure of a round to fire is a misfire. It may be a hangfire or a mechanical delay.

A mechanical delay is a delay in functioning of the launcher firing mechanism.

d. Procedure. If you pull the trigger of a loaded launcher and the rocket does not fire perform the following

WARNING

Do not place any portion of the body in front of the launcher or in the rear danger-zone area.

WARNING

Do not attempt to retract the clip into launcher. Do not use bail handle while removing clip assembly.

(1) Keep launcher pointed at target. Pull the trigger four times, after the last dud, to clear the weapon.

NOTE

If this clears the weapon, remove spent clip and inspect (para 2-5).

NOTE

If this does not clear the weapon, perform the following

(2) Wait 1 minute, keeping the launcher pointed downrange. Place trigger safety in forward (safe) position.

(3) Keeping launcher pointed downrange, lower it from the shoulder and place it on a firm surface. Position the launcher so that there is no obstruction in front of or behind the launcher. Figure 2-14 shows recommended position.

(4) Then remove the rocket clip from the launcher as follows:

(a) Grasp the side of one of the clip tubes (fig. 2-15).

(b) Remove clip latch from the clip manifold to separate the launcher firing pin mechanism from the clip.

NOTE

If the firing-pin mechanism assembly does not automatically retract, carefully insert a blade between the firing-pin mechanism assembly and the clip manifold. Apply enough pressure to separate the firing-pin mechanism assembly from the clip manifold at least one inch.

(c) Depress the clip lock button (fig. 2-15) and slide clip out of launcher.

(d) Keeping the clip pointed downrange, place it on the ground away from the launcher (fig. 2-16).

(e) Dispose of the clip in accordance with local safety procedures.

(f) Inspect launcher in accordance with paragraph 2-5.

2-13. Emergency Procedures Should An M74 Rocket Leak at launch

If an M74 rocket leaks on launch, a small amount of burning TPA may remain in the launcher tube. The following procedures apply:

a. Keeping launcher pointed downrange, move trigger safety to forward (safe) position.

b. Lower launcher from shoulder and place on the ground. Position launcher so there is no obstruction in front or behind of launcher.

c. Remove rocket clip from launcher as follows:

(1) Grasp one of the clip tubes (fig. 2-15).

(2) Remove clip latch from clip manifold.

(3) Depress clip lock button (fig. 2-15) and slide clip out of launcher.

(4) Keeping the clip pointed downrange, place it on the ground away from the launcher.

(5) Use sand or dirt to extinguish fire burning in launcher. If not possible, allow fire to burn out.

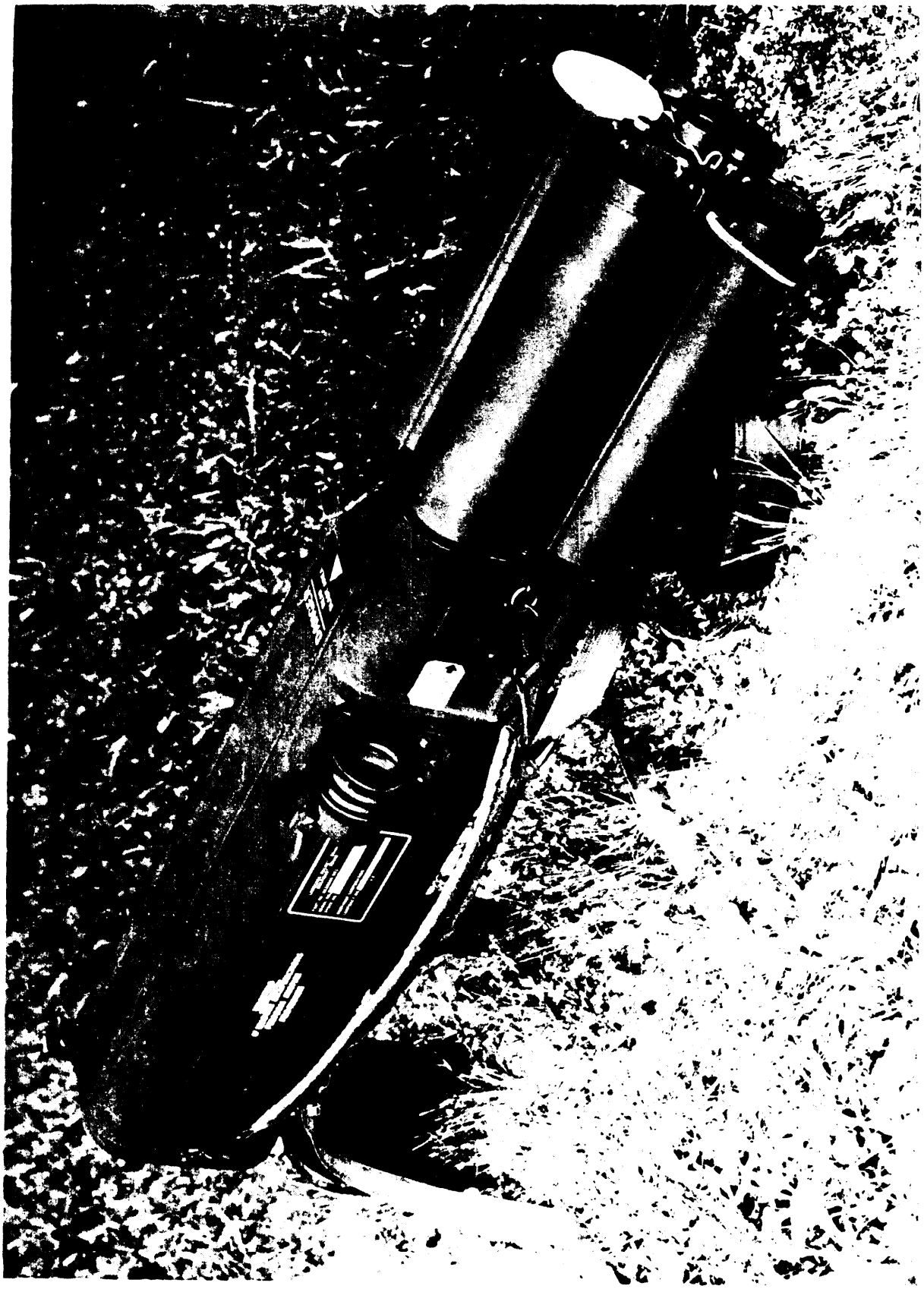


Figure 2-14. Position on ground of misfire launcher—resting on front and rear covers.

Figure 2–15. Removing misfire clip from launcher tubes.

(6) Handle the clip in accordance with local safety procedures.

(7) Inspect launcher in accordance with paragraph 2-5.

d. If the weapon cannot be cleared of all rockets:

(1) Place the launcher on the ground keeping the launcher pointed toward the target area (para 2-12d(3)).

(2) Evacuate the area at least 60 meters and take cover. Do not move in front of launcher or into the rear danger-zone area.

e. Notify authorized personnel.

f. Report incident in accordance with AR 75-1.

2-14. After Mission Services

Report any launcher defects to organizational maintenance.

Section III. OPERATION UNDER UNUSUAL CONDITIONS

2-15. General

Operation under unusual conditions is similar to that for usual conditions (para 2-4 through 2-13). The only differences are in the care and handling of the launcher. Follow instructions in paragraphs 2–15 and 2–16 to insure that the launcher functions properly in locations where the atmosphere is salty or where extremes in temperature and humidity prevail.

2–1 6. Care and Handling

a. Keep launcher free of sand, mud, moisture, or any other foreign matter.

b. If launcher becomes dirty or wet, wipe off at

Figure 2-16. Position of removed misfire clip.

once with a clean, dry cloth (particularly inside of launcher tubes).

c. Cover launcher to protect it from snow and ice.

d. At low temperatures the lens of sight assembly tends to fog from gunner's breath. Avoid breathing on lens. Keep sight closed when not firing. Use M1 antifogging kit (item 2, table 1-1).

2–17. Preparing for Operation

a. Cold Climate. Protect launcher from snow and ice; inspect, clean, and dry it thoroughly Observe launcher's operating temperature limits (para 1-5).

b. Tropical Conditions. Where temperature and humidity are excessive or where salt air is present, inspect and clean launcher daily if required.

c. Sandy or Dusty Conditions. During sand or dust storms, keep launcher covered when operating conditions permit. Wipe it clean as often as necessary.

CHAPTER 3

OPERATOR'S MAINTENANCE INSTRUCTIONS

Section I. GENERAL

3–1. Maintenance

While the operator has no responsibility of replacing parts he is responsible for preventive maintenance checks and services and troubleshooting the launcher.

OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES

Table 3–1 lists the operator preventive maintenance checks and services:

Table 3-1. Preventive Maintenance Checks and Services

B—Before Operation Time required:	*D—During Operation Time required:*	*A—After Operation Time required.*
Interval and sequence No.	*Item to be inspected Procedure*	*Work Time (H/M)*
B D A		
	LAUNCHER	
1	Perform before mission services (para 2-5).	0.2
1	Perform care and handling procedures (para 2-15) and preparing for operation (para 2-16).	

Section III. TROUBLESHOOTING TABLE

Possible malfunctions are listed in table 3–2, along with probable causes and corrective actions that can be taken. Symptoms of trouble or malfunctions not listed should be reported to organizational maintenance.

Table 3-2. Operator Troubleshooting

Item No.	*Malfunction*	*Probable cause*	*Corrective action*
1	Trigger does not release firing pins during operational check.	1. Trigger safety on. 2. Defective mechanism.	Release safety. Unsafe. Return launcher to organizational maintenance.
2	Trigger handle does not stay in retracted position.	Worn toggle.	Unsafe. Return launcher to organizational maintenance.
3	Trigger safety does not safe trigger.	Defective mechanism.	Unsafe. Return launcher to organizational maintenance.
4	Inaccurate launch firing.	Sight not boresighted properly.	Return launcher to organizational maintenance for boresighting,
5	Firing pin extended when firing mechanism is fully retracted into launcher.	Defective firing pin mechanism and or safety guide.	Unsafe. Return launcher to organizational maintenance.

CHAPTER 4
ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIEL

4.1. Unpacking — M202A1 Rocket Launcher

CAUTION

Do not discard foam pad from inside rear cover until launcher is first used. Subsequent storage should be with an expended clip installed. This will prevent foreign matter from entering launcher's firing mechanism.

a. Open wood box cover.

b. Tear open barrier bag and remove launcher.

4-2 Inspection

All M202A1 Launchers having serial numbers 7800 through 9700; and B71-7801 through B71-8605 have been modified in accordance with MWO 3-1055-456-50 AMC. An MWO label was attached to each of these launchers after modification.

NOTE

All launchers with serial numbers B71-8606 and above have been modified during manufacturer and do not contain a MWO label.

WARNING

Any launcher with serial numbers 7800 through 9700 and B71-7801 through B71-8605 must have a DA Form 2409 which states that MWO 3-1055-456-50 AMC has been applied to prevent serious injury to personnel.

a. Check DA Form 2409 of launchers with above serial numbers to verify application of MWO.

b. If the DA Form 2409 does not state the MWO has been applied or the DA Form 2409 is missing, the launcher will not be issued, and must be returned, through normal supply channels, to depot for modification.

c. Inspect launcher para 2-5a through f(1).

d. Check to see that sight alinement marks (13, fig. 1-6) are alined (para 4-6e). Boresight if necessary (para 4-9).

e. Check to see that the following items are packed with the launcher.

(1) Wrench-screwdriver combination tool.
(2) Peephole boresight disk,
(3) Crosshair boresight disk.
(4) Spare clip latch in rear cover.
(5) Sling assembly.
(6) DA Form 2408-9 (Equipment Control Record),
(7) Copy of this manual.
(8) DA Form 2409 (Equipment Maintenance Log).

4.3. Services

a. Install sling assembly on launcher attachment rings.

b. Touch-up chipped paint.

Section II. TOOLS AND EQUIPMENT

Table 4-1 lists the special tools (fig. 4-1) required for organizational maintenance of the launcher. These tools are packed with the launcher.

Table 4-1. Special Tools

Item	*Unit of Issue*	*Paragraph Reference*	*Use*
Wrench-screwdriver combination	1	2-5f,4-5, 4-6, 4-9	To loosen, tighten, or remove mounting screws and nuts on the reflecting-sight assembly.
Crosshair boresight disk	1	4-9	To boresight M202A1 rocket launcher.
Peephole boresight disk	1	4-9	To boresight M202A1 rocket launcher.

Section III. ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES

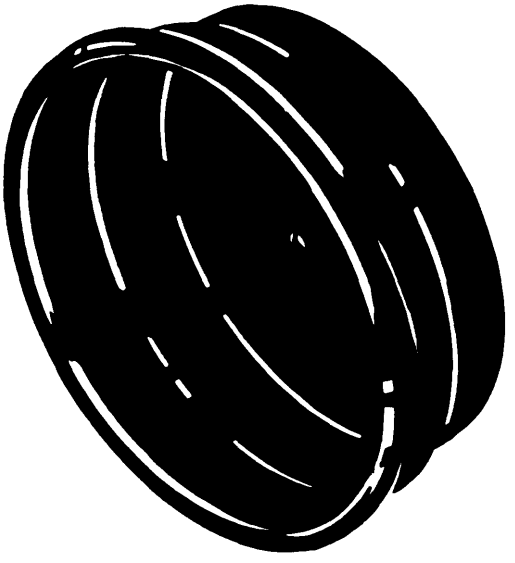
Table 4-2 lists preventive maintenance for the systematic care, inspection, and servicing of the launcher to prvent breakdown and assure maximum operational readiness.

Table 4-2. Organizational Preventive Maintenance Checks and Services

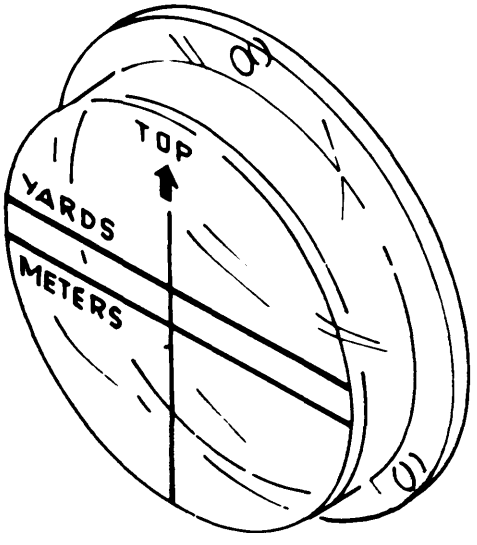
A – After Operation
Time required: 1.6

Inteval and sequence No. A	*Item to be inspected Procedures*	*Work times (M/H)*
	LAUNCHER	
1	Perform operations in paragraph 2-5.	0.2
2	Check ding for damage; replace (para 4-7 and 4-8).	0.1
3	Check sight for damage. Replace sight and boresight launcher. (para 4-5 and 4-6).	0.7
4	Check optical eye shield for damage. Replace eye shield.	0.1
5	Check sight alinement marks. (para 4-6e).	0.1
6	Touch-up painted surfaces (para 4- 10).	0.1
7	Tighten any loose screws.	0.1
8	Clean launcher.	0.1

A. WRENCH, SCREWDRIVER COMBINATION



C. PEEPHOLE BORESIGHT DISK



B. CROSSHAIR BORESIGHT DISK

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Figure 4-1. Special tools.

Section IV. ORGANIZATIONAL TROUBLESHOOTING

Table 4–3 lists the most frequently occurring malfunction, its probable causes. and corrective actions.

Table 4-3. Troubleshooting

Malfunction	*Probable cause*	*Corrective action*
1. Inaccurate launcher firing.	*a.* Sight marks not alined.	Realine marks (para 4-6e).
	b. Damaged sight.	Replace sight and boresight launcher (para 4-5, 4-6 and 4-9).
2. Inability to sight launcher.	Damaged or missing optical eye shield.	Replace optical eye shield.
3. Nonadjustable sling assembly.	Damaged strap, buckles or snap hooks.	Replace (para 4-7 and 4-6).

Section V. MAINTENANCE

4-4. General

Organizational maintenance personnel are authorized to repair or replace the reflecting-sight assembly and the sling assembly and to touch up all painted surfaces and maintain DA Form 2408-9 (Equipment Control Record).

4–5. Removal of Reflecting-Sight Assembly

a. Remove and retain the elevation plate screws (12, fig. 1–6), lockwashers, and elevation adjustment plate (2). (Wrench-screwdriver combination tool (A, fig. 3–1) can be used.)

CAUTION

Press down on the spring loaded sight lock while loosening sight assembly from mounting bushing to eliminate gouging the launcher.

b. Remove sight assembly and curved washer (4, fig. 1-6) from sight mounting bushing (3) by turning sight assembly counterclockwise. Retain curved washer.

4–6. Installation of Reflecting-Sight Assembly

NOTE

The sight assembly must be installed correctly in order to provide the proper degree of snugness to assure accuracy of launcher.

a. Position curved washer (4, fig. 4-2) so that concave side is down on mounting bushing (1).

CAUTION

Press down on the spring loaded sight lock while hand tightening sight assembly in mounting bushing to eliminate gouging the launcher.

b. Screw sight assembly (5) clockwise and handtighten sight assembly into mounting bushing until it bottoms.

c. Check for proper location of sight lock (7). If sight lock (7) is located between (A) and (B) after completing operation a above, sight is properly installed. If sight lock (7) is not located between (A) and (B), remove sight assembly. Install one or more of the .002 and .010 shims (2 and 3) between curved washer (4) and mounting bushing (1). Repeat a and b until sight lock (7) is correctly located.

c. Position sight assembly by turning it counterclockwise until sight lock (7) is between mounting screw holes (11).

d. Install elevation adjustment plate (10) with elevation plate screws (8) and lockwashers (9); aline sight marks; and tighten screws.

e. Recheck that sight alinement marks (13, fig. 1-6) are alined. If they aren't use the wrench-screwdriver combination tool (A, fig. 4–1) and perform the following:

(1) Loosen the two elevation plate screws (12, fig. 1-6).

(2) Position elevation adjustment plate (2) so the mark on the adjustment plate alines with the mark on the mounting plate (1).

(3) Tighten the two elevation plate screws.

f. Boresight launcher (para 4-9).

4–7. Removal of Sling Assembly

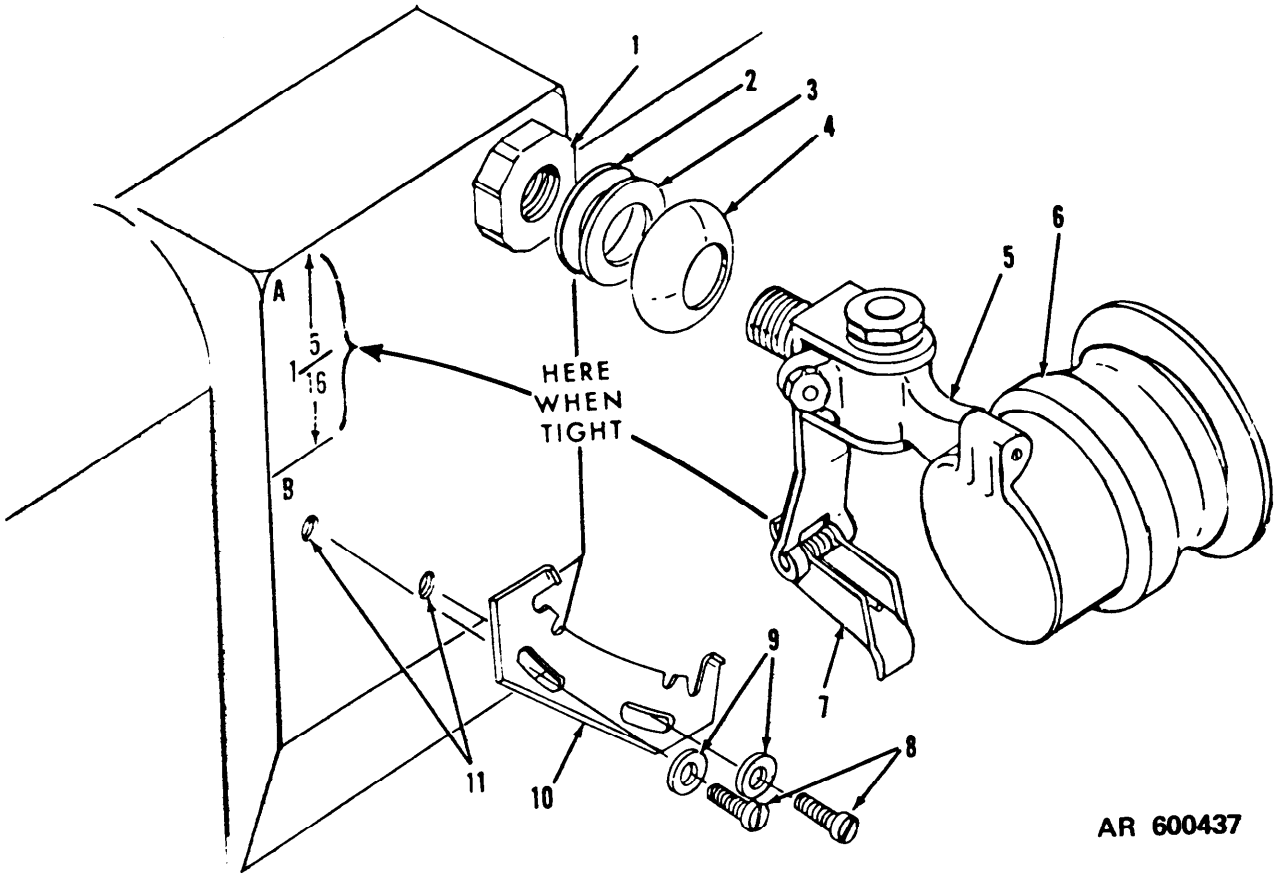
Remove sling assembly from launcher by un-snapping the two snaphooks from the launcher ring assemblies.

4–8. Installation of Sling Assembly

Install sling assembly by snapping the snaphooks to the launcher ring assemblies.

4–9. Boresighting M202A1 Rocket Launcher

The purpose of boresighting (fig. 4-3) is to check the alinement of the reflecting sight with respect to the bore of the launcher.



1	Mounting bushing	7	Sight lock
2	.002 shim	8	Screws
3	.010 shim	9	Lockwashers
4	Curved washer	10	Elevation plate
5	Sight assembly	11	Mounting-screws holes
6	Eyeshield		

Figure 4-2. Installation of reflecting-sight assembly.

NOTE

The reticle is graduated from 0-5 in. hundreds of meters.

a. Setting Up.

(1) Select a target with a range of at least 150 meters, preferably farther.

(2) Place launcher on a secure base.

(3) Open front and rear launcher covers.

(4) Place reflecting sight in firing position. Open lens cover.

(5) Install crosshair boresight disk (B, fig. 4–1) in the muzzle end of the upper left launcher tube. Aline the disk so that "TOP" is positioned on top.

(6) Install peephole boresight disk (C) in the rear of the same launcher tube.

b. Checking.

(1) Sight through the boresight disks at the target.

NOTE

If boresight has yards and meters lines, disregard yard line.

Position the launcher so that the crosshair boresight disk's proper horizontal line (meters) and vertical line superimpose on the target. Do not move the launcher after this sighting.

(2) View through the reflecting sight.

(3) If the sight's 0 horizontal line and vertical line are superimposed on the target, boresight is correct. No further adjustment is required. Remove boresight disks.

(4) If the sight's lines do not superimpose on the target, adjust for elevation (c below) or adjust for azimuth (d below), or adjust for both.

c. Adjusting for Elevation.

(1) Loosen the elevation plate screws (12, fig. 1-6).

(2) Sight through the boresight disks at the

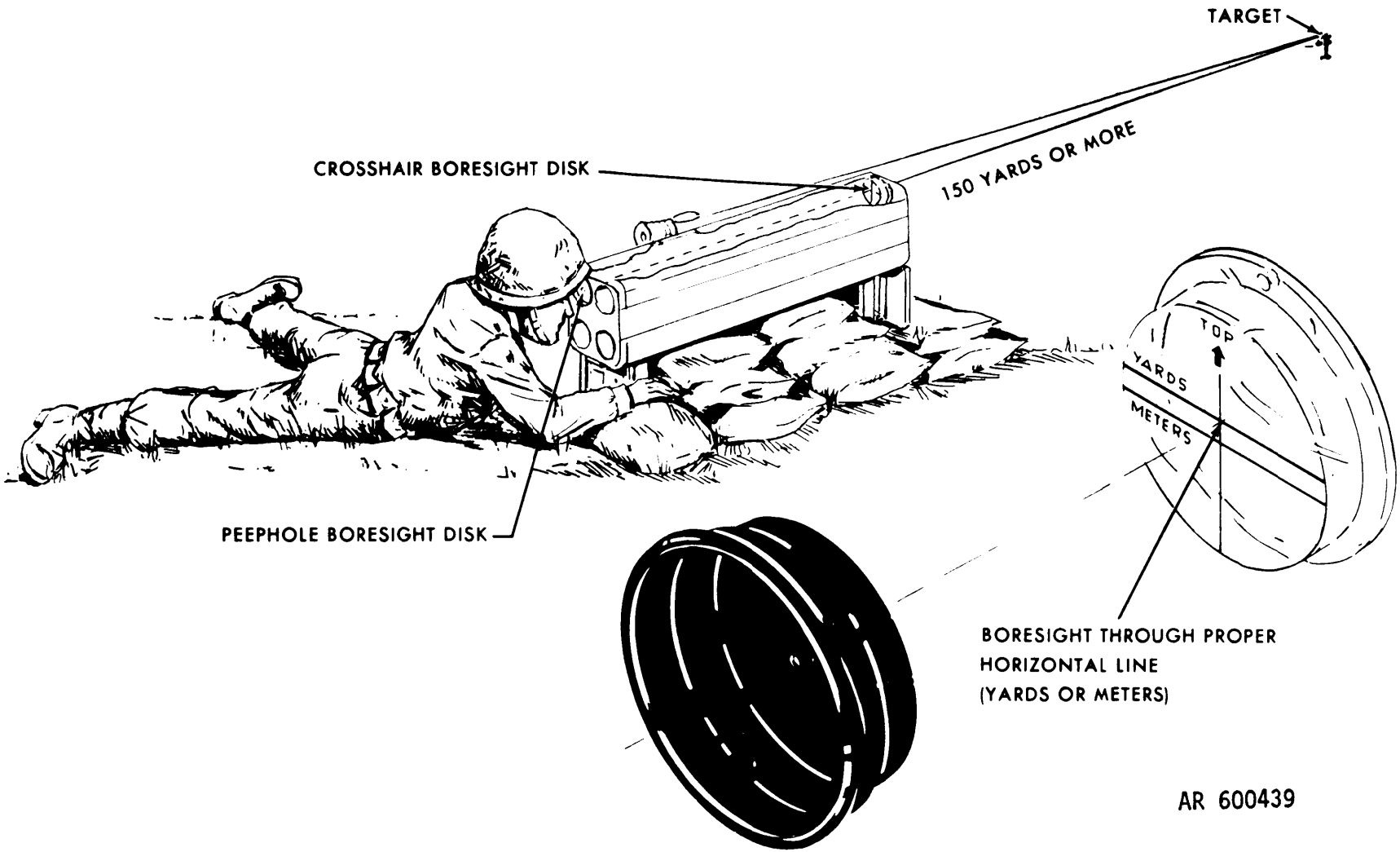


Figure 4-3. Boresighting launcher.

target. Position launcher so that the crosshair boresight disk's proper horizontal line (meters) and the vertical line superimpose on the target. The launcher must not move after this sighting.

(3) View through the reflecting sight and move the elevation adjustment plate (2) until the sight's 0 horizontal line superimposes on the target.

(4) Tighten the two elevation plate screws.

(5) View through the reflecting sight again to see if correct adjustment was made.

(6) Recheck launcher-tube alinement by sighting through boresight disks to see if upper horizontal line of the crosshair boresight disk superimposes on the target. If the line does not match the target, repeat (1) through (5) above.

(7) When all adjustments have been completed and the original alinement marks (13) are now misalined, obliterate the old mark on the elevation adjustment plate (2). Scribe new mark to lineup with mark on mounting plate. Fill mark with white paint.

d. Adjusting for Azimuth.

(1) Loosen the stop screw nut (6) and back off stop screw (5) into housing.

(2) Loosen hinge stud nut (7).

(3) Position the reflecting sight in the firing position. Turn hinge stud (10) right or left until the spring-loaded ball snaps in place in the sight frame detent and the indicator mark (15) on the hinge stud is approximately lined up with the center mark on the sight frame and screwdriver slot (14) is parallel to the mounting plate.

(4) Rotate sight to assure detent is engaged. If not, repeat steps (1) through (3) above:

NOTE

When the spring-loaded ball is properly engaged in the detent, the hinge stud will rotate with the sight only when the hinge nut is loose.

(5) Sight through the boresight disks at the target. Position the launcher so that the crosshair boresight horizontal line (meters) and vertical line are superimposed on the target. The launcher must not move after this sighting.

(6) View through the sight. Move the sight so the sight's vertical line is either superimposed on target or is slightly to the right of the target. If the sight's vertical line cannot be placed in this position; and if stop screw is completely backed-off (step 1, above), replace sight.

(7) Tighten hinge stud nut (7).

(8) Turn stop screw (5) until sight's vertical line superimposes on target.

(9) Tighten stop screw nut (6).

(10) View through reflecting sight and boresight disks to assure correct adjustment was maintained.

(11) If adjustment is not correct, repeat (1), (2), and (6) through (10) above.

(12) Move sight to closed and open positions to check that the spring-loaded ball in the hinge stud snaps into place at both positions. If not, repeat (1) through (11) above.

4-10. Painting

a. Touch up surfaces on launcher where paint is worn or chipped. Do not paint inside of launcher tubes or any part of the firing pin mechanism assembly.

b. Mask or cover launcher tubes, firing pin mechanism assembly, identification plates, instruction labels and rubber parts.

c. Clean and prime only metal surfaces with zinc chromate primer MIL-P–8585.

d. Clean and paint surfaces with Finish 20.8 of MIL-STD-171. Use lusterless olive-drab enamel No. 34087 (item No. 1, table l–l) on launcher.

4–11. Disposition of Unserviceable M202A1 Rocket Launcher

Rocket launchers found defective during inspection or use will be turned in for proper disposition.

CHAPTER 5

AMMUNITION

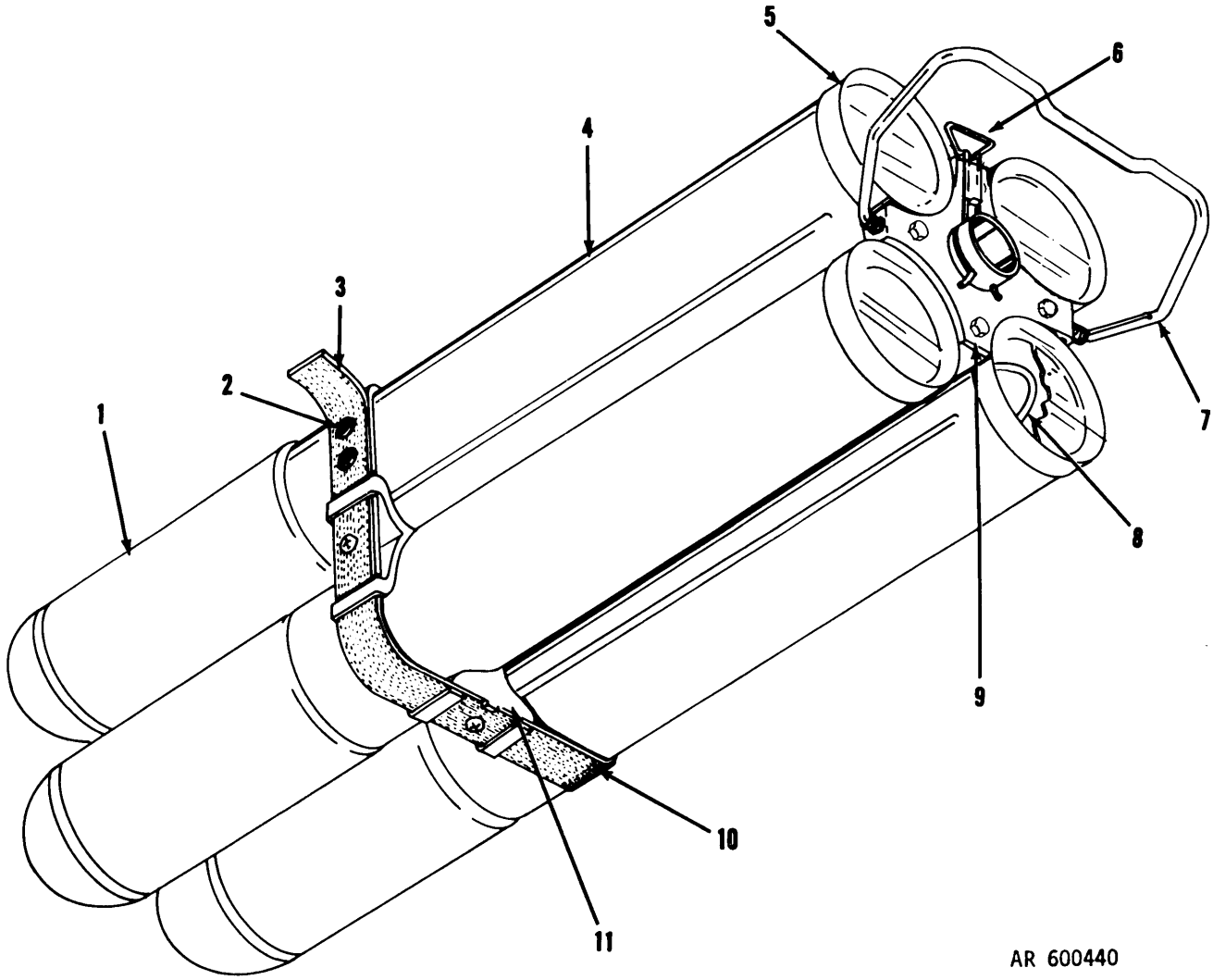
Section I. DESCRIPTION

5-1. General

Ammunition for the M202A1 rocket launcher is issued in rocket clips of fixed ammunition (the rocket motor propelling charge is not adjustable). The rocket clip consists of four 66mm rockets. Each rocket consists of a warhead, fuze and rocket motor.

5-2. Rocket clip

The rocket clip (fig. 5–1) has four aluminum tubes (4), each preloaded with a 66mm rocket (1). The tubes are grouped in the same two-by-two pattern as the M202A1 rocket launcher, and they slip-fit into the launcher tubes. The clip tubes are assembled to a manifold (9). Other rocket clip



1 Rocket
2 Snap
3 Strap
4 Tube
5 Rocket retainer
6 Clip latch (secure position)
7 Bail handle (extended position)
8 Rocket motor igniter
9 Manifold
10 Clip-support assembly
11 Plastic separator

Figure 5-1. M74 rocket clip.

components are as follows:

a. Bail Handle. The spring-loaded bail handle (7) is used to load, extend, and remove the clip. The handle has two positions:

(1) *Folded position.* The bail handle is folded against the rear edge of the clip's outer tube by spring action, for storing and when firing.

(2) *Extended position.* The bail handle is extended perpendicular to the rear of the clip in order to load, extend, or remove the clip.

b. Clip Latch. The clip latch (6) secures the clip to the launcher's firing-pin mechanism. The clip latch has two positions:

(1) *Secure position.* The clip latch is pushed into the center of the clip manifold. In this position the clip latch will automatically secure to the launcher's firing-pin mechanism when the rocket clip is fully inserted in the launcher tubes.

(2) *Release position.* The clip latch is pulled away from the center of the manifold to release the launcher's firing-pin mechanism from the rocket clip.

NOTE

A spare clip latch (10, fig. 1-4) is stored in the rear cover of the rocket launcher.

c. Rocket Retainers. A two-piece plastic rocket retainer (5, fig. 5–1) holds each rocket in a clip tube. The plastic retainers are blown off by the motor's exhaust pressure.

d. Clip-Support Assembly. The clip-support assembly (10) consists of a strap (3) and four plastic separators (11). This assembly holds the tubes together, so the clip can be handled without

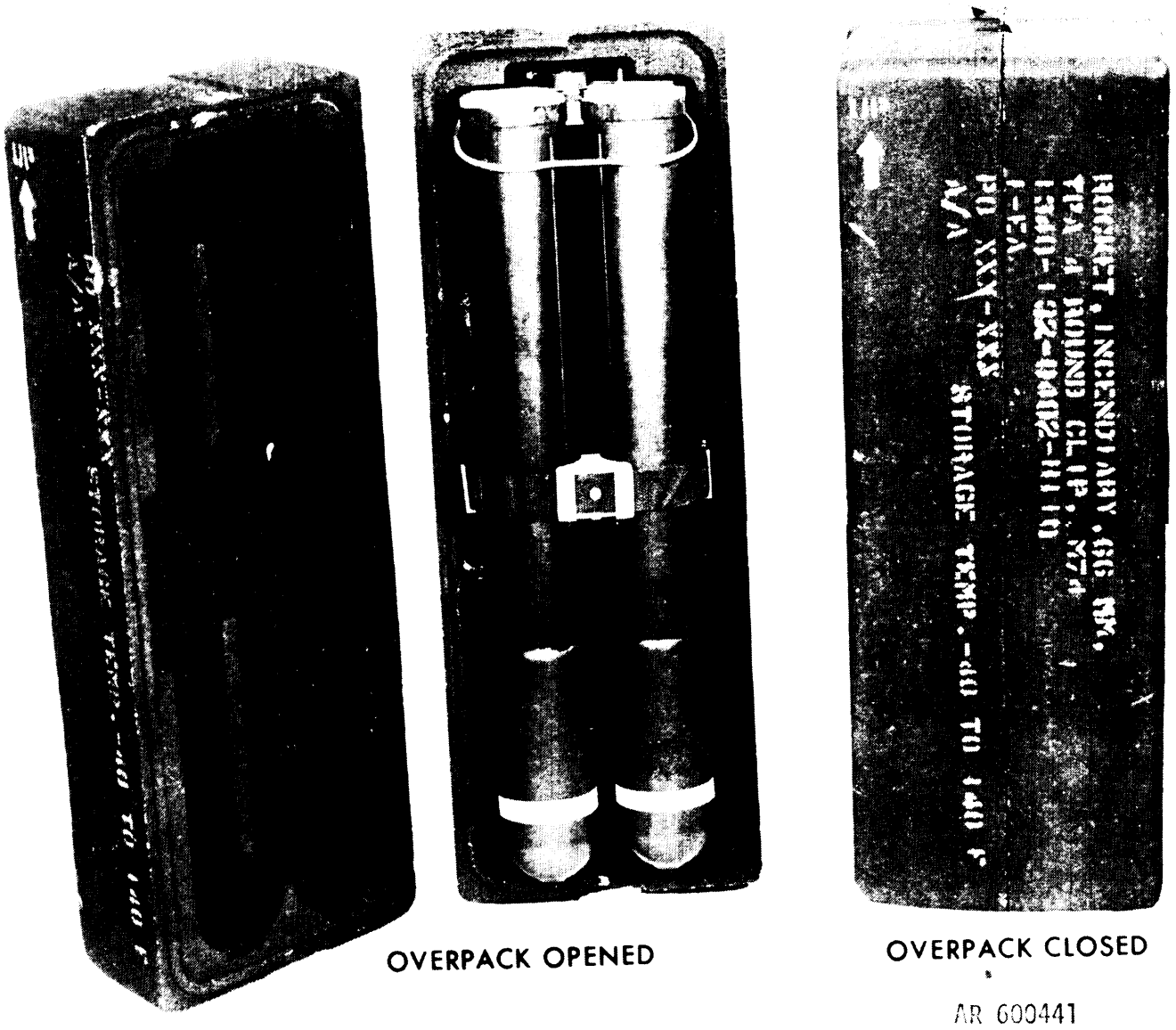


Figure 5-2. Typical overpack (M74 rocket clip shown).

damage to the clip and to maintain rocket alinement for loading. When the clip is inserted into the launcher, the support assembly is removed by disengaging the double-snap (2) quick disconnect.

e. Foam Overpack. The overpack (fig. 5-2) is a two-piece polystyrene foam box that is held together with tear tape. The overpack provides shock and environmental protection to the clip until it is ready to be fired. The clip is removal from the overpack by ripping the tape from around the box to separate the two pieces.

Section II. CLASSIFICATION AND IDENTIFICATION

5-3. Classification

Ammunition for M202A1 rocket launcher is classified according to the rocket warhead (table 5-1).

Table 5-1. *Ammunition Classification*

Rocket CIip	*Rocket warhead*	*Classification*
M74	M235	Incendiary (TPA)

5-4. Identification

a. General. Painting and markings identify the ammunitions, ammunition components, and all original packing boxes.

b. Model. To identify a particular design, a model number is assigned. This number becomes part of the nomenclature and is included in the item marking. Model number is as follows:

Rocket clip model No.	*Warhead model No.*
M74	M235

c. Ammunition Lot Number. When ammunition is manufactured, an ammunition lot number is assigned and is stenciled on every rocket warhead and on all original packing boxes. The lot number is required for purposes of record, including reports on condition, functioning, or accidents involving the ammunition.

d. Painting. Ammunition is coated to prevent rust and the color of paint used identifies the type of ammunition. The rockets are painted as follows:

Rocket model	*Component*	*Color*
M74	Warhead	Light red with yellow band
	Adapter	Yellow
	Motor	Brown

e. *Marking.* Markings are stenciled on the rocket warheads as follows:

Warhead model	*Marking*	*Color*
M235	Light red	WARHEAD M235 – 1/4-inch letters LOT NO. – 1/8-inch letters BLEND NO. – 1/8-inch letters DATE– 1/8-inch letters

Section III. CARE, HANDLING, AND PRESERVATION

5-5. General

Observe the precautions outlined in this section to assure proper care, handling, and preservation of the ammunition.

5-6. Care and Preservation

a. Protect ammunition from high temperatures and direct sunrays. Never store ammunition where the temperature may exceed 140°F.

b. Keep rocket clip in foam overpack until ready to load into launcher.

c. Keep ammunition free of sand, mud, moisture, frost, snow, ice, grease, or any other foreign material. If ammunition becomes dirty or wet, wipe it dry with a clean, dry cloth.

d. Return ammunition prepared for firing, but not fired, to its overpack. Pack and mark it correctly. Use this ammunition first in subsequent firings, so stock of opened packages is kept to a minimum.

e. When it is necessary to leave ammunition in the open, raise it on dunnage at least 6 inches above the ground. Cover the ammunition with a double thickness of tarpaulin; leave enough space for air to circulate.

f. Keep packing boxes from becoming broken or damaged. Repair broken boxes immediately. Replace any markings that are destroyed.

5-7. Handling

WARNING

Handle explosive ammunition or components containing ammunition with care at all times. Explosive elements in primer, igniters, and fuzes are particularly sensitive to shock and high temperatures. Do not drop, tumble, drag, or otherwise strike boxes containing ammunition.

WARNING

Do not handle duds. Notify authorized personnel.

WARNING

Do NOT use an M74 Rocket Clip when the barrier bag or molded foam overpack is damp or wet. Use of these clips may cause rocket motor blow-up and serious injury or DEATH.

Do NOT use rocket clips that are rusted or corroded. Use of these clips may cause rocket motor blow-up and serious injury or DEATH.

WARNING

Place overpack on ground before removing clip. If the clip is dropped on the nose a fracture of the warhead could occur. Fracture of the warhead will cause the TPA to ignite. Should a clip be dropped and the warhead fractures, immediately evacuate the area.

WARNING

Do not disassemble a rocket clip.

WARNING

Rocket clips in heavily damaged or impacted Packing boxes must be considered armed and must not be moved. Notofy authorized personnel.

In handling or storage, ammunition should be positioned according to the markings on packing boxes. This will result in the least damage if the propellant is accidently ignited.

Section IV. MATERIEL USED IN CONJUNCTION WITH AMMUNITION

5-8. Carrying Ammunition

The following equipment can be used to carry two rocket clips in foam overpacks (fig. 5-3).

a. One lightweight rucksack (1, fig. 5-4) (NSN 8465-00-782-3248), which includes shoulder straps (5), cargo straps (2), back straps (4), and waist straps (3).

b. One cargo support shelf (NSN 8465-00-782-6722).

5-9. Instructions for Use

Paragraph 5-18 gives instructions for using the rucksack and cargo support shelf.

Section V. AUTHORIZED ROUNDS

5-10. General

Table 5-2 lists the ammunition authorized for the M202A1 rocket launcher.

Table 5-2. Authorized Ammunition

Complete round standard nomenclature	*Rocket warhead*	*Rocket fuze*	*Rocket motor*	*NSN/DODAC*
Rocket, Incendiary, 66 Millimeter TPA, 4 Round clip, M74.	M235	M434 (BD).	M54	NSN 1340-(0132-0482 DODAC 1340-H110.

5-11. Description

a. Complete Round.

(1) *M74 rocket clip.* The M74 rocket clip consists of four incendiary rockets (fig. 5-5). Each rocket consists of an M235 warhead (7), containing approximately 1.3 pounds of thickened triethylalumirtum (TPA) (9), and an adapter (5), which adapts an M54 rocket motor (3) to the warhead.

b. Fuze, Rocket, M34.

(1) *General.* The M434 fuze (6, fig. 5-5) is a base-detonating (BD), nondelay-action type. It incorporates a graze functioning element which, upon deceleration due to impact, causes the fuze to detonate the burster (8) in the warhead.

(2) *Description.* The fuze consists of a base plate and motor assembly, cover assembly, primer, and detonator pellet. It is designed to function by graze action. Graze functioning occurs when a spring-loaded firing pin is released by the decelerating force of impact. The fuze is dropsafe and boresafe. It arms within a minimum distance of 5.5 meters of rocket travel and a maximum distance of 13 meters of rocket travel.

c. Functioning. Rocket—Incendiary rocket. When the projectile is fired, acceleration acts upon the fuze sequential leaf arming mechanism. The fuze rotor assembly is then free to rotate to the armed position. When rotor is in the armed position, the detonator is alined with the remainder of the explosive train. Rocket deceleration, due to impact, causes the graze element of the fuze to shift, thereby allowing the firing pin of the fuze to be driven into the primer. The primer flashes through the flash channel and initiates, in turn, the detonator and the primacord in the warhead, which disseminates the warhead agent.

5-12. Tabulated Data

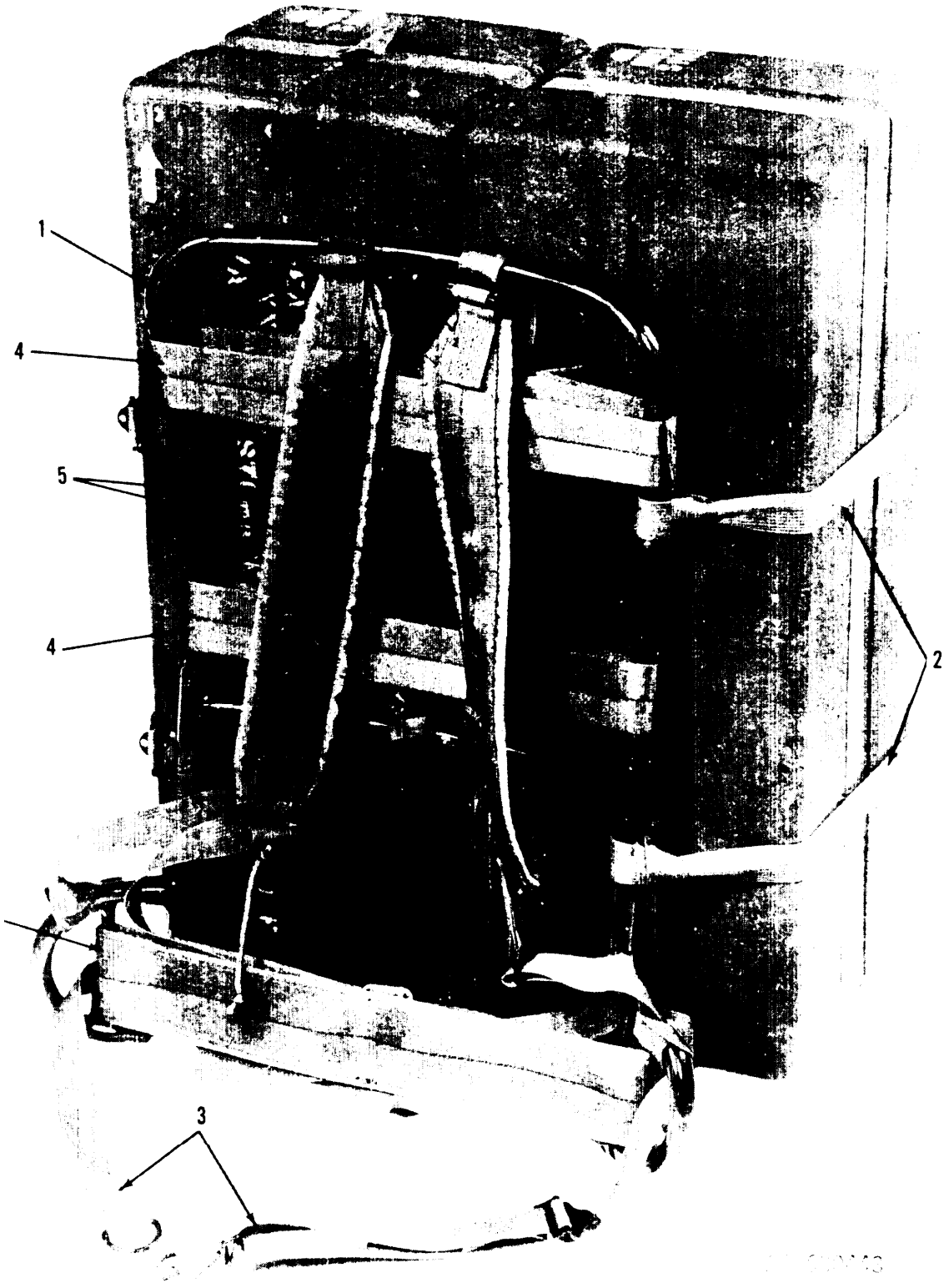
a. Four-Round Clip-M74 Rocket Clip. All data are approximate.

Length . . . . . .21.5 in.
Weight . . . . . .15.1 lb

b. Round-Incendiary Rocket.

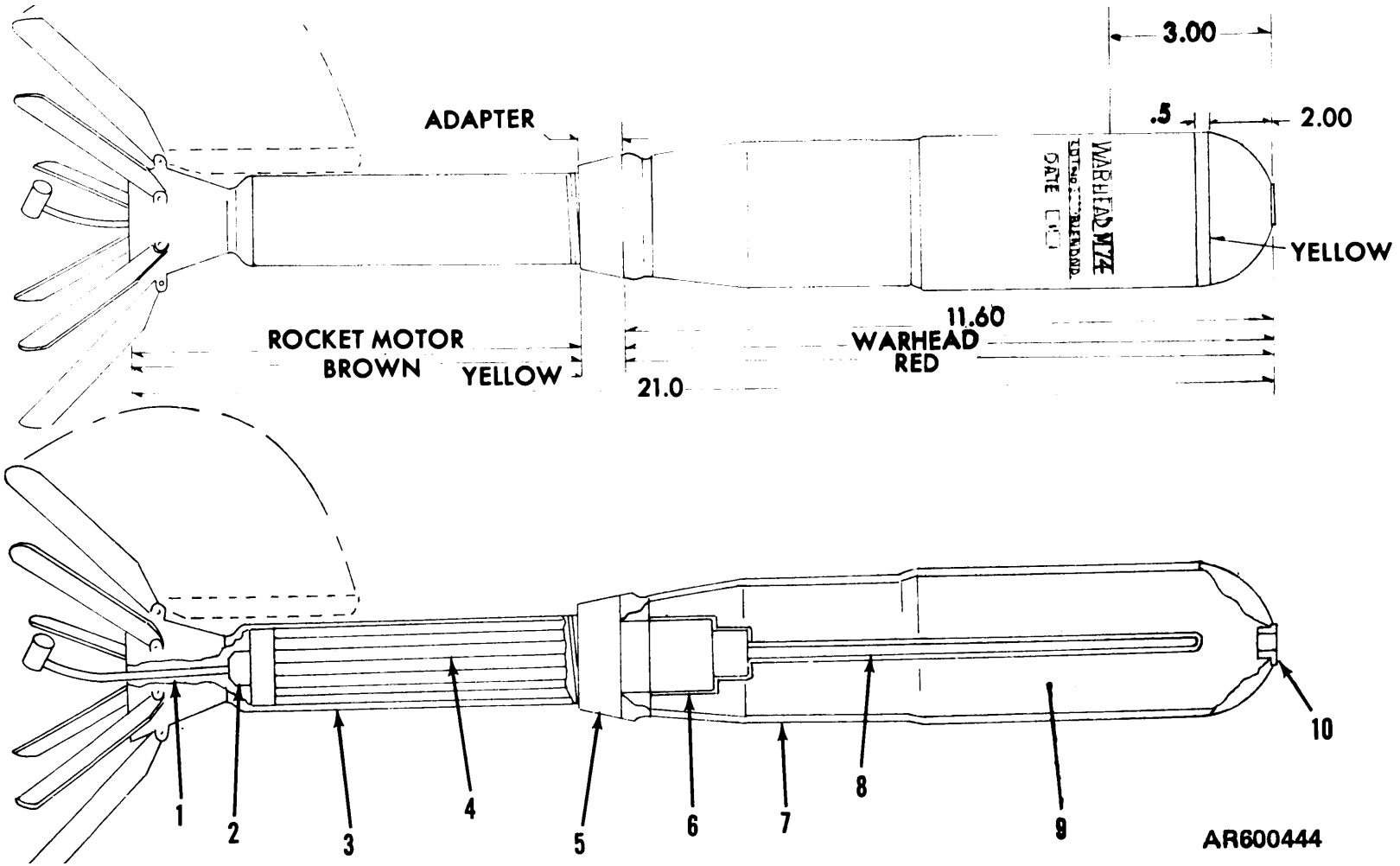
Length (approx) . . . . . .21 in. (fins closed)
Weight (approx) . . . . . .3 lb
Range (max) . . . . . .750 meters
Range (min safe) . . . . . .20 meters
Muzzle velocity (approx) . . . . . .375 ft per second
Bursting radius (approx) . . . . . .65 ft.
Operating temperature limits . . . . . .-25°to + 140°F

Figure 5-3. Carrying ammunition.



1 Rucksack
2 Cargo straps
3 Waist straps
4 Back straps
5 Shoulder straps

Figure 5-4. Overpacks installed on backpack.



1	Flash tube	6	M434 fuze
2	Integral igniter	7	M235 warhead
3	M54 rocket motor	8	Burster
4	Propellant grains	9	Incendiary agent, TPA
5	Adapter	10	Filling plug

Figure 5-5. M74 rocket.

Section VI. PACKING AND MARKING

5-13. Packing

Each clip is packed in a molded-foam overpack which is sealed in a water-vaporproof barrier bag, and then packed in a fiberboard box with voids filled with vermiculite Four fiberboard boxes are packaged in a 25 by 25 by 28 3/4-inch wood box. The complete box of four clips ready for shipment weighs 140 pounds and displaces 10.4 cubic feet of space.

5-14. Marking

The unpainted packing boxes are marked in black (fig. 5-6).

Section VII. SERVICE UPON RECEIPT OF MATERIEL

WARNING

The rocket warhead TPA agent fill ignites spontaneously when exposed to air. If an M74 rocket clip is leaking and burning immediately evacuate the area and take cover.

WARNIG

Do not use an M74 Rocket Clip if any of the following conditions exist; dispose of in accordance with local SOP's:

An M74 Rocket Clip shows any evidence of misuse and mishandling.

An M74 Rocket Warhead which has leaked TPA agent fall. This condition can be noted by a "built-up" mound of greyish white colored residue on the warhead surface.

WARNING

Do not dispose of a leaking rocket by submerging in water. TPA reacts violently upon contact with water.

WARNING

Do NOT use an M74 Rocket Clip when the barrier bag or molded foam overpack is damp or wet. Use of these clips may cause rocket motor blow-up and serious injury or DEATH.

WARNING

Do NOT use rocket clips that are rusted or corroded. Use of these clips may cause rocket motor blow-up and serious injury or DEATH.

5-15. Unpacking

a. Open hinged cover of wood packing box.

b. Remove tape that seals cover of fiberboard boxes and open rovers.

c. Remove barrier-bag-covered foam overpacks from fiberboard boxes.

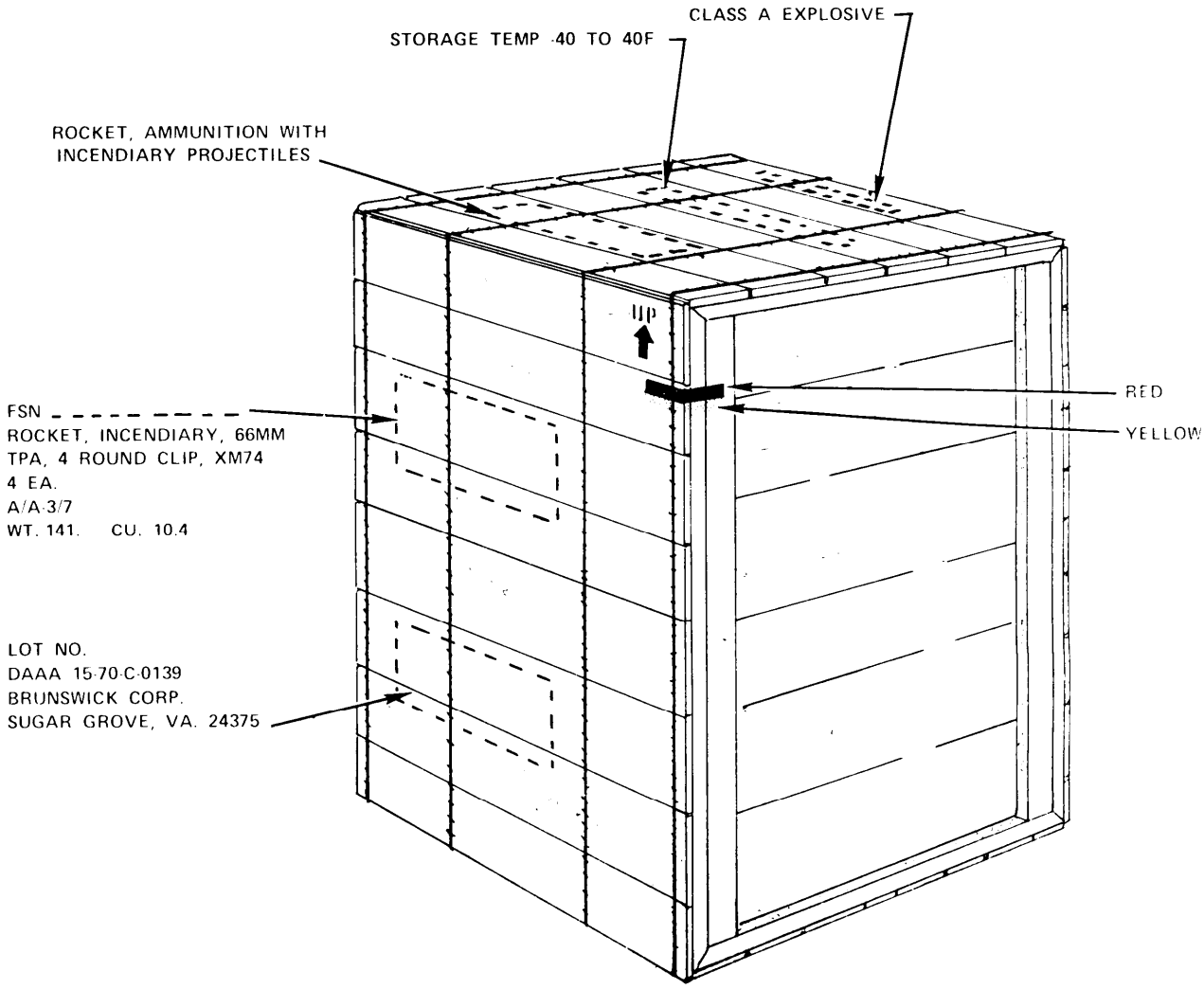


Figure 5-6. Packing and marking-rocket clips.

d. Remove foam overpacks from barrier bags.

5-16. Inspection

a. Inspect foam overpack for any extensive damage that could have affected serviceability of rocket clip.

b. Inspect overpack for any evidence of a leaking rocket warhead.

5-17. Repacking

Repacking, if necessary, should be in overpack containers. If other containers are used, they should be properly marked to indicate the contents. Repacked ammunition should be used first in order to keep opened items to a minimum. Return ammunition prepared for firing, but not fired, to its overpack. Pack and mark it correctly. Use this ammunition first in subsequent firings, so stock of opened packages is kept to a minimum.

Section VIII. CARRYING INSTRUCTIONS

5-18. Installing Overpacks on Rucksack

a. Place the two rocket-clip overpacks on cargo shelf. Make sure ends marked "UP" are positioned as shown in fig. 5-4.

b. Pass cargo straps around overpacks and tie loose ends in place on rucksack frame.

Section IX. SHIPMENT AND ADMINISTRATIVE STORAGE

5-19. Shipment

Four M 74 rocket clips are shipped in a wood box (fig. 5-6).

5-20. Transportation Requirements

a. Rail UFC 5930

b. Motor-NMFL 13880

c. Freight description: Rockets, NO1, other than guided.

d. DOT hazard class explosive, Class "A".

e. DOT markings: Rocket ammunition with incendiary projectiles.

d. DOT compatibility– e.

g. All modes of transportation are authorized. The item may be transported without damage or functional impairment by vessel, rail, motor vehicle, and aircraft.

5-21. Administrative Storage

Table 5-3 contains detailed storage information of the ammunition.

Table 5-3. Shipment and Storage Data

Item	Temperature limitations Min.	Temperature limitations Max.	Chemical munition storage group	Quantity-distance hazard class	Compatibility storage group	*DOT requirement Hazard coding	*DOT requirement Marking	Color Coding
Rocket, Incendiary, 66 Millimeter: TPA, 4 Round Clip, M74	-40 °F	+140 °F	D	3	A	Explosive Class A	Rocket ammunition with incendiary projectiles.	Wood box—unpainted with red and yellow stripes on diagonal corners.

*Department of Transportation

Section X. DESTRUCTION OF ROCKET CLIP TO PREVENT ENEMY USE

5-22. General

a. Destruction of the equipment, when subject to capture or abandonment in the combat zone, will be authorized by the unit commander (TM 9-1300-206).

b. The information which follows is for guidance only. Certain procedures outlined require the use of demolition charges and incendiary grenades, which normally may not be authorized items of issue for the using organization. The issue of these and related materiels, and the conditions under which destruction will be effected, are command decisions and will be made according to the tactical situation. Of the several means of destruction, those most generally applicable are as follows:

(1) *Burning.* Requires gasoline, oil, or other flammables.

(2) *Demolition.* Requires demolition charges or ammunition.

(3) *Gunfire.* Includes artillery, machinegun, rifles using rifle grenades, and launchers using antitank rockets.

(4) *Disposal.* Requires burying in the ground or submerging under water. Selecting a particular method of destruction requires imagination and resourcefulness in the use of facilities at hand under existing conditions. Time is usually critical.

c. If destruction is directed, due consideration should be given to the following:

(1) Select point of destruction that will cause greatest obstruction to enemy movement and also prevent hazards to friendly personnel from fragments or ricocheting projectiles, which may occur during the destruction.

5–23. Destruction of Rocket Clip to Prevent Enemy Use

WARNING

When destroying rocket clips, take cover immediately. The time required for the warhead to explode is unpredictable. The igniting propellant in the rocket motor may cause rockets to be projected in unpredictable flight. Therefore, the danger-zone is considered to be a radius equivalent to the rocket's maximum range (750 meters).

a. Method No. 1—By Demolition.

(1) Place a 1/4-pound demolition charge of TNT. Tape or tie one charge to center of left tubes. Tape or tie one charge to center of right tubes.

(2) Fuze each charge.

(3) Take cover and detonate the charge.

b. Method No. 2–By Burning.

WARNING

Observe appropriate safety precautions in handling gasoline.

WARNING

When destroying rocket clips, take cover immediately. The time required for the warhead to explode is unpredictable. The igniting propellant in the rocket motor may cause rockets to be projected in unpredictable flight Therefore, the danger-zone area is considered to be a radius equivalent to the rocket's maximum range (750 meters).

(1) Place quantities of combustible materials on and around the clip. Clip should be fully exposed to the fire and in a location where the greatest damage will result from the explosion. Pour gasoline or oil over the combustible material.

(2) Ignite by means of an incendiary grenade, a combustible train of suitable length, or other appropriate means.

c. Method 3—By Gunfire.

WARNING

Fire rifle grenades or antitank rockets from cover.

Destroy the clip by gunfire, using machineguns, rifles using rifle grenades, or launchers using antitank rockets. Fire at the clip aiming at the center of the tubes.

WARNING

Do not dispose of a leaking rocket by submerging in water. TPA reacts violently upon contact with water.

d . Method No. 4–By Disposal. Bury the clip in a hole or submerge it under water.

CHAPTER 6

SHIPMENT

6–1. General

The M202A1 rocket launcher is shipped in a wood box (fig. 1-10 and para 1-6).

6–2. Transportation Requirements

a. Rail — UFC 73060.

b. Motor – NMFC 146250, sub 2.

c. Freight Description — Guns, NO1, Not Otherwise Indexed, bore under 6 but not less than 3/4 in., not mounted; other than wheeled.

d. All modes of transportation are authorized. The item may be transported without damage or functional impairment by vessel, rail, motor vehicle, and aircraft.

CHAPTER 7

DESTRUCTION OF LAUNCHER TO PREVENT ENEMY USE

7–1. General

a. Destruction of the equipment, when subject to capture or abandonment in the combat zone, will be authorized by the unit commander (TM 9-1300-206).

b. The information which follows is for guidance only. Certain procedures outlined require the use of demolition charges and incendiary grenades, which normally may not be authorized items of issue for the using organization. The issue of these and related materiels, and the conditions under which destruction will be effected, are command decisions and will be made according to the tactical situation. Of the several means of destruction, those most generally applicable are as follows:

(1) *Burning.* Requires gasoline, oil, or other flammables.

(2) *Demolition.* Requires demolition charges or ammunition.

(3) *Gunfire.* Includes artillery, machinegun, rifles using rifle grenades, and launchers using antitank rockets.

(4) *Disposal.* Requires burying in the ground or submerging under water. Selecting a particular method of destruction requires imagination and resourcefulness in the use of facilities at hand under existing conditions. Time is usually critical.

c. If destruction to prevent enemy use is necessary, the weapon must be so badly damaged that it cannot be restored to a usable condition in the combat zone, either by repair or cannibalization. Adequate destruction requires that all parts essential to the operation of the launcher be destroyed or damaged beyond repair. However, when lack of time and personnel prevents destruction of all parts, priority is given to the destruction of those parts most essential for operation. Equally important, the same essential parts must be destroyed on all like materiel, so that the enemy cannot construct one complete unit from several damaged ones.

d. If destruction is directed, due consideration should be given to the following:

(1) Select point of destruction that will cause greatest obstruction to enemy movement and also prevent hazards to friendly personnel from fragments or ricocheting projectiles, which may occur incidental to the destruction.

(2) Observe appropriate safety precautions.

7–2. Destruction of M202A1 Rocket Launcher

a. Method No. 1 — By Demolition.

(1) Place a 1/4-pound demolition charge of TNT together with the necessary detonating cord in one of the bottom launcher tubes directly above the trigger mechanism.

(2) Provide for dual priming to minimize the possibility of a misfire.

(3) Take cover immediately and detonate the charge.

b. Method No. 2 — By Burning.

WARNING

Observe appropriate safety precautions in handling gasoline.

(1) Using an ax, sledge hammer, or other heavy implement, smash the tubes, trigger handle assembly, firing mechanism assembly, and reflecting sight assembly.

(2) Place quantities of combustible material on or about the launcher. Pour gasoline or oil over the combustible material.

(3) Ignite by means of an incendiary grenade, a combustible train of suitable length, or other appropriate means, and take over.

c. Method No. 3 — By Gunfire.

WARNING

Fire rifle grenades or antitank rockets from cover.

Destroy the rocket launcher by gunfire, using machineguns, rifles using rifle grenades, or launchers using antitank rockets. Fire at the launcher by aiming at the center of the tubes.

d. Method No. 4 – By Disposal.

(1) Using an ax, sledge hammer, or heavy implement, smash the tubes, trigger handle assembly, firing mechanism assembly, and reflecting sight assembly.

(2) Bury the rocket launcher in a hole or submerge it under water.

APPENDIX A

REFERENCES

AR 75-1	Malfunctions Involving Ammunition and Explosives
AR 385-40	Accident Reporting and Records
AR 385-63	Regulation for Firing Ammunition for Training Target Practice and Combat
FM 3-2	Tactical Employment of Riot Control Agent CS
FM 20-33	Combat Flame Operations
TB MED 251	Noise and Conservation of Hearing
TM 3-215	Military Chemistry and Chemical Agents
TM 3-220	Chemical, Biological and Radiological (CBR) Decontamination
TM 9-1300-206	Ammunition and Explosives Standards
TM 38-750	The Army Maintenance Management System (TAMMS)
TM 740-90-1	Administrative Storage of Equipment
TM 750-5-15	Army Equipment Data Sheets: Chemical Weapons and Defense Equipment

APPENDIX B

BASIC ISSUE ITEMS LIST, ITEMS TROOP INSTALLED OR AUTHORIZED LIST, REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

B–1. Scope

This appendix lists items troop installed or authorized repair parts and special tools required for the performance of organizational maintenance of the M202A1 rocket launcher, and authorizes the requisition and issue of items as indicated by the source and maintenance codes.

B–2. General

This Basic Issue Items, Items Troop Installed or Authorized, Repair Parts, and Special Tools List is divided into the following sections:

a. Section II—Basic Issue Items List. Not applicable.

b. Section III–Items Troop Installed or Authorized List. A list, in alphabetical sequence, of items which, at the discretion of the unit Commander, may accompany the end item, but are not subject to be turned in with the end item.

c. Section IV—Repair Parts List. A list of repair parts authorized at the organizational level for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending numerical sequence, with the parts in each group listed in figure and item number sequence.

d. Section V—Special Tools List. A list of special tools, TM DE, and support equipment authorized for the performance of maintenance at the organizational level.

B-3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings:

a. Illustration. This column is divided as follows:

(1) *Figure Number.* Indicate the figure number of the illustration in 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 Codes (SMR).

(1) *Source Code.* Source codes are assigned to support items to 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.

Note. Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA, XD, and aircraft support items as restricted by AR 700-42.

(2) *Maintenance Code.* Maintenance Codes are assigned to indicate the levels of maintenance authorized to USF 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*
O	Support item is removed, replaced, used at organizational 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*
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 format as follows:

Recoverability Codes	*Definition*
F	Reparable item. When uneconomically reparable, condemn and dispose at the direct support level.

Z	Nonreparable item. When uneconomically condemn and dispose at the level indicated in position 3.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.

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

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. For BIIL and ITIAL, see explanation of description column, para f.

NOTE

When stock numbered item is requisitioned, the repair part 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. For BIIL and ITIAL, see explanation of description column, para f.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item. (In BIIL and ITIAL only, the following will be used: "The last line for each item in the BIIL and ITIAL indicates the part number with the FSCM in parentheses").

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 Authorized (Items Troop Installed or Authorized Only). Indicates the quantity of the item authorized to be used with the equipment.

i. 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, appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers, etc).

B-4. Abbreviations

Abbreviations	*Explanation*
CRES	corrosion resistant
dia	diameter
ea	each
hd	head
in	inch(es)
lg	long length
o/a	over all
od	outside diameter
thd	thread(s)(ed)
thk	thickness)

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1) National stock number	(2) Description Part Number & FSCM	Usable on Code	(3) U/M	(4) Qty Auth
6515-00-299-8287	CASE, EAR PLUGS		ea	*
6515-00-299-8288	PLUG, EAR, noise protection, large		pr	*
6115-00-299-8289	PLUG, EAR, noise protection, medium		pr	*
6115-00-295-8290	PLUG, EAR, noise protection, small		pr	*
5120-00-234-8913	SCREWDRIVER, CROSS TIP, phillips, plastic handle, No. 2 size tip, 4 in. lg blade GGG-S-121 (81348)		ea	1
	*Earplugs are obtained from and must be fitted by medical personnel. Quantity authorized is according to size required.			

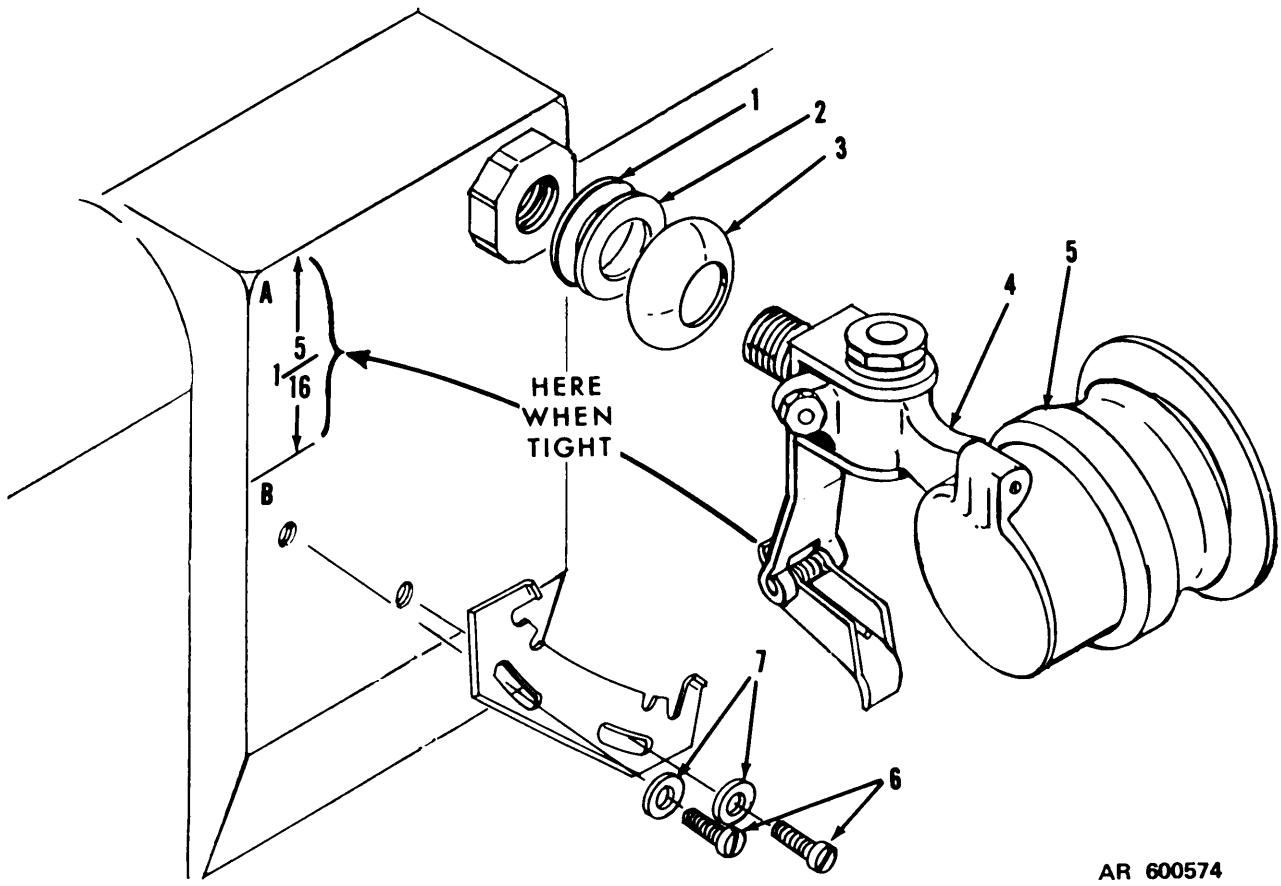
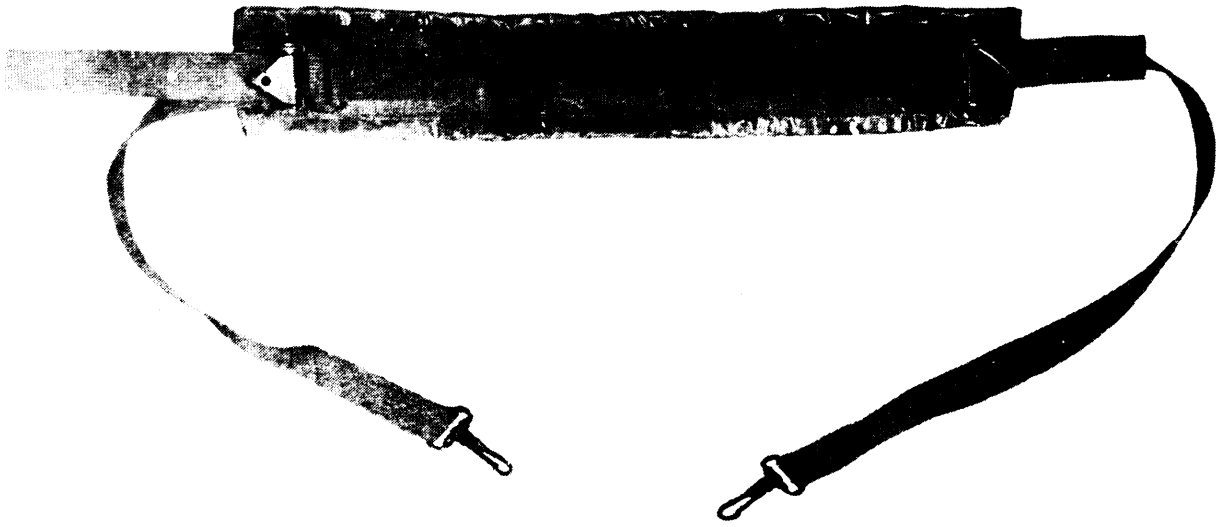


Figure B-1. Reflection-sight assembly.



AR 600575

Figure B-2. Sling assembly.

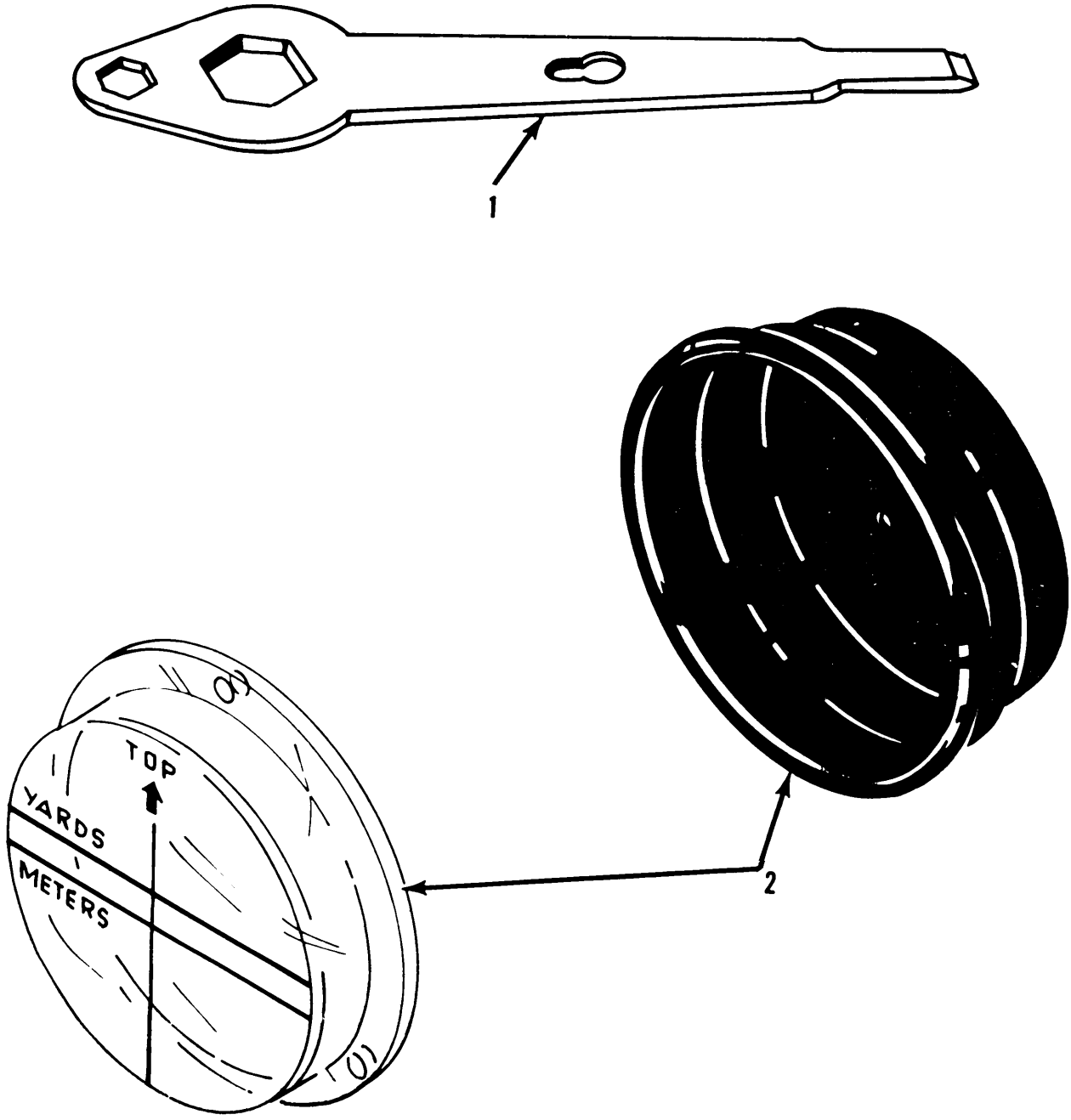


Figure B-3. Special tools.

APPENDIX C

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

C–1. General

The maintenance allocation chart (see II) lists the authorized maintenance functions assigned the maintenance categories for maintenance of the M202A1 rocket launcher. This chart is to be used by all levels of maintenance to insure complete support of the equipment.

C–2. Maintenance Functions

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical and/or electrical characteristics with 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 equipments 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 (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publications. 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.

C-3. Column Entries

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 noun 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.

d. Column 4, Maintenance Category. Column 4 specifies, by the Iisting of a “work time” figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed on Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary

at difference maintenance categories, appropriate "work time"' figures will be shown for each category. The number of man-hours 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 conditions. 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 man-hours and carried to one decimal place (tenths of hours).

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

MAINTENANCE ALLOCATION CHART
for
LAUNCHER, ROCKET: 66MM, 4-TUBE, M202A1

(1)	(2)	(3)	(4)					(5)
Group number	Component Assembly	Maintenance function	Maintenance category *					Tools and equipment
			C	O	F	H	D	
0100	LAUNCHER GROUP							
0101	Tube, Firing, Trigger and Front and Rear cover Assemblies							
		Inspect	0.2					
		Test		0.2				
		Service		0.1				
		Overhaul					**	
0200	SIGHT GROUP							
0201	Reflecting-Sight Assembly	Inspect	0.1					
		Service		0.1				
		Align		0.1				
		Replace		0.7				
		Repair		0.1				1,2,3
0300	CANVAS GROUP							
0301	Sling Assembly	Inspect	0.1					
		Adjust	0.1					
		Replace		0.1				

*The subcolumns are as follows:
C—operator/crew
O—organizational
F—direct support
H—general support
D—depot
**Indicates WT/MH required

TOOL AND TEST EQUIPMENT REQUIREMENTS

Tool or Test Equipment Reference Code	Maintenance Category	Nomenclature	National/NATO Stock Number	Tool Number
1	0	Tool Kit, Small Arm Repairman	4933-00-357-7770	
2	0	Wrench, Double Box	5120-00-312-7168	
		End Screwdriver		
		End Combination		
3.	0	Disk Set, Boresighting	1055-00-312-7167	

Section IV. REPAIR PARTS LIST

(1) Illus Fig No.	(1) Illus Item No.	(2) SMR code	(3) National stock number (NSN)	(4) Part number	(5) FSCM	(6) Description Usable On Code	(7) U/M	(8) Qty inc in unit
						GROUP: 0200 SIGHT GROUP		
B-1	1	PAOZZ	5365-00-116-2215	B147-1-193-1	81361	SHIM, CRES, 1 IN. OD, 0.516 IN. DIA HOLE, 0.002 IN. THK 10 PER BAG	EA	1
B-1	2	PAOZZ	5365-00-116-2205	B147-1-193-3	81361	SHIM, CRES, 1 IN. OD, 0.516 IN. DIA HOLE, 0.010 IN. THK 10 PER BAG	EA	1
B-1	3	PAOZZ	5310-00-116-2358	U500-0210	90247	WASHER, SPRING TENSION, HIGH CARBON STEEL, 0.525 IN. HOLE, 0.980 IN. OD BLUED	EA	1
B-1	4	PAOOF	1240-00-179-0005	11730196	81337	SIGHT, REFLECTING	EA	1
B-1	5	PAOZZ	6650-00-355-8920	5182872	19200	EYE SHIELD, OPTICAL	EA	1
B-1	6	PAOZZ	5305-00-059-3659	MS51958-63	96906	SCREW, MACHINE, 10-32 UNF, 2A THD, CRES, CROSS RECESS, PAN HD, 1/2 IN. LG	EA	2
B-1	7	PAOZZ	5310-00-619-1148	MS15795-808	96906	WASHER, FLAT, CRES, 7/16 IN. OD, 7/32 IN. HOLE	EA	2
						GROUP: 0300 CANVAS GROUP		
B-2		PAOZZ	1010-00-283-9044	D147-1-181	81361	SLING, SMALL ARMS	EA	1

Section V. SPECIAL TOOLS LIST

(1) Illus. Fig. No.	(1) Illus. Item No.	(2) SMR code	(3) National stock number (NSN)	(4) Part number	(5) FSCM	(6) Description Usable On Code	(7) U/M	(8) Qty inc in unit
						GROUP: 0400 SPECIAL TOOLS		
B-3	1	PAOZZ	5120-00-312-7163	C147-1-190	81361	WRENCH, DOUBLE BOX END AND SCREWDRIVER END COMBINATION, STEEL, 0.125 IN. THK, 5.250 IN. O/A LG	EA	1
B-3	2	PAOZZ	1055-00-312-7167	C147-1-177	81361	DISK SET, BORESIGHT, PLASTIC, PEEPHOLE AND CROSS-HAIR DISK, 3.030 IN. O/A DIA, CLEAR COLOR, CROSS HAIR DISK	EA	1

INDEX

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To be distributed in accordance with DA Form 12-28 (qty rqr block no. 514), Organizational maintenance requirements for Launchers.

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Suggest that paragraph 5-15a be changed to read:

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