

APPROVED BY U.S. COAST GUARD <i>P. Behring</i> CAPT USCG DATE 10-23-74	APPROVED BY BUREAU OF EXPLOSIVES <i>M. F. Grassmuck</i> SUPERVISOR, MILITARY & INTERMODAL SERVICES DATE 7/11/74
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HAWK

LOADING AND BRACING[⊙] IN MILVAN CONTAINERS[⊕] OF ROCKET MOTOR, M22E8 AND M112 SERIES, PACKED IN WOODEN CRATE

- ⊙ LOADING AND BRACING SPECIFICATIONS SET FORTH WITHIN THIS DRAWING ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLAT-CAR (T/COFC) RAIL CARRIER SERVICE. THESE SPECIFICATIONS MAY ALSO BE USED FOR LOADS THAT ARE TO BE MOVED BY MOTOR OR WATER OR AIR CARRIERS. SEE GENERAL NOTE "T" ON PAGE 2.
- ⊕ ONLY MILVAN CONTAINERS WHICH HAVE BEEN MODIFIED TO INCLUDE A MECHANICAL LOAD-BRACING SYSTEM THAT SATISFIES THE REQUIREMENTS OF THE BUREAU OF EXPLOSIVES PAMPHLET 6C WILL BE USED FOR THE MOVEMENT OF AMMUNITION BY T/COFC SERVICE. CAUTION: OTHER REQUIREMENTS OF PAMPHLET 6C ALSO APPLY.

REVISIONS				DRAFTSMAN	PROJ ENG
				<i>AA</i>	<i>GWP/MWW</i>
				CHECKER	LOG ENGRS OFFICE
				<i>RSW</i>	<i>John Boyd</i>
				APPROVED	
				<i>Wesley E. Gilleland</i>	
				U. S. ARMY MISSILE COMMAND	
				APPROVED BY ORDER OF COMMANDING GENERAL	
				U. S. ARMY MATERIEL COMMAND	
				<i>A. E. Ehringer</i>	
				USAMC AMMO CENTER	
				U. S. ARMY MATERIEL COMMAND	
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				CLASS	DIVISION
				19	48
				DRAWING	FILE
				5946	GM 15HA5

DO NOT SCALE

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AMCR 740-13, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO THE HAWK GUIDED MISSILE ROCKET MOTORS, M22E8 AND M112 SERIES, PACKED ONE MOTOR PER WOODEN CRATE. SUBSEQUENT REFERENCE TO WOODEN CRATE MEANS THE CRATE WITH ROCKET MOTOR.
- C. FOR DETAIL OF THE M22E8 SERIES ROCKET MOTOR CRATE, SEE DRAWING NO. 9082296 AND "STACK DETAIL" ON PAGE 3.
- CONTAINER DIMENSIONS --- 113-1/2" LONG BY 20-3/4" WIDE BY 23-3/8" HIGH.
GROSS WEIGHT ----- 1,091 POUNDS (APPROX).
CUBE ----- 31.9 CUBIC FEET.
- D. FOR DETAIL OF THE M112 SERIES ROCKET MOTOR CRATE, SEE DRAWING NO. 10242885 AND "STACK DETAIL" ON PAGE 3.
- CONTAINER DIMENSIONS --- 118-1/2" LONG BY 20-1/2" WIDE BY 22-7/8" HIGH.
GROSS WEIGHT ----- 1,128 POUNDS (APPROX).
CUBE ----- 32.4 CUBIC FEET.
- E. THESE ITEMS ARE A DOT CLASS "B" EXPLOSIVE, AND A COAST GUARD CLASS II-B. THE OUTLOADING PROCEDURES SPECIFIED HEREIN CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED WITHIN THE DRAWING TITLE.
- F. OTHER TYPES OF LADING ITEMS MAY BE LOADED IN MILVAN CONTAINERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED ITEMS, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED.
- G. THE LOADS AS SHOWN ARE BASED ON A 20' LONG BY 8' WIDE BY 8' HIGH MILVAN CONTAINER WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 92" WIDE BY 87" HIGH. THE LOADS ARE DESIGNED FOR TRAILER/CONTAINER-ON-FLAT-CAR SERVICE.
- H. THE SPECIFIED OUTLOADING PROCEDURES ARE FOR CONTAINERS EQUIPPED WITH SELF-CONTAINED MECHANICAL BRACING DEVICES AS DESCRIBED WITHIN BUREAU OF EXPLOSIVES PAMPHLET 6C. CROSS MEMBER ATTACHMENT FACILITIES WITHIN THESE CONTAINERS MUST PROVIDE FOR THE INSTALLATION OF LOAD BLOCKING CROSS MEMBERS AT THE HEIGHTS SPECIFIED. THE HEIGHT DIMENSIONS SPECIFIED WITHIN THIS DRAWING FOR THE INSTALLATION OF CROSS MEMBERS CONFORM WITH BUREAU OF EXPLOSIVES PAMPHLET 6C, WITH THE EXCEPTION THAT TWO (2) ADDITIONAL BELT RAILS HAVE BEEN SHOWN: ONE AT 72" AND ONE AT 83" HEIGHT FROM THE CONTAINER FLOOR. VOIDS LENGTHWISE WITHIN THE LOAD MUST BE HELD TO A MINIMUM. CROSS MEMBERS MUST BE PLACED AGAINST THE LADING AS TIGHTLY AS THE HOLE SPACING IN THE CROSS MEMBER ATTACHMENT FACILITY PERMITS. EACH CROSS MEMBER WILL BE INSTALLED WITH THE ENDS ATTACHED AS NEARLY AS POSSIBLE IN "MATED" POSITIONS (AT EQUAL HEIGHTS AND AT EQUAL DISTANCES FROM THE END OF THE CONTAINER). CROSS MEMBERS IN EMPTY CONTAINERS AND THOSE NOT USED IN LOADED CONTAINERS MUST BE FASTENED INTO BELT RAILS FOR SHIPMENT. COMPONENTS ASSIGNED TO EACH CONTAINER MUST REMAIN THEREWITH EVEN THOUGH UNUSED DURING SOME SHIPMENTS. SEE THE "FILL DETAIL" ON PAGE 5 FOR THE DUNNAGING METHOD REQUIRED TO ELIMINATE AN EXCESSIVE LENGTHWISE VOID WITHIN A LOAD. THE LOAD BLOCKING COMPONENT DESIGNATED AS "CROSS MEMBER" HEREIN, IS IDENTIFIED AS "BEAM ASSEMBLY" WITHIN TM 55-8115-200-24, DATED SEPTEMBER 1972. THE BEAM ASSEMBLY IS FURTHER IDENTIFIED AS NSN 8115-00-165-6623 (FSN 8115-165-6623).
- J. IF 1-3/8" DIMENSIONAL LUMBER IS NOT AVAILABLE FOR THE SPECIFIED FILL MATERIAL, PIECES CAN BE MADE BY PLANING NOMINAL 2" X 4" MATERIAL TO THE PROPER THICKNESS. ALSO, STRIPS OF PLYWOOD CAN BE USED AS FILL MATERIAL. USE PLYWOOD OF DIFFERENT THICKNESS TO ACHIEVE THE SPECIFIED 1-3/8".
- K. DUNNAGE LUMBER SPECIFIED IS OF A NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" OR 3-5/8" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE OR 1-5/8" THICK BY 5-5/8" WIDE UNLESS OTHERWISE SPECIFIED.
- L. CAUTION: DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.
- M. WHEN ANY STRAP IS SEALED TO AN END-OVER-END LAP JOINT, TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED TO SEAL THE JOINT.

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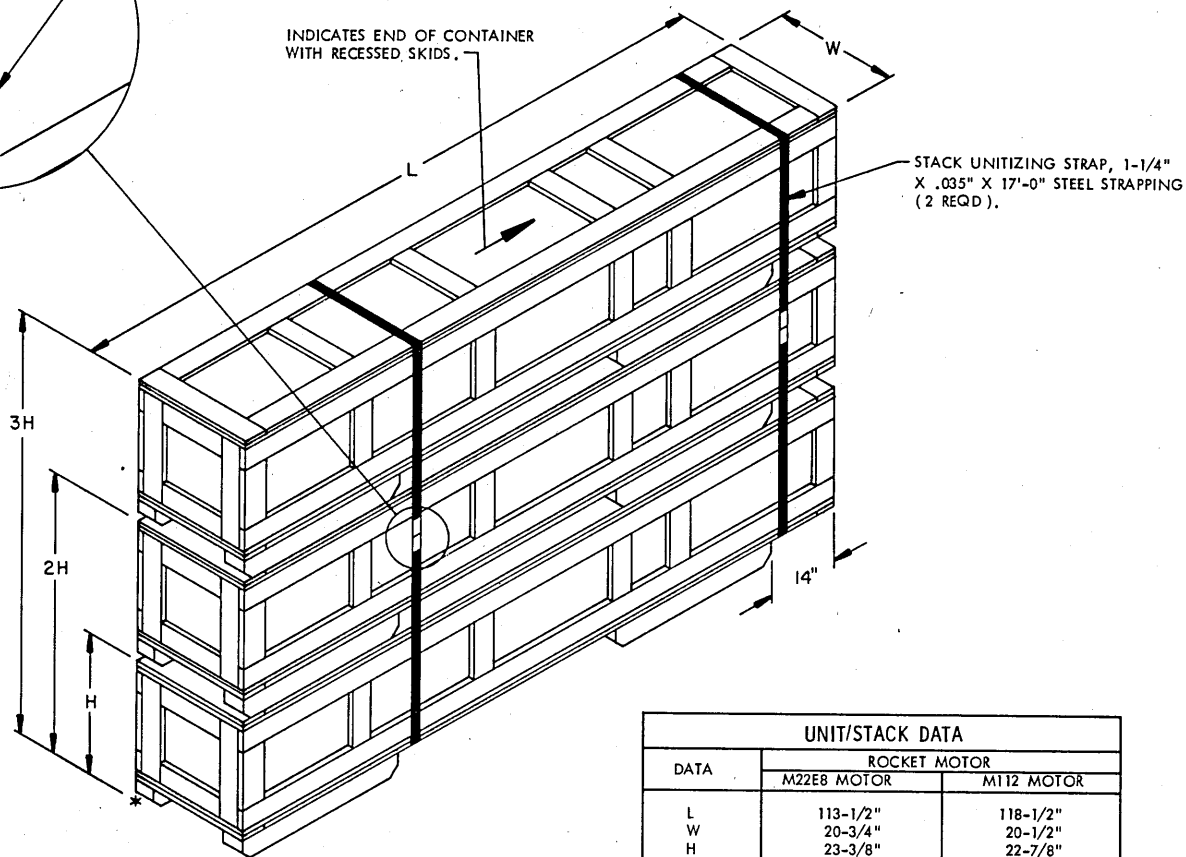
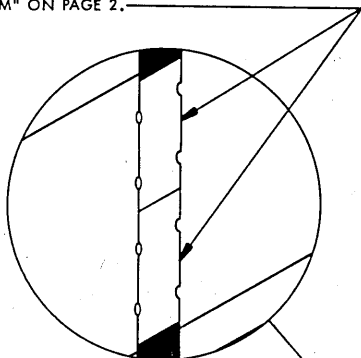
MATERIAL SPECIFICATIONS

- LUMBER -----: SEE TM 743-200-1, DUNNAGE LUMBER; FED SPEC MM-L-751.
- NAILS -----: COMMON, CEMENT COATED OR CHEMICALLY ETCHED;
FED SPEC FF-N-105.
ALT: ANNULAR-RING TYPE NAIL OF THE SAME SIZE.
- WIRE -----: FED SPEC QQ-W-461.
- SEAL, STRAP
STAPLE, STRAP ----: COMMERCIAL GRADE.
- STRAPPING, STEEL--: TYPE I OR IV, FINISH A OR B, FED SPEC QQ-5-781.

(GENERAL NOTES CONTINUED)

- N. A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES OR WHEN LAMINATING DUNNAGE. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- O. PORTIONS OF THE CONTAINERS DEPICTED WITHIN THIS DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- P. THE THICKNESS OF THE BEARING PIECES OF THE FILLER GATE AS DETAILED ON PAGE 5 MUST BE ADJUSTED AS REQUIRED, TO COMPLY WITH THE DIMENSIONAL VARIANCE OF THE WOODEN CRATE, SO AS TO NOT ALLOW MORE THAN ONE AND ONE-HALF INCH (1-1/2") VOID ACROSS THE WIDTH OF A BRACED LOAD. ADJUSTMENTS CAN BE MADE BY USING A DIFFERENT THICKNESS BEARING PIECE OR BY LAMINATING ADDITIONAL PIECES TO THE SPECIFIED BEARING PIECES ON ONE OR BOTH SIDES OF THE LOAD. ADJUSTMENTS CAN ALSO BE MADE BY ADJUSTING THE THICKNESS OF THE FILLER PIECES AND THE VERTICAL PIECES.
- R. TO FACILITATE LOADING OPERATIONS, THE FILLER GATES CAN BE WIRE TIED TO THE CONTAINER BELT RAILS ON EACH SIDE OF THE CONTAINER. SECURE THE VERTICAL PIECES OF A GATE TO A BELT RAIL WITH A 18" LONG PIECE OF NO. 14 GAGE WIRE POSITIONED NEAR THE TOP OF THE VERTICALS. INSTALL THE WIRE TO FORM A COMPLETE LOOP THROUGH THE HOLES IN THE BELT RAIL AND AROUND A VERTICAL PIECE, BRING THE ENDS TOGETHER AND TWIST TAUT.
- S. MAXIMUM LOAD WEIGHT CRITERIA:
- BECAUSE OF THE LIGHT WEIGHT OF THE AMMUNITION, A LOAD WEIGHT WILL NEVER EXCEED ANY WEIGHT RESTRICTION CRITERIA.
- SEE THE SPECIAL NOTE SECTION ON PAGE 5 FOR INSTRUCTIONS WHICH MUST BE APPLIED IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN IN THE BASIC LOAD ON PAGE 4.
- T. SPECIAL T/COFC NOTES:
1. CAUTION: LOADED CONTAINERS MUST BE ON CHASSIS EQUIPPED WITH TWO BOGIE ASSEMBLIES WHEN BEING MOVED IN TOFC SERVICE, REGARDLESS OF LOAD WEIGHT WITHIN THE CONTAINERS.
 2. LOAD LIMITS OF T/COFC RAIL CARS MUST NOT BE EXCEEDED, NOR WILL A CAR BE LOADED SO THAT THE TRUCK UNDER ONE END OF THE CAR CARRIES MORE THAN ONE-HALF OF THE LOAD LIMIT FOR THAT CAR.
 3. CHASSIS/CONTAINERS COUPLED INTO A 40-FOOT TRAILER CONFIGURATION MUST BE PLACED AT THE B-END OF A TOFC RAIL CAR. THE REAR END OF THE 40-FOOT UNIT WILL OVER-HANG THE END OF THE CAR IF IT IS PLACED AT THE A-END. TWENTY-FOOT AND 40-FOOT UNITS CAN BE LOADED ON THE SAME CAR.
- U. THE SPACER ASSEMBLIES NEED NOT BE FABRICATED FOR A DRIVE FIT, THE ASSEMBLY SHOULD BE FABRICATED SO THAT IT CAN BE EASILY INSTALLED. HOWEVER, IT MUST FIT TIGHT ENOUGH SO AS TO NOT ALLOW MORE THAN ONE-HALF INCH (1/2") VOID ACROSS THE WIDTH OF A BRACED LOAD.

SEAL FOR 1-1/4" X .035" STEEL STRAPPING
(2 REQD PER STRAP JOINT). DOUBLE CRIMP
EACH SEAL AS SHOWN. SEE GENERAL NOTE
"M" ON PAGE 2.



STACK DETAIL

UNIT/STACK DATA		
DATA	ROCKET MOTOR	
	M22E8 MOTOR	M112 MOTOR
L	113-1/2"	118-1/2"
W	20-3/4"	20-1/2"
H	23-3/8"	22-7/8"
2H	46-3/4"	45-3/4"
3H	70-1/8"	68-5/8"
WEIGHT -----	1,091 LBS -----	1,128 LBS -----
CUBE -----	31.9 CU. FT. -----	32.4 CU. FT. -----

**UNITIZING AND HANDLING
PROCEDURAL GUIDANCE**

1. STACKING UNITS FOR UNITIZING.

- A. PLACE AN UPPER UNIT AS CLOSELY AS POSSIBLE IN VERTICAL ALIGNMENT WITH THE NEXT LOWER UNIT.

2. INSTALLING 1-1/4" X .035" STACK UNITIZING STEEL STRAPPING.

- A. POSITION EACH OF THE UNITIZING STRAPS AROUND THE UNITS AS SHOWN. PLACE STRAPPING NEAR THE ENDS OF THE SKIDS AND SO THAT STRAPPING LAYS FLAT AND STRAIGHT WITH THE BODY SURFACES OF THE UNIT; I.E., VERTICAL ALONG THE SIDES AND STRAIGHT ACROSS THE TOP AND BOTTOM OF THE STACK.
- B. THE STRAPPING WILL BE FIRMLY TENSIONED AND SO THAT EACH STRAP CRUSHES SLIGHTLY INTO THE UPPER AND LOWER EDGES OF THE STACK. EACH END-OVER-END LAP JOINT WILL BE SEALED WITH TWO (2) SEALS, BUTTED TOGETHER, WITH TWO PAIR OF CRIMPS PER SEAL. THE LAP JOINT WILL BE MADE ON THE SIDE OF THE STACK. EXCESS STRAPPING (STRAP ENDS) SHOULD BE CUT OFF OR BROKEN OFF NEAR THE JOINT SEALS.

**3. UNIT OR UNIT STACK HANDLING -
NOTES: (1) APPROVED MATERIALS HANDLING EQUIPMENT (MHE) IS SPECIFIED IN**

OTHER DOCUMENTS. MHE IS INTENDED TO MEAN EQUIPMENT SUCH AS FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS AND SPREADER BARS.

(2) PRECAUTIONARY HANDLING TECHNIQUES NORMALLY EMPLOYED OR AS SPECIFIED FOR THE TYPE OF COMMODITY INVOLVED WILL BE USED FOR HANDLING THE DEPICTED UNITS.

- A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIALS HANDLING EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED UNITS.

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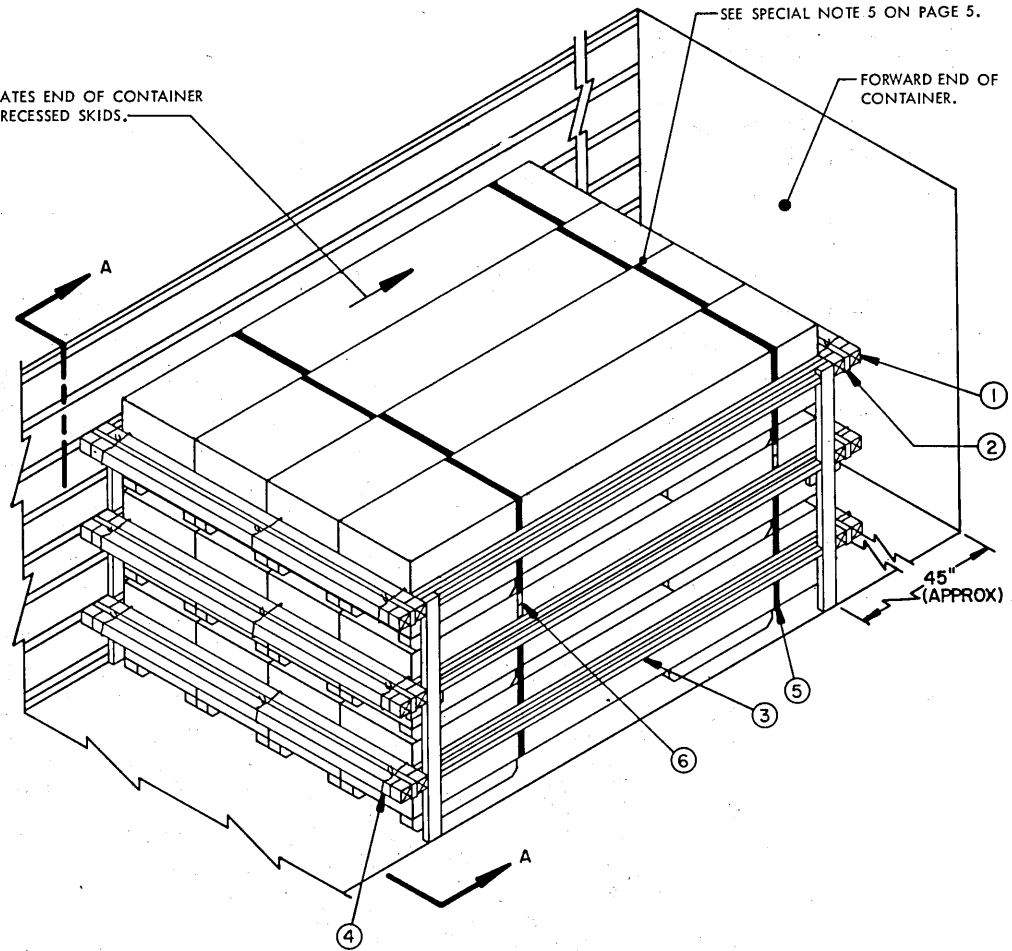
(UNITIZING AND HANDLING PROCEDURAL GUIDANCE CONTINUED)

- B. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE UNITS SHOULD BE HANDLED FROM A SIDE POSITION AS MUCH AS POSSIBLE. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER A UNIT, TO PREVENT DAMAGE TO A UNIT BY THE FORK TINES OR THE PACKAGE GUARD. FOR VERY SHORT "INCHING" SPEED MOVEMENTS, SUCH AS WILL BE EXPERIENCED DURING LOADING, A UNIT STACK MAY BE HANDLED BY INSERTING THE FORKS OF A FORKLIFT TRUCK UNDER THE SECOND LAYER UNIT.
- C. IF A STACK IS HANDLED BY SLINGING, THE SLING USED MUST BE OF SUCH A DESIGN THAT LIFTING IS DONE ON THE BOTTOM OF THE LOWER UNIT.

INDICATES END OF CONTAINER WITH RECESSED SKIDS.

SEE SPECIAL NOTE 5 ON PAGE 5.

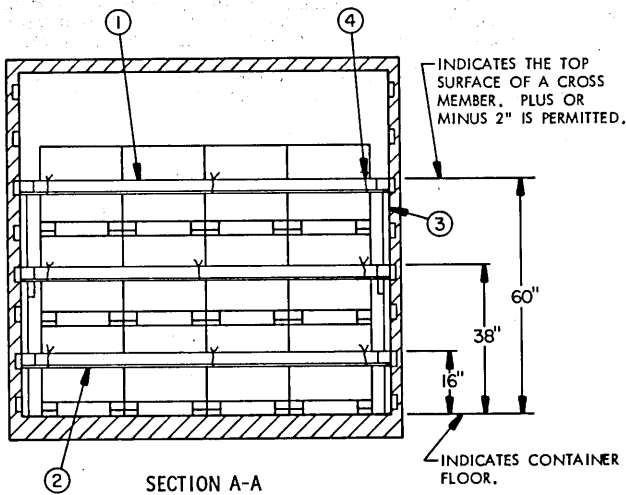
FORWARD END OF CONTAINER.



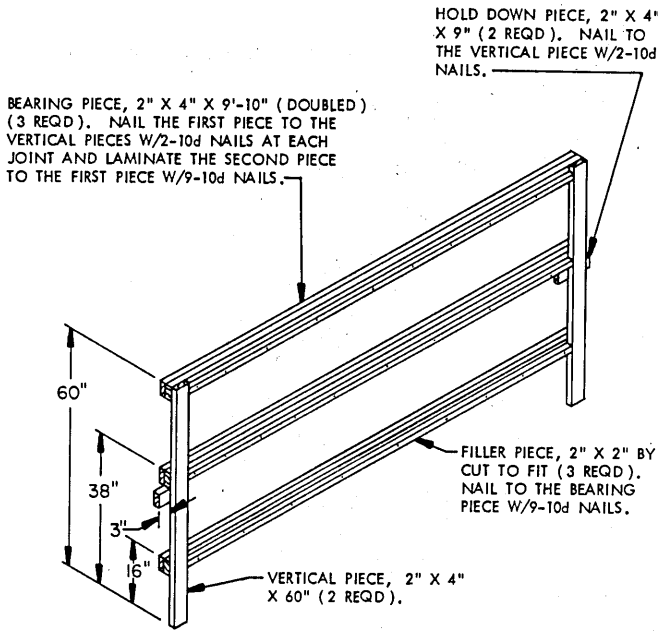
ISOMETRIC VIEW

KEY NUMBERS

- ① CROSS MEMBER (DOUBLED) (6 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "SECTION A-A" VIEW. SEE THE "FILL DETAIL" ON PAGE 5.
- ② FILL MATERIAL, 1-3/8" X 4" BY CONTAINER WIDTH MINUS 1" (6 REQD).
- ③ FILLER GATE (2 REQD). SEE THE "FILLER GATE" DETAIL ON PAGE 5 AND GENERAL NOTES "P" AND "R" ON PAGE 2.
- ④ TIE WIRE (DOUBLE LOOP) (18 REQD; 3 AT 6 LOCATIONS). INSTALL TO FORM TWO (2) COMPLETE LOOPS AROUND THE CROSS MEMBERS AND FILL PIECES, BRING THE ENDS TOGETHER AND TWIST TAUT. SECURE TO THE FILL PIECE WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STRAP STAPLE.
- ⑤ UNITIZING STRAP, 1-1/4" X .035" X 17'-0" LONG STEEL STRAPPING (8 REQD). SEE THE "UNITIZATION AND HANDLING PROCEDURAL GUIDANCE" ON PAGE 3.
- ⑥ SEAL FOR 1-1/4" STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "M" ON PAGE 2.



SECTION A-A

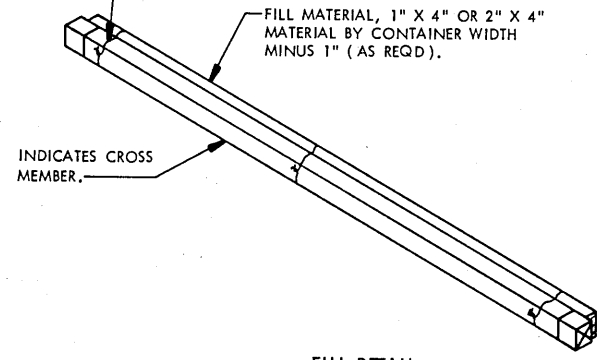


FILLER GATE
SEE SPECIAL NOTE 4 AT RIGHT.

SPECIAL NOTES

1. THE LOAD AS SHOWN ON PAGE 4 DEPICTS A 12-UNIT LOAD OF M112 ROCKET MOTORS IN A MILVAN CONTAINER. THIS DRAWING IS ALSO APPLICABLE TO THE LOADING OF THE M22E8 ROCKET MOTOR CRATE.
2. IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN ON PAGE 4, UNITS SHOULD BE ELIMINATED FROM THE MIDDLE OF THE LOAD. FOR EXAMPLE, IF ONLY ELEVEN UNITS ARE TO BE LOADED, THE METHOD SPECIFIED BY THE "ALTERNATIVE LOADING PATTERN" SHOWN ON PAGE 6 MUST BE APPLIED.
3. SPECIFICATIONS FOR THE "BASIC LOAD" AND THE "ALTERNATIVE LOADING PATTERN" SHOWN ON PAGE 6 WILL BE APPLIED SEPARATELY OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN TWELVE-UNIT LOADS.
4. THE "FILLER GATE" AS DEPICTED AT LEFT IS DESIGNED TO BE USED WHEN OUTLOADING THE M112 ROCKET MOTOR CRATE. WHEN OUTLOADING THE M22E8 ROCKET MOTOR CRATE, IT MAY BE NECESSARY TO OMIT THE SECOND PIECE OF THE DOUBLED BEARING PIECES, ON THE FILLER GATE ASSEMBLY AT ONE OR BOTH SIDES OF THE CONTAINER, TO COMPENSATE FOR THE DIMENSIONAL VARIANCE OF THE MOTOR CRATES. SEE GENERAL NOTE "P" ON PAGE 2. ALSO, WHEN OUTLOADING THE M22E8 ROCKET MOTOR CRATES, THE LENGTH OF THE BEARING PIECES WILL BE 9'-5" LONG.
5. TO MAKE LOADING EASIER, TO HELP ACHIEVE A TIGHT LOAD ACROSS A CONTAINER, AND TO PREVENT UNACCEPTABLE DAMAGE TO LADING UNITS WHEN LOADING A MILVAN, A SLIP-SHEET CAN BE USED EFFECTIVELY AS A "SHOEHORN" TYPE DEVICE. THE SLIP-SHEET WILL PROVIDE A SMOOTH SURFACE THAT WILL PREVENT UNIT STRAPS AND/OR BOX CLEATS FROM INTERLOCKING OR CATCHING ON OTHER PROJECTIONS WHEN LATERALLY ADJACENT LADING UNITS ARE BEING LOADED. A SLIP-SHEET WILL BE USED AFTER THREE STACKS HAVE BEEN LOADED, TWO STACKS ON ONE SIDE AND ONE STACK ON THE OTHER SIDE WITH SIDES OF THE STACKS IN CONTACT WITH FILLER GATES AND ADJACENT STACKS. TWO SLIP-SHEETS ARE TO BE PLACED AGAINST THE SIDES OF THE TWO STACKS BEFORE THE LAST STACK IS LOADED. AFTER THE LAST STACK IS LOADED THE SLIP-SHEETS ARE TO BE REMOVED. A SLIP-SHEET OF SUITABLE SIZE CAN BE MADE FROM A SHEET OF 1/8" TEMPERED HARDBOARD (MASONITE) OR FROM A SHEET OF ANY OTHER MATERIAL THAT WILL SATISFY THE REQUIREMENT.
6. IF OTHER TYPES OF COMPATIBLE LADING ARE TO BE LOADED IN A MILVAN WITH THE ROCKET MOTORS, THE LOCATION OF THE ROCKET MOTORS CAN BE POSITIONED DIFFERENTLY THAN SHOWN IN THE LOAD VIEW SHOWN ON PAGE 4. THE FORWARD CROSS MEMBER ASSEMBLIES MAY BE POSITIONED AT THE MOST FORWARD POSITION OF THE BELT RAILS, THUS INCREASING THE AMOUNT OF SPACE AVAILABLE FOR THE OUTLOADING OF OTHER TYPES OF COMPATIBLE LADING ITEMS. SEE GENERAL NOTE "F" ON PAGE 2. ALSO, THE LADING CAN BE LOCATED TOWARD THE REAR OF THE MILVAN SO THAT THE REAR CROSS MEMBER ASSEMBLIES CAN BE POSITIONED IN THE MOST REARWARD LOCATION IN THE BELT RAIL. THIS LOADING ARRANGEMENT WILL GREATLY FACILITATE LOADING OPERATIONS AND ALSO ELIMINATE THE NEED FOR FILL MATERIAL, PIECE MARKED ② ON PAGE 4, IN THE REAR CROSS MEMBER ASSEMBLIES. **NOTICE:** WHEN INSTALLING THE CROSS MEMBERS AT THE MOST REARWARD LOCATION, CARE SHOULD BE EXERCISED TO INSURE THAT ANY VOID OF 1/4" (ONE-QUARTER-INCH) OR GREATER BETWEEN CROSS MEMBERS MUST BE FILLED WITH FILL MATERIAL.

TIE WIRE, NO. 14 GAGE WIRE
18" LONG (3 REQD PER CROSS MEMBER). INSTALL TO FORM A COMPLETE LOOP AROUND FILL MATERIAL AND CROSS MEMBER, BRING ENDS TOGETHER AND TWIST TAUT. SECURE TO THE FILL MATERIAL WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STRAP STAPLE.



FILL DETAIL

THIS DETAIL DEPICTS METHOD OF POSITIONING FILL MATERIAL BETWEEN CROSS MEMBER AND LADING, WHEN THE VOID BETWEEN THE TWO IS GREATER THAN ONE INCH (1") FOR LONGITUDINAL BRACING.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	56	19
* 1-3/8" X 4"	46	31
2" X 4"	141	94
NAILS	NO. REQD	POUNDS
10d (3")	158	2-1/2
WIRE, NO. 14 GAGE	90' REQD	1-1/2 LBS
STEEL STRAPPING, 1-1/4" X .035"	136' REQD	19 LBS
SEAL FOR 1-1/4" STRAPPING	16 REQD	1 LB
CROSS MEMBER		12 REQD

* SEE GENERAL NOTE "J" ON PAGE 2.

LOAD AS SHOWN

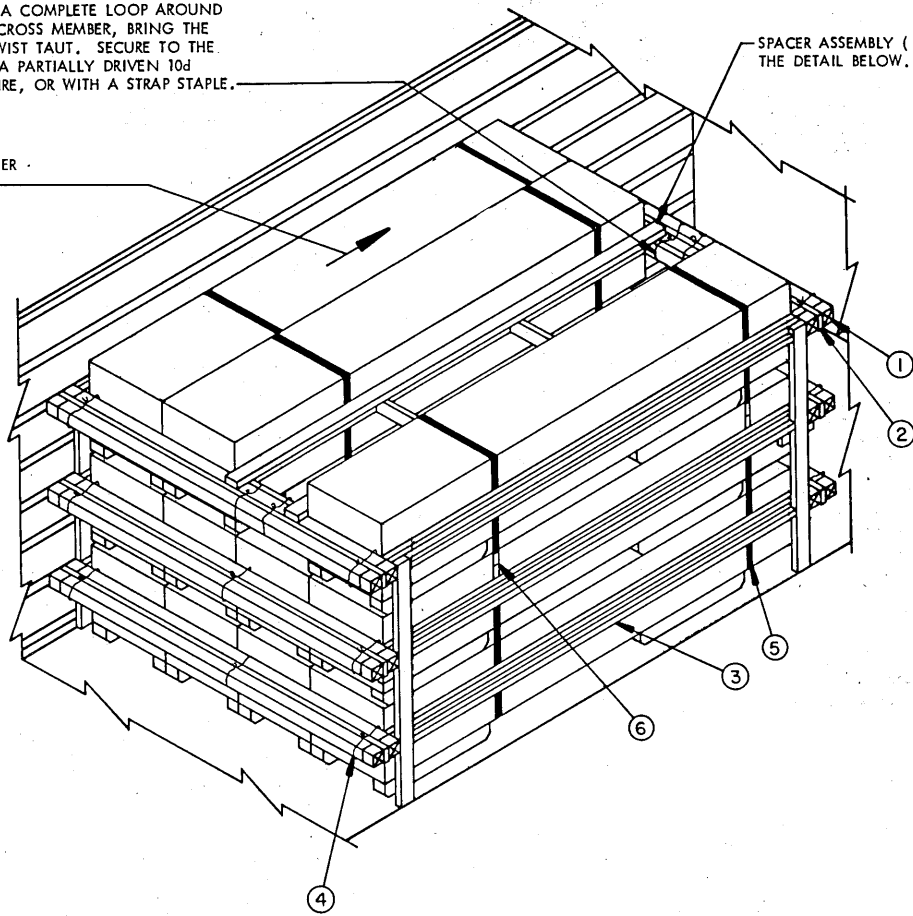
ITEM	QUANTITY	WEIGHT (APPROX)
M112 ROCKET MOTOR	12	13,536 LBS
DUNNAGE		384 LBS
CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		19,620 LBS

* M22E8 ROCKET MOTOR - 12 ----- 13,092 LBS

TIE WIRE, NO. 14 GAGE WIRE 18" LONG (4 REQD).
 INSTALL WIRE TO FORM A COMPLETE LOOP AROUND
 SPACER ASSEMBLY AND CROSS MEMBER, BRING THE
 ENDS TOGETHER AND TWIST TAUT. SECURE TO THE
 SPACER ASSEMBLY WITH A PARTIALLY DRIVEN 10d
 NAIL BENT OVER THE WIRE, OR WITH A STRAP STAPLE.

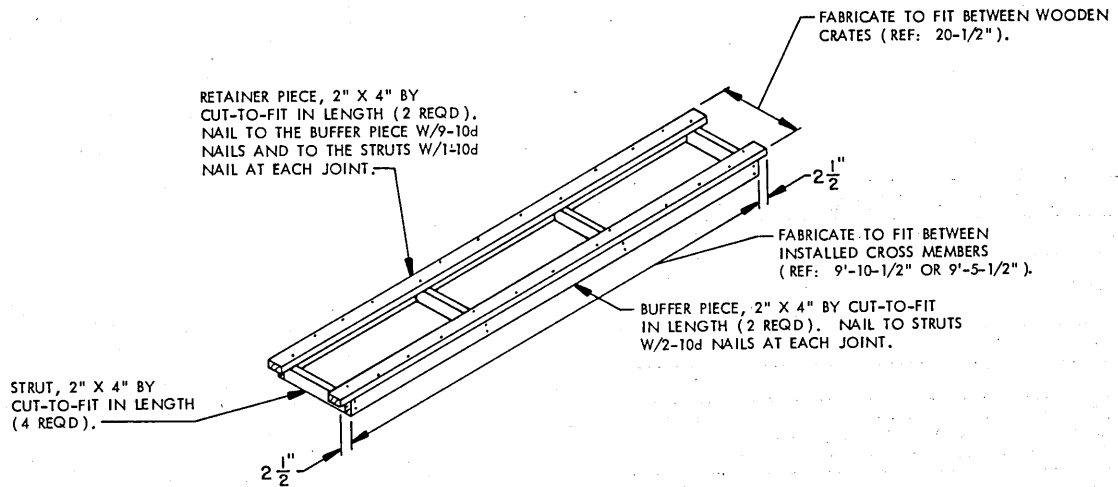
INDICATES END OF CONTAINER
 WITH RECESSED SKIDS.

SPACER ASSEMBLY (1 REQD). SEE
 THE DETAIL BELOW.



ALTERNATIVE LOADING PATTERN

THE DETAIL ABOVE SPECIFIES A BLOCKING METHOD TO
 BE USED IN A "REDUCED-LOAD" CONTAINER LOAD.



SPACER ASSEMBLY

SEE GENERAL NOTE "U" ON PAGE 2. THE WIDTH OF THE
 SPACER ASSEMBLY MAY ALSO BE ADJUSTED TO TAKE THE
 PLACE OF TWO OR THREE OMITTED UNITS, SUCH AS FOR A
 TEN OR NINE-UNIT LOAD.