

APPENDIX 22

UNITIZATION PROCEDURES FOR PROPELLING CHARGES PACKED IN CYLINDRICAL METAL CONTAINERS ON 4-WAY ENTRY PALLETS

PA103 SERIES CONTAINER

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NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4042A-20PM1001.

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	OCTOBER 1983		
	CLASS	DIVISION	DRAWING
REVISION NO. 4	OCTOBER 1996	19	48
SEE THE REVISION LISTING ON PAGE 2		4042A/ 22	20PM 1001

DO NOT SCALE

PALLET UNIT DATA				
ITEMS INCLUDED		HAZARD CLASS AND DIVISION ●		APPROX WEIGHT LBS
NSN	DODIC	OD CLASS	COMP GROUP	
1320-01-202-8938	D532	1.3	C	1,370

● 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).

REVISIONS

REVISION NO. 1, DATED OCTOBER 1985, CONSISTS OF:

1. ADDING ITEM BY NATIONAL STOCK NUMBER TO PALLET UNIT DATA CHART.
2. CHANGING UNIT WEIGHT.

REVISION NO. 2, DATED OCTOBER 1987, CONSISTS OF:

1. ADDING ITEM BY NATIONAL STOCK NUMBER TO PALLET UNIT DATA CHART.
2. ADDING DATA TO PALLET UNIT DATA CHART.

REVISION NO. 3, DATED SEPTEMBER 1989, CONSISTS OF:

1. DECREASING PALLET UNIT BY TWO LAYERS OF CONTAINERS.
2. DELETING ITEM BY NATIONAL STOCK NUMBER FROM PALLET UNIT DATA CHART.
3. CHANGING WEIGHT FOR NSN IN PALLET UNIT DATA CHART.
4. CHANGING SPECIAL NOTE 3 AND DELETING SPECIAL NOTE 4.

REVISION NO. 4, DATED OCTOBER 1996, CONSISTS OF:

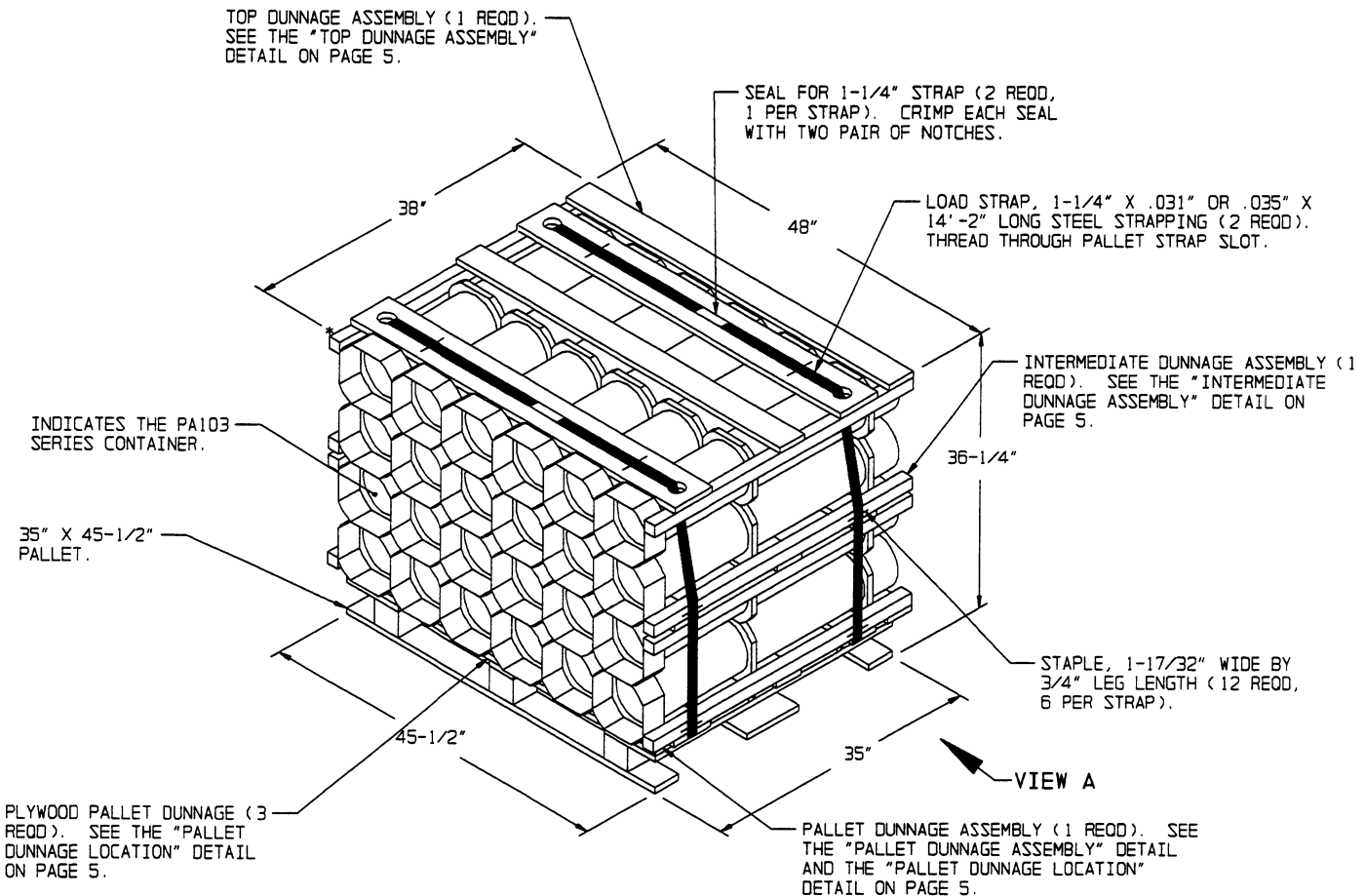
1. CHANGING GENERAL NOTE "C".
2. UPDATING TO CURRENT STANDARDS.
3. CHANGING DUNNAGE WIDTH.
4. ADDING SPECIAL NOTE 4.

GENERAL NOTES

- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZING PROCEDURES DRAWING 19-48-4042A-20PM1001. 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 CONTAINER, WEIGHT OF THE SPECIFIC ITEM, AND METHOD OF UNITIZATION.
- C. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.

BOXCAR - - - - - 19-48-4042B/21-5PM1000
STORAGE - - - - - 19-48-4145/14-1-3-4-14-22PM1003
VAN TRAILER - - - - - 19-48-4042C/21-11PM1000
END OPENING ISO
CONTAINER - - - - - 19-48-4154/22-15PM1002
MILVAN - - - - - 19-48-4106-15PM1001
SIDE OPENING ISO
CONTAINER - - - - - 19-48-4264/22-15PM1003
- D. IF ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS APPENDIX, THE CONTAINERS NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS APPENDIX.
- E. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING PROPELLING CHARGES WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN THOSE SHOWN ON PAGE 2, PROVIDED THE ITEM IS PACKED IN THE PA103 SERIES CONTAINER. THE EXPLOSIVE CLASSIFICATION OF OTHER ITEMS MAY BE DIFFERENT THAN THOSE SHOWN.
- F. FOR DETAILS OF THE PA103 SERIES CONTAINER, SEE US ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER, DRAWING NO. 9349398.

CONTAINER DIMENSIONS - 38" LONG BY 7-1/2" WIDE BY 7-1/2" HIGH.
CONTAINER CUBE - - - - - 1.24 CUBIC FEET.
CONTAINER WEIGHT (WITH CHARGE) - - - 54 LBS (APPROX).
- G. IF DEEMED MORE ECONOMICAL FOR SHIPPING AND STORAGE BY THE RESPONSIBLE COMMAND, THE UNIT DEPICTED ON THE FOLLOWING PAGES MAY BE INCREASED BY ONE OR TWO COMPLETE LAYERS OF CONTAINERS. FOR FURTHER UNITIZATION GUIDANCE, SEE SPECIAL NOTE 3 ON PAGE 4.
- H. THE STYLE 1A PALLET DELINEATED IN THE VIEW ON PAGE 4 NEED NOT HAVE CHAMFERS AS SPECIFIED WITHIN MILITARY SPECIFICATION MIL-P-15011 WHEN USED FOR THE UNITIZATION OF THE ITEMS COVERED BY THIS APPENDIX.



ISOMETRIC VIEW

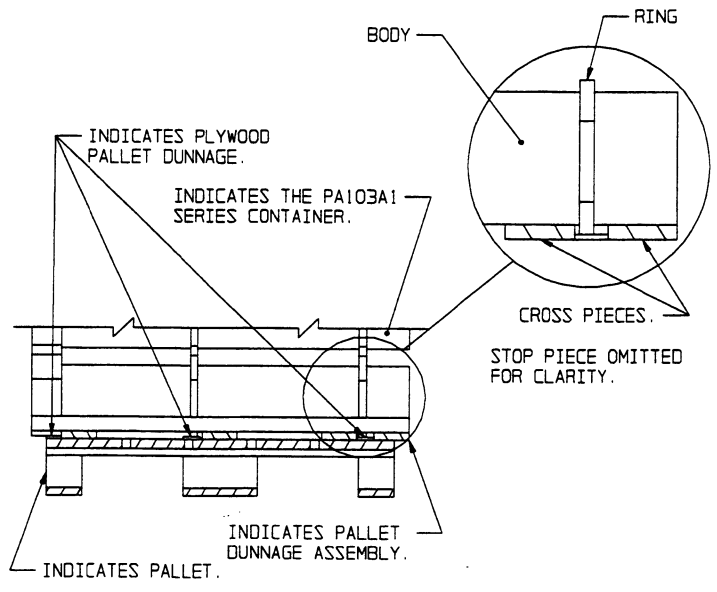
UNIT DATA

WEIGHT

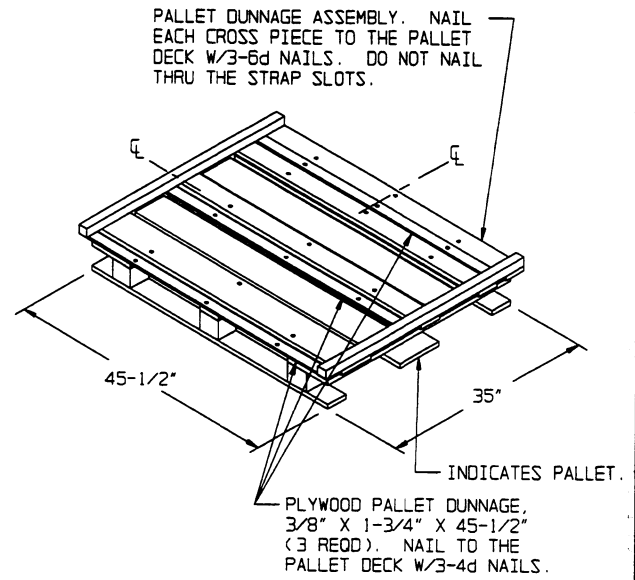
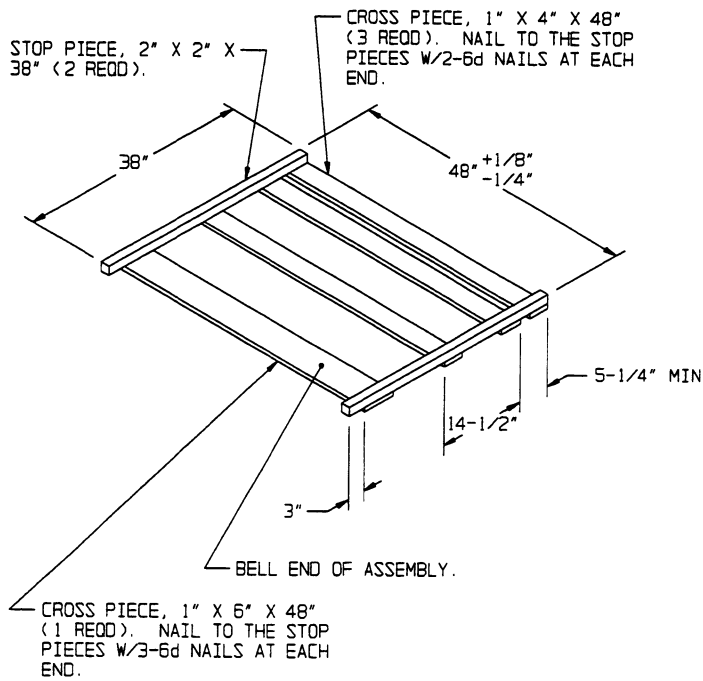
CUBE	---	---	-38.3 CUBIC FEET (APPROX)
CONTAINER, PA103 SERIES	---	24 EACH AT 52 LBS	1,248 LBS (APPROX)
DUNNAGE	---		57 LBS
PALLET	---		65 LBS
TOTAL WEIGHT			1,370 LBS (APPROX)

SPECIAL NOTES:

1. DIMENSIONS GIVEN FOR DUNNAGE PIECES OR DUNNAGE ASSEMBLIES WILL BE FIELD CHECKED PRIOR TO THEIR ASSEMBLY TO THE PALLET UNIT. CONTAINERS MUST FIT SNUGLY IN THE DUNNAGE ASSEMBLIES. ALSO, DUE TO THE VARIATION OF THE CONTAINER DIMENSIONS, ADJUSTMENTS MAY BE REQUIRED AS TO THE LOCATION OF CERTAIN PIECES OF DUNNAGE IN A DUNNAGE ASSEMBLY.
2. ALTHOUGH THE PROPELLING CHARGE CONTAINERS DEPICTED IN THE UNIT LOAD ABOVE ARE CONSTRUCTED WITH INTERLOCKING DEVICES, THE INTERLOCKS WILL NOT FUNCTION PROPERLY UNLESS THE CONTAINERS ARE POSITIONED SO THAT THE "PINS" OF THE INTERLOCKS ARE IN AN UPRIGHT ORIENTATION. THIS ORIENTATION WILL PRECLUDE INTERFERENCE OF THE "PINS" AND THE PLYWOOD PALLET DUNNAGE AND WILL AID IN THE PREVENTION OF CONTAINER MOVEMENT, BOTH Laterally AND LONGITUDINALLY, DURING SHIPMENT OF THE UNIT LOAD.
3. THE UNIT LOAD DEPICTED ABOVE MAY BE INCREASED BY ONE OR TWO LAYERS WHEN DEEMED ADVANTAGEOUS FOR A CERTAIN MODE OF TRANSPORTATION. IN THIS EVENT, A SECOND "INTERMEDIATE DUNNAGE ASSEMBLY" MUST BE ADDED AND THE LOAD STRAP LENGTHS MUST BE INCREASED. THE DECISION TO INCREASE THE LOAD BY ONE OR TWO LAYERS WILL BE MADE BY THE RESPONSIBLE COMMAND AND WILL BE BASED ON THE ECONOMICS OF TRANSPORTATION AND HANDLING.
4. THE DUNNAGE ASSEMBLIES AID IN PREVENTING MOVEMENT BY CAPTURING THE BELL END AND CONTAINER RINGS. THE BODY OF THE CONTAINER SHOULD REST ON THE CROSS PIECES. THE BELL END AND RINGS SHOULD REST BESIDE AND BETWEEN THE CROSS PIECES AS SHOWN IN PARTIAL VIEW A AND THE ISOMETRIC VIEW ON THIS PAGE.



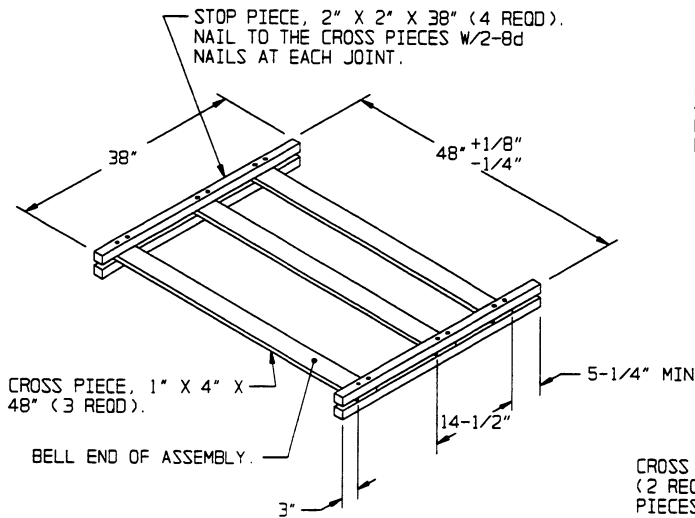
PARTIAL VIEW A



PALLET DUNNAGE LOCATION

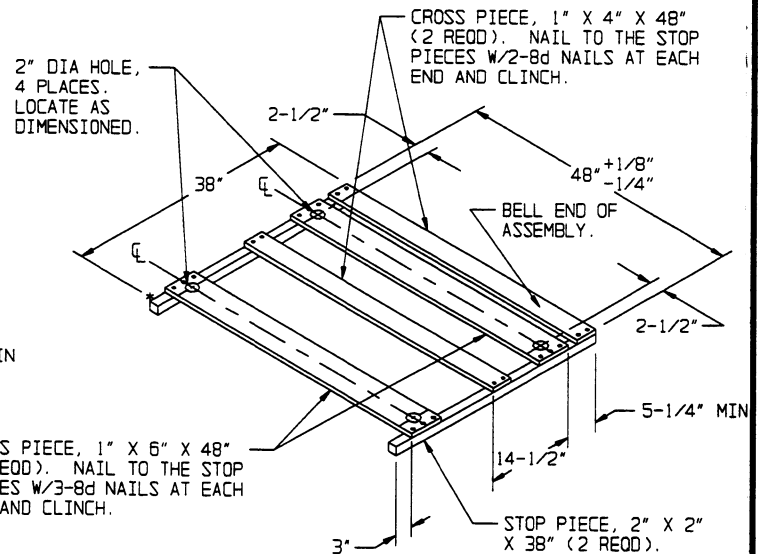
PALLET DUNNAGE ASSEMBLY

(1 REOD)



INTERMEDIATE DUNNAGE ASSEMBLY

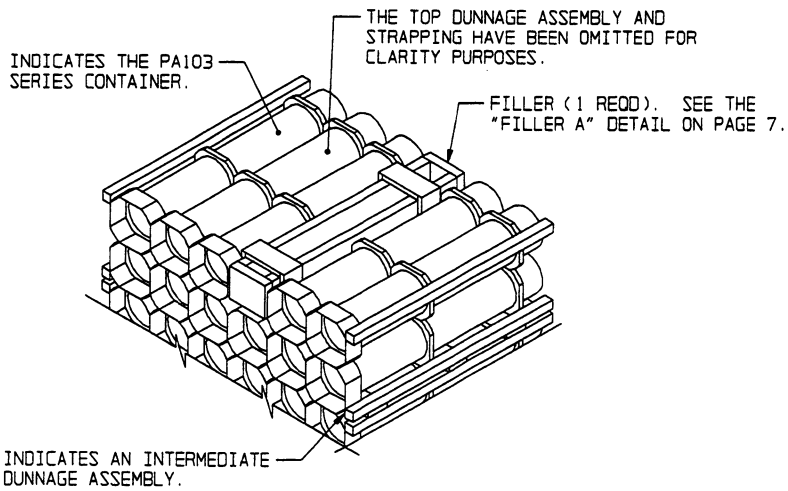
(1 REOD)



TOP DUNNAGE ASSEMBLY

(1 REOD)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	32.00	10.67
1" X 6"	12.00	6.00
2" X 2"	25.33	8.44
NAILS	NO. REOD	POUNDS
4d (1-1/2")	9	0.03
6d (2")	30	0.18
8d (2-1/2")	44	0.46
PALLET, 35" X 45-1/2"	1 REOD	65 LBS
STEEL STRAPPING, 1-1/4"	28.33' REOD	4.05 LBS
SEAL FOR 1-1/4" STRAPPING	2 REOD	NIL
STAPLE, 1-17/32 X 3/4"	12 REOD	NIL
PLYWOOD, 3/8"	1.66 SQ FT REOD	1.71 LBS

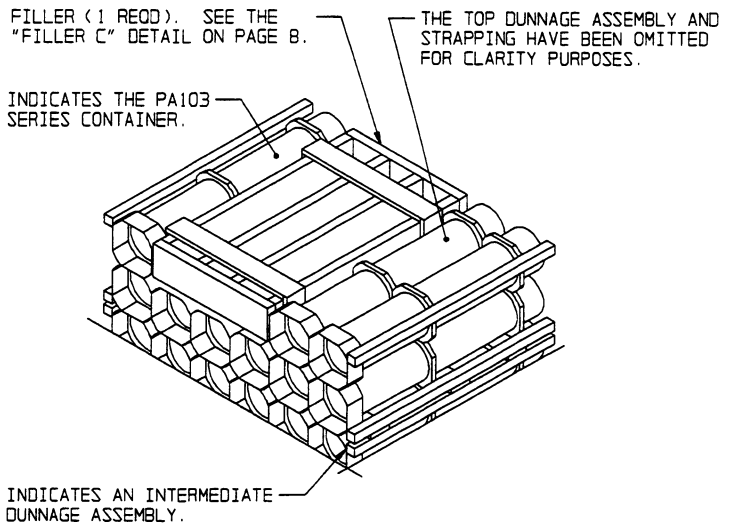


DETAIL A

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.

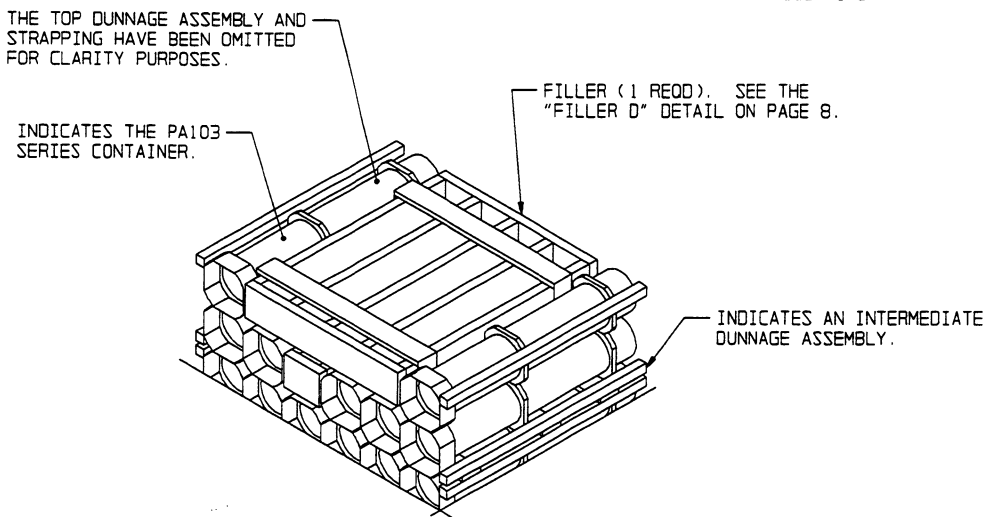
SPECIAL NOTES

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. THE OVERALL HEIGHT OF THE FILLER ASSEMBLIES DEPICTED ON PAGE 7 MUST BE REDUCED FROM 7-1/4" TO 6-1/2" WHEN INSTALLED BETWEEN A TOP DUNNAGE ASSEMBLY AND AN INTERMEDIATE DUNNAGE ASSEMBLY OR BETWEEN ANOTHER FILLER ASSEMBLY AND AN INTERMEDIATE DUNNAGE ASSEMBLY.



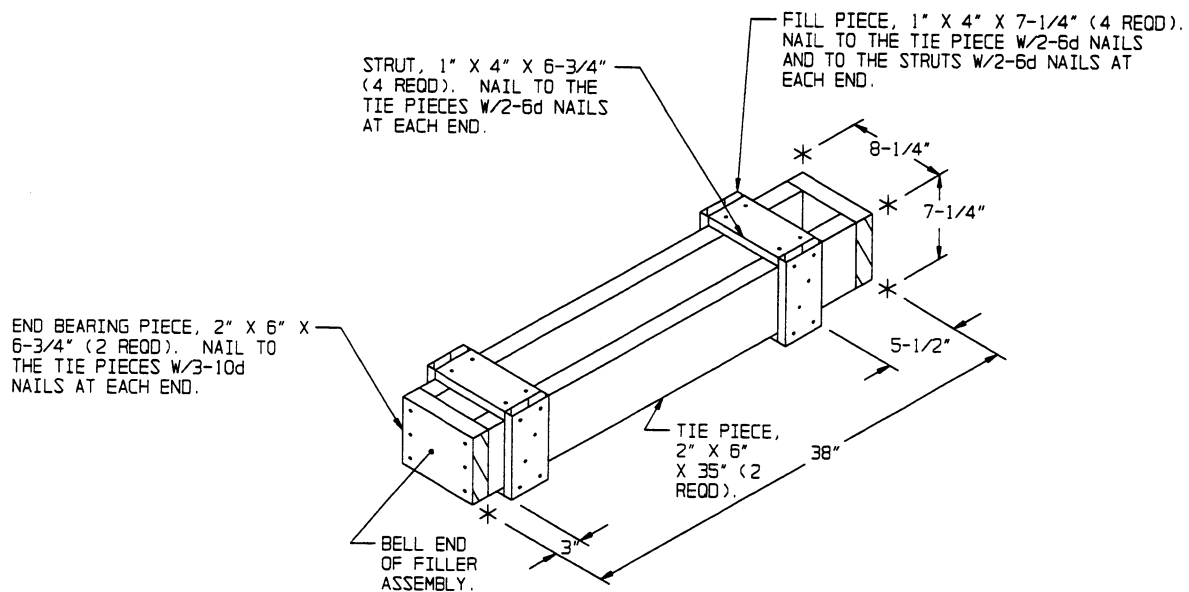
DETAIL B

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



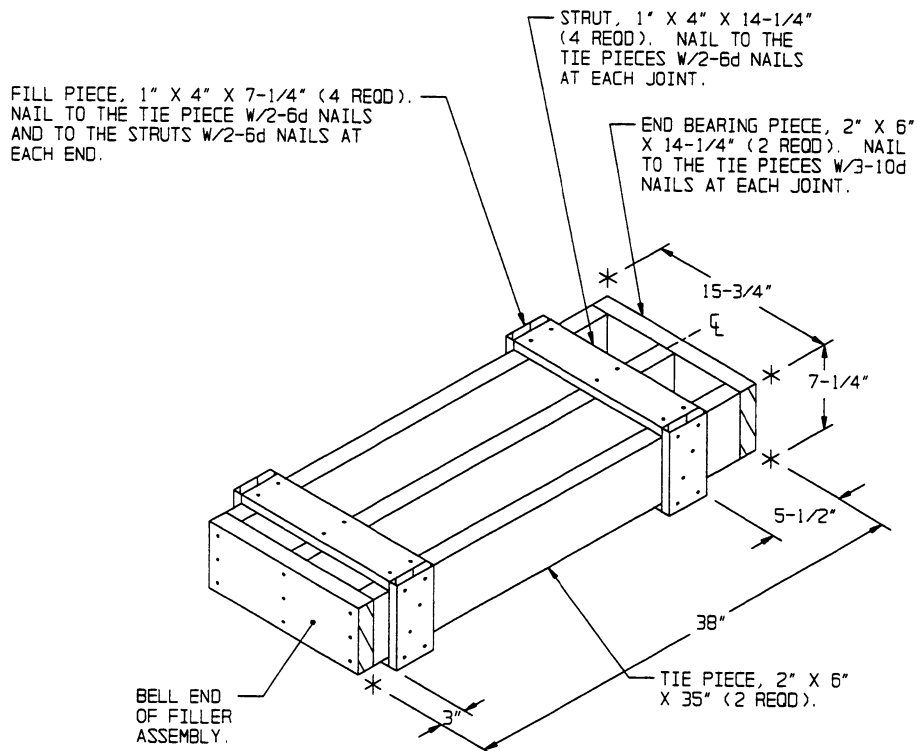
DETAIL C

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



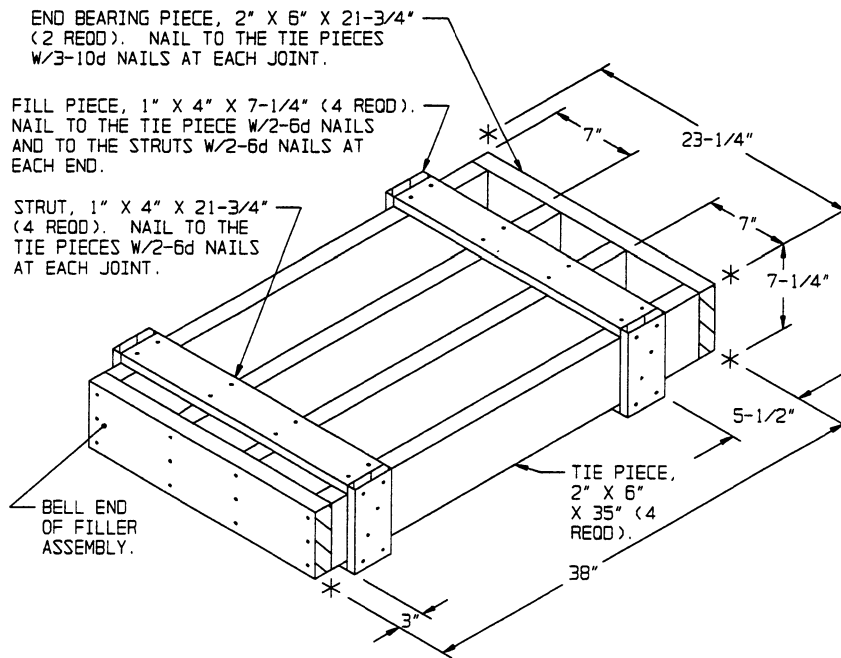
FILLER A

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



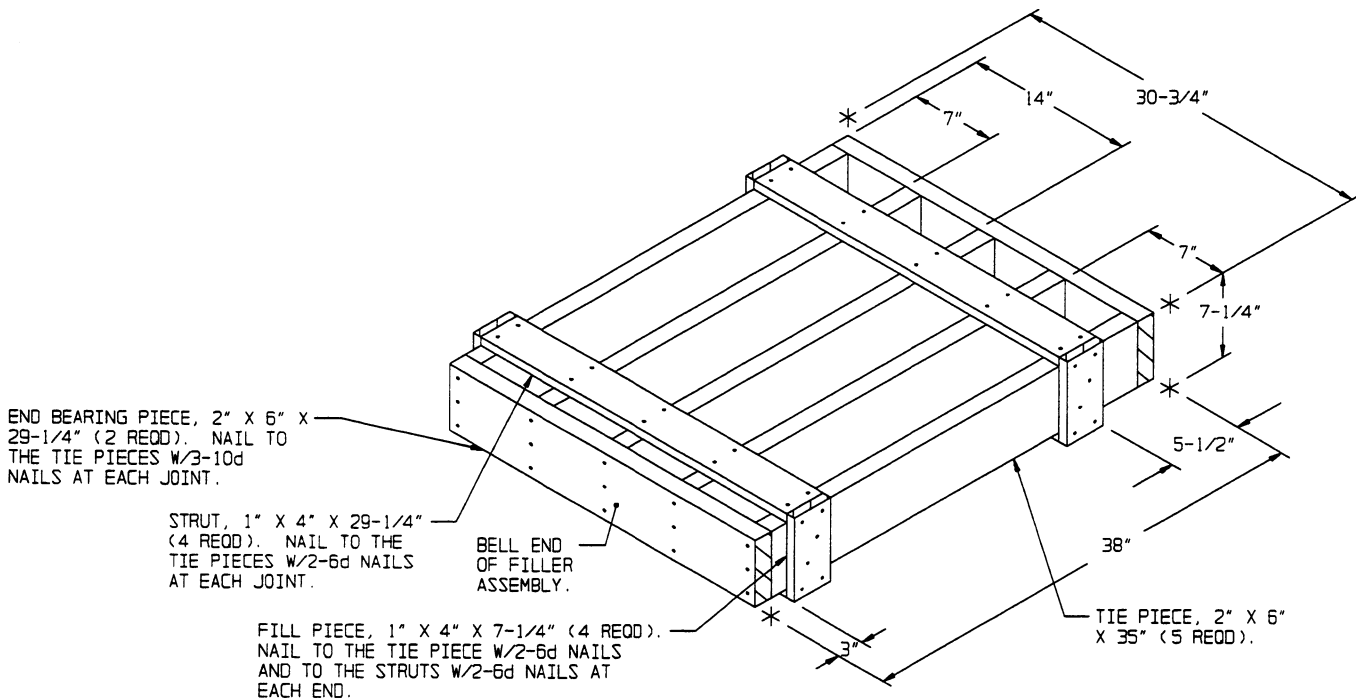
FILLER B

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



FILLER D

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