
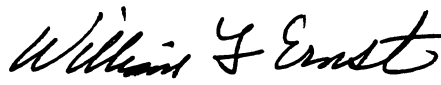


JAVELIN

UNITIZATION PROCEDURES FOR JAVELIN MISSILE PACKED ONE PER METAL CONTAINER, UNITIZED 6 CONTAINERS PER 4-WAY ENTRY PALLET

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U.S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U.S. ARMY MISSILE COMMAND 	DRAFTSMAN	BETTY J. KUNDERT	
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APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND 	LOGISTICS ENGINEERING OFFICE		
	<i>Ernst W. Ernst</i>		
JULY 1994			
REVISION NO. 2	MAY 1996	CLASS	DIVISION
		DRAWING	FILE
		19	48
SEE THE REVISION LISTING ON PAGE 2		5266	GM20JV1

DO NOT SCALE

GENERAL NOTES

(GENERAL NOTES CONTINUED)

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5) AND CONFORMS TO MIL-STD-1660.
- B. DIMENSIONS, CUBE AND WEIGHT OF A PALLET UNIT WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE CONTAINER AND THE SPECIFIC ITEM BEING UNITIZED.
- C. FOR DETAILS OF THE JAVELIN MISSILE ROUND SHIPPING CONTAINER, SEE U.S. ARMY MISSILE COMMAND DRAWING NO. 13305300.
 CONTAINER DIMENSIONS - - - 59-1/4" LONG X 15-1/4" WIDE
 X 15" HIGH
 GROSS WEIGHT OF CONTAINER
 WITH ITEM - - - - - 70 LBS (APPROX)
- D. CAUTION: THIS ITEM IS IN A "PROPULSIVE STATE" AND MUST BE LOADED ON THE PALLET WITH THE FORWARD END (FWD) OF ALL CONTAINERS FACING IN ONE DIRECTION.
- E. IN ORDER TO OBTAIN COMPACT (SOUND) UNITS, ALL STRAPS SHALL BE LOCATED IN PROPER ALIGNMENT AND TENSIONED UNTIL THEY CUT INTO THE EDGE OF THE PALLET DECK AND DUNNAGE ASSEMBLY. AFTER TENSIONING, ALL STRAPS WILL BE SECURED USING ONE SEAL AND TWO PAIR OF NOTCHES PER SEAL.
- F. WHEN APPLYING ANY STRAP, CARE MUST BE EXERCISED TO ASSURE THAT THE END OF THE STRAP ON THE UNDERSIDE OF THE JOINT EXTENDS AT LEAST 6" BEYOND THE SEAL. THIS EXTRA MINIMUM LENGTH OF THE STRAP IS REQUIRED TO PERMIT SUBSEQUENT TIGHTENING OF LOOSENED STRAPPING. RETENSIONING CAN BE ACCOMPLISHED WITHOUT REPLACING STRAPPING OR SPLICING STRAPPING THROUGH THE USE OF A FEEDWHEEL TENSIONING TOOL, MANUAL OR PNEUMATIC, AND THE APPLICATION OF ONE ADDITIONAL SEAL.
- G. FILLER ASSEMBLIES WILL BE USED IN PLACE OF OMITTED CONTAINERS WHEN PALLETIZING LESS THAN SIX JAVELIN MISSILES. FILLER ASSEMBLIES MUST BE INSTALLED IN THE MIDDLE OF THE LAYER(S) OF CONTAINERS. IF THREE FULL CONTAINERS ARE TO BE OMITTED, ONE FULL LAYER OF CONTAINERS WILL BE OMITTED.
- H. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4MM, AND ONE POUND EQUALS 0.454 KG.
- J. IF STRAP CUTTERS ARE SPECIFICALLY REQUIRED BY THE PROCURING ACTIVITY, REFER TO DARCOM DRAWING 19-48-4127-20P1000 FOR APPROPRIATE MEANS OF SECUREMENT TO THE PALLET UNIT.
- K. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECK BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN.

(CONTINUED AT RIGHT)

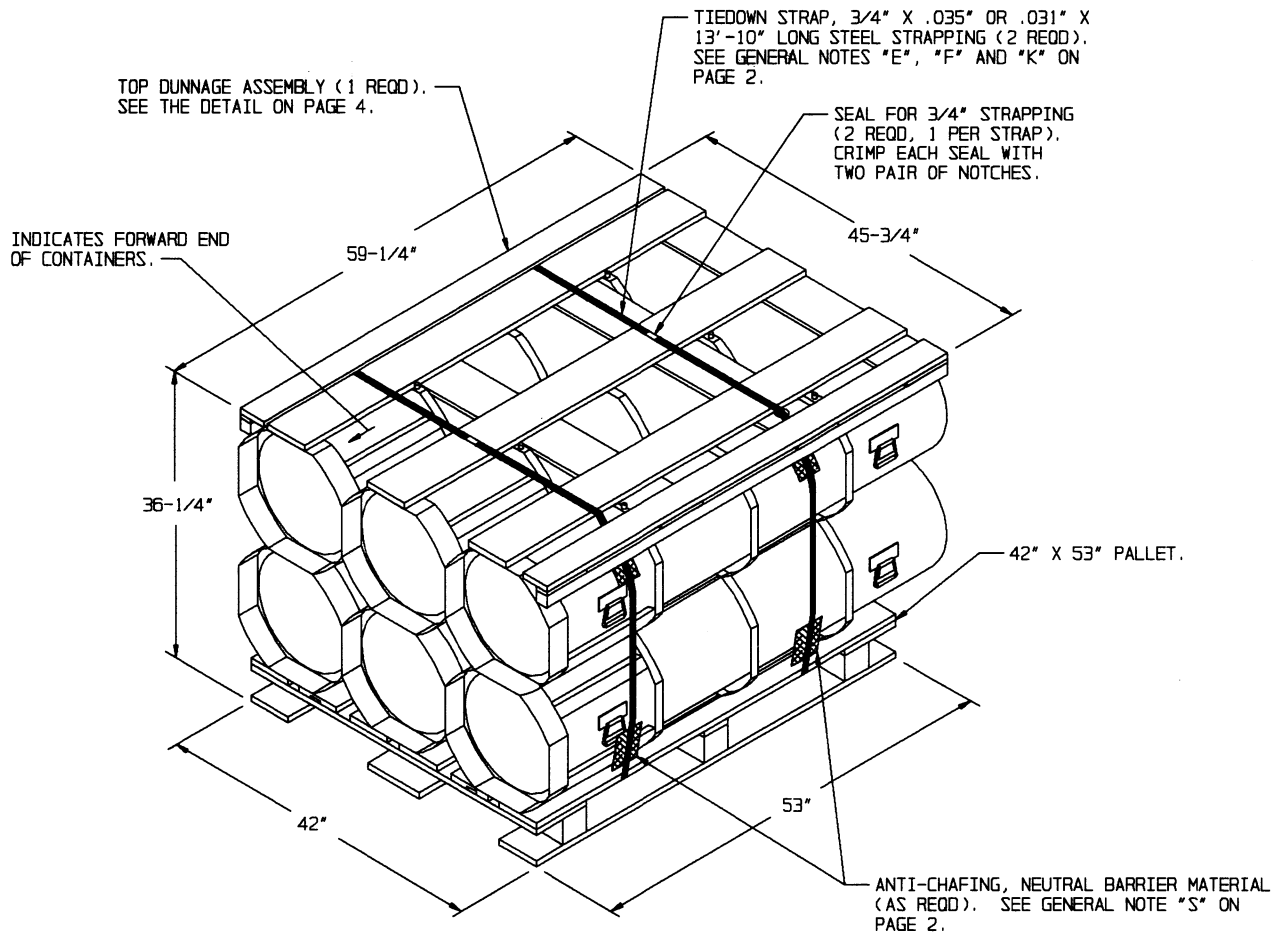
- L. ALTHOUGH THE CONTAINERS DEPICTED IN THE UNIT LOAD ON PAGE 3 ARE CONSTRUCTED WITH INTERLOCKING DEVICES, THE INTERLOCKS WILL NOT FUNCTION PROPERLY UNLESS THE CONTAINERS ARE POSITIONED SO THAT THE PINS OF THE INTERLOCKS ARE FACING UPWARD. THIS ORIENTATION WILL AID IN THE PREVENTION OF CONTAINER MOVEMENT, BOTH Laterally AND LONGITUDINALLY, DURING SHIPMENT OF THE UNIT LOAD.
- M. DIMENSIONAL LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE, UNLESS OTHERWISE SPECIFIED. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.
- N. A PLUS OR MINUS 1/4" IS ALLOWED ON OVERALL DIMENSIONS OF ANY DUNNAGE ASSEMBLY. HOWEVER, SIMILAR PIECES IN AN ASSEMBLY MUST BE WITHIN 1/8" OF THE SAME DIMENSION.
- O. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.
 CARLOADING - - - - 19-48-5985-GM5JV1
 TRUCKLOADING - - - 19-48-5986-GM11JV1
 STORAGE - - - - - 19-48-5265-GM1-3-4-14-22JV1
 END OPENING ISO
 CONTAINER - - - - 19-48-5988-GM15JV2
 MILVAN - - - - - 19-48-5987-GM15JV1
 SIDE OPENING ISO
 CONTAINER - - - - 19-48-5988-GM15JV3
 TACTICAL VEHICLE - 19-48-5990-GM17JV1
- P. THE STYLE 1B PALLET DELINEATED IN THE DETAIL ON PAGE 3 NEED NOT HAVE CHAMFERS OR STRAP SLOTS AS SPECIFIED WITHIN MILITARY SPECIFICATION MIL-P-15011 WHEN USED FOR THE UNITIZATION OF JAVELIN MISSILES.
- Q. DIMENSIONS GIVEN FOR THE TOP DUNNAGE ASSEMBLY WILL BE FIELD CHECKED PRIOR TO ASSEMBLY. THIS GUIDANCE MUST BE APPLIED PRIOR TO BEGINNING A PALLETIZING OPERATION. ALSO, DUE TO VARIATIONS OF PACKAGE DIMENSIONS, ADJUSTMENTS MAY BE REQUIRED AS TO THE LOCATION OF CERTAIN PIECES ON DUNNAGE ASSEMBLIES. THE TOP DUNNAGE ASSEMBLY MUST NOT EXTEND BEYOND THE OUTER EDGE OF THE CONTAINERS.
- R. ALL WOODEN DUNNAGE USED IN UNIT LOADS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE PROCEDURES SPECIFIED IN MIL-B-2427 FOR CLEATED WOODEN BOXES. IF THE DUNNAGE CONSISTS OF MORE THAN ONE COMPONENT, IT MUST BE ASSEMBLED PRIOR TO TREATMENT. THE LETTERS PA DENOTING P056 (COPPER-8-QUINOLINOLATE), PB DENOTING M-GARD W550 (ZINC NAPHTHENATE EMULSIFIABLE) OR PC DENOTING M-GARD W510 OR CUNAPSOL 5 (COPPER NAPHTHENATE) MUST BE APPLIED TO THE WOOD DUNNAGE IN LETTERS AT LEAST ONE INCH HIGH.
- S. ANTI-CHAFING MATERIAL MUST BE INSTALLED AT POINTS OF CONTACT BETWEEN CONTAINERS, AND BETWEEN CONTAINERS AND STEEL STRAPPING, TO PREVENT CHAFING DAMAGE TO CONTAINER PAINT AND MARKINGS.
- T. STEEL STRAPPING MUST BE INSTALLED SO THAT CONTAINER MARKINGS OR CONTAINER HANDLES ARE NOT COVERED.

MATERIAL SPECIFICATIONS

- PALLET - - - - - : MIL SPEC MIL-P-15011; 4-WAY ENTRY, STYLE 1B, TYPE I, CLASS 1, PRESERVATIVE TREATED.
- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
- NAILS - - - - - : FED SPEC FF-N-105; COMMON.
- PLYWOOD - - - - - : COMMERCIAL ITEM DESCRIPTION A-A-55057, TYPE A, CONSTRUCTION AND INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.
- STRAPPING, STEEL - - : ASTM D3953; FLAT STRAPPING, TYPE 1 OR 2, HEAVY DUTY, FINISH B (GRADE 2), SIZE 3/4" X .035" OR .031".
- SEAL, STRAP - - - - : ASTM D3953; CLASS H, FINISH B (GRADE 2), STYLE I, II, OR IV.
- ANTI-CHAFING MATERIAL - - - - - : MIL-B-121 (OR EQUAL); NEUTRAL BARRIER MATERIAL.

REVISIONS

- REVISION NO. 1, DATED OCTOBER 1995, CONSISTS OF:
 1. MODIFYING THE TOP DUNNAGE ASSEMBLY.
- REVISION NO. 2, DATED MAY 1996, CONSISTS OF:
 1. SHIFTING CONTAINERS ON PALLET.
 2. MODIFYING TOP DUNNAGE ASSEMBLY.
 3. ELIMINATING TIEDOWN STRAP.
 4. ADDING GENERAL NOTES.



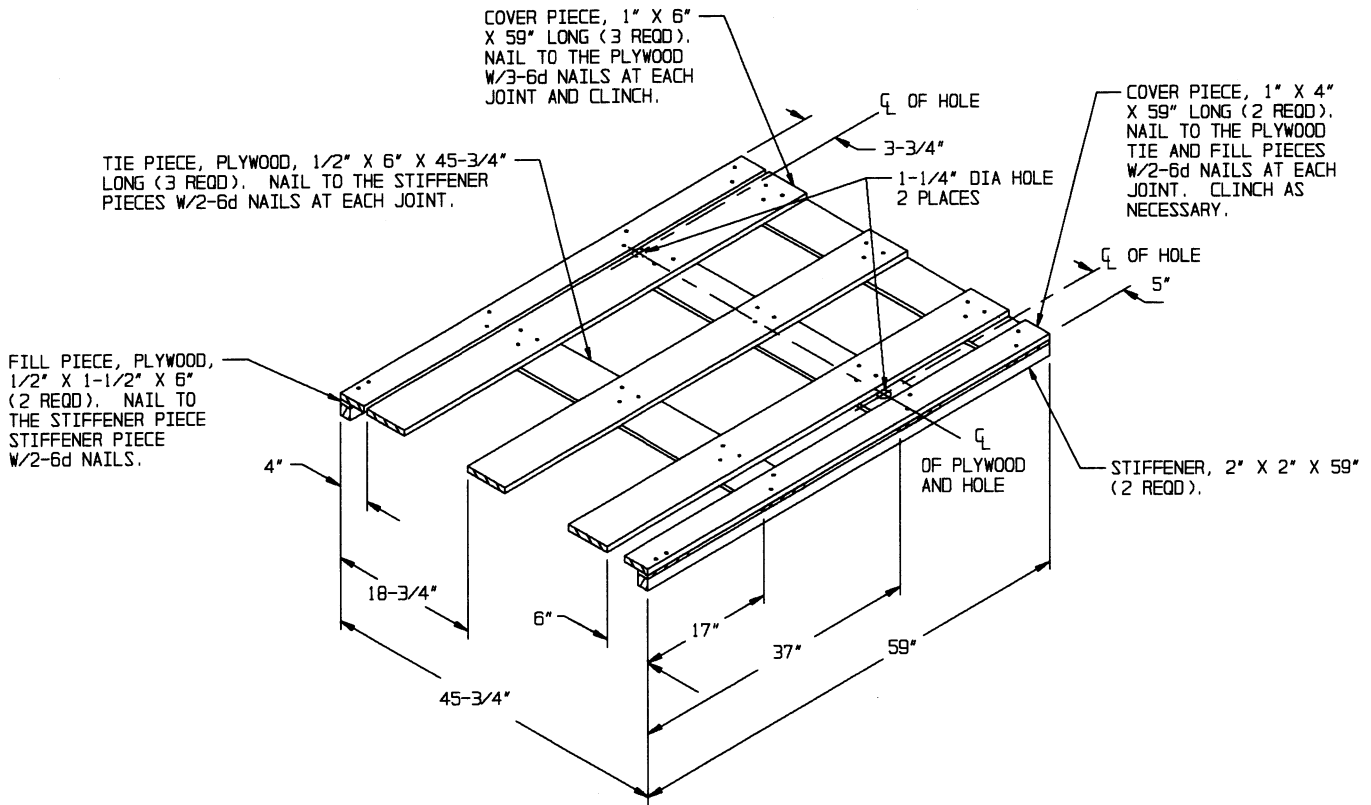
PALLET UNIT

SEE GENERAL NOTE "B" ON PAGE 2.

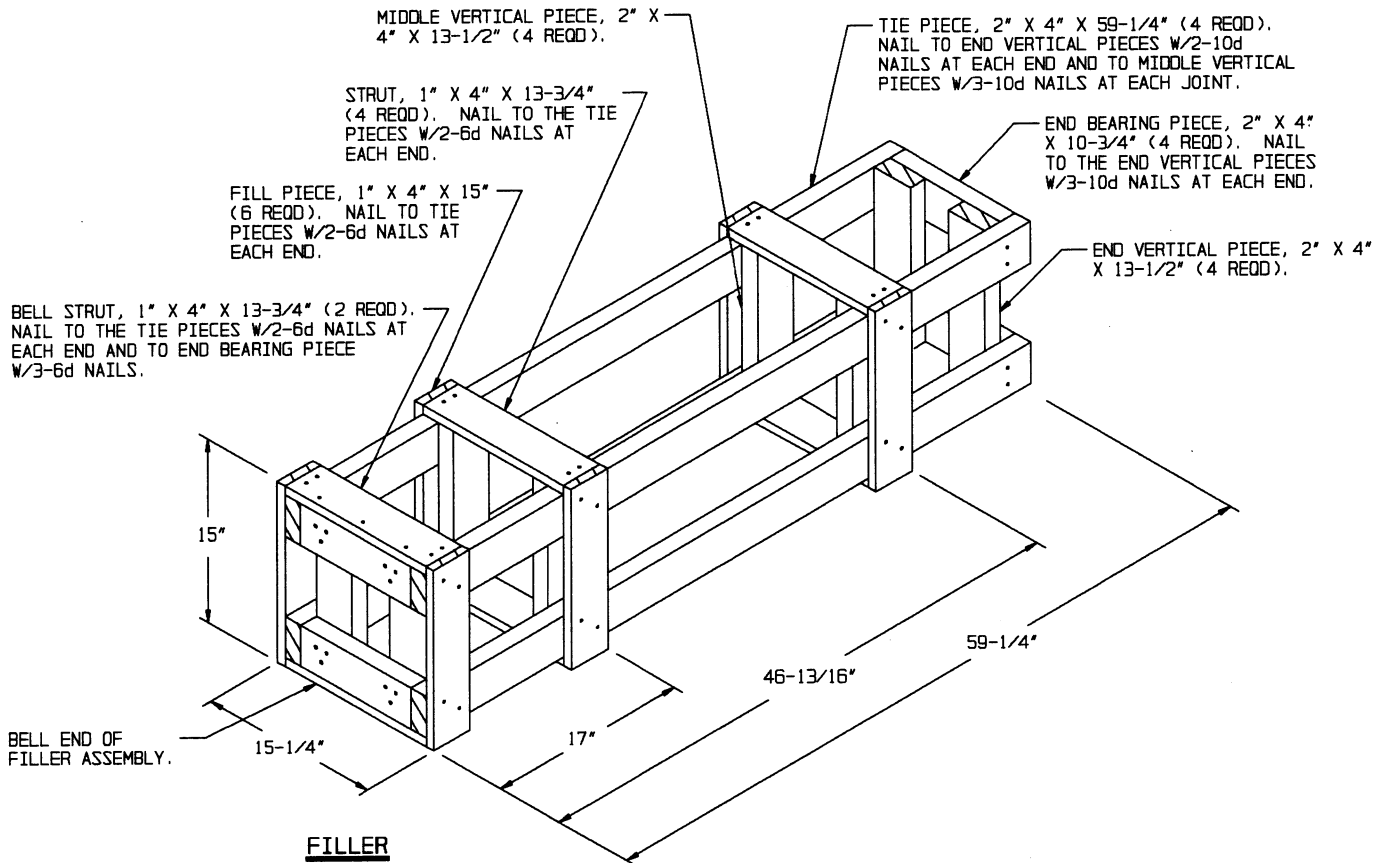
6 JAVELIN CONTAINERS @ 70 LBS	-----	420 LBS (APPROX)
DUNNAGE	-----	39 LBS
PALLET	-----	90 LBS

TOTAL WEIGHT	-----	549 LBS (APPROX)
CUBE	-----	56.9 CU FT (APPROX)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	9.84	3.28
1" X 6"	14.75	7.38
2" X 2"	9.84	3.28
NAILS	NO. REQD	POUNDS
6d	59	.35
PLYWOOD, 1/2"	5.84 SQ FT REQD	8.03 LBS
PALLET, 42" X 53"	1 REQD	90 LBS
STEEL STRAPPING, 3/4"	27.67' REQD	2.47 LBS
SEAL FOR 3/4" STRAPPING	2 REQD	NIL



TOP DUNNAGE ASSEMBLY



FILLER

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