

# APPENDIX IO

## UNITIZATION PROCEDURES FOR BOXED AMMUNITION AND COMPONENTS ON 4-WAY ENTRY PALLETS

CARTRIDGE, 9MM, PACKED 3,840 PER WOODEN  
BOX, UNITIZED 32 BOXES PER 35" X 45 1/2"  
PALLET; APPROX BOX SIZE 16 3/4" L X 8 1/2" W X  
11" H

PALLET UNIT DATA						
ITEMS INCLUDED		HAZARD CLASSIFICATION				WEIGHT (LBS)
NSN	DODIC	DOT CLASS	CG CLASS	OD CLASS	COMP GROUP	
1305-00- 308-5810	A360	C	I	1.4	S	3,779

NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST  
BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION  
PROCEDURES DRAWING 19-48-4116-20PA1002.

REVISIONS				DRAFTSMAN <i>J. H. Mink</i>	PROJ ENG <i>B. J. New</i>
				CHECKER <i>GRS</i>	LOC ENGINE OFFICE <i>J. H. Mink</i>
APPROVED, U. S. ARMY ARMAMENT MATERIEL READINESS COMMAND					
<i>W. H. Benton</i>					
APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND (DARCOM)					
<i>John X. Byrd</i>					
U. S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL					
U. S. ARMY DARCOM DRAWING					
MAY 1980					
CLASS	DIVISION	DRAWING	FILE		
19	48	4116/10	20PA 1002		

**DO NOT SCALE**

SEAL FOR 3/4" STRAPPING (8 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.

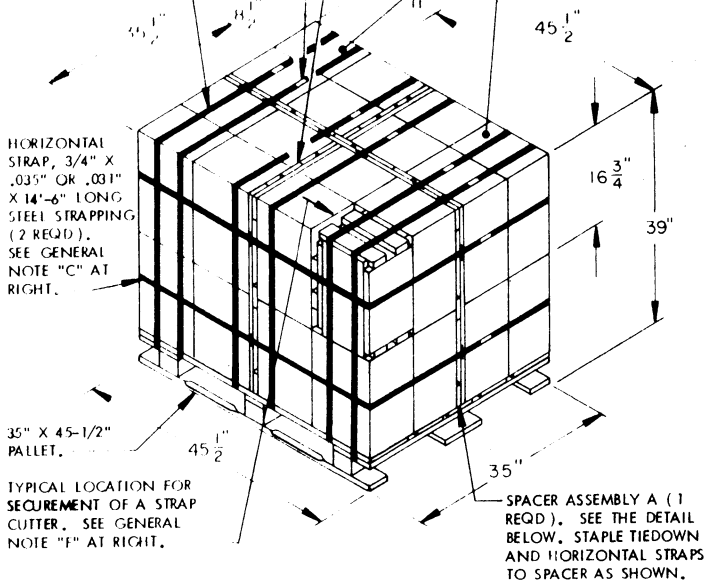
TIEDOWN STRAP, 3/4" X .035" OR .031" X 12'-2" LONG STEEL STRAPPING (6 REQD). SEE GENERAL NOTE "D" AT RIGHT.

HORIZONTAL STRAP, 3/4" X .035" OR .031" X 14'-6" LONG STEEL STRAPPING (2 REQD). SEE GENERAL NOTE "C" AT RIGHT.

TYPICAL LOCATION FOR SECUREMENT OF A STRAP CUTTER. SEE GENERAL NOTE "F" AT RIGHT.

SPACER ASSEMBLY B (2 REQD). SEE THE DETAIL BELOW. STAPLE HORIZONTAL STRAP TO SPACER ON EACH LAYER.

TOP CLEATS ON THE BOXES IN THE OUTSIDE STACKS WILL BE TURNED INWARD.



**PALLET UNIT**

SEE GENERAL NOTE "B" AT RIGHT.

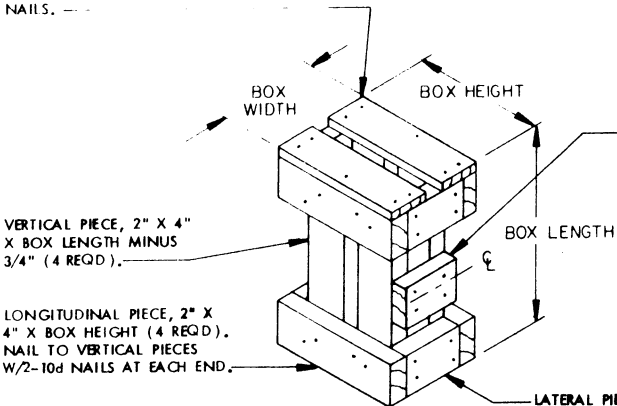
32 BOXES OF 9MM CARTRIDGE (3,840 PER BOX) @ 115 LBS	---	3,680 LBS (APPROX)
DUNNAGE	---	34 LBS
PALLET	---	65 LBS

TOTAL WEIGHT	---	3,779 LBS (APPROX)
CUBE	---	36.5 CU FT (APPROX)

**BILL OF MATERIAL**

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	37.96	12.65
NAILS	NO. REQD	POUNDS
6d (2")	48	0.28
PALLET, 35" X 45-1/2"	1 REQD	65 LBS
STEEL STRAPPING, 3/4"	104.50 REQD	7.46 LBS
SEAL FOR 3/4" STRAPPING	8 REQD	NIL
STAPLE	14 REQD	NIL

TIE PIECE, 1" X 4" X BOX HEIGHT (2 REQD). NAIL TO LATERAL PIECES W/1-6d NAIL AT EACH END AND TO LONGITUDINAL PIECE W/3-6d NAILS.



**FILLER ASSEMBLY**  
(FOR MINUS ONE BOX)

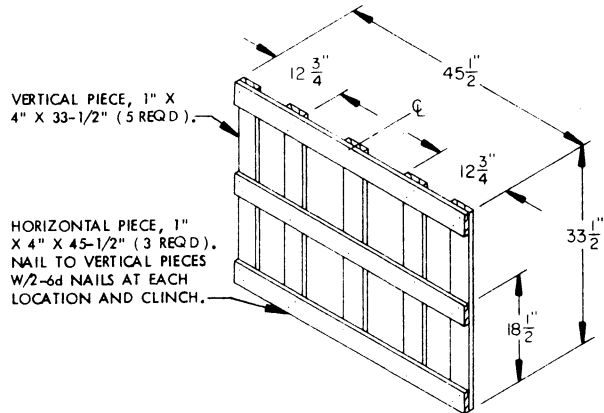
STRAP BEARING PIECE, 2" X 4" BY BOX WIDTH MINUS 3" (AS REQD). NAIL TO VERTICAL PIECES W/2-10d NAILS AT EACH END. NOTE: WHEN A UNIT HAS MORE THAN EIGHT (8) BOXES OMITTED, THE FILLER ASSEMBLY OR ASSEMBLIES LOCATED AT THE OUTER EDGE OF THE UNIT WILL REQUIRE A "STRAP BEARING PIECE" POSITIONED UNDER THE HORIZONTAL STRAP. STAPLE STRAP TO THE "STRAP BEARING PIECE".

LATERAL PIECE, 2" X 4" X BOX WIDTH MINUS 3" (4 REQD). NAIL TO VERTICAL PIECES W/2-10d NAILS AT EACH END.

**GENERAL NOTES**

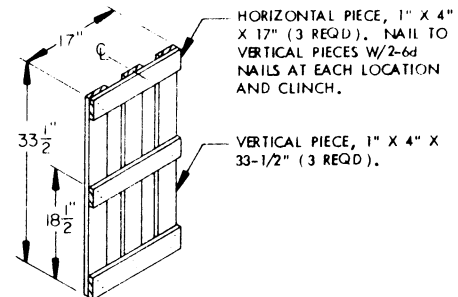
- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4116-20PA1002. TO PRODUCE AN APPROVED UNIT LOAD, ALL PERTINENT PROCEDURES, SPECIFICATIONS AND CRITERIA SET FORTH WITHIN THE BASIC DRAWING WILL APPLY TO THE PROCEDURES DELINEATED IN THIS APPENDIX.
- B. DIMENSIONS, CUBE AND WEIGHT OF A PALLET UNIT WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE BOXES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- C. INSTALL EACH HORIZONTAL STRAP TO ENCIRCLE EACH LAYER OF BOXES ON THE PALLET. HORIZONTAL STRAPS MUST BE TENSIONED AND SEALED PRIOR TO APPLICATION OF TIEDOWN STRAPS.
- D. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE DECK/STRINGER BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN. TIEDOWN STRAPS WILL NOT BE APPLIED UNTIL THE HORIZONTAL STRAPS HAVE BEEN TENSIONED AND SEALED.
- E. THE FOLLOWING DARCOM DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.
 

CARLOADING	-----	DRAWING 19-48-4115-5PA1002
TRUCK LOADING	-----	DRAWING 19-48-4117-11PA1003
STORAGE	-----	DRAWING 19-48-4118-1-2-14-22PA1002
- F. FOR METHOD OF SECURING A STRAP CUTTER TO THE PALLET UNIT, SEE DARCOM DRAWING 19-48-4127-20P1000.
- G. IF ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS APPENDIX, THE BOXES NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS APPENDIX.
- H. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING 9MM CARTRIDGES WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS SHOWN ON THE TITLE PAGE, PROVIDED THE BOX PACK DOES NOT VARY FROM WHAT IS DELINEATED HEREIN. THE EXPLOSIVE CLASSIFICATION OF OTHER ITEMS MAY BE DIFFERENT THAN WHAT IS SHOWN.



**SPACER ASSEMBLY A**

(1 REQD)



**SPACER ASSEMBLY B**

(2 REQD)