JAVELIN

UNITIZATION PROCEDURES FOR GUIDED MISSILES PACKED ONE PER CYLINDRICAL PLASTIC CON-TAINER, UNITIZED SIX CONTAINERS PER 4-WAY ENTRY NATO PALLET

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ITEM GENERAL NOTES AND MATER PALLET UNIT DETAIL DETAILS TYPICAL FILLER ASSEMBLY LESS-THAN-FULL-PALLET-U					 		 	 4 	GE (S) 2 3 -6 5 6
DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE DISTRIBUTION IS UNLIMITED.									
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GENERAL NOTES

- 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. THESE PROCEDURES ARE ONLY APPLICABLE TO FMS ITEMS, AND ARE NOT TO BE USED FOR U.S. STOCKS.
- B. FOR DETAIL OF THE JAVELIN MISSILE ROUND SHIPPING CONTAINER, SEE MI-COM DRAWING NO. 13303015.

CONTAI NER	DIMENSIONS -	-										WIDE X STACKING)
CONTAI NER	GROSS WEIGHT	-	-	-	-	-	-	-	-	88 L	BS	(APPROX)
CONTAI NER	MAX WEIGHT -	-	-	-	-	-	-	-	-	96 L	BS	
CONTAI NER	CUBE	_	-	_	-	_	_	8.	84	CU	FΤ	(APPROX)

- C. <u>CAUTION</u>: THIS ITEM IS IN A "PROPULSIVE STATE" AND MUST BE LOADED ON THE PALLET WITH THE FORWARD END OF ALL CONTAINERS FACING IN ONE DIRECTION.
- D. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS DRAWING.

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TRUCK	(LOAD	I NG			-	-	-	-	-	-	-	-	1	9-48-	-599	6-GM	11JV2
																	22JV2
																	15JV5
																	15JV4
																	15JV6
																	A17Q6
TACTI	CAL	VEHI	CLE	Ξ -	-	-	-	-	-	-	-	-	1	9-48-	-821	8-GM	17JV2

- E. DIMENSIONS, CUBE AND WEIGHT OF A PALLET UNIT WILL VARY SLIGHTLY DE-PENDING UPON THE ACTUAL DIMENSIONS OF THE BOXES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- F. DIMENSIONAL LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAW-ING IS OF A NOMINAL SIZE, UNLESS OTHERWISE SPECIFIED. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.
- G. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCU-MENT 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.
- H. 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.
- J. WHEN ASSEMBLING A COMPLETE PALLET UNIT, CARE SHALL BE TAKEN TO ENSURE THAT THE CONTAINERS AND DUNNAGE ASSEMBLIES OR PIECES ARE EVENLY ALIGNED SO THAT THE SIDES AND ENDS OF THE PALLET UNIT DO NOT EXCEED A 1/2" TOLERANCE, RELATIVE TO THE PALLET.
- K. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECKBOARDS OF THE PALLET. NOTE THAT THE STRAPS WILL BE LOCATED AS SHOWN, THREADED THROUGH THE TOP CONTAINER HANDLES. STRAP ALIGNMENT MUST CONFORM WITH THE TOLERANCE STANDARDS SPECIFIED ON PAGE 5.

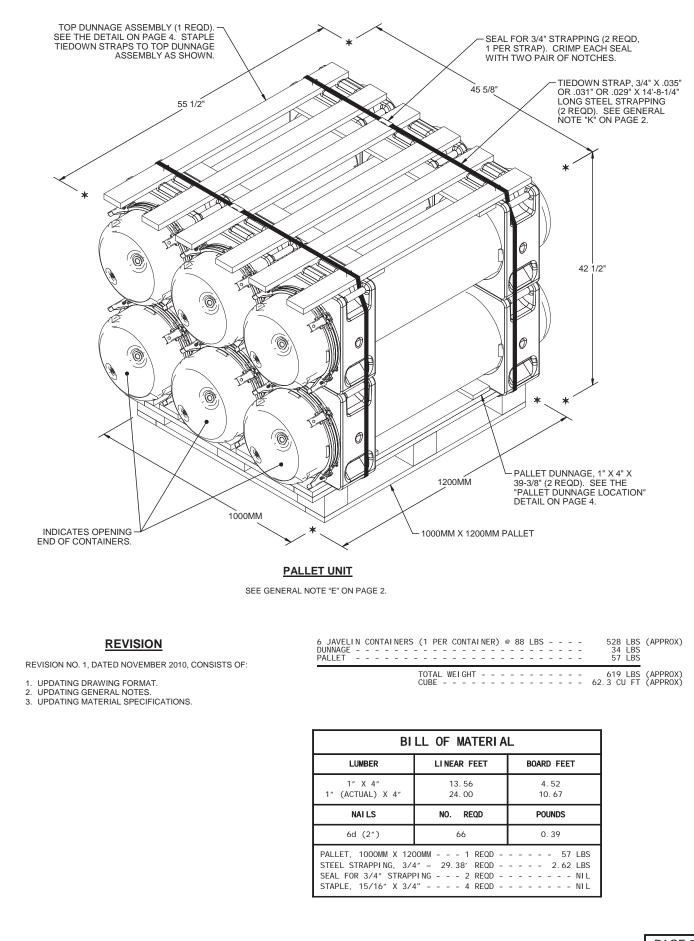
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MATERIAL SPECIFICATIONS

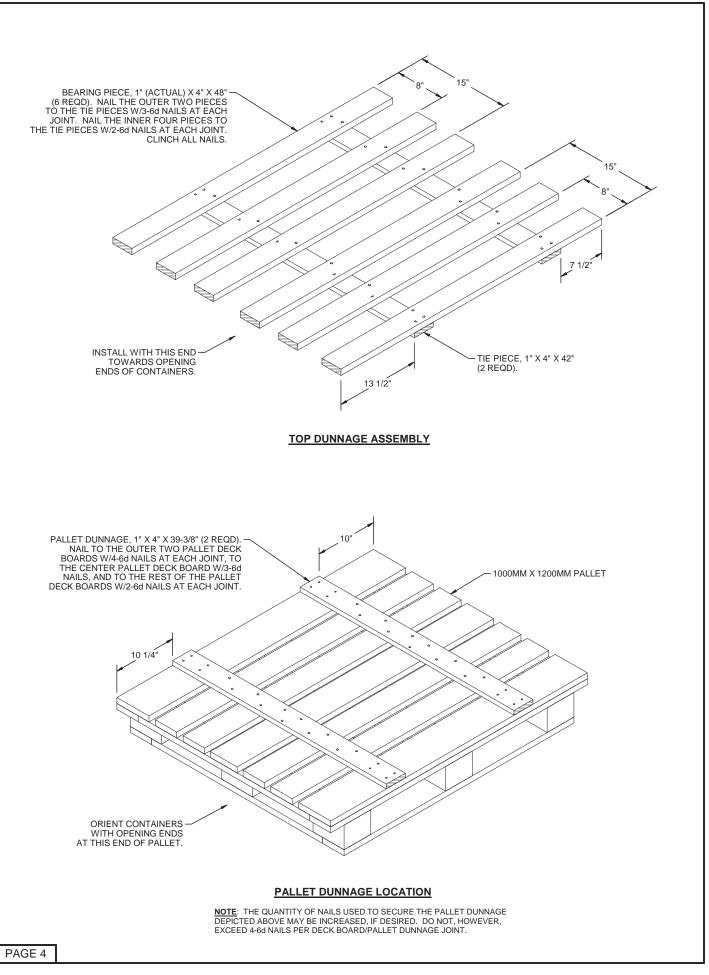
<u>PALLET</u> :	NATO STANDARD, 1814KG. SEE DEFENCE CLOTH- ING AND TEXTILES AGENCY (S&TD) DRAWING AO/11130. SEE GENERAL NOTE "R".
LUMBER :	SEE TM 743-200-1 (DUNNAGE LUMBER) AND VO- LUNTARY PRODUCT STANDARD PS 20. SEE GEN- ERAL NOTE "R".
NAILS:	ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMMS). ALT: UNDERLAYMENT NAIL (NLUL), PALLET NAIL (NLPL), OR COOLER NAIL (NLCL) OF SAME SIZE.
STRAPPING, STEEL:	ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH B (GRADE 1 OR 2), SIZE 3/4" X .035" OR .031" OR .029".
<u>SEAL, STRAP</u> :	ASTM D3953; CLASS H, FINISH B (GRADE 1 OR 2) DOUBLE NOTCH TYPE, STYLE I, II, III OR IV. ALTERNATIVE SEAL FINISH: SIGNODE PAINTED SEALS MAY BE USED AS AN ALTERNA- TIVE IF ALL SURFACES ARE PAINTED. GRITTED BACKING IS NOT PERMITTED.
<u>STAPLE</u> :	ASTM F1667; STFCS-189, STFCS-198, STFCS- 207, OR STFCS-216, 15/16" OR 1" CROWN WIDTH X 3/4" LEG LENGTH, ANY FINISH.
ANTI-CHAFING MATERIAL :	MIL-B-121 (OR EQUAL); NEUTRAL BARRIER MA- TERIAL.

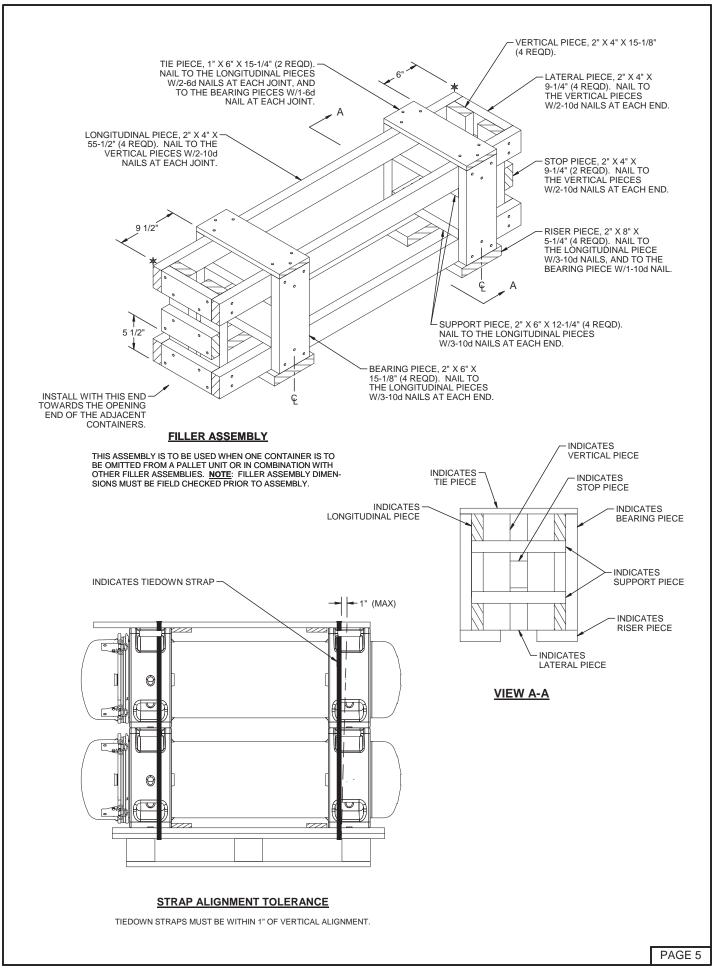
(GENERAL NOTES CONTINUED)

- L. 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 STRAP IS RE-QUIRED TO PERMIT SUBSEQUENT TIGHTENING OF LOOSENED STRAPPING. RETENSIONING CAN BE ACCOMPLISHED WITHOUT REPLACING STRAPPING OR SPLICING STRAPPING THROUGH THE USE OF MANUAL OR PNEUMATIC FEEDWHEEL TYPE TENSIONING TOOL AND THE APPLICATION OF ONE ADDI-TIONAL SEAL.
- M. IN ORDER TO OBTAIN COMPACT (SOUND) UNITS, ALL STRAPS SHALL BE LO-CATED IN PROPER ALIGNMENT AND TENSIONED UNTIL THEY CUT INTO THE EDGE OF THE DUNNAGE ASSEMBLY AND THE PALLET DECK. AFTER TENSION-ING, ALL STRAPS WILL BE SECURED USING ONE SEAL AND TWO PAIR OF NOTCHES PER SEAL. ALL STRAPPING MUST BE STRAIGHT WITHIN 2" ON ANY SURFACE OF THE UNITIZED LOAD I.E., TOP, BOTTOM, SIDES, OR ENDS THAT IT ENCOMPASSES.
- N. REFER TO DAC DRAWING ACV00617 FOR APPROVED SOURCES FOR SEALLESS (CLIPLESS) SEALING TOOL. THESE APPROVED SEALING TOOLS CAN BE USED IN PLACE OF SEAL CURRENTLY SPECIFIED IN THE MATERIAL SPECIFICATIONS LISTED AT LEFT.
- O. IF STRAP CUTTERS ARE SPECIFICALLY REQUIRED BY THE PROCURING ACTIV-ITY, REFER TO DARCOM DRAWING 19-48-4127-20P1000 FOR APPROPRIATE MEANS OF SECUREMENT TO THE PALLET UNIT.
- P. DIMENSIONS GIVEN FOR DUNNAGE ASSEMBLIES AND THE PALLET DUNNAGE LOCATION WILL BE FIELD CHECKED PRIOR TO ASSEMBLY OF PALLET UNIT. CONTAINERS MUST FIT SNUGLY AGAINST THE DUNNAGE ASSEMBLIES.
- Q. UNLESS OTHERWISE SPECIFIED, A PLUS-OR-MINUS 1/4" IS ALLOWED ON OVERALL DIMENSIONS OF ANY PIECE OF DUNNAGE OR DUNNAGE ASSEM-BLY. HOWEVER, SIMILAR PIECES IN AN ASSEMBLY MUST BE WITHIN 1/8" OF THE SAME DIMENSION.
- R. ALL NON-MANUFACTURED WOOD USED IN PALLETIZED LOAD SHALL BE HEAT TREATED AND MARKED TO SHOW CONFORMANCE TO THE INTERNA-TIONAL PLANT PROTECTION CONVENTION STANDARD (IPPC), ISPM-15. SEE DAC DRAWING ACV00831 FOR ISPM-15 CERTIFICATION MARKING AND PLA-CEMENT DETAILS.
- S. ALL NAILS DRIVEN INTO THE DUNNAGE ASSEMBLIES, FILLER ASSEMBLIES, OR PALLET SHALL BE DRIVEN SO THAT THE NAILHEADS ARE FLUSH OR SLIGHTLY BELOW THE SURFACE OF THE PIECE THAT THEY ARE BEING DRIVEN THROUGH.
- T. ANTI-CHAFING MATERIAL MAY BE INSTALLED AT POINTS OF CONTACT BE-TWEEN CONTAINERS, BETWEEN CONTAINERS AND DUNNAGE, AND BE-TWEEN CONTAINERS AND STEEL STRAPPING, TO PREVENT CHAFING DAM-AGE TO CONTAINER AND MARKINGS.
- U. A UNIT LOAD, SUCH AS THE LAST UNIT LOAD FOR AN AMMUNITION LOT, CAN BE ASSEMBLED WITH FEWER LAYERS THAN SPECIFIED FOR THE BA-SIC UNIT LOAD. THE UNIT LOAD CAN ALSO BE ASSEMBLED WITH A PARTIAL TOP LAYER PROVIDING IT IS TO BE SHIPPED WITHIN CONUS TO A DEPOT, DEPOT ACTIVITY, POST, CAMP, OR STATION. FOR OCONUS OR FOREIGN MILITARY SALES (FMS) SHIPMENTS, HOWEVER, THE UNIT LOAD MUST NOT BE ASSEMBLED WITH A PARTIAL LAYER. EMPTY CONTAINERS OR FILLER ASSEMBLIES WILL BE USED TO ACHIEVE FULL-LAYER CONFIGURATION. FOR ADDITIONAL GUIDANCE, SEE GENERAL NOTE "V" AND THE DETAILS ON PAGES 5 AND 6.
- V. IF LESS THAN SIX CONTAINERS ARE TO BE LOADED ON A PALLET, IT SHALL BE ACCOMPLISHED BY SUBSTITUTING FILLER ASSEMBLIES, AS DEPICTED ON PAGE 5, FOR ONE OR TWO OMITTED CONTAINERS, EXCEPT AS OTHER-WISE STATED WITHIN GENERAL NOTE "U". HOWEVER, IF MORE THAN TWO CONTAINERS ARE TO BE OMITTED, A COMPLETE LAYER OF CONTAINERS MUST BE OMITTED. FILLER ASSEMBLIES WILL BE POSITIONED WITHIN THE UNIT LOAD AS DEPICTED IN THE DETAILS ON PAGE 6. **NOTE**: EMPTY OR REJECT CONTAINERS MAY BE USED IN PLACE OF FILLER ASSEMBLIES AS NECESSARV. WHEN (EMPTY) FILLER CONTAINERS ARE USED IN PLACE OF OMITTED CONTAINERS TO COMPLETELY FILL OUT A LAYER ON A PALLET, THEY WILL BE MARKED AS SPECIFIED IN ARDEC DRAWING NO. 12982865.
- W. IF UNITIZING OPERATIONS ARE BEING PERFORMED IN SUPPORT OF A SHIPMENT OF ITEMS FOR TROOP USE AT A CAMP, POST OR STATION, AND, IF IN ADDITION TO FULL LAYER UNITS SPECIFIED IN GENERAL NOTE "U", A FEW LOOSE CONTAINERS ARE REQUIRED TO SATISFY THE QUANTITY RE-QUISITIONED, THE LOOSE CONTAINERS NEED NOT BE UNITIZED. HOWEV-ER, THE METHOD FOR BRACING AND STAYING OF THE LOOSE CONTAINERS WITHIN THE LOAD TO BE SHIPPED MUST COMPLY WITH THE METHOD SPE-CIFIED WITHIN THE APPLICABLE 19-48 SERIES OUTLOADING PROCEDURAL DRAWING.
- X. PALLETIZED UNITS OF MISSILES ARE LIMITED TO ONE LOT PER PALLET UNIT, EXCEPT WHERE REQUIRED BY BALLISTIC SAMPLE SHIPMENT OR TROOP USE AT POST, CAMP, OR STATION, OR AS REQUIRED WITHIN GOV-ERNMENT CONTRACT PRIOR TO GOVERNMENT ACCEPTANCE.

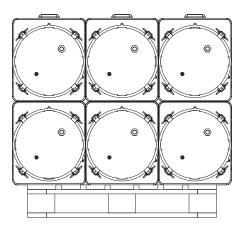


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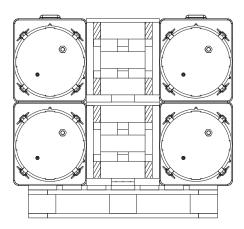


NOTE: ALL DUNNAGE AND STRAPPING HAVE BEEN OMITTED FROM THE SIX PALLET UNITS BELOW FOR CLARITY PURPOSES.

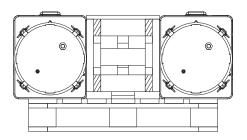


FULL PALLET UNIT

PALLET UNIT MINUS ONE CONTAINER

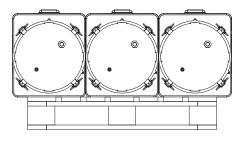


PALLET UNIT MINUS TWO CONTAINERS

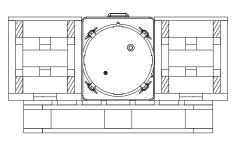


PALLET UNIT MINUS FOUR CONTAINERS

NOTE: THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CON-TAINERS" DEPICTED IN THE PERTINENT OUTLOADING DRAW-INGS MAY BE USED TO TRANSPORT TWO LEFTOVER CONTAIN-ERS INSTEAD OF THE PROCEDURES SHOWN ABOVE. SEE GENERAL NOTE "W" ON PAGE 2.



PALLET UNIT MINUS THREE CONTAINERS



PALLET UNIT MINUS FIVE CONTAINERS

NOTE: THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CON-TAINERS" DEPICTED IN THE PERTINENT OUTLOADING DRAW-INGS MAY BE USED TO TRANSPORT TWO LEFTOVER CONTAIN-ERS INSTEAD OF THE PROCEDURES SHOWN ABOVE. SEE GENERAL NOTE "W" ON PAGE 2.

PAGE 6

ASSEMBLY OF FULL AND LESS-THAN-FULL PALLET UNITS