

INCH – POUND

MIL-A-70788A (AR)
w/AMENDMENT 5
20 February 2020SUPERSEDING
MIL-A-70788A (AR)
W/AMENDMENT 4
3 November 2008

MILITARY SPECIFICATION

ADAPTER, METAL AND WOOD PALLET

This specification is approved for use by the U.S. Army Armament, Munitions and Chemical Command, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

Scope. This specification covers the requirements, examinations, tests and packaging of special adapters for metal pallets. The adapter, together with the metal pallet, are used in unitizing ammunition (See 6.1).

Classification. The adapters are be of the following types (See 6.2):

Type I	-	Adapter, Pallet, PA113 Container
Type II	-	Adapter, Pallet, PA116/171 Container
Type III	-	Adapter, Pallet, PA117 Container
Type IV	-	Adapter, Pallet, PA120 Container
Type V	-	Adapter, Pallet, PA125 Container
Type VI	-	Adapter, Pallet, PA150 Container
Type VII	-	Adapter, Pallet, PA151 Container
Type VIII	-	Top Assembly – Pallet Adapter PA150 Container for use with Wood Pallet
Type IX	-	Top Assembly – Pallet Adapter PA151 Container for use with Wood Pallet
Type X	-	Top Lift adapter, M643 Ammunition Container**

Comments, suggestions, or questions on this document should be addressed to the Commander, U.S. Army AC, ATTN: FCDD-ACE-QSA, Picatinny, NJ 07806-5000 or emailed to ardec-stdzn@pica.army.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.dla.mil>.

AMSC N/A

FSC 8140

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2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in section 3 or 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards and handbooks. The following specifications, standards and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

FEDERAL SPECIFICATIONS

TT-C-490	- Cleaning Methods for Ferrous Surfaces and Pretreatments for Organic Coatings
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DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-A-48078	- Ammunition, Standard Quality Assurance Provisions, General Specification for
MIL-A-70625	- Automated Acceptance Inspection Equipment Design, Testing and Approval of
MIL-DTL-53072	- Chemical Agent Resistant Coating (CARC) System Applications Procedures and Quality Control Inspection

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-171	- Finishing of Metal and Wood Surfaces
MIL-STD-1660	- Ammunition Unit Loads

(Copies of these documents are available online at <https://quicksearch.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings and publications. The following other Government documents, drawings and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

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U.S. ARMY ARMAMENT, RESEARCH, DEVELOPMENT AND
ENGINEERING CENTER (ARDEC) DRAWINGS

AC200000414	- Adapter, Pallet, for PA113 Container
AC200000423	- Chemical Agent Resistant Coating (CARC) Finishing Requirements for Metal Pallets and/or Pallet Adapters
AC200000461	- Wood Pallet and Top Adapter Assembly for PA116/PA171 Container
AC200000501	- Adapter, Pallet, PA116 Container
ACV00053	- Combination of Adopted Items, Pallet and Pallet Adapter, Unitization of PA125 Container
ACV00124	- Combination of Adopted Items, Pallet and Pallet Adapter, Unitization of PA120 Container
ACV00134	- Combination of Adopted Items, Pallet and Pallet Adapter, Unitization of PA117 Container
ACV00155	- Combination of Adopted Items, Pallet and Pallet Adapter, Unitization of PA151 Container
ACV00156	- Combination of Adopted Items, Pallet and Pallet Adapter, Unitization of PA150 Container
ACV00647	- Top Assembly - Pallet Adapter PA150 Container for use with Wood Pallet
ACV00648	- Top Assembly – Pallet Adapter PA151 Container for use with Wood Pallet
ACV00515	- General Welding Procedures

(Copies of these drawings may be requested online at Drawing-Request@conus.army.mil or from U.S. Army ARDEC, ATTN: AMSRD-AAR-EIS-T, Picatinny, NJ 07806-5000.)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM-D3951	- Standard Practice for Commercial Packaging (DoD adopted)
ASTM-D4138	- Measurement of Dry Film Thickness of Protective Coating System by Destructive Means
ANSI/ASQC A8402	- Quality Management and Quality Assurance – Vocabulary

(Copies of these documents are available online at <http://www.astm.org> or from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428.)

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2.4 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this specification takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Materials. Materials and parts shall be in accordance with applicable drawings and specifications.

3.2 Adapters. The adapter assemblies shall comply with all requirements specified on drawings (Dwgs) AC200000414, AC200000461, AC200000501, ACV00053, ACV00124, ACV00134, ACV00155, ACV00156, ACV00647 and ACV00648 as applicable and associated drawings and with all requirements specified in applicable specifications and standards.

3.3 Welding. The welding shall comply with the requirements of ACV00515, Class 1. The welding procedure and workmanship specimens shall be submitted prior to production in accordance with ACV00515.

3.4 Lifting ring (bar) pull test. Lifting rings (bars) of the adapter top assembly shall withstand a (non-destructive) load of 2,500 pounds minimum (min.) for a duration of 30 seconds minimum. (See 4.4.2.2)

3.5 Painted surface. The painted surfaces of the adapters shall comply with the requirements of Dwg AC200000423 (Chemical Agent Resistant Coating (CARC)) and applicable drawings. The adapters for PA116/PA171 Container (Dwg AC200000461) is the only adapter which has the option of complying with CARC requirements or with requirements for conventional coating (see 3.5.1).

3.5.1 Conventional coating. The painted surface of the adapters (applicable only to PA116/PA171 Container pallet top adapters used for training rounds on wooden pallets) shall comply with the requirements of the applicable drawings, TT-C-490 and with instructions in MIL-STD-171.

3.6 Unit load tests. The metal pallet adapters, as part of unit loaded pallets, shall conform to the requirements specified in MIL-STD-1660.

3.7 First article inspection. When specified in the contract or purchase order (see 6.2), a sample shall be subjected to first article inspection in accordance with the technical provisions herein (see 4.3).

3.8 Workmanship.

3.8.1 Adapters. The adapters shall be regular, smooth, and free from wrinkles, cracks, rough spots, burrs, sharp edges, and other defects that might affect the

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serviceability, durability and safety of the adapters. Weld spatter is permissible on non-load bearing surfaces provided it is firmly attached.

3.8.2 Paint coating. The finished coat shall cover all required surfaces and be continuous. Paint runs are permissible provided they are no more than 3 inches in length, solid and free from cracks and blisters. Excess thickness is acceptable in areas where multiple passes of the paint gun are required to obtain total coverage. Paint chips which expose primer or bare metal are acceptable provided they are not more than 0.25 inches in diameter and no more than two such paint chips on an adapter. Scratches which expose primer or bare metal are permissible provided they are no more than 1.5 inches in length and no more than 10 inches total on an adapter. Bare metal on contact surfaces in areas inaccessible to paint is permissible.

3.8.3 Parts. All parts shall be free of chips, dirt, grease, rust and foreign material. The cleaning method used shall not be injurious to any of the parts nor shall any of the parts be contaminated by the cleaning agents used.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specifications where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 DELETED

4.1.2 General provisions. Unless otherwise specified herein, the provisions of MIL-A-48078 apply and form a part of this specification. Reference shall be made to ANSI/ASQC A8402 to define quality assurance terms used herein.

4.2 Classification of inspections. The following types of inspections shall be conducted on this item:

- a. First article inspection (See 4.3)
- b. Quality conformance inspection (See 4.4)

4.3 First article inspection.

4.3.1 Submission. The contractor shall submit a first article sample as designated by the Contracting Officer for evaluation in accordance with the provisions of 4.3.2. The first article sample shall consist of the following items in sample quantities as indicated:

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<u>Part description-</u>	<u>Quantity</u>
Lifting ring (bar)	6
Top assembly (unpainted)	6
Bottom assembly (unpainted)	6
Top assembly (painted)	6
Bottom assembly (painted)	6
Intermediate assembly (unpainted)	6
Intermediate assembly (painted)	6
Adapter assembly	3

The samples for the adapter assemblies may be comprised of the individual painted top, bottom and intermediate (when applicable) assemblies submitted.

4.3.2 Inspections to be performed. See MIL-A-48078 and Table I specified herein.

4.3.3 Rejection. See MIL-A-48078

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TABLE I – First article inspection

CLASSIFICATION OF DEFECTS & TESTS				MIL-A-70788A (AR)	
PARAGRAPH	TITLE Assemblies and Components	SHEET 1 OF 3		DRAWING NUMBER As applicable	
				NEXT HIGHER ASSEMBLY	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE	
	<u>Lifting ring (bar)</u> (Dwg. AC200000804, ACV00060 or ACV00130, as applicable) Examination for defects	6	3.2	4.4.2.1	
	<u>Top assembly, unpainted</u> (Dwg. AC200000469, AC200000807, AC200000827, ACV00054, ACV00125, ACV00135, ACV00157, ACV00159, ACV00647 or ACV00648 as applicable) Examination for defects	6	3.2	4.4.2.2	
	<u>Top Assembly, Painted</u> (Dwg. AC200000469, AC200000807, AC200000827, ACV00054, ACV00125, ACV00135, ACV00157, ACV00159, ACV00647 or ACV00648 as applicable) Examination for defects	6	3.2	4.4.2.3	
NOTES:					

AMSMC Form 1570a-E, 1 Jul 89

Replaces AMSMC Form 1570a, 1 Apr 85, which may not be used.

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TABLE I – First article inspection

CLASSIFICATION OF DEFECTS & TESTS				MIL-A-70788A (AR)
PARAGRAPH	TITLE Assemblies and Components	SHEET 2 OF 3		DRAWING NUMBER As applicable
				NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
	<u>Bottom assembly, unpainted</u> (Dwg. AC200000470, AC200000828, ACV00055, ACV00126, ACV00136, ACV00158 or ACV00160 as applicable) Examination for defects	6	3.2	4.4.2.4
	<u>Bottom assembly, painted</u> (Dwg. AC200000470, AC200000828, ACV00055, ACV00126, ACV00136, ACV00158 and ACV00160 as applicable) Examination for defects	6	3.2	4.4.2.5
	<u>Intermediate assembly, unpainted</u> (Dwg. ACV00056) Examination for defects	6	3.2	4.4.2.6
NOTES:				

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Replaces AMSMC Form 1570a, 1 Apr 85, which may not be used.

CLASSIFICATION OF DEFECTS & TESTS

PARAGRAPH	TITLE		SHEET 3 OF 3		DRAWING NUMBER As applicable
	Assemblies and Components				NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE	
	<u>Intermediate assembly, painted</u> (Dwg. ACV00056) Examination for defects <u>Adapter Assembly</u> (Dwg. AC200000414, AC200000461, AC200000501, ACV00053, ACV00124, ACV00134, ACV00155, ACV00156, ACV00647 or ACV00648 as applicable) Unit load test <u>Lifting Ring Retainer</u> (Dwg. AC200000805, AC200000806) Examination for Defects	6 3 6	3.2 3.6 3.2	4.4.2.7 4.5.1 4.4.2.8	
NOTES:					

Replaces AMSMC Form 1570a, 1 Apr 85, which may not be used.

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4.4 Quality conformance inspection.

4.4.1 Inspection lot formation. The term “inspection lot” is defined as a homogeneous collection of units of product from which a representative sample is drawn or which is inspected 100 percent to determine conformance with applicable requirements. Units of product selected for inspection shall represent only the inspection lot from which they are drawn and shall not be construed to represent any prior or subsequent quantities presented for inspection. Homogeneity shall be considered to exist provided the inspection lot has been produced by one manufacturer in one unchanged process, using the same materials and methods, in accordance with the same drawings, same drawings revisions, same specifications and, same specifications revisions. All material submitted for inspection in accordance with this specification shall comply with the homogeneity criteria specified herein, regardless of the type of inspection procedure which is being applied to determine conformance with requirements.

4.4.2 Examination and tests.

a. Classification of characteristics. Quality conformance examination and tests are specified in the following Classification of Characteristics paragraphs. The contractor's quality program or detailed inspection system shall provide assurance of compliance of all characteristics with the applicable drawings and specification requirements utilizing as a minimum the conformance criteria specified. When cited herein, attributes sampling inspection shall be conducted in accordance with Table II below, using the inspection levels sated in the Classification of Characteristics paragraphs.

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TABLE II. Attribute sampling inspection

Lot Size	Inspection Levels					
	I	II	III	IV	V	VI
2 to 8	*	*	*	*	5	3
9 to 15	*	*	*	13	5	3
16 to 25	*	*	*	13	5	3
26 to 50	*	*	32	13	5	3
51 to 90	*	*	32	13	13	5
91 to 150	*	125	32	13	13	5
151 to 280	*	125	32	13	20	8
281 to 500	*	125	32	30	20	8
501 to 1200	*	125	80	50	20	13
1201 to 3200	1250	125	80	50	32	13
3201 to 10000	1250	125	125	50	32	13
10001 to 35000	1250	315	125	80	50	13
35001 to 150000	1250	315	125	80	50	13
150001 to 500000	1250	500	200	125	50	13
500001 and over	1250	500	200	125	50	13

Number under inspection levels indicate sample size; asterisks (*) indicates one hundred percent inspection. If sample size exceeds lot size, perform one hundred percent inspection. Accept on zero and reject on one or more for all inspection levels.

b. Alternative quality conformance provisions. Unless otherwise specified herein or provided for in the contract, alternative quality conformance procedures, methods, or equipment, such as statistical process control, tool control, other types of sampling procedures, etc., may be used by the contractor when they provide, as a minimum, the level of quality assurance required by the provisions specified herein. Prior to applying such alternative procedures, methods, or equipment, the contractor shall describe them in a written proposal submitted to the Government for evaluation (6.3). When required, the contract shall demonstrate that the effectiveness of each proposed alternative is equal to or better than the specified quality assurance provisions (s) herein. In cases of dispute as to whether the contractor's proposed alternative (s) provide equivalent assurance, the provisions of this specification shall apply. All approved alternative provisions shall be specifically incorporated into the contractor's quality program or detailed inspection system, as applicable.

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QUALITY CONFORMANCE INSPECTION

CLASSIFICATION OF CHARACTERISTICS

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PARAGRAPH 4.4.2.1	TITLE Lifting ring (bar)	SHEET 1 OF 1		DRAWING NUMBER See Note 1	
				NEXT HIGHER ASSEMBLY See Note 2	
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined				
<u>Major</u> 107	Ring Minimum Height at rest (Horizontal Position)		Level IV	3.2	Gage
<u>Minor</u> 201	Evidence of poor workmanship		Level V	3.8	Visual
NOTES: 1. Dwg. AC200000804, ACV00060, ACV00130, ACV00155 or ACV00156 applies, as applicable 2. Dwg. AC200000469, AC200000807, AC200000827, ACV00054, ACV000125, ACV000135, ACV00155 or ACV00156 applies, as applicable					

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CLASSIFICATION OF CHARACTERISTICS

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER See Note 1	
4.4.2.2	Top Assembly, Unpainted			NEXT HIGHER ASSEMBLY See Note 2	
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined				
<u>Major</u>					Certification (Note 3)
101	Material certification		Level II	3.4	4.5.2
102	Lifting ring pull test		Level III	3.2	Gage
103	True position of stacking lugs		Level III	3.2	Visual
104	Weld missing, incomplete or incorrect		Level IV	3.2	Gage
105	Ring (at rest) below top surface		Level IV	3.2	Gage
106	Ring free to rotate from vertical position to resting(horizontal position with no force applied				
107	Ring Minimum Height at rest (Horizontal Position)		Level IV	3.2	Gage
<u>Minor</u>					
201	Evidence of poor workmanship		Level V	3.8.1/3.8.3	Visual
NOTES: 1. Dwg. AC200000469, AC200000807, AC200000827, ACV00054, ACV00125, ACV00135, ACV00157, ADV00159, ACV00647 or ACV00648 applies, as applicable 2. Dwg. AC200000414, AC200000461, AC200000501, ACV00053, ACV000124, ACV000134, ACV00155 or ADV00156 applies, as applicable 3. A Certified Material Test Report (CMTR) shall be submitted for all chemical and physical requirements for compliance with the applicable drawing. 4. 4. Major characteristics 107 is not applicable to Dwg. ACV0054 and ACV00125.					

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CLASSIFICATION OF CHARACTERISTICS

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER See Note 1	
4.4.2.3	Top Assembly, Painted			NEXT HIGHER ASSEMBLY See Note 2	
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined				
<u>Major</u> 101	Top coat thickness (total thickness minus primer thickness (see AC200000423 and Note 3))				
102	Marking missing, incorrect or illegible		Level IV	3.2	Gage
103	Paint adhesion test		Level IV	3.2	Visual
104	Primer coat thickness (see AC00000423 and Note 3)		4, 0-1	3.5	4.5.3
105	Ring (at rest) below top surface		Level IV	3.2	Gage
106	Ring free to rotate from vertical position		Level IV	3.2	Gage
	To resting (horizontal position) with no force applied		Level IV	3.2	Gage
<u>Minor</u> 201	Evidence of poor workmanship		Level V	3.8.2	Visual
NOTES: 1. Dwg. AC200000469, AC200000807, AC200000827, ACV00054, ACV00125, ACV00135, ACV00157, ACV00159, ACV00647 OR ACV00648 applies, as applicable 2. Dwg. AC200000414, AC200000461, AC200000501, ACV00053, ACV000124, ACV000134, ACV00155 or ACV00156 applies, as applicable 3. The inspection is only applicable for CARC coating. The primer thickness may be determined from a test panel, when representative of the part for CARC topcoat. When destructive testing is done on samples (e.g. ASTM-D4138), these surfaces may be touched up in accordance with 3.6.1 of MIL-DTL-53072 4. Major characteristics 105 and 106 are not applicable to Dwg. ACV0054 and ACV00125.					

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PARAGRAPH	TITLE		SHEET 1 OF 1		DRAWING NUMBER See Note 1
4.4.2.4	Bottom Assembly, Unpainted				NEXT HIGHER ASSEMBLY See Note 2
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined				
<u>Major</u>					Certification (Note 3)
101	Material certification		Level III	3.2	Gage
102	True position of stacking lugs		Level III	3.2	Visual
103	Weld missing, incomplete or incorrect		Level IV	3.2	Gage
104	Overall length		Level IV	3.2	Gage
105	Overall width				
<u>Minor</u>					
201	Evidence of poor workmanship		Level V	3.8.1 3.8.3	Visual
NOTES: 1. Dwg. AC200000470, AC200000828, ACV00055, ACV00126, ACV00136, ACV00158 or ACV00160 applies, as applicable 2. Dwg. AC200000414, AC200000501, ACV00053, ACV000124, ACV000134, ACV00155 or ACV00156 applies, as applicable 3. A Certified Material Test Report (CMTR) shall be submitted for all chemical and physical requirements for compliance with the applicable drawing. 4. When this inspection is performed on the top assembly for the Type II or Type III Pallet Adapter, the gage shall be as specified in Dwg AC200000812					

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PARAGRAPH	TITLE		SHEET 1 OF 1		DRAWING NUMBER
					See Note 1
4.4.2.5	Bottom Assembly, Painted				NEXT HIGHER ASSEMBLY
					See Note 2
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined				
<u>Major</u>					
101	Top coat thickness (total thickness minus primer thickness (see AC200000423 and Note 3))		Level IV	3.2	Gage
102	Marking missing, incorrect or illegible		Level IV	3.2	Visual
103	Paint adhesion test		4, 0-1	3.5	4.5.3
104	Primer coat thickness (see AC200000423 and Note 3)		Level IV	3.2	Gage
<u>Minor</u>					
201	Evidence of poor workmanship		Level V	3.8.2	Visual
NOTES: 1. Dwg. AC200000470, AC200000828, ACV00055, ACV001265, ACV00136, ACV00158 or ACV00160 applies, as applicable 2. Dwg. AC200000414, AC200000501, ACV00053, ACV000124, ACV000134, ACV00155 or ACV00156 applies, as applicable 3. The inspection is only applicable for CARC coating. The primer thickness may be determined from a test panel, when representative of the part for CARC topcoat. When destructive testing is done on samples (e.g. ASTM-D4138), these surfaces may be touched up in accordance with 3.6.1 of MIL-DTL-53072					

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PARAGRAPH 4.4.2.6	TITLE Intermediate Assembly – Pallet Adapter PA125 Container, Unpainted	SHEET 1 OF 1		DRAWING NUMBER ACV0056	
				NEXT HIGHER ASSEMBLY ACV0053	
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined				
<u>Major</u>					
101	Material certification		Level III	3.2	Certification (Note 1)
102	Weld missing, incomplete or incorrect		Level IV	3.2	Visual
103	Overall length		Level IV	3.2	Gage
104	Overall width				Gage
<u>Minor</u>					
201	Evidence of poor workmanship		Level V	3.8.1 3.8.3	Visual
NOTES: 1. A Certified Material Test Report (CMTR) shall be submitted for all chemical and physical requirements for compliance with the applicable drawing.					

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PARAGRAPH	TITLE	SHEET 1 OF 1			DRAWING NUMBER ACV00056
4.4.2.7	Intermediate Assembly , Pallet Assembly, PA125 Container, Painted				NEXT HIGHER ASSEMBLY ACV00053
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined				
<u>Major</u>					
101	Top coat thickness (total thickness minus primer thickness (see AC200000423 and Note 3))		Level IV	3.2	Gage
102	Marking missing, incorrect or illegible		Level IV	3.2	Visual
103	Paint adhesion test		4, 0-1	3.5	4.5.3
104	Primer coated thickness (see AC200000423 and note 1)		Level IV	3.2	Gage
<u>Minor</u>					
201	Evidence of poor workmanship		Level V	3.8.2	Visual
NOTES: 1. The inspection is only applicable for CARC coating. The primer thickness may be determined from a test panel, when representative of the part for CARC topcoat. When destructive testing is done on samples (e.g. ASTM-D4138) these surfaces may be touched up in accordance with 3.6.1 of MIL-DTL-53072					

AMSMC Form 1570a-E, 1 Jul 89

Replaces AMSMC Form 1570a, 1 Apr 85, which may not be used.

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QUALITY CONFORMANCE INSPECTION

CLASSIFICATION OF CHARACTERISTICS

MIL-A-70788 (AR)

PARAGRAPH 4.4.2.8	TITLE Lifting Ring Retainer	SHEET 1 OF 1		DRAWING NUMBER AC200000805, AC200000806	
				NEXT HIGHER ASSEMBLY See Note 1	
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined				
<u>Major</u> 101	Legs Proper Height		Level IV	3.2	Gage
<u>Minor</u> 201	Evidence of poor workmanship		Level V	3.8	Visual
NOTES: 1. Dwg. AC200000469, AC200000807, AC20000827, ACV00135, ACV00157, ACV00159, ACV00647, or ACV00648 applies, as applicable					

AMSMC Form 1570a-E, 1 Jul 89

Replaces AMSMC Form 1570a, 1 Apr 85, which may not be used.

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4.4.3 Testing. Testing is described in the First Article and Quality Conformance Inspection Tables.

4.4.4 Inspection equipment. The inspection equipment required to perform the inspections specified is identified in the "Inspection Method Reference" column of the Classification of Characteristics listing starting in 4.4.2.1 and 4.5. Contractor inspection equipment designs shall be submitted for Government approval as specified in the contract. Designs which provide variable measurements instead of attributes data are preferred in order to facilitate the use of statistical process control. When Automated Acceptance Inspection Equipment is to be used, the provisions of MIL-A-70625 shall apply. See Section 6 of MIL-A-48078 and 6.4 herein.

4.5 Methods of inspection. (See 6.5)

4.5.1 Unit load test. (First article inspection only (see 6.2.e)). Unit loads for the pallet and adapter assemblies shall be fabricated in accordance with MIL-STD-1660 with the following exceptions. The gross weight of the ammunition load shall be 2,500 pounds minimum. Fabrication of the unit load shall include using the exact container for which the adapter is designed. The following tests shall be performed on the unit loads in accordance with MIL-STD-1660. The tests shall be performed in the sequence indicated ("a" through "f")

- a. Stacking test.
- b. Repetitive shock test.
- c. Edgewise drop (rotational) test.
- d. Include impact test.
- e. Sling compatibility test.
- f. Disassembly test.

4.5.2 Lifting ring (bar) pull test. Lifting rings (bars) of the adapter top assembly shall be placed in a test machine designed for pull testing. The load shall be applied by a steady pressure and the load read directly by a gage. The load applied, in a vertical direction, to each ring shall be 2,500 pounds and shall be maintained for the required time. The results of the test shall not show signs of deformation, change in length of the ring (bar) nor any separation of the ring (bar) from top assembly.

4.5.3 Paint adhesion test. The paint (primer and top coat) adhesion shall be tested in accordance with TT-C-490.

5. PACKAGING

5.1 Preservation and packing. None required.

5.2 Packing.

5.2.1 Commercial. The adapters shall be packed in accordance with ASTM-D3951.

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5.3 Marking.

5.3.1 Commercial. Shipping marking shall comply with ASTM-D3951 and the following additional instructions. No shipping marking shall be placed directly on the adapters. Commercial shipping tags attached with wire shall be used unless otherwise specified. The following information shall be shown: Item name and model number, part number and revision, contract number, and date, name and address of manufacturer. If adapters are bundled, boxed or bulk-contained, the gross weight and quantity shall be included. The above information may be placed on bulk-containers or boxes by labeling or stenciling.

5.4 Shipping. When adapters from more than one lot are shipped at one time, each lot shall be kept separate and the division between lots clearly indicated to prevent mixing lots in transit.

6. Notes

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. These metal adapters are intended for use with metal pallets when unitizing packaged ammunition containers.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number and date of this specification.
- b. Type of adapter (see 1.2).
- c. Applicable stock number.
- d. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
- e. First article sample requirements. Contractual provisions should require that the unit load test (as per MIL-STD-1660) will be performed at the U.S. Army Defense Ammunition Center and School USADACS), SMCAC-DEV, Savanna, IL 61074-9639
- f. Packaging requirements, if other than specified in Section 5.
- g. Serialization requirements, if applicable.
- h. Certificate of Conformance for each lot of shipment of product.

6.3 Submission of alternative quality conformance provisions. Unless otherwise specified in the contract, proposed alternative quality conformance provisions will be submitted by the contractor for evaluation by the technical activity responsible for the preparation of this specification.

6.4 Submission of contractor equipment designs for approvals. Submit copies of designs as required to: Commander, U.S. Army Armament Research, Development and Engineering Center, ATTN: SMCAR-QAR-I, Picatinny Arsenal, NJ 07806-5000. This address will be specified on the Contract Data Requirements List, DD Form 1423 in the contract.

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6.5 Approval of equivalent test methods. Prior approval of the Contracting Officer is required for use of equivalent test methods. A description of the proposed method should be submitted through the Contracting Officer to: Commander, U.S. Army Armament Research, Development and Engineering Center, ATTN: SMCAR-QAR-Q, Picatinny Arsenal, NJ 07806-5000. This description should include but not be limited to the accuracy and precision of the method, test data demonstrating the accuracy and precision and drawings of any special equipment required.

6.6 Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

6.7 Subject term (key word) listing.

Ammunition
Cartridge
Container
Tank
Unitizing
Volcano Mines

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APPENDIX

QUALITY ASSURANCE PROVISIONS FOR REFURBISHMENT

10 SCOPE:

Scope. This appendix provides the Quality Assurance provisions for the refurbishment of metal pallet adapters.

20 APPLICABLE DOCUMENTS:

STANDARDS

FEDERAL

SAE-AMS-STD-595 - Colors

MILITARY

MIL-STD-171 - Finishing of Metal and Wood Surfaces

30 REFURBISHMENT:

30.1 Cleaning. Loose paint, dirt, grease and rust shall be removed.

30.2 Refinish. The parts shall be finished in accordance with the applicable drawings with the following exception:

- a. For refinishing of adapter AC200000807 (training rounds only), No. 5.1.1 or 5.2 shall be applied to all bare metal, followed by No. 20.1 to all surfaces in accordance with MIL-STD-171, color forest green No. 34079 per FED-STD-595 may be used as an alternate.
- b. An "R" shall be placed directly following the part number of refurbished adapters, using the same size stencil and color specified on the drawing.

40 REQUIREMENTS:

Welds. Welds shall be in accordance with good commercial practices.

Stackability. The pallet shall not be deformed to the extent that it effects safely stacking of pallets in storage.

Lifting rings. The lifting rings shall not be damaged or deformed to the extent of preventing safe handling by a sling during top lifting operations.

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Adapters. The top lift shall not be deformed to the extent that it does not engage the containers.

Workmanship. See paragraph 3.6 unless otherwise specified below:

- a. Deformation or damage that does not effect stacking, slinging or assembly of the pallet is allowed.
- b. Damage or deformation to the pallet legs that does not allow four way entry or prevents the pallet from resting evenly on a level surfaces is not allowed.
- c. Bottom adapter is deformed to the extent that it does not mate with the pallet is not allowed.

50 INSPECTION:

Examination. Unless otherwise specified examinations for major and minor characteristics shall be performed in accordance with TABLE II. Attributes sampling inspection.

Metal pallet adapter (see drawings listed in 2.1.2, as applicable).

CLASS	CHARACTERISTICS	CONFORMANCE CRITERIA	INSPECTION METHOD
<u>Critical</u>	None defined		
<u>Major</u>			
101	Welds missing or broken	Level III	40.1/Visual
102	Stacking surface deformed	Level III	40.2/Visual
103	Lifting rings damaged or deformed	Level III	40.3/Visual
104	Adapter damaged or deformed	Level III	40.4/Visual
<u>Minor</u>			
201	Marking, missing, incorrect or illegible	Level III	3.2/Visual
202	Protective finish damaged	Level III	3.2/Visual
203	Poor workmanship	Level III	40.5/Visual

Custodian:
Army-AR

Preparing activity:
Army-AR
(Project 8140-2020-002)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.