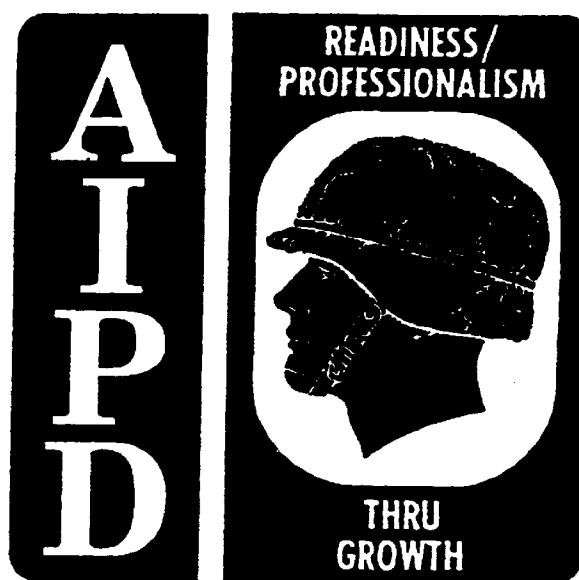


SUBCOURSE
MM3679

EDITION
8

US ARMY AMMUNITION INSPECTOR
MOS 55X SKILL LEVEL 3 COURSE

**INSPECTING THE TOW GM
AND ITS CONTAINER**



US ARMY AMMUNITION INSPECTOR
MOS 55X SKILL LEVEL 3 COURSE

THE ARMY INSTITUTE FOR PROFESSIONAL DEVELOPMENT

ARMY CORRESPONDENCE COURSE PROGRAM

**US Army Ammunition Inspector
MOS 55X Skill Level 3 Course**

**INSPECTING THE TOW GM
AND ITS CONTAINER**

Subcourse MM3679

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This publication is provided for nonresident instruction only. It reflects the current thought of this school and conforms to published Department of the Army doctrine as closely as possible.

Users of this publication are encouraged to recommend changes and submit comments for its improvement. Comments should be keyed to the specific page and line of the text to which the change is recommended. Reasons will be provided for each comment to ensure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded directly to: Missile and Munitions, United States Army Combined Arms Support Command, Fort Lee, Virginia 23801-1809.

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INTRODUCTION

As an ammunition inspector assigned to a surveillance position, you may be required to inspect the TOW guided missile (GM) and its shipping and storage container. This subcourse, which has been adapted from a TEC lesson, shows you how to inspect the TOW GM and its shipping and storage container for defects and how to classify defects. It also gives instructions for unpacking and repacking the TOW GM.

Task. This subcourse consists of one lesson based on the following task from STP 9-55X34-SM-TG: 093-404-3187, Inspect TOW GM and Container.

Objectives. When you have completed this lesson, you should be able to inspect the TOW GM and its container and detect and correctly classify defects. You should also be able to describe how to unpack and repack the TOW GM in its container.

Conditions. You will have this subcourse book and will work without supervision. There are no supplementary requirements in material or personnel for this subcourse.

Standard. You must score at least 75 on the end-of-subcourse examination (answer 12 of the 15 questions correctly).

Credit Hours. Two credit hours will be awarded for the successful completion of this subcourse.

*** * * IMPORTANT NOTICE * * ***

THE PASSING SCORE FOR ALL ACCP MATERIAL IS NOW 70%.

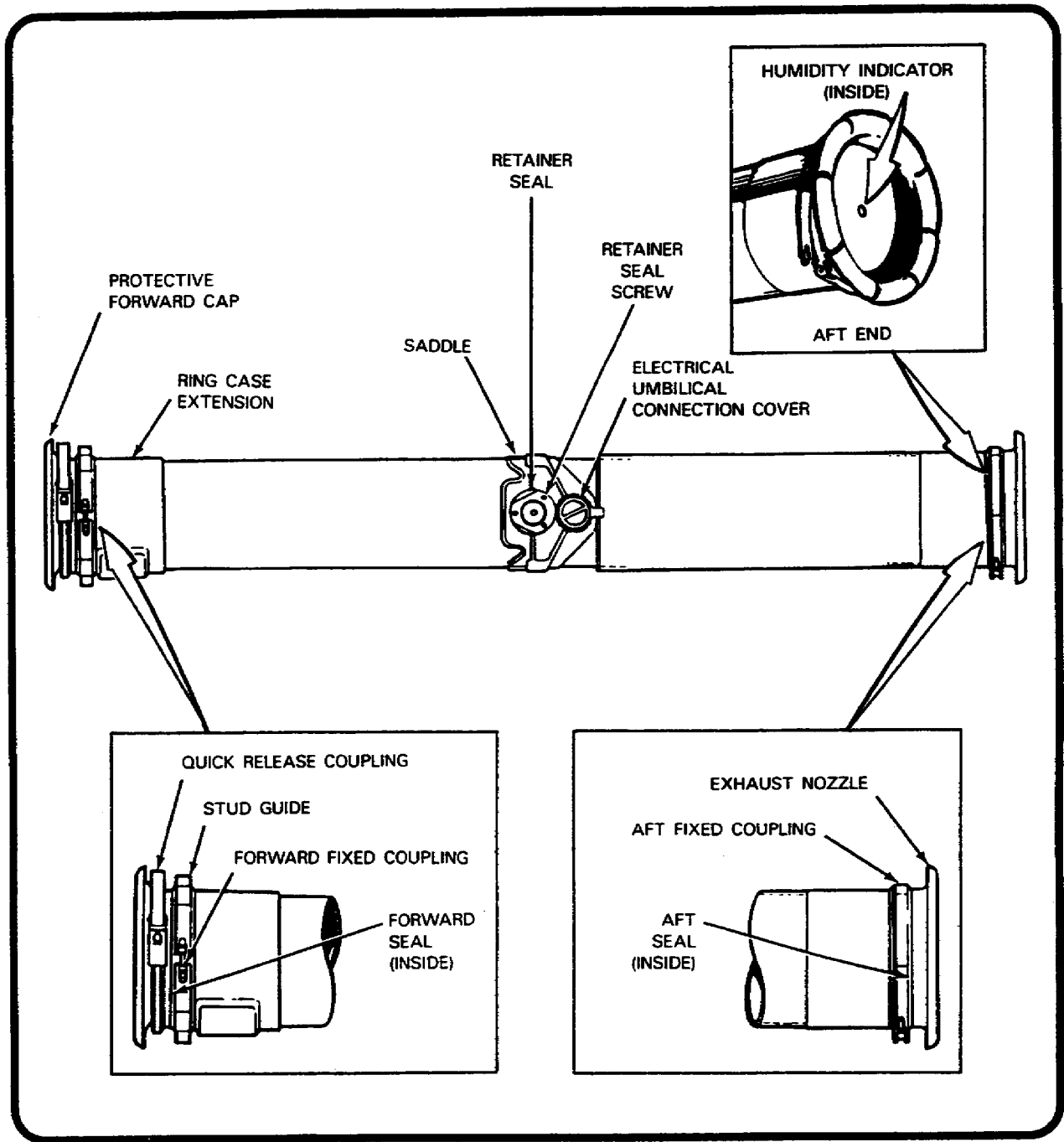
PLEASE DISREGARD ALL REFERENCES TO THE 75% REQUIREMENT.

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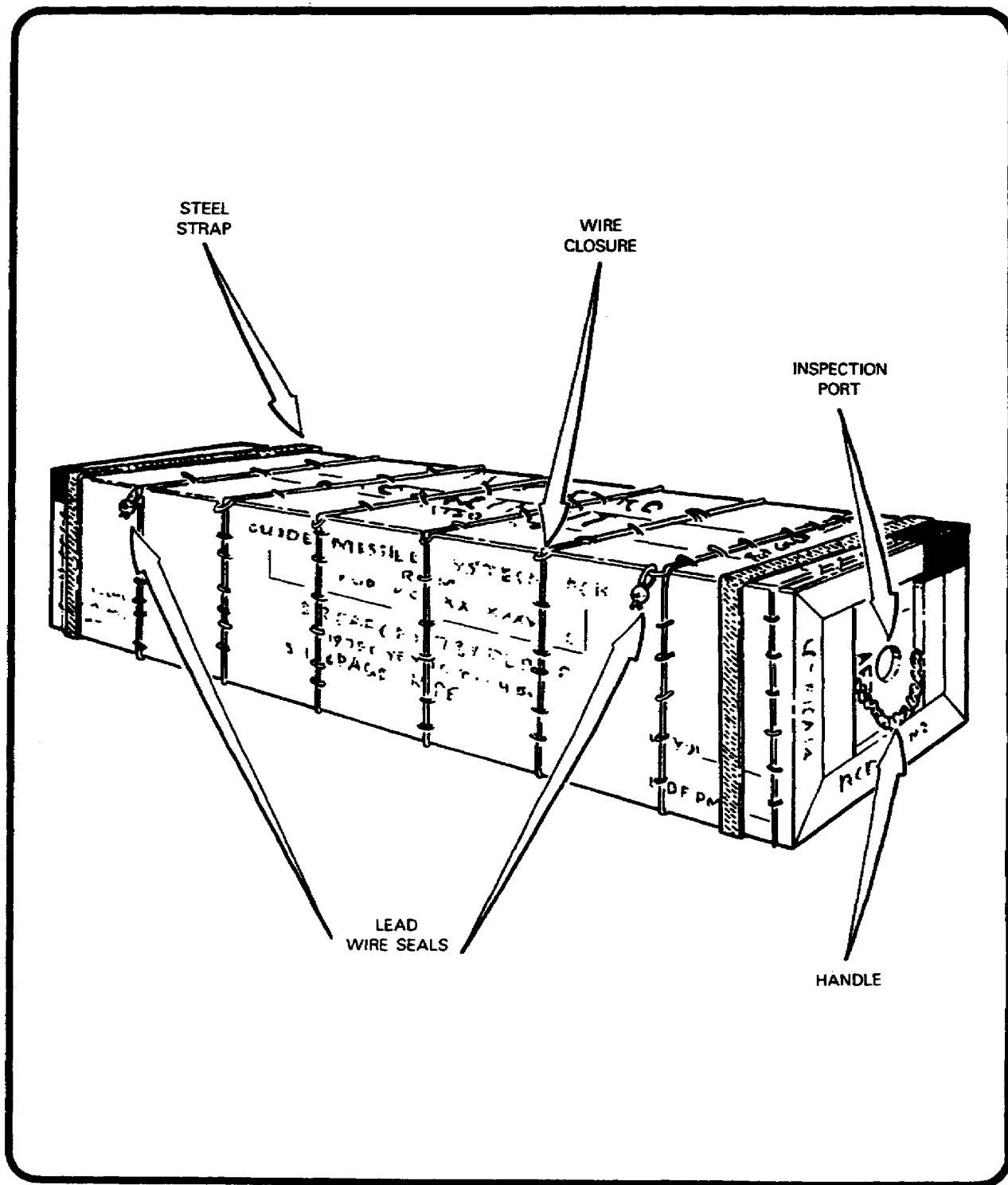
INSPECTING THE TOW GM AND ITS CONTAINER

THE TOW GM AND ITS CONTAINER

The TOW GM consists of a missile sealed inside a cylindrical fiberglass case, the launch container. It is handled like a conventional round of ammunition.



The TOW GM is stored and shipped in a specially constructed wooden container. The container has an inspection port for viewing the humidity indicator in the aft end of the TOW GM.



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PRELIMINARY INSPECTION PROCEDURES

Before you begin your inspection of TOW GMs and their containers, review the standing operating procedure (SOP); the storage monitoring record, if applicable; and the DA Form 3022-R (Army Depot Surveillance Record), or DSR card, for these items.

In an actual inspection, all defects and other necessary information would be entered on an ammunition surveillance inspection report (ASIR). However, since you are conducting a simulated inspection, all that is required is the identification and classification of the defects.

Select a sample of TOW GMs for inspection based on the number of TOW GMs on hand in a particular lot.

Lot Size	Sample Level	Acceptable Quality Level			
		Critical	Major A	Major B	Minor
0-25	5	0	0	0	0
26-50	5	0	0	0	0
51-90	20	0	0	1	1
91-150	20	0	0	2	2
151-280	32	0	0	3	4
281-500	50	0	0	3	5
501-1200	80	0	0	4	6

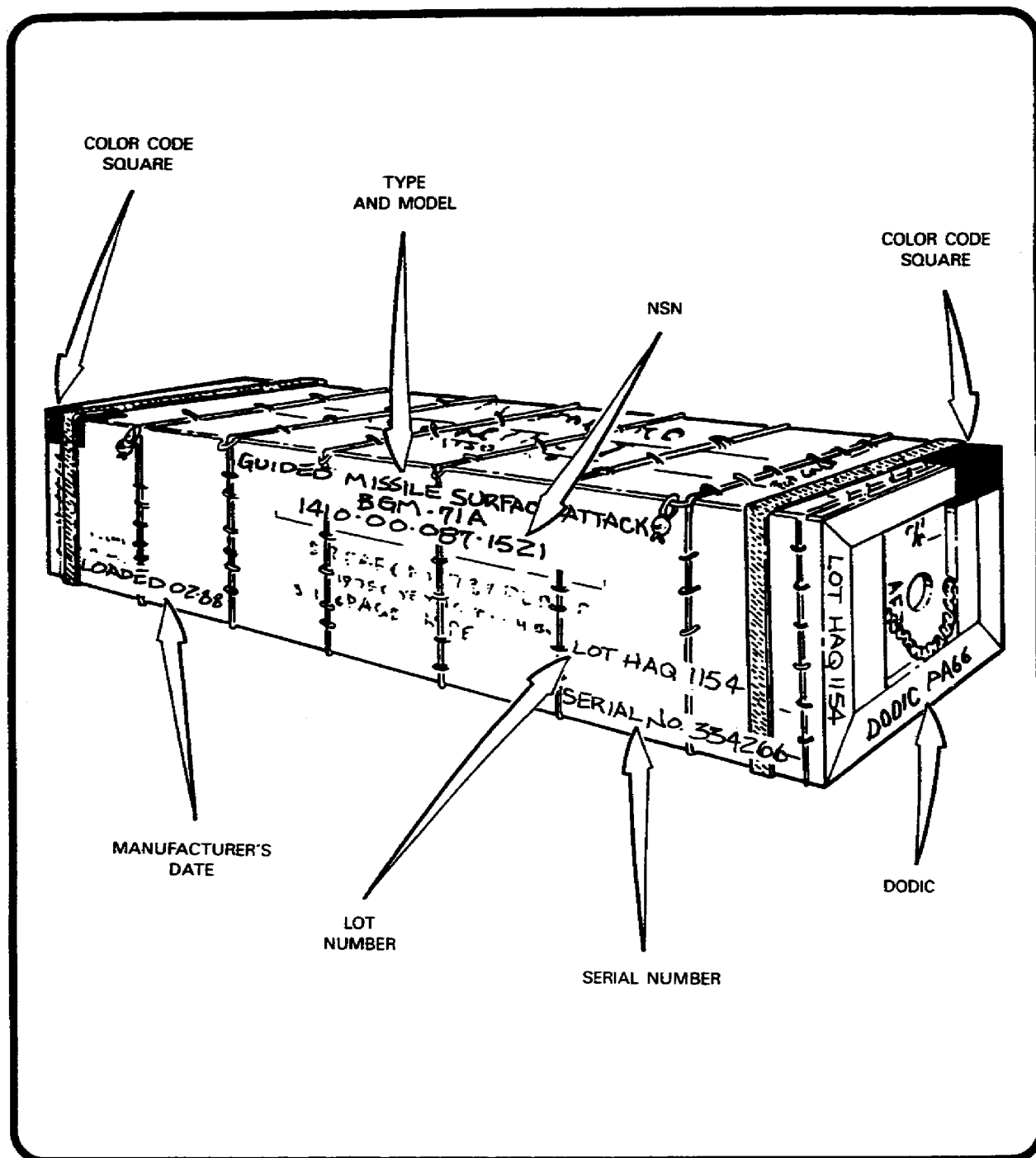
Storage personnel will transport the samples to the inspection site. Make sure that the correct fire symbol is posted before the samples are offloaded at the inspection site. The correct fire symbol for the TOW GM is Fire Symbol 1.

The samples will be inspected in accordance with the criteria that are listed in SB 742-1410-92-005.

Check the shelf-life status of the TOW GM. The shelf-life of the TOW GM is 16 years from the date of manufacture given on the DSR card.

INSPECTING THE CONTAINER

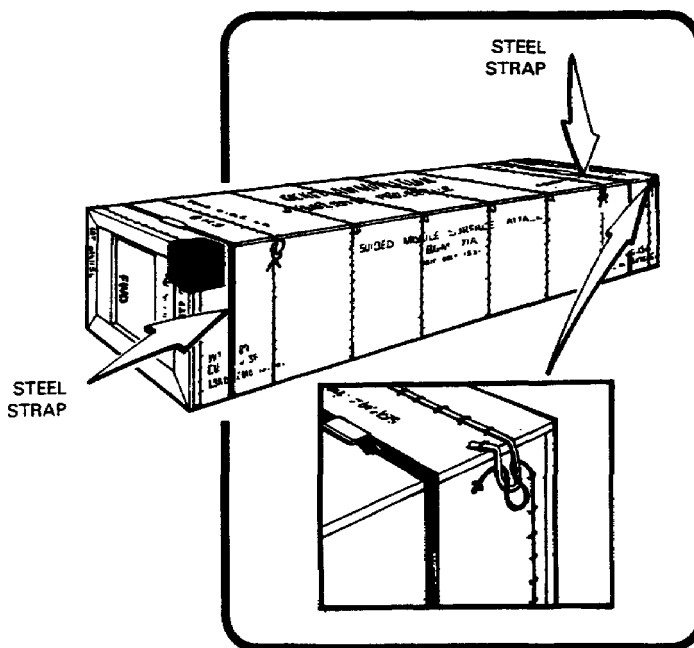
You must make sure that the TOW GM shipping and storage container has the correct identification markings. All identification markings on the container are in white or black. The color codes are black for the service round and blue for the practice round.



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The container's cover should be completely closed. All wire closures must be properly secured. The steel straps must be properly placed—3 inches, plus or minus 1/4 inch, from each end of the container. Lead wire seals must be in place.

Inspect the container for holes and cracked or broken parts.



Classify defects according to the criteria in SB 742-1410-92-005.

**DEFECT CRITERIA FOR TOW GM CONTAINER
(from SB 742-1410-92-005)**

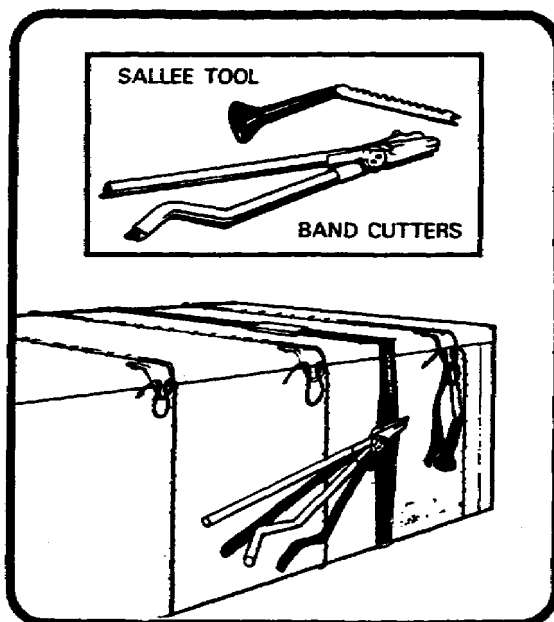
Defect	Classification
Humidity indicator not visible through inspection port.	Minor
Cover not completely and securely closed.	Minor
Lead wire seals not attached.	Minor
Straps not in place and fastened securely.	Minor
Container damaged to the extent that TOW GM is not protected.	Major
Container damaged but will protect TOW GM.	Minor
Markings faded, dim, or illegible.	Minor
Markings missing or incorrect.	Minor/critical
Color codes missing or incorrect.	Minor/critical

You may be required at times to perform a storage monitoring inspection (SMI) on TOW GMs. A reading of the humidity indicator on the TOW GM is obtained by looking through the inspection port in the aft end of the container. If it is pink, the desiccant in the TOW GM must be replaced. This is recorded on the storage monitoring record and on the DSR card.

INSPECTING THE TOW GM

Remove the lead wire seals from the container.

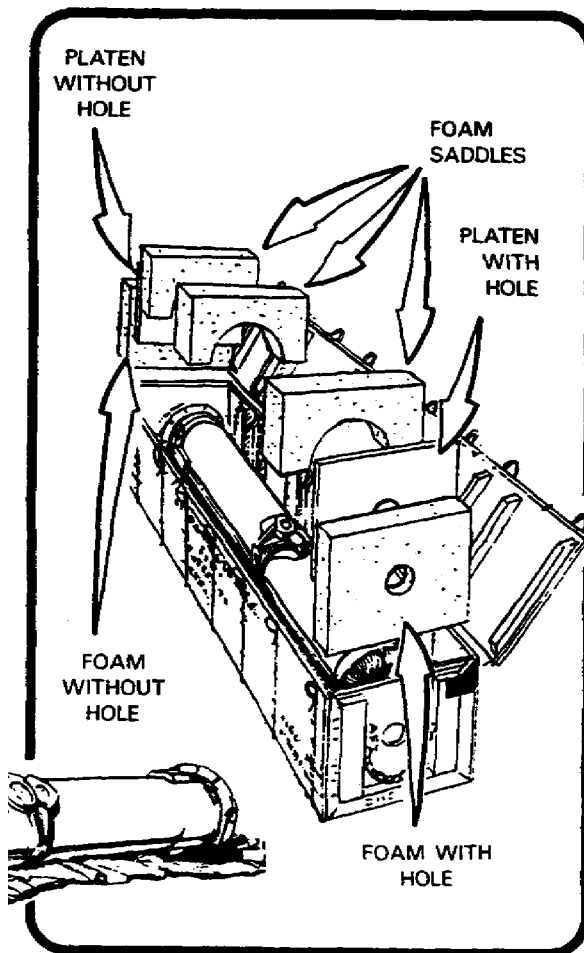
Use a sallee closer tool to lift the bent wires that close the cover of the shipping and storage container. Cut the steel straps with a pair of metal band cutting shears. Be careful removing the steel straps. The ends and edges are sharp.



Open the container and remove the three foam saddles. Next, take out the platen and pads.

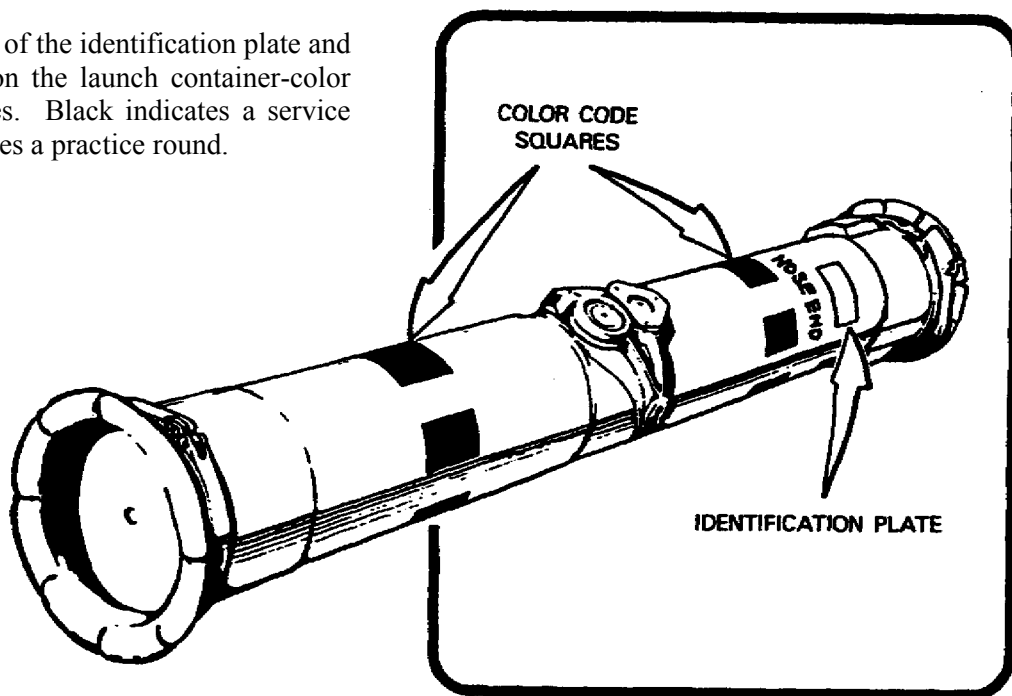
Remove the TOW GM from the container and place it on a workbench. Brace it so that it cannot roll.

The TOW GM may be packed in a barrier bag. If it is, remove the bag and throw it away. The bag is not replaced.



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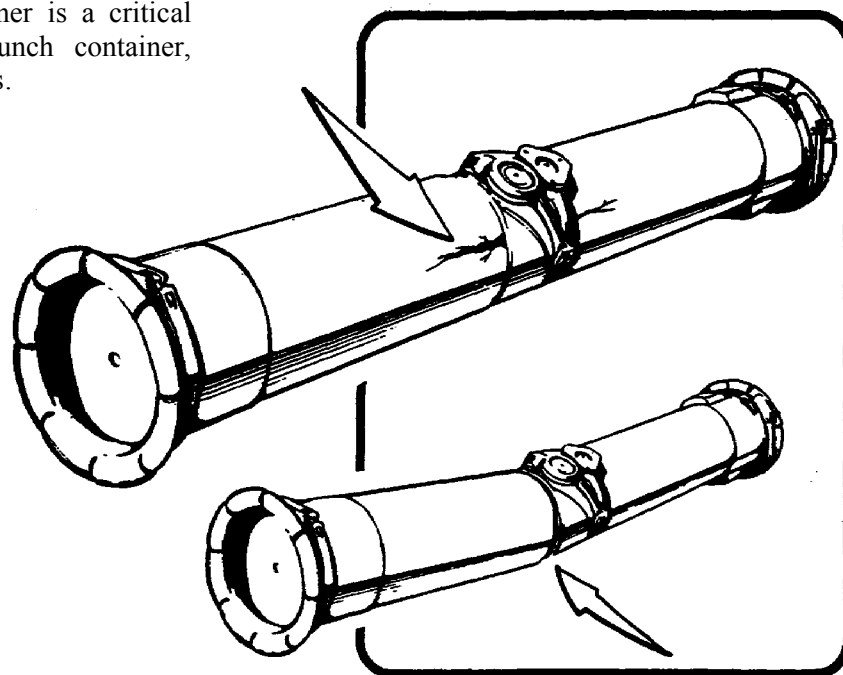
Check for the presence of the identification plate and color code markings on the launch container-color squares or color stripes. Black indicates a service round, and blue indicates a practice round.



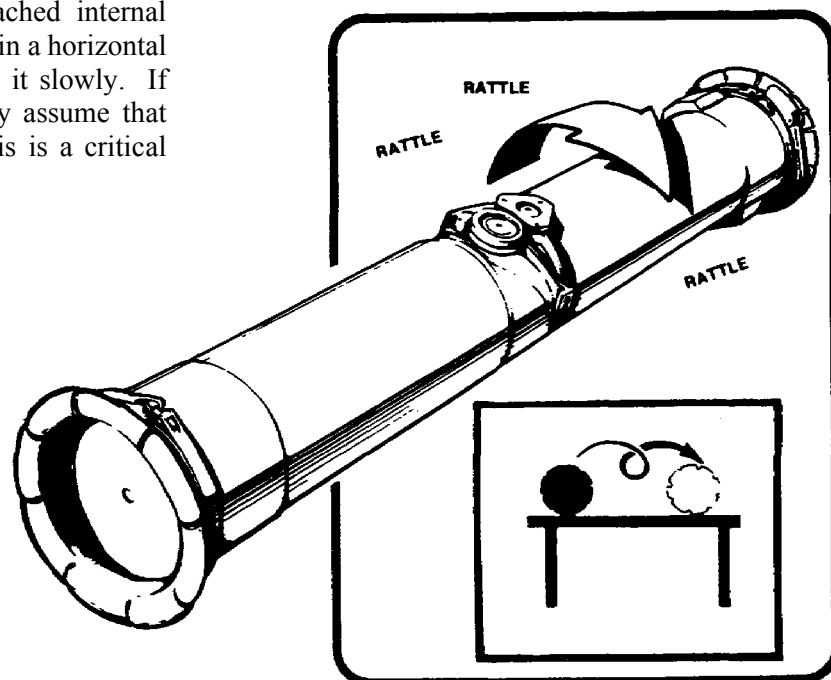
When you are inspecting TOW GMs, the criteria listed on this table are used for determining defects and classifying them.

DEFECT CRITERIA FOR THE TOW GM (from SB 742-1410-92-005)		
Area/Component	Defect	Classification
Launch container exterior	Improper, incorrect, or indistinguishable markings or color codes. Blurred or partially illegible markings. Color code indicating a service round as a practice round. Holes, dents, or fractures.	Minor/critical Minor Critical Major/critical
Launch container interior	Audible evidence of detached internal parts.	Critical
Humidity indicator	Pink in color.	Minor
Aft and forward seals	Ruptured.	Minor
Exhaust nozzle	One or more segments missing or bent against main body.	Minor
Aft and forward fixed couplings	Loose.	Minor
Protective forward cap	Missing or bent against main body or quick release coupling.	Minor
Quick release coupling	Broken or jammed.	Minor
Stud guide	Misaligned.	Minor
Electrical umbilical connection cover	One or more contacts visible, or cover not in place.	Minor
Retainer seal screws	Loose.	Minor
Retainer seal	Fractured.	Minor
Saddle	Fractured.	Minor
Ring case extension	Fractured.	Minor

A fractured or bent launch container is a critical defect. All fractures on the launch container, regardless of size, are critical defects.

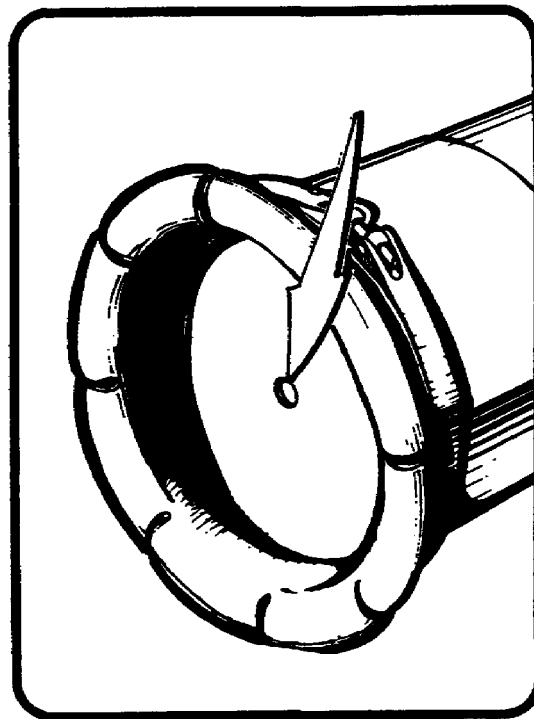


Inspect the audible evidence of detached internal parts. To do this, place the TOW GM in a horizontal position on the workbench and rotate it slowly. If you hear something rattling, you may assume that there is serious internal damage. This is a critical defect.

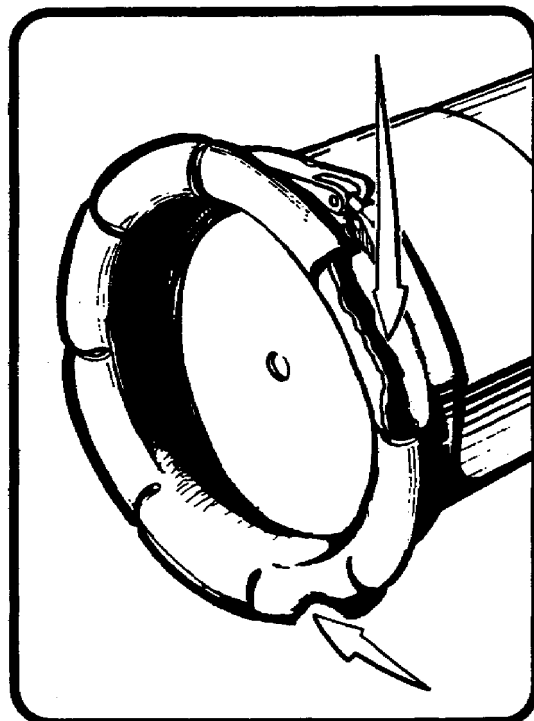


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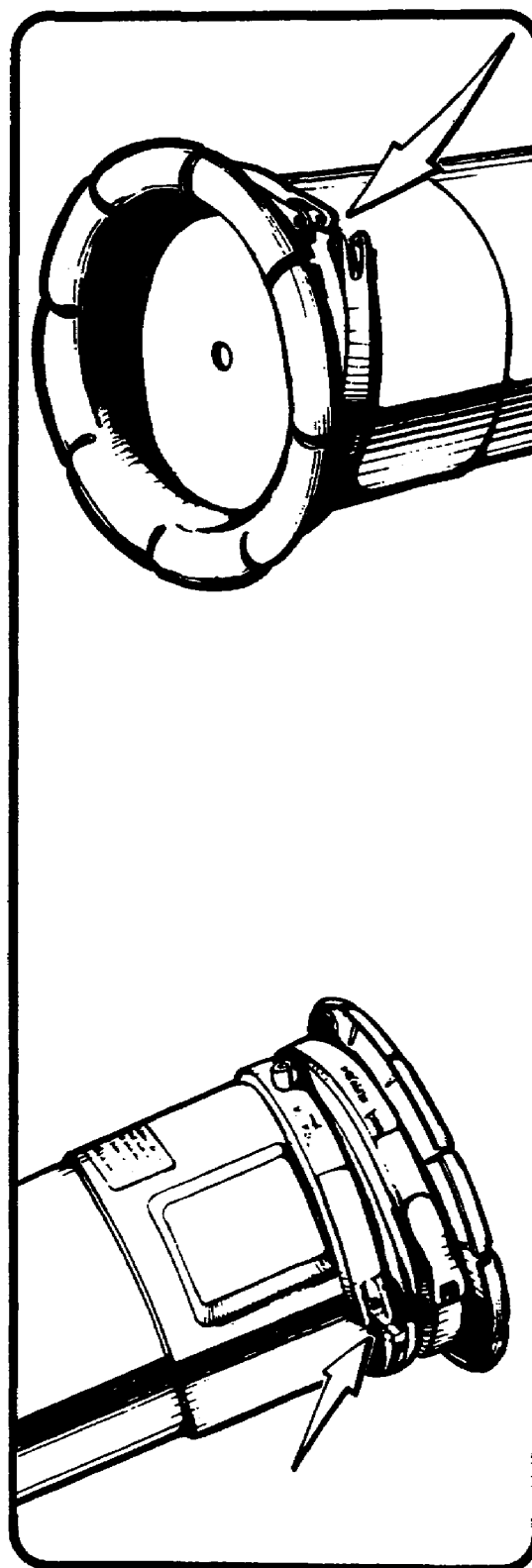
Check the humidity indicator in the aft end. If it is pink, the desiccant in the forward end of the TOW GM must be replaced at the completion of the inspection. This would be a **minor** defect.



Inspect the exhaust nozzle for missing or bent segments, which are **minor** defects.

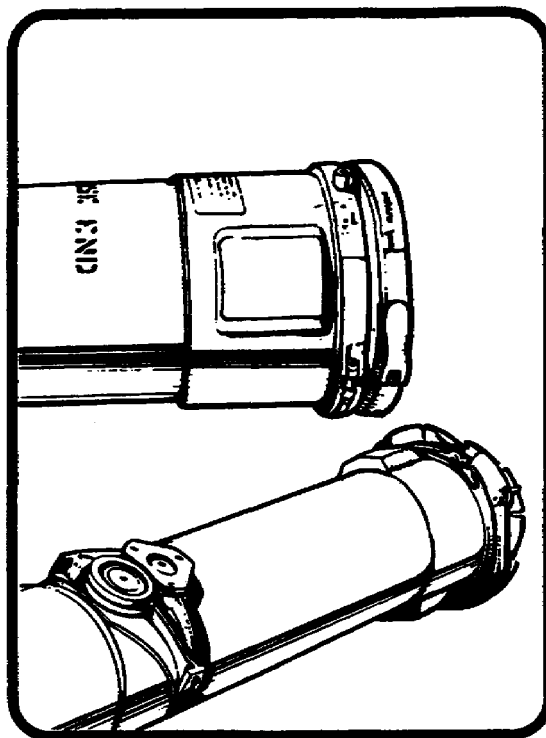


Inspect the aft fixed coupling and the forward fixed coupling for looseness. Loose couplings are **minor** defects.

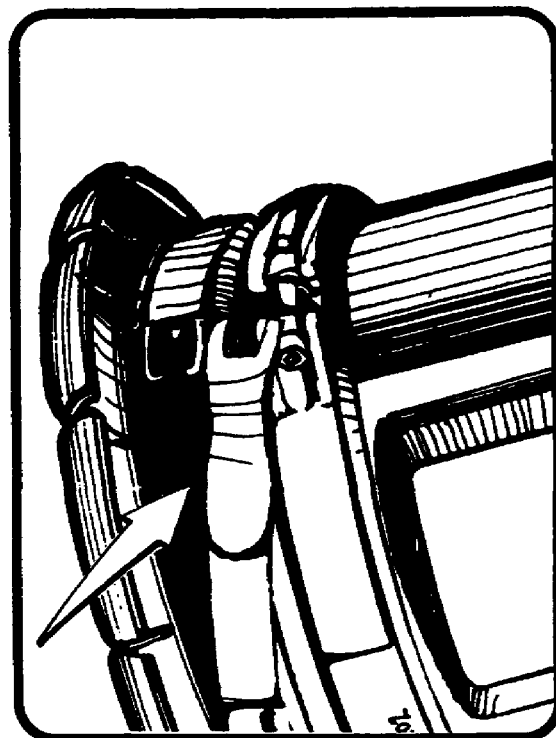


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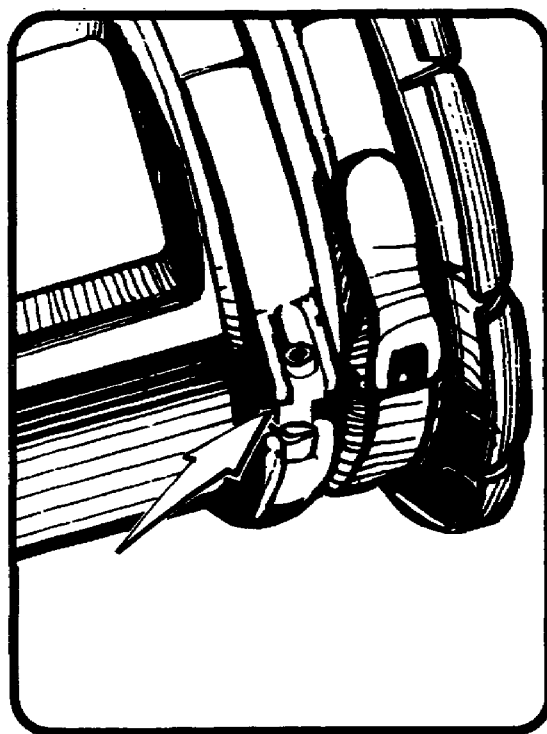
Inspect the protective forward cap. If it is missing or bent against the main body or the quick release coupling, there is a **minor** defect.



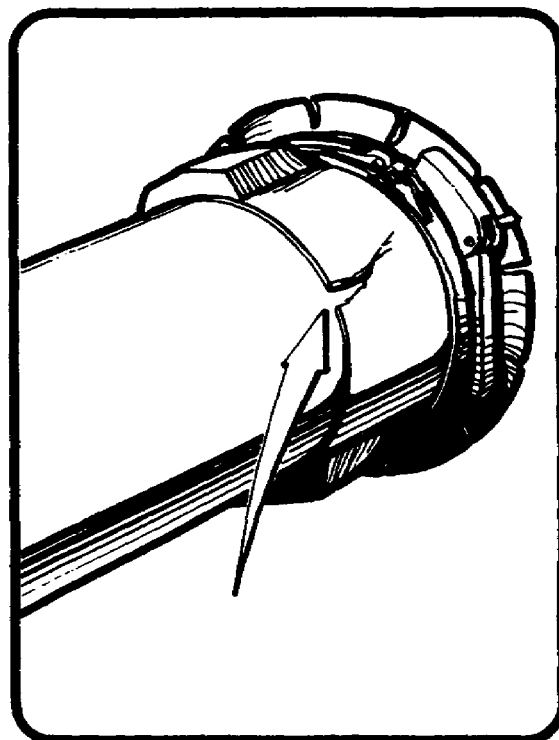
A quick release coupling that is broken or jammed forward is a **minor** defect.



Inspect the stud guide of the forward fixed coupling.
If it is not aligned properly, it is a **minor** defect.

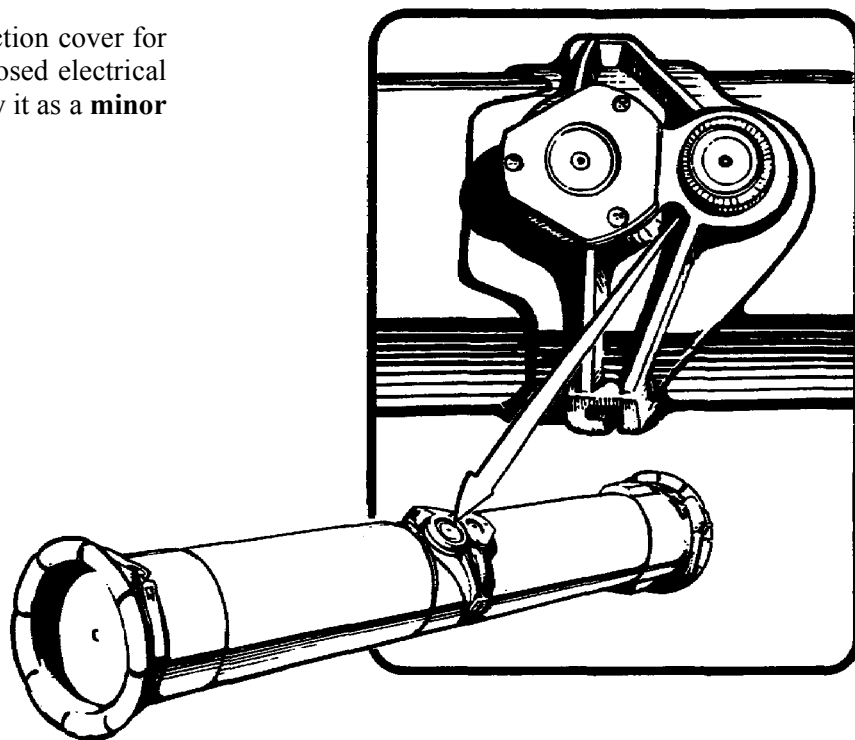


Inspect the ring case extension. If it is fractured, it is
a **minor** defect.

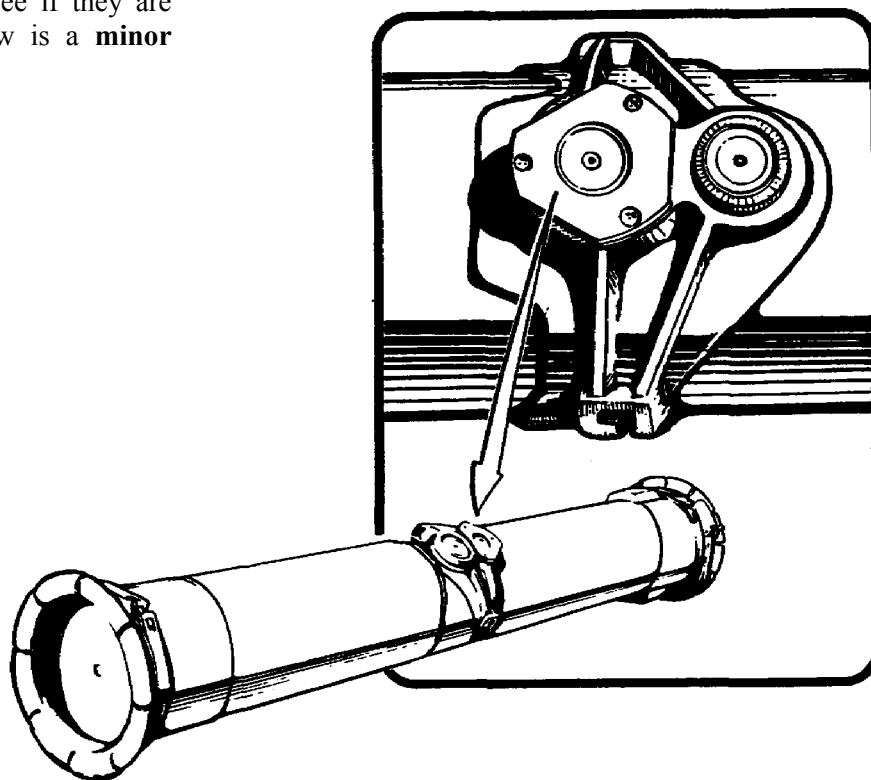


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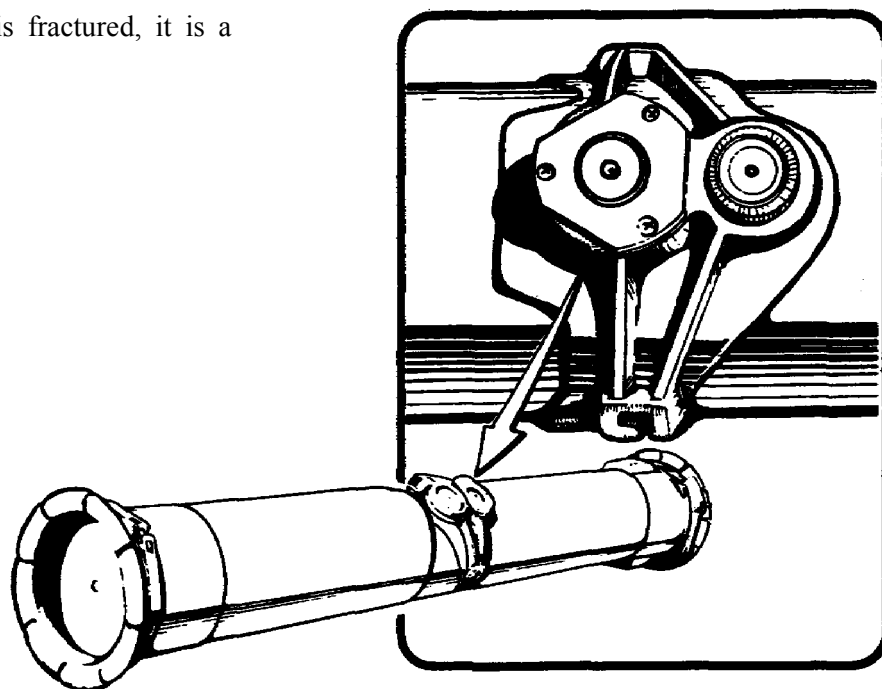
Inspect the electrical umbilical connection cover for proper placement. If you find an exposed electrical contact or a cover not in place, classify it as a **minor** defect.



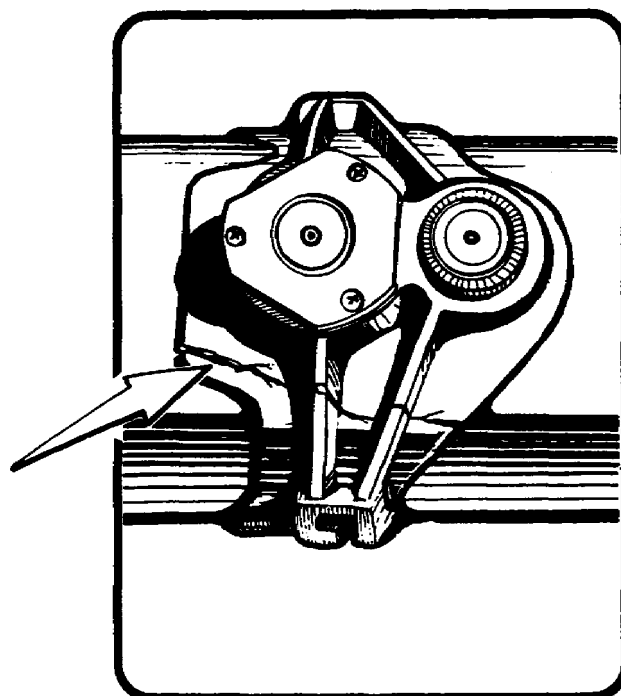
Inspect the retainer seal screws to see if they are secure. A loose retainer seal screw is a **minor** defect.



Check the retainer seal. If it is fractured, it is a **minor** defect.



Inspect the saddle. A fractured or otherwise badly damaged saddle is a **minor** defect.

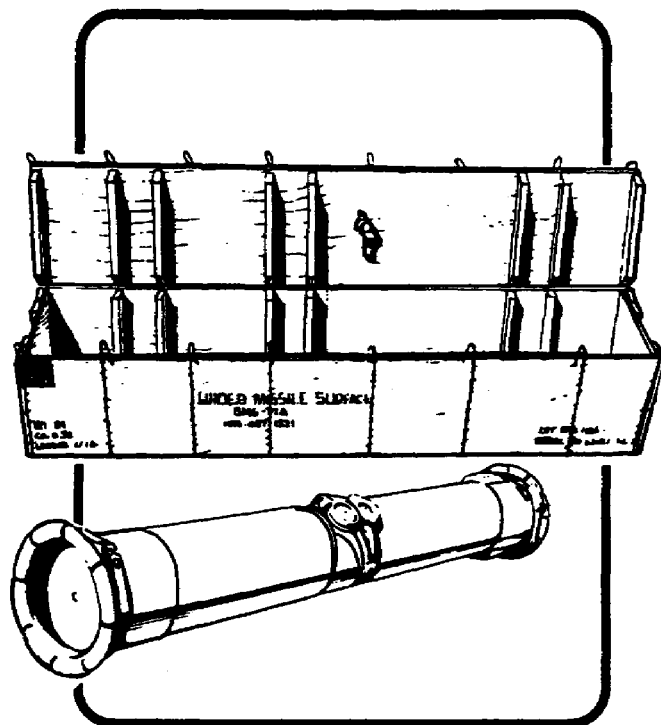


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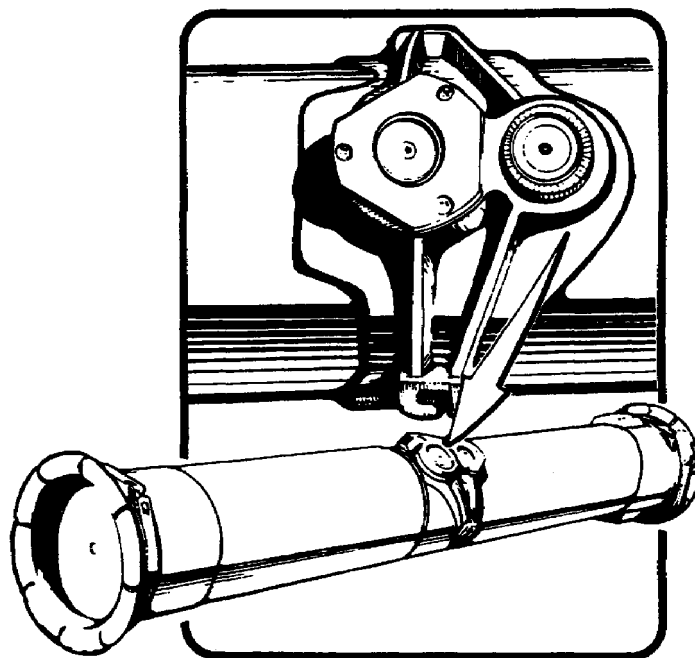
POST-INSPECTION PROCEDURES

When you have completed your inspection of TOW GMs, you must repack them.

If the humidity indicator in the aft end of the TOW GM was pink, you must change the desiccant in the forward end at this time. The new desiccant will cause the humidity indicator to turn blue.

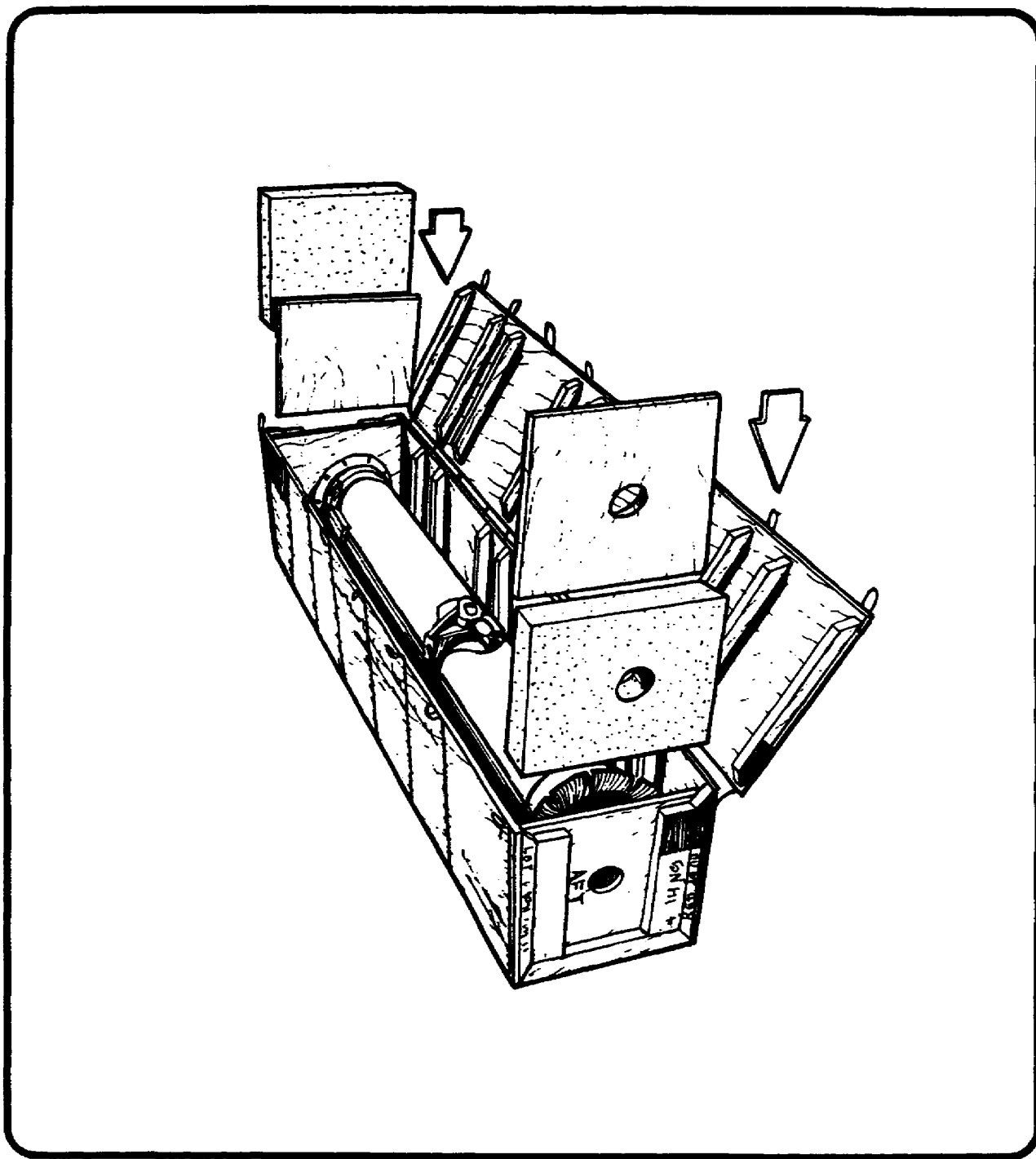


Before replacing a TOW GM in its container, make sure the electrical umbilical connection cover is properly installed and torqued to 23 to 25 inch-pounds.



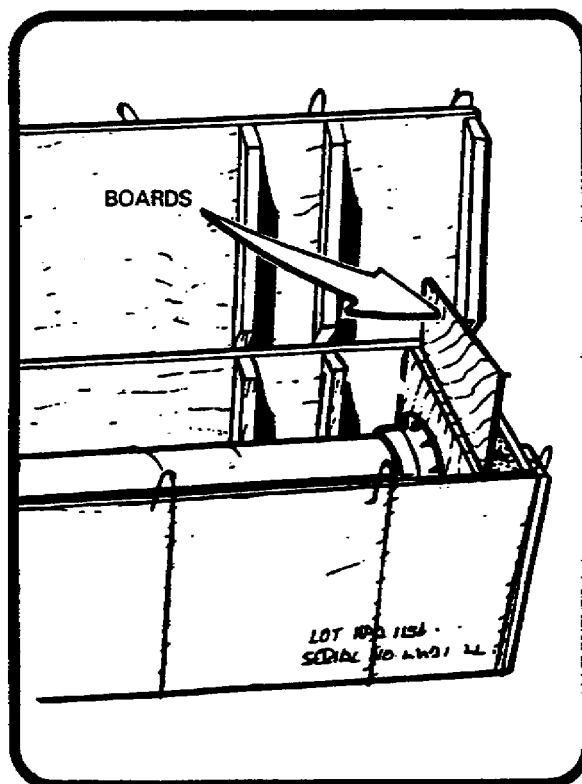
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Place the TOW GM in its shipping and storage container with its aft end at the aft end of the container. Insert the foam pad and platen with holes between the aft end of the TOW GM and the container. Be sure the backing on the platen faces the TOW GM. Insert the other platen and foam pad at the forward end of the TOW GM-again, with the backing facing the TOW GM.

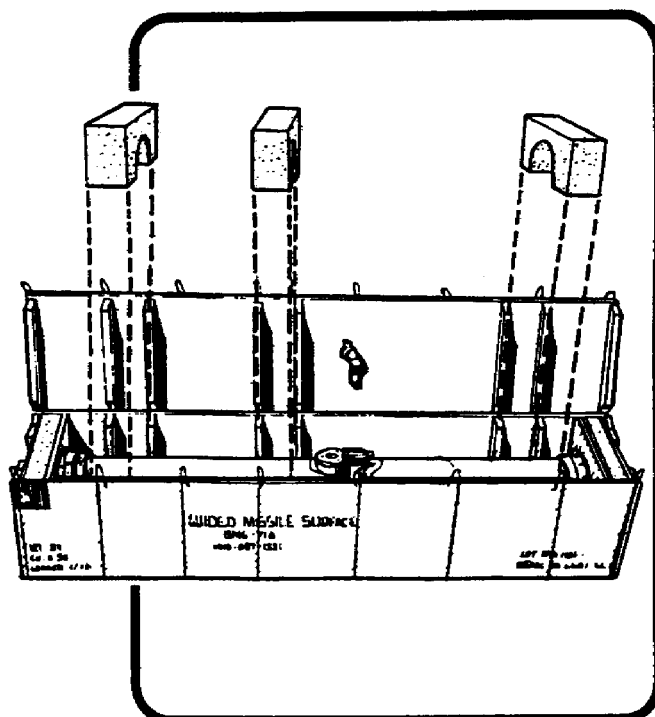


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Insert enough boards between the forward foam pad and the platen to compress each foam pad to a 1/4-inch thickness.

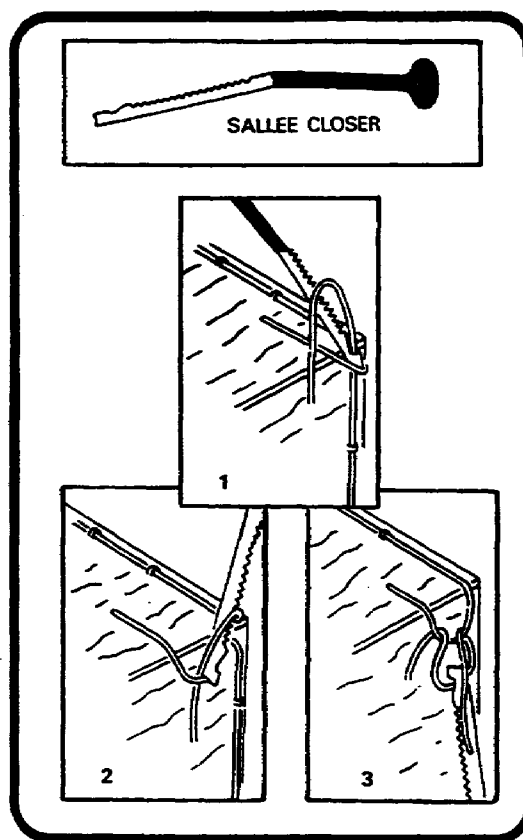


Next, insert the three cushioning foam saddles.

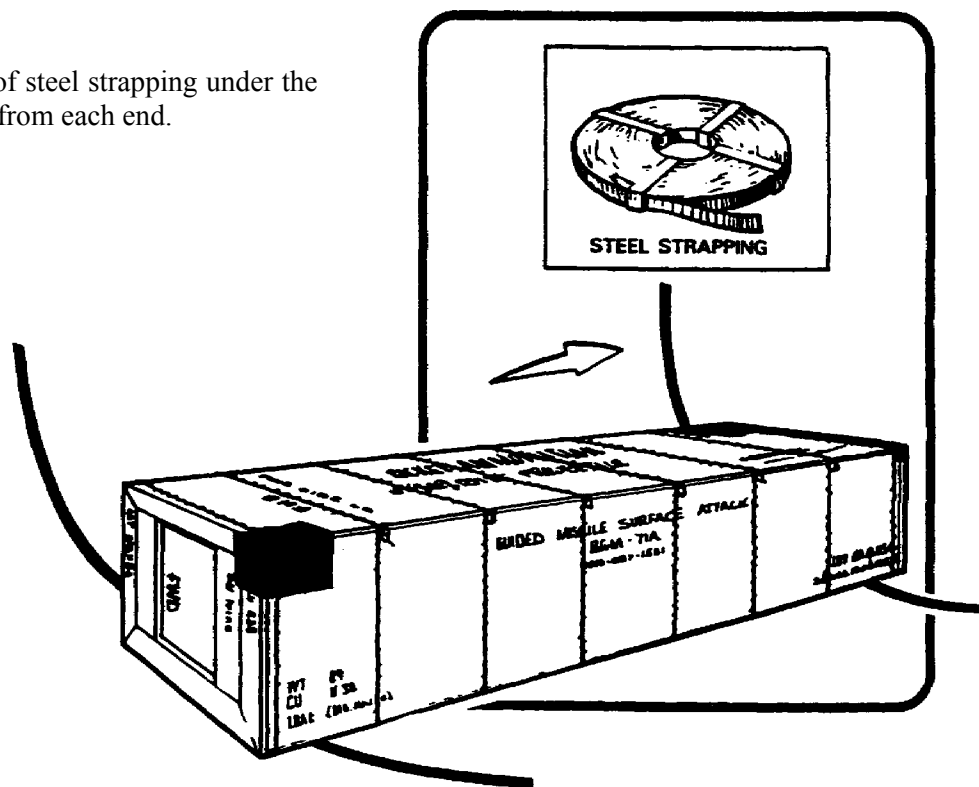


Close the cover of the container and secure the loops of the cover wire closures with a sallee closer.

1. Insert the sallee closer through the side loop of wire.
2. Catch the cover loop of wire in the notch at the end of the sallee closer.
3. Move the sallee closer towards you and down to push the side loop against the container as tightly as possible.

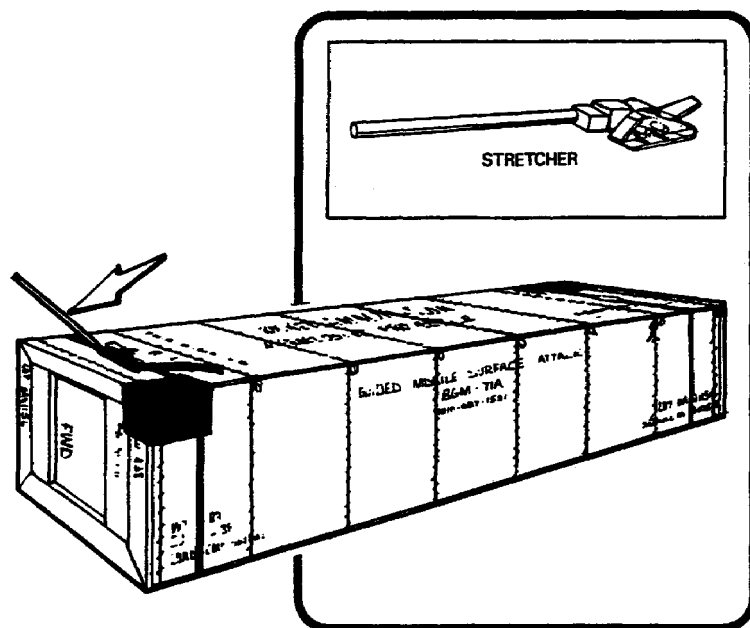


Place two 6-foot lengths of steel strapping under the container, about 3 inches from each end.

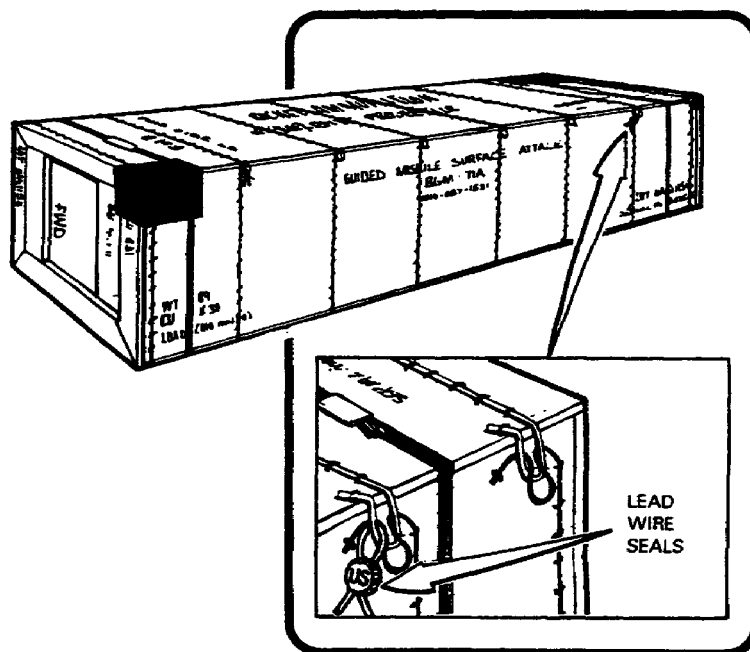


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Secure the steel strapping around the container with a stretcher or another suitable tool.



Replace the lead wire seals.



The results of your inspection are entered on your ASIR as each defect is found and classified. You would annotate the DSR card concerning defects after you have completed your inspection.

Inspection results are evaluated against the acceptance or rejection criteria found in SB 742-1410-92-005. If a change in the ammunition condition code (ACC) is needed, note this on the ASIR before you submit it to the chief inspector.

Lot Size	Sample Level	Acceptable Quality Level			
		Critical	Major A	Major B	Minor
0-25	5	0	0	0	0
26-50	5	0	0	0	0
51-90	20	0	0	1	1
91-150	20	0	0	2	2
151-280	32	0	0	3	4
281-500	50	0	0	3	5
501-1200	80	0	0	4	6

Notify storage personnel to return the samples to storage and remove the fire symbol from the inspection site.

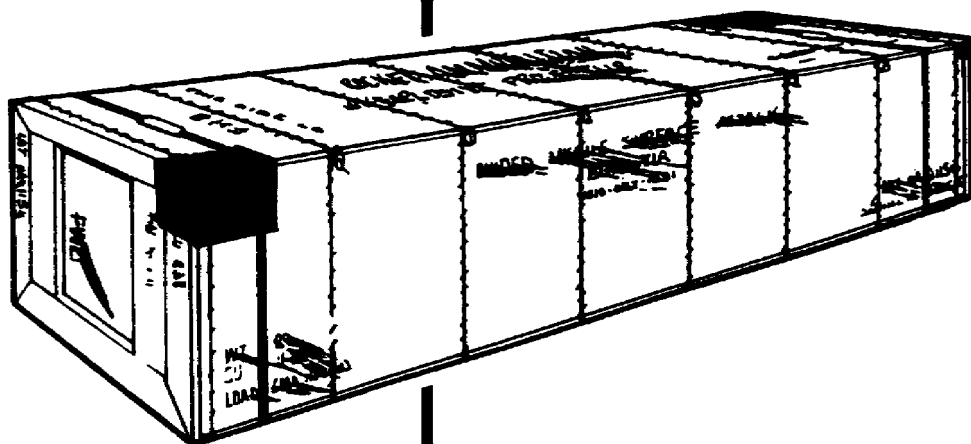
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REVIEW EXERCISES

Name and classify the defects shown in each illustration.

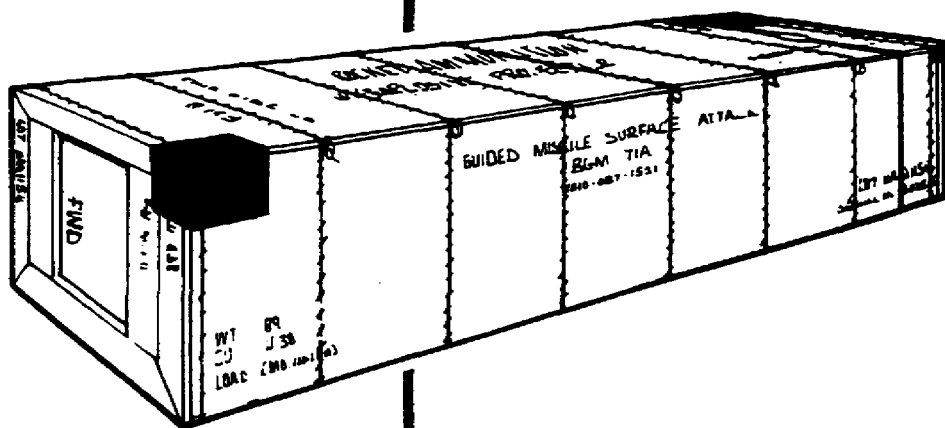
1. Defect _____

Classification _____



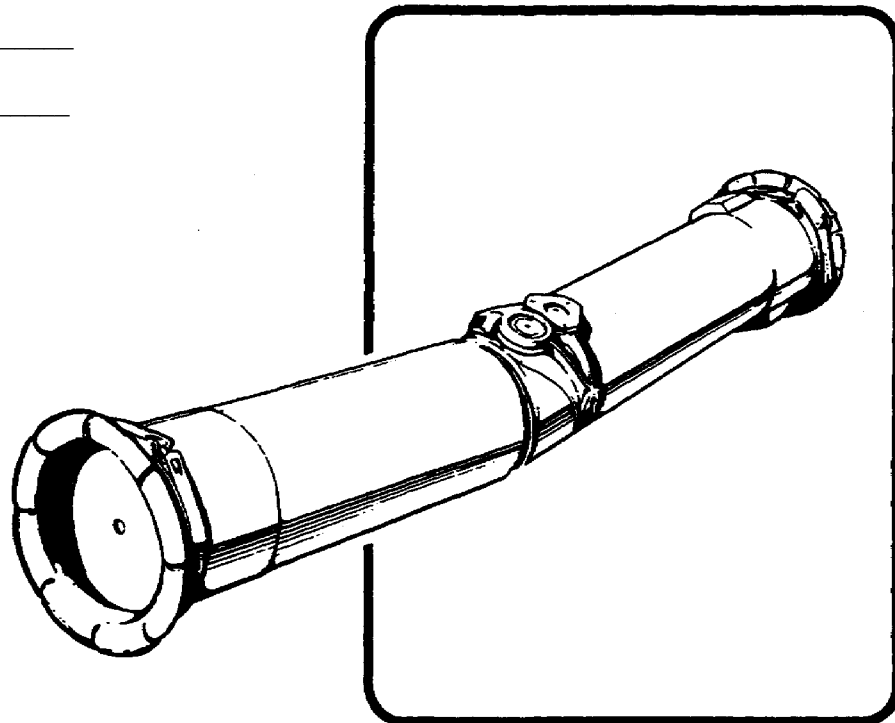
2. Defect _____

Classification _____



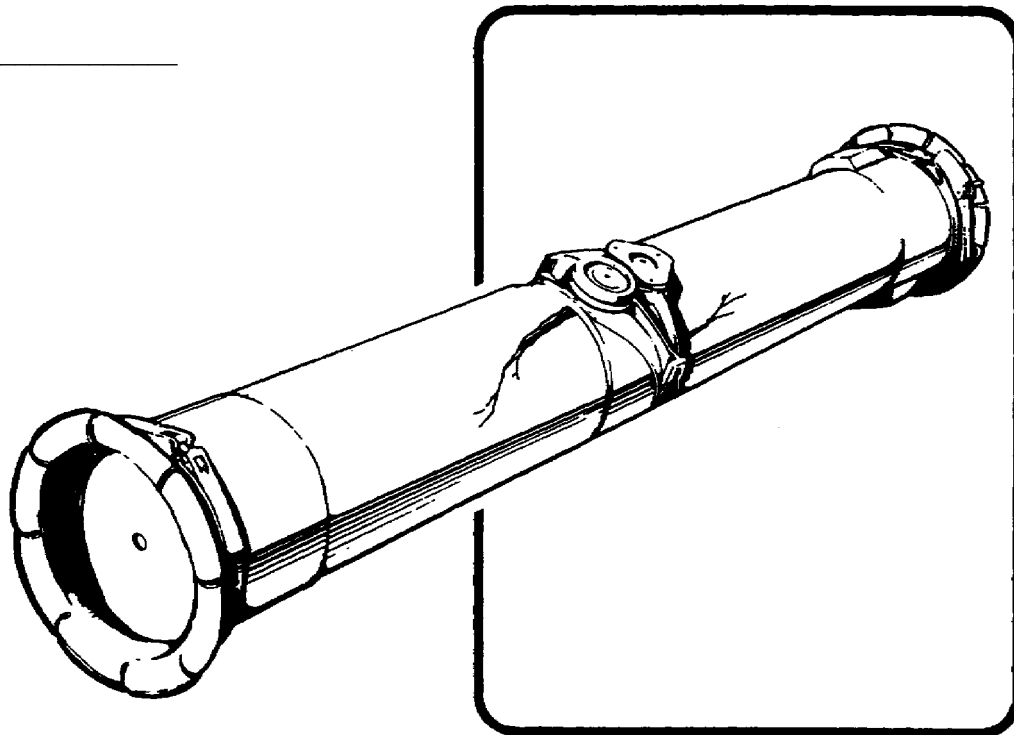
3. Defect _____

Classification _____



4. Defect _____

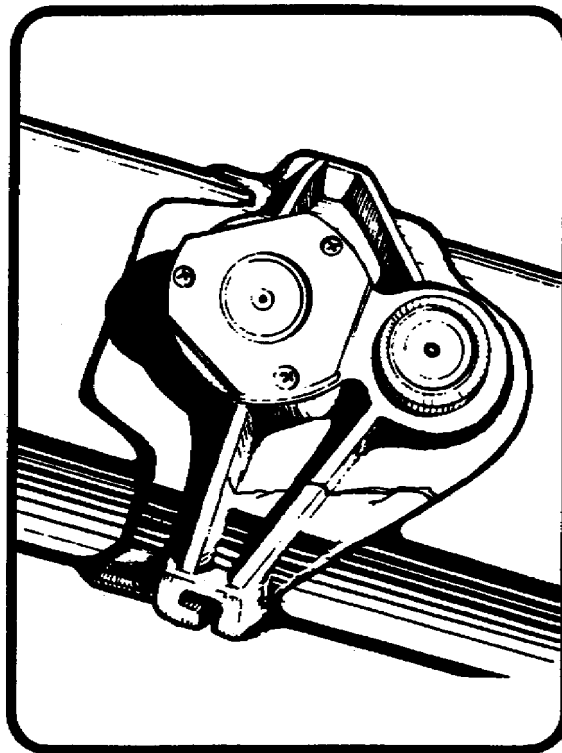
Classification _____



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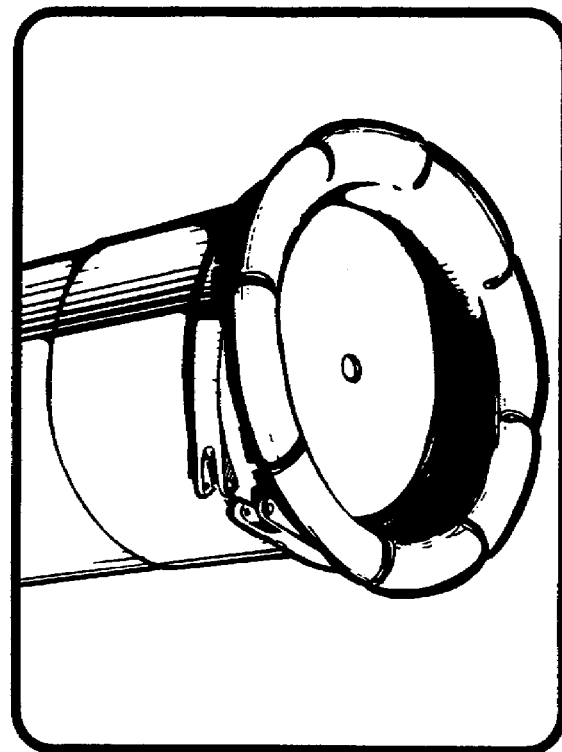
5. Defect _____

Classification _____



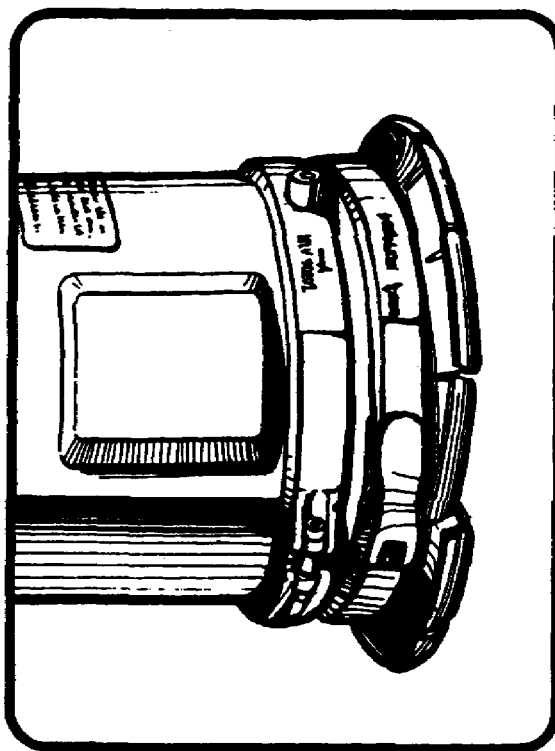
6. Defect _____

Classification _____



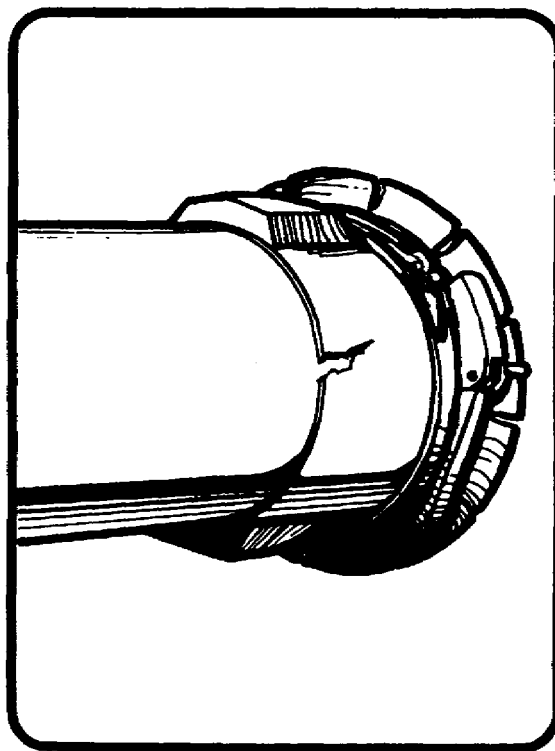
7. Defect _____

Classification _____



8. Defect _____

Classification _____



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9. What is the color code for identification markings on TOW GM containers?

10. What is the fire symbol used for the TOW GM at the inspection site?

Recheck your answers to the review exercises. When you are satisfied that you have answered every question to the best of your ability, check your answers against the exercise solutions. If you missed three or more questions, you should retake the entire subcourse, paying particular attention to the areas in which your answers were incorrect.

EXERCISE SOLUTIONS

1. Illegible markings, minor (page 10)
2. Container improperly banded, or one strap or band missing; minor (pages 10 & 23)
3. Bent launch container, critical (page 13)
4. Fractured launch container, critical (page 13)
5. Fractured saddle, minor (pages 12 & 19)
6. Aft fixed release coupling loose, minor (pages 12 & 15)
7. Forward protective cap bent, minor (pages 12 & 16)
8. Fractured ring case extension, minor (pages 12 & 17)
9. Black or white (page 9)
10. Fire Symbol 1 (page 8)