



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

JUN 13 2013

Joseph Hamill, P.E.  
ARDEC Project Officer (APO)  
40 mm High Velocity Ammunition  
U.S. Army ARDEC-Picatinny  
Picatinny Arsenal, NJ 07806-5000

Reference No. 13-0015R

Dear Mr. Hamill:

This is in response to your January 22, 2013 e-mail, and your recent telephone conversations with a member of my staff, requesting clarification of marking requirements under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask what is the correct meaning of the two-digit number in the fourth position of a performance-oriented marking for a non-bulk, United Nations (UN) standard, 4A steel box packaging. You enclosed a copy of Department of Defense Drawing 12928042 that states in Note 19 that the asterisk in the marking --"4A/Y22/S/ \* /USA/DOD/ AYD"-- must be replaced with the last two digits of the year this steel box is packed with 40mm ammunition cartridges. You state it is your understanding that the HMR require that these numbers represent the last two digits of the year the packaging is manufactured. You ask which interpretation is correct.

Under § 178.503(a)(6), the two numbers in the fourth position of a performance-oriented packaging marking for a non-bulk, UN standard 4A steel box must represent the last two digits of the year this packaging is manufactured. The HMR do not define the wording "year of manufacture" but this Office has interpreted this wording to mean the following:

- The "year of manufacture" of single, combination, or composite hazardous materials packaging can be the either the year a packaging is manufactured or assembled.

Thank you for bringing this matter to our attention. PHMSA may consider adding a definition for "year of manufacture" to the HMR in a future rulemaking.

I hope this satisfies your request.

Sincerely,

T. Glenn Foster  
Chief, Regulatory Review and Reinvention Branch  
Standards and Rulemaking Division

**Drakeford, Carolyn (PHMSA)**

Edmonson  
3178.503  
Marking of Packagings  
13-0015R

**From:** INFOCNTR (PHMSA)  
**Sent:** Tuesday, January 22, 2013 11:33 AM  
**To:** Drakeford, Carolyn (PHMSA)  
**Subject:** FW: 40mm ammo POP marking Request for Letter of Interpretation (UNCLASSIFIED)  
**Attachments:** 12928042 Packing and Marking of Shipping and Storage Contain.pdf; 12564414 Container, Shipping and Storage Cartridge 40mm, PA1.pdf

Hi Carolyn,

We received the following request for a formal letter of interpretation.

Thanks,  
Victoria

**From:** Hamill, Joseph T CIV (US) [<mailto:joseph.t.hamill.civ@mail.mil>]  
**Sent:** Friday, January 18, 2013 4:30 PM  
**To:** INFOCNTR (PHMSA)  
**Cc:** Hamill, Joseph T CIV (US)  
**Subject:** 40mm ammo POP marking Request for Letter of Interpretation (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

To whom it may concern,

I am writing to request an official letter of interpretation regarding Drawing 12928042 and CFR Title 49 (49CFR178.503). Specifically, please verify if the direction on drawing 12928042 violates CFR 49.

I am a Mechanical Engineer working as an ARMY Civilian at Picatinny Arsenal in NJ.

Our 40mm packing and marking drawings state the last two digits of the UN POP Marking shall be the year PACKED. See note 19 on page 2 of the attached DWG 12928042.

CFR Title 49 Section 178.503 (a) (6) states "the last two digits of the year of manufacture."

The packaging office here at Picatinny interprets "manufacture" to mean the year the packed ammo can full of ammunition and sealed with a metallic seal is manufactured. They interpret the "year manufactured" to be equivalent to the "year packed". This interpretation is based on the fact that the requirement for POP marking is on drawing 12928042, and not on a lower assembly drawing 12564414.

Some of our contractors have stated they believe the year of manufacture to be the year the ammo can (see dwg 12564414) was produced.

Due to this disagreement, our 40mm ammunition suppliers have stated they will not ship 40mm cartridges over the road until a written decision is received regarding whether or not the markings are in compliance with 49CFR178.503.

Please confirm you've received my request.

I appreciate a response as soon as feasible in order to minimize any delays with ammunition deliveries.

Also please let me know if I need to provide any additional information.

Thanks for the help,  
~JOE

~~~~~  
**Joseph Hamill, P.E.**

ARDEC Project Officer (APO)  
40mm High Velocity Ammunition  
U.S. Army ARDEC-Picatiny  
973-724-2926

joseph.t.hamill.civ@mail.mil<----- New Email Address

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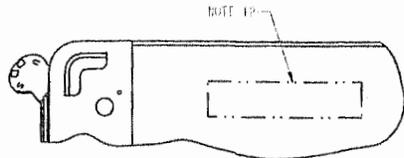
Classification: UNCLASSIFIED  
Caveats: NONE



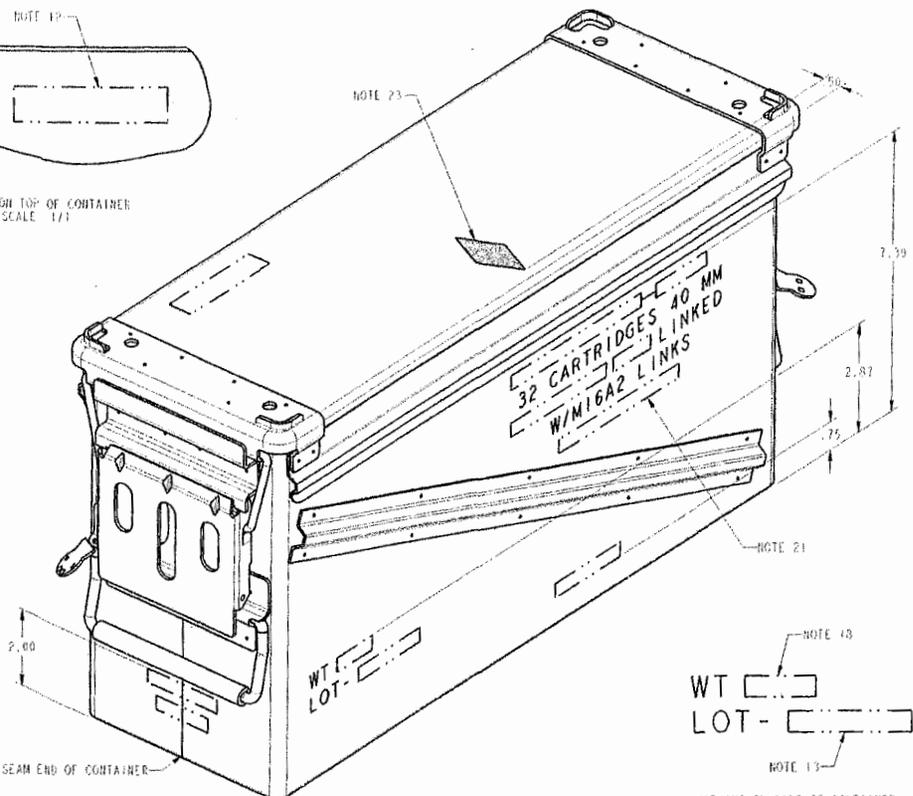
NOTES CONT'D

10. ALL MARKING SHALL BE .515 INCH HIGH. SPACE BETWEEN LINES SHALL BE .25 INCH, EXCEPT ENCLOSURES OR U/D SYMBOL, WHICH SHALL BE SUFFICIENTLY LARGE ENOUGH TO PROVIDE A MINIMUM CLEAR SPACING AROUND LETTERS. ALSO, LOWER CASE LETTERS OF POP SYMBOL SHALL BE .50 INCH HIGH.
11. MARK WITH INK (ITEM 10). ALL MARKINGS SHALL BE IN WHITE INK, 27675 PER FED STD-595, SPENCIL HBK SPEC. A-A-296 TYPE I, TYPE III OR TYPE IV.
12. INSERT PROPER SHIPPING NAME AND IDENTIFICATION NUMBER (SEE TABLE, COL. 7).
13. INSERT LOT NUMBER IN ACCORDANCE WITH MIL-STD-116D, FOR MARKING ON SIDE OF CONTAINER ONLY. LOT NUMBER SHALL BE PRECEDED BY THE WORD "LOT" AND UNDERLINED.
14. INSERT NATIONAL STOCK NUMBER, SEE TABLE COL. E.
15. INSERT DEPT. OF DEFENSE IDENTIFICATION CODE, SEE TABLE COL. E.
16. INSERT CARTRIDGE MODEL NUMBER, SEE TABLE COL. D.
17. INSERT CARTRIDGE TYPE, SEE TABLE COL. C.
18. INSERT GROSS WEIGHT.
19. APPLY MARKINGS SHOWING COMPLIANCE WITH UN PERFORMANCE ORIENTED PACKAGING REQUIREMENTS AS INDICATED BELOW EXCEPT WHEN PACKED WITH BUMMY CARTRIDGES.
  - (U) 4A / Y22/S/\*
  - (N) USA / DOD / ARD

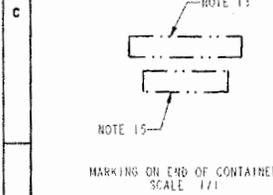
\* INSERT THE LAST TWO DIGITS OF YEAR PACKED THIS MARKING WILL BE APPLIED TO THE SIDE OF THE BOX OPPOSITE THE IDENTIFICATION MARKINGS.
20. INSERT BAR CODE LABEL (AW DRAWING 12982865).
21. INSERT EX NUMBER FOR MK281 MOD 0 ONLY.
  - G. INSERT: "EX4 0105202" FOR MK281 MOD 0 (NSN 1310-01-472-9871) MANUFACTURED BY ARGES.
  - H. INSERT: "EX4 0105203" FOR MK281 MOD 0 (NSN 1310-01-472-9871) MANUFACTURED BY NICO.
  - I. INSERT: "EX4 0105204" FOR MK281 MOD 0 (NSN 1310-01-472-9816) MANUFACTURED BY ARGES.
  - J. INSERT: "EX4 0105205" FOR MK281 MOD 0 (NSN 1310-01-472-9816) MANUFACTURED BY NICO.
- 22.
23. INSERT DIAMOND SYMBOL FOR M16G1 ONLY. FOR SYMBOL DIMENSION SEE FIGURE B.
24. CARTRIDGE, 40MM, M916/M305A1, LINKED 2 TO 1, NSN 1310-01-541-8121, HAS AN INTERIM HAZARD CLASSIFICATION (IHC) ONLY. THE IHC NUMBER IS 2486-A-2114 WHICH EXPIRES ON 24 APR 08. THIS IHC IS APPLICABLE TO THE LISTED PROPER SHIPPING NAME & IDENTIFICATION NUMBER.



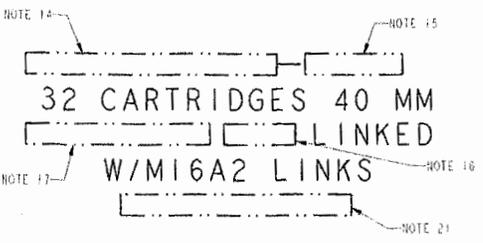
MARKING ON TOP OF CONTAINER SCALE 1/1



MODEL	REV	DRAWING
W/A		G
W/A		H
W/A		F
W/A		G
W/A		H
W/A		N
W/A		P
W/A		Q
W/A		R
W/A		S
W/A		T
W/A		V
W/A		W
W/A		X
W/A		Y
W/A		AA
W/A		AB
W/A		AC
W/A		AD



MARKINGS ON END OF CONTAINER SCALE 1/1

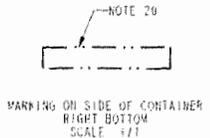


MARKING ON SIDE OF CONTAINER RIGHT TOP SCALE 1/1

SEE SHEET 1 FOR PARTS LIST

32 CARTRIDGES 40 MM  
LINKED  
W/M16A2 LINKS

32 TEST VEHICLES 40MM  
W/CRTG CASE M169  
M16A2 LINKS

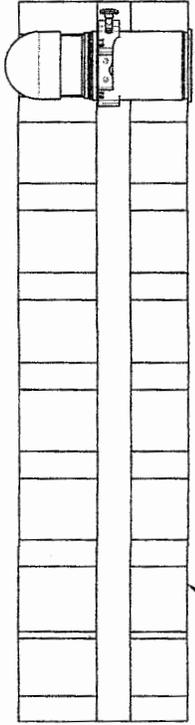
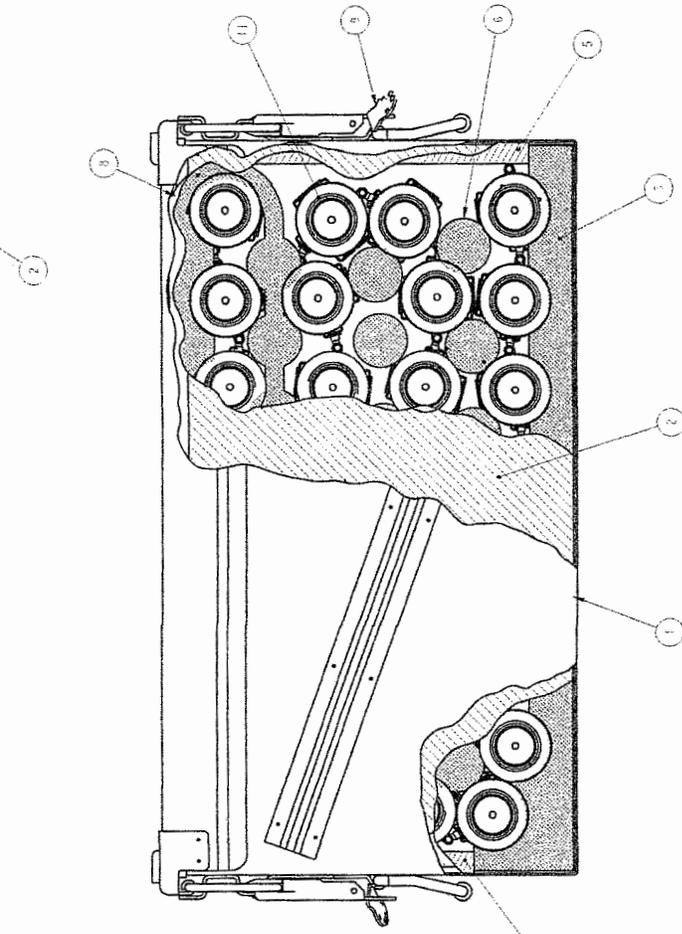
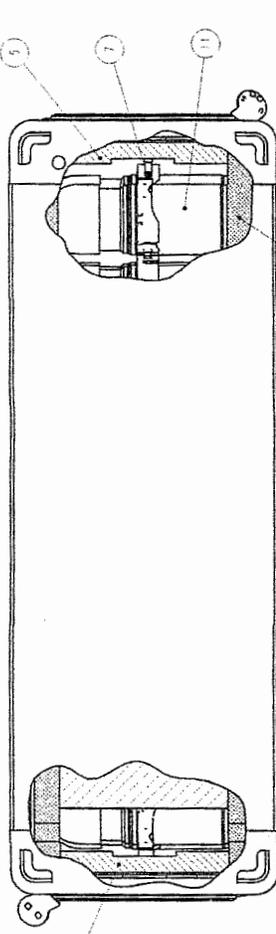


MARKING ON SIDE OF CONTAINER RIGHT BOTTOM SCALE 1/1

MARKING ON SIDE OF CONTAINER RIGHT TOP (MARKING FOR TEST VEHICLE ONLY) SCALE 1/1

LINE NO.	(COLUMN A) PART NO.	(COLUMN B) CARTRIDGE PART NO.	(COLUMN C) CARTRIDGE TYPE	(COLUMN D) CARTRIDGE MODEL NO.	(COLUMN E) NSN & DODIC	(COLUMN F) PROPER SHIPPING NAME & IDENTIFICATION NO.	(COLUMN G) NOTES
1	12928042-1	9287851	HEDP	M430	1310-01-319-1541 B542	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	
2	12928042-2	8886326	PRACTICE	M305A1	1310-01-316-9973 B576	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	
3	12928042-3	9399372	TP	M918	1310-01-317-5948 B544	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	
4	12928042-4	12928011-1	HEDP	M430A1	1310-01-354-8745 B542	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	
5	12928042-5	12928011-2	HEDP	M430A1	1310-01-419-8263 B542	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	
6	12928042-6	12928011-2	HEDP	M430A1	1310-01-419-8285 B542	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	WOOD PALLET (USMC USE)
7	12928042-7	12928011-1	HEDP	M430A1	1310-01-362-5295 B542	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	WOOD PALLET (USMC USE)
8	12928042-8	9287351	HEDP	M430	1310-01-362-5296 B542	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	WOOD PALLET (USMC USE)
9	12928042-9	8886326	PRACTICE	M305A1	1310-01-361-9039 B576	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	WOOD PALLET (USMC USE)
10	12928042-10	9399372	TP	M918	1310-01-362-5294 B504	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	WOOD PALLET (USMC USE)
11	12928042-11	12991142	CANISTER	M1001	1310-01-464-4117 BA11	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	
12	12928042-12	12991142	CANISTER	M1001	1310-01-464-4121 BA11	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	WOOD PALLET (USMC USE)
13	12928042-13	12992287	PRACTICE	MK281 MOD 0	1310-01-472-9916 BA12	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	SEE NOTE 21
14	12928042-14	12992287	PRACTICE	MK281 MOD 0	1310-01-472-9871 BA12	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	WOOD PALLET (USMC USE) SEE NOTE 21
15	12928042-15	12993805	TEST VEHICLE		1310-01-490-9274	CARTRIDGES, POWER DEVICE UN 0331	
16	12928042-16	9399372 8886326	2-TP M918: 1-PRACTICE M305A1		1310-01-541-8121 BA30	CARTRIDGES FOR WEAPONS, INERT PROJECTILE UN 0339	SEE NOTE 21

REV	DATE	BY	CHKD
1	11/15/62	WJA	L
2	11/15/62	WJA	H
3	11/15/62	WJA	S
4	11/15/62	WJA	P
5	11/15/62	WJA	H
6	11/15/62	WJA	H
7	11/15/62	WJA	H
8	11/15/62	WJA	H
9	11/15/62	WJA	H
10	11/15/62	WJA	H
11	11/15/62	WJA	H
12	11/15/62	WJA	H
13	11/15/62	WJA	H
14	11/15/62	WJA	H
15	11/15/62	WJA	H
16	11/15/62	WJA	H
17	11/15/62	WJA	H
18	11/15/62	WJA	H
19	11/15/62	WJA	H
20	11/15/62	WJA	H



ITEM NO.	QTY	DESCRIPTION	UNIT
11	32	SPACER	PCS
10	48	LINK	PCS
9	2	LINK	PCS
8	1	LINK	PCS
7	32	LINK	PCS
6	14	LINK	PCS
5	1	LINK	PCS
4	1	LINK	PCS
3	2	LINK	PCS
2	1	LINK	PCS
1	1	LINK	PCS

ITEM NO.	QTY	DESCRIPTION	UNIT
11	32	SPACER	PCS
10	48	LINK	PCS
9	2	LINK	PCS
8	1	LINK	PCS
7	32	LINK	PCS
6	14	LINK	PCS
5	1	LINK	PCS
4	1	LINK	PCS
3	2	LINK	PCS
2	1	LINK	PCS
1	1	LINK	PCS

- APPLICABLE STANDARDS/SPECIFICATIONS:
  - ASTM F 1100-1962
  - ASTM F 1100-1962
  - D-510-510-000-14B1
- ALL MATERIAL SHALL BE THOROUGHLY DRY AT THE TIME OF PACKING. MAXIMUM MOISTURE CONTENT OF ALL FIBERBOARD PRODUCTS SHALL BE LESS THAN .4%.
- LINK 32 CARTRIDGES (ITEM 11) WITH LINKS (ITEM 7) AS SPECIFIED BY THE PROCURING ACTIVITY.
- INSERT 2 SIDE FILLERS (ITEM 2) IN CONTAINER (ITEM 1) AS SHOWN.
- PLACE BOTTOM SUPPORT (ITEM 3) IN CONTAINER AS SHOWN.
- INSERT NOTCHED END FILLER (ITEM 5) ON TOP OF SHORTEST LEG OF BOTTOM SUPPORT AS SHOWN, AND END FILLER (ITEM 4) ON OPPOSITE END.
- STARTING WITH WALE END OF LINK OR BELT OF 32 CARTRIDGES BEGIN POSITIONING LINKED CARTRIDGES IN BOTTOM SUPPORT (ITEM 3) AS SHOWN. STARTING ON END WITH NOTCHED END FILLER, ALSO INSURE THAT CARTRIDGE CASE OF ROUND IS PLACED TO FIT IN NARROW SIDE OF BOTTOM SUPPORT. DO THAT THE RIM OF THE CARTRIDGE CASE HANGS OVER THE EDGE OF BOTTOM SUPPORT SIDE AS DEPICTED IN FIGURE A.
- AFTER POSITIONING EIGHT CARTRIDGES ALONG BOTTOM OF CONTAINER, INSERT SPACERS (ITEM 6), ONE BETWEEN EACH CARTRIDGE AS SHOWN TO CUSHION CARTRIDGES. POSITION NEXT 8 LINKED CARTRIDGES BACK OVER FIRST LAYER OF SPACERS TO FORM SECOND LAYER OF CARTRIDGES AS SHOWN. REPEAT THIS PROCESS FOR THIRD LAYER OF CARTRIDGES. NOTE: BE SURE TO INSERT ROCKET LIGHT ON ASSEMBLY AFTER EACH LAYER OF CARTRIDGES IS PLACED. MAKE SURE THAT EACH SPACER RESTS BETWEEN EACH ROUND OF THIRD LAYER AS SHOWN. REPEAT PLACE THE FOURTH LAYER OF ROUNDS OVER SPACER SECTION AND FOLD COVER PORTION OF TOP CUSHION ASSEMBLY ONTO THE FOURTH LAYER OF ROUND. DO THAT THE ROUNDS FIT INTO GROOVES OF THE CUSHION.
- PLACE COVER ON CONTAINER, CLOSE AND ATTACH METALLIC SEAL (ITEM 9) TO EACH END OF CONTAINER AS SHOWN.

- INSTRUCTION: FOR REUSE OF PACKING MATERIAL, REUSE OF ALL CUSHION MATERIALS PERMISSIBLE AND IS RECOMMENDED WHEN CONTAINER IS IN USABLE CONDITION.
- REFERENCES:
- WEIGHTS
    - BOX PALLET FORTY
    - CARTRIDGE ROUNDS (32)
    - FILLERS, SPACERS, SUPPORTS
    - 48.0 LBS. (EST)
    - 13.0 LBS. (EST)
    - 36.0 LBS. (EST)
    - 3.0 LBS. (EST)
    - 42.0 LBS. (EST)
    - .72 CUBIC FEET
  - CHARGE
  - CONTAINER OUTSIDE DIMENSIONS
    - LENGTH 10.74 INCH
    - HEIGHT 10.39 INCH
    - WIDTH 6.36 INCH
  - FOR PALLETIZATION SEE DWG. 19-48-4232-21-0001-0007 WHICH IS THE BASIS OF THIS DRAWING UNLESS DIRECTED OTHERWISE BY THE PROCURING ACTIVITY.

DISTRIBUTION STATEMENT IS RESTRICTED TO THE DEPARTMENT OF DEFENSE AND IS TO BE CONTAINED ONLY IN ADMINISTRATIVE OR OPERATIONAL USE. IF MAY 2007. OTHER REQUESTS SHALL BE REFERRED TO THE OFFICE OF THE PROJECT MANAGER FOR HARDWARE AMBUSH SYSTEMS, ATTN: 3FAE-AMG-WAS-1C, PENTAGON, RTJ 07889-5060.

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REV	STATUS	SHEET	NO.
1	REV	1	1
2	REV	2	1
3	REV	3	1
4	REV	4	1
5	REV	5	1
6	REV	6	1
7	REV	7	1

ORIENTATION OF CARTRIDGE IN BOTTOM SUPPORT (ITEM 3) SEE NOTE 7

FIGURE A

NARROW SIDE