

## APPENDIX 12

# UNITIZING PROCEDURES FOR COMPLETE ROUNDS<sup>●</sup> PACKED IN CYLINDRICAL METAL CONTAINERS ON 4-WAY ENTRY PALLETS\*

## PA113 SERIES CONTAINER

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PALLET UNIT DATA						
ITEMS INCLUDED		HAZARD CLASSIFICATION <sup>①</sup>				WEIGHT (LBS)
NSN	DODIC	DOT CLASS	CG CLASS	QD CLASS	COMP GROUP	
1345- 01-233-2030 01-233-2029	K042	C	I	(04) 1.2	C	2,741
	K045	A	VII	1.1	D	2,741

- ① HAZARD CLASSIFICATION DATA CONTAINED IN THE ABOVE CHART IS FOR GUIDANCE AND INFORMATIONAL PURPOSES ONLY. VERIFICATION OF THE SPECIFIED DATA SHOULD BE MADE BY CONSULTING THE MOST RECENT JOINT HAZARD CLASSIFICATION SYSTEM LISTING OR OTHER APPROVED LISTING(S).

\* SEE GENERAL NOTE "J" ON PAGE 2.

- UNITIZATION PROCEDURES CONTAINED WITHIN THIS APPENDIX REFER TO THE VOLCANO MINE SYSTEM.

**NOTICE:** THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4079-20PM1002.

**DO NOT SCALE**

REVISIONS				DRAFTSMAN HJ	PROJ ENG LAF/WRF	CHECKER WJ	LOGGING OFFICE WJ
				<small>APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND</small> <i>David A. Anderson</i> <i>J. B. Sigurd</i> <small>SMCAR - ESK</small> <small>AMSC - TMS</small>			
<small>APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIAL COMMAND (AMC)</small> <i>John L. B...</i> <small>U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL</small>				<b>U.S. ARMY AMC DRAWING</b> <b>MARCH 1988</b>			
				CLASS	DIVISION	DRAWING	FILE
				19	48	4079/ 12	20PM 1002

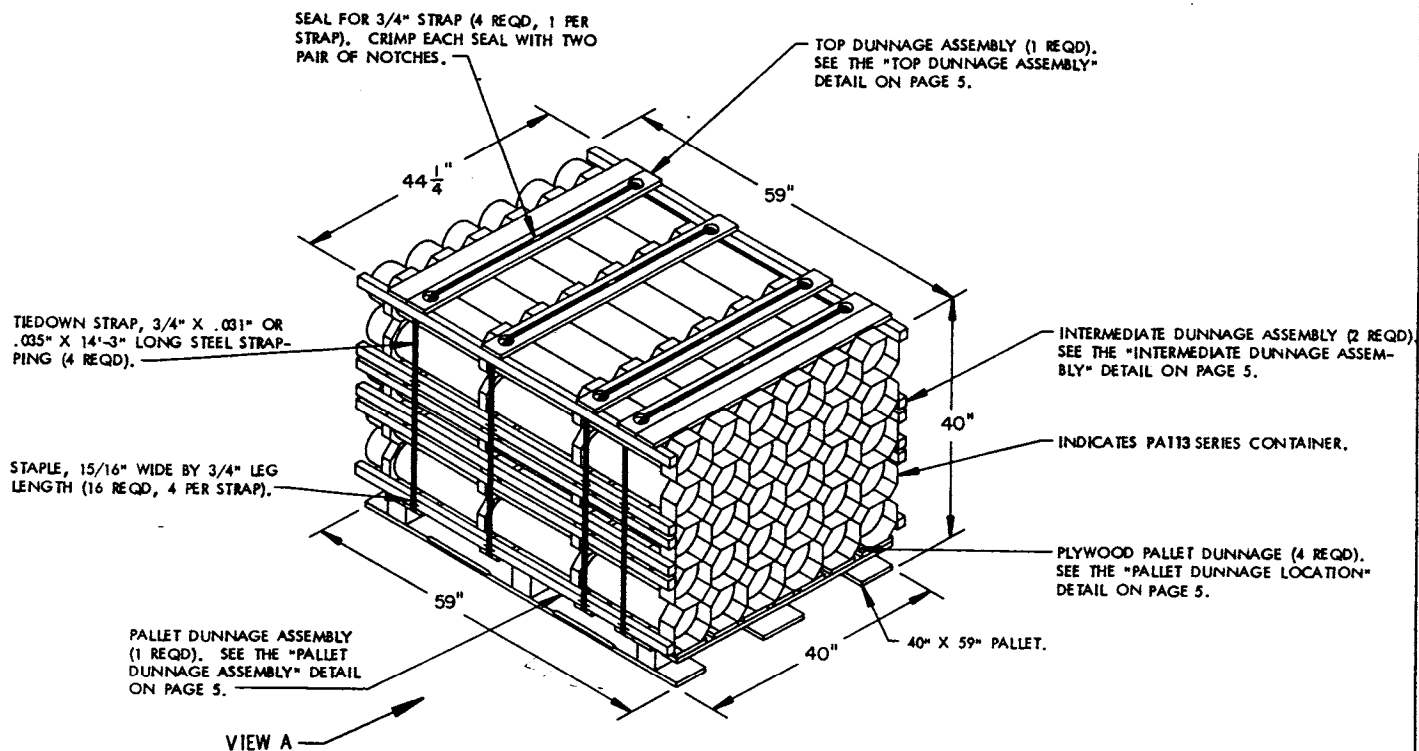
## GENERAL NOTES

- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4079-20PM1002. TO PRODUCE AN APPROVED UNIT LOAD, ALL PERTINENT PROCEDURES, SPECIFICATIONS AND CRITERIA SET FORTH WITHIN THE BASIC DRAWING WILL APPLY TO THE PROCEDURES DELINEATED IN THIS APPENDIX. ANY EXCEPTIONS TO THE BASIC PROCEDURES ARE SPECIFIED IN THIS APPENDIX.
- B. DIMENSIONS, CUBE AND WEIGHT OF A PALLET UNIT WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE CONTAINERS AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- C. FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX, CONTACT THE U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL, ATTN: SMCAC-DEO, SAVANNA, IL 61074-9639 FOR SPECIFIC PROCEDURAL GUIDANCE.
- D. FOR METHOD OF SECURING A STRAP CUTTER TO THE PALLET UNIT, SEE DARCOM DRAWING 19-48-4127-20P1000.
- E. IF ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS APPENDIX, THE CONTAINERS NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS APPENDIX.
- F. FOR DETAILS OF THE PA113 SERIES CONTAINER, SEE U.S. ARMY ARMAMENT RESEARCH AND DEVELOPMENT CENTER DRAWING NO. 9390404.

CONTAINER DIMENSIONS ----- 59" LONG X 6-7/8" WIDE X 6-7/8" HIGH  
CONTAINER CUBE ----- 1.6 CUBIC FEET (APPROX)  
CONTAINER WEIGHT  
(WITH ROUND) ----- 85 POUNDS (APPROX)

- G. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING MINE CANISTERS WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS SHOWN ON THE TITLE PAGE, PROVIDED THE CONTAINER DOES NOT VARY FROM WHAT IS DELINEATED HEREIN. THE EXPLOSIVE CLASSIFICATION OF OTHER ITEMS MAY BE DIFFERENT THAN WHAT IS SHOWN.
- H. DIMENSIONS GIVEN FOR DUNNAGE PIECES WILL BE FIELD CHECKED PRIOR TO THEIR ASSEMBLY TO THE PALLET UNIT. CONTAINERS MUST FIT SNUGLY IN THE DUNNAGE ASSEMBLIES.
- J. THE SPECIAL PALLET WILL BE CONSTRUCTED IN ACCORDANCE WITH MILITARY SPECIFICATION MIL-P-15011, STYLE 1, TYPE I, CLASS 1 PALLET WITH THE EXCEPTION THAT THE TOP AND BOTTOM DECK BOARDS WILL BE 59" LONG INSTEAD OF 48". ALL OTHER REQUIREMENTS SPECIFIED WITHIN MIL-P-15011 FOR A STYLE 1, TYPE I, CLASS 1 PALLET WILL APPLY TO THE PALLET SPECIFIED WITHIN THIS DRAWING.
- K. THE SPECIAL PALLET DELINEATED IN THE DETAIL ON PAGE 4 NEED NOT HAVE CHAMFERS OR STRAP SLOTS AS SPECIFIED WITHIN MILITARY SPECIFICATION MIL-P-15011 WHEN USED FOR THE UNITIZATION OF THE ITEMS COVERED BY THIS APPENDIX.

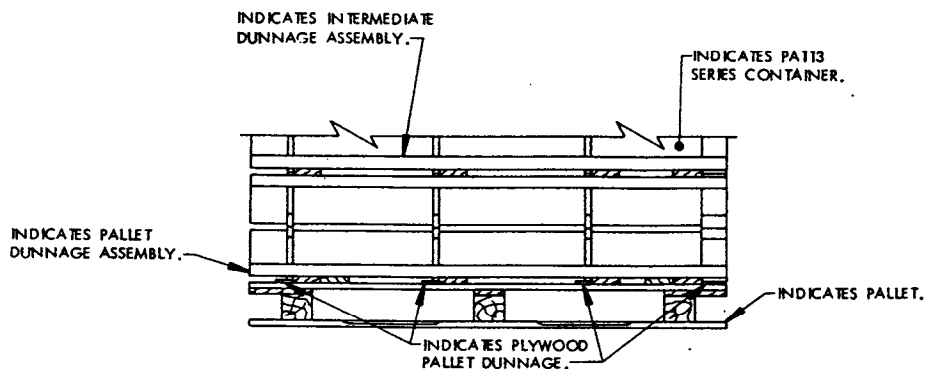
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ISOMETRIC VIEW

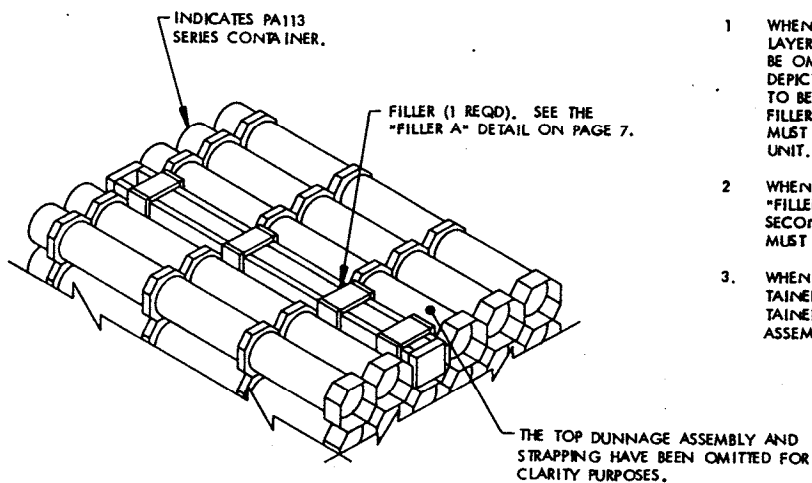
SPECIAL NOTE:

THE CONTAINERS DEPICTED IN THE UNIT LOAD ABOVE ARE CONSTRUCTED WITH BOTH LATERAL AND VERTICAL INTERLOCKS. TO FUNCTION PROPERLY, THE VERTICAL INTERLOCKS (PINS) MUST BE POSITIONED UPWARD. THIS ORIENTATION WILL PRECLUDE INTERFERENCE OF THE "PINS" AND THE PLYWOOD PALLET DUNNAGE. FOR THE LATERAL INTERLOCKS TO FUNCTION PROPERLY, THE LATERAL INTERLOCKING DEVICES ON THE RINGS OF A CONTAINER MUST BE ENGAGED WITH THE LATERAL INTERLOCKING DEVICES ON THE RINGS OF AN ADJACENT CONTAINER. LATERAL INTERLOCK ENGAGEMENT IS ACCOMPLISHED WHEN CONTAINERS ARE LOWERED ONTO THE PALLET UNIT. THE INTERLOCKS WILL ALSO AID IN THE PREVENTION OF CONTAINER MOVEMENT, BOTH LATERAL AND LONGITUDINAL, DURING SHIPMENT OF THE UNIT LOAD.



PARTIAL VIEW A



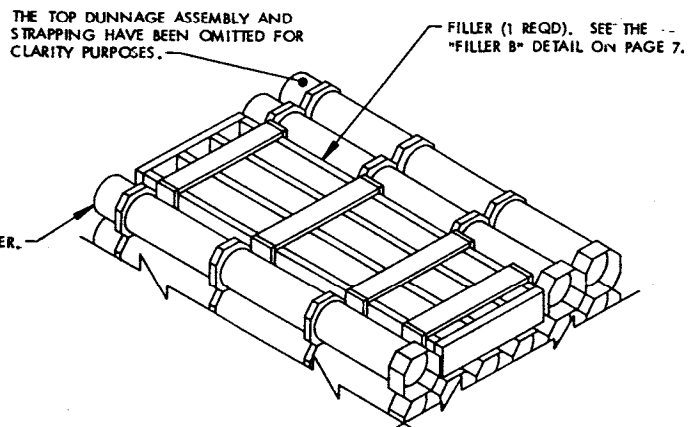


DETAIL A

THIS DETAIL DEPICTS PROCEDURES TO BE USED WHEN A STANDARD PALLET UNIT MINUS ONE CONTAINER IS TO BE UNITIZED. THE FILLER ASSEMBLY DEPICTED MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYER OF THE PALLET UNIT.

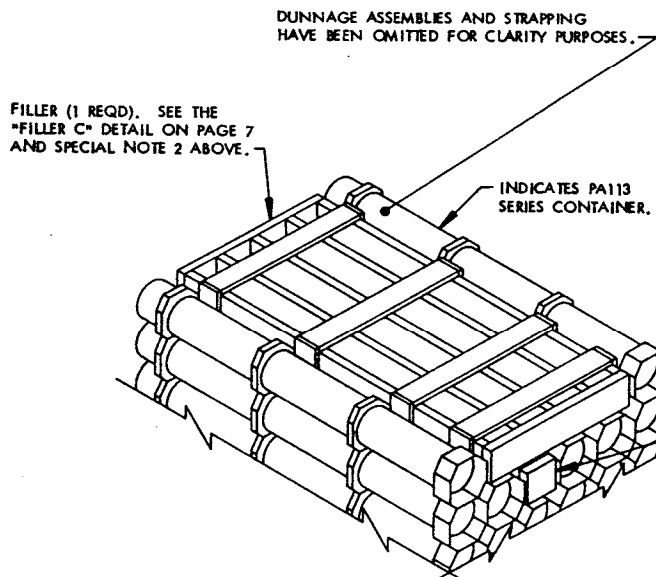
SPECIAL NOTES:

1. WHEN SIX CONTAINERS ARE TO BE OMITTED FROM A PALLET UNIT, A COMPLETE LAYER OF CONTAINERS MUST BE OMITTED. WHEN FIVE CONTAINERS ARE TO BE OMITTED FROM A PALLET UNIT, A COMBINATION OF FILLER ASSEMBLIES DEPICTED ON PAGE 7 MUST BE USED. WHEN FOUR OR LESS CONTAINERS ARE TO BE OMITTED FROM A PALLET UNIT, A COMBINATION OR ONE OF THE FILLER ASSEMBLIES DEPICTED ON PAGE 7 MAY BE USED. ALL FILLER ASSEMBLIES MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYER OR LAYERS OF A PALLET UNIT.
2. WHEN A "FILLER A" ASSEMBLY IS USED IN COMBINATION WITH A "FILLER B" OR "FILLER C" ASSEMBLY, THE "FILLER A" ASSEMBLY MUST BE POSITIONED IN THE SECOND LAYER OF CONTAINERS FROM THE TOP OF THE PALLET UNIT AND MUST HAVE ITS OVERALL HEIGHT REDUCED FROM 6-3/4" TO 6".
3. WHEN TWO "FILLER A" ASSEMBLIES ARE USED IN PLACE OF TWO OMITTED CONTAINERS, THE FILLER ASSEMBLIES WILL BE SEPARATED BY AT LEAST ONE CONTAINER TO INSURE PROPER FILLER ASSEMBLY RETENTION AND TO PRECLUDE ASSEMBLY INTERFERENCES.



DETAIL B

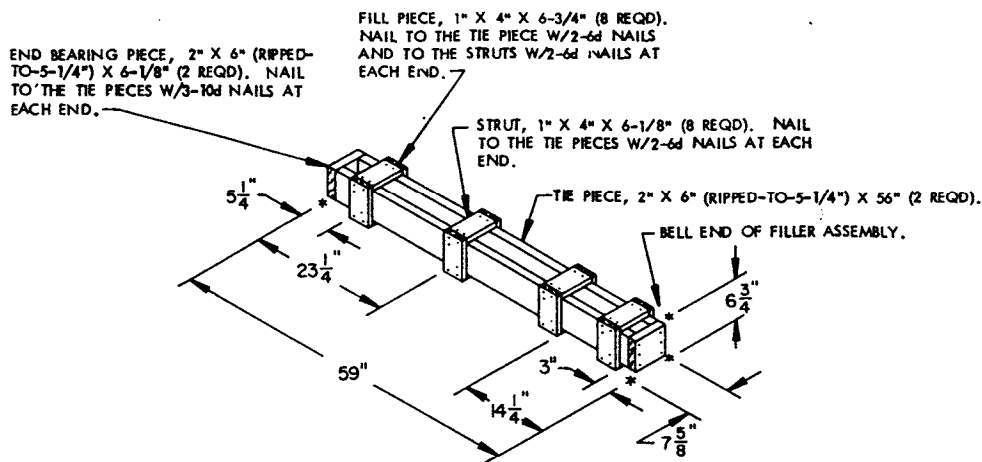
THIS DETAIL DEPICTS PROCEDURES TO BE USED WHEN A STANDARD PALLET UNIT MINUS THREE CONTAINERS IS TO BE UNITIZED. THE FILLER ASSEMBLY MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYER OF THE PALLET UNIT.



DETAIL C

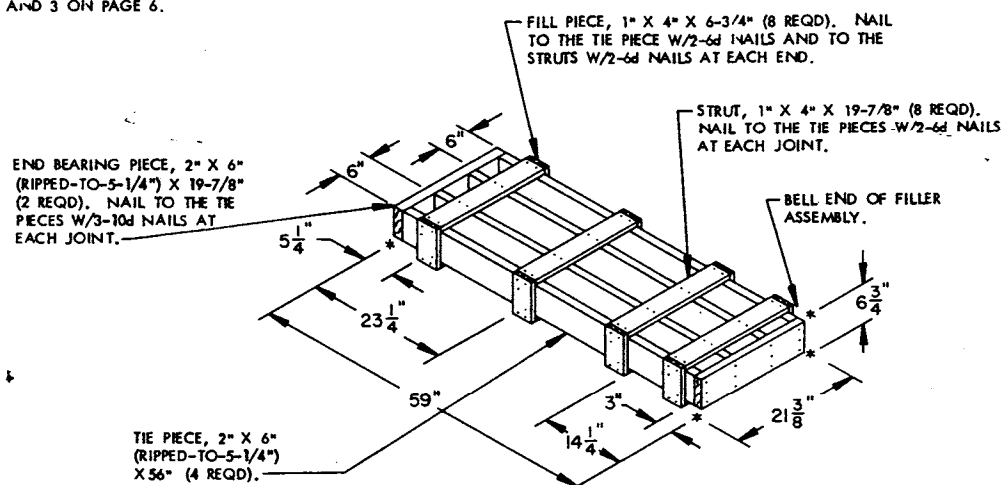
THIS DETAIL DEPICTS PROCEDURES TO BE USED WHEN A STANDARD PALLET UNIT MINUS FIVE CONTAINERS IS TO BE UNITIZED. THE FILLER ASSEMBLIES DEPICTED MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYERS OF THE PALLET UNIT.

FILLER (1 REQD). SEE THE "FILLER A" DETAIL ON PAGE 7 AND SPECIAL NOTE 2 ABOVE.



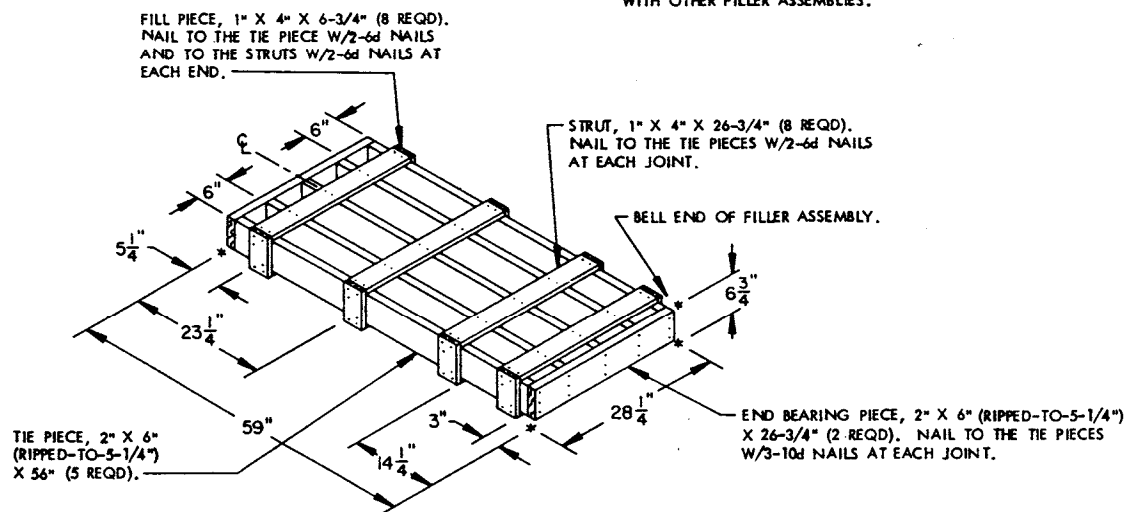
**FILLER A**

THIS FILLER ASSEMBLY IS TO BE USED WHEN ONE OR TWO CONTAINERS ARE TO BE OMITTED FROM A PALLET UNIT, OR IN COMBINATION WITH OTHER FILLER ASSEMBLIES. SEE SPECIAL NOTE 2 AND 3 ON PAGE 6.



**FILLER B**

THIS FILLER ASSEMBLY IS TO BE USED WHEN THREE CONTAINERS ARE TO BE OMITTED FROM A PALLET UNIT, OR IN COMBINATION WITH OTHER FILLER ASSEMBLIES.



**FILLER C**

THIS FILLER ASSEMBLY IS TO BE USED WHEN FOUR CONTAINERS ARE TO BE OMITTED FROM A PALLET UNIT, OR IN COMBINATION WITH A "FILLER A" ASSEMBLY.