BUREAU OF EXPLOSIVES

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MILITARY ABSISTANT

DATE 7/12/68

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF CBU ITEMS PACKED IN THE CNU-105/E CONTAINER

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- INCLUDES PROCEDURES FOR CONVENTIONAL TRAILERS AND TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES AS APPROVED BY THE BUREAU OF EXPLOSIVES, ASSOCIATION OF AMERICAN RAILROADS.

CAUTION

PROCEDURES SHOWN HEREIN FOR MECHANICAL DEVICE EQUIPPED TRAILERS ARE ONLY APPLICABLE FOR HIGHWAY MOVEMENT; NOT FOR CONTAINER/TRAILER-ON-FLAT-CAR MOVEMENTS.

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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 CBU ITEMS WHEN THEY ARE PACKED IN THE CNU-105/E CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS CONTAINER WITH CONTENTS.
- D. THE LOADS AS SHOWN HEREIN ARE FOR CLOSED OR OPEN TOP VAN TRAILERS
 WHICH ARE 90" TO 93" WIDE (INSIDE DIMENSION) AND OF VARIOUS LENGTHS,
 AND THEY ARE LIMITED TO HIGHWAY MOVEMENTS ONLY. THE DEPICTED
 LOADS ARE BASED ON TRAILERS OF THE CONVENTIONAL TYPE OR ARE BASED
 ON TRAILERS WHICH ARE EQUIPPED WITH SELF-CONTAINED MECHANICAL
 BRACING DEVICES (CROSS MEMBERS AND WALL MEMBERS) AND APPLY TO
 TRAILERS HAVING WOOD, WOOD AND METAL, OR METAL FLOORS.
- E. THE OUTLOADING PROCEDURES SPECIFIED ON PAGES 4 THROUGH 9 ARE FOR CONVENTIONAL TYPE VAN TRAILERS.
- F. THE OUTLOADING PROCEDURES SPECIFIED ON PAGES 10 THROUGH 12 ARE FOR TRAILERS EQUIPPED WITH VARIOUS TYPES OF SELF-CONTAINED MECHANICAL BRACING DEVICES. HOWEVER, CROSS MEMBER ATTACHMENT FACILITIES WITH-IN THESE TRAILERS MUST PROVIDE FOR THE INSTALLATION OF LOAD BLOCKING CROSS MEMBERS AT THE HEIGHTS SPECIFIED HEREIN. <u>CAUTION</u>: TRAILERS EQUIPPED WITH FACILITIES WHICH DO NOT MEET THE LOCATION REQUIREMENTS MUST NOT BE USED. THE HEIGHT REQUIREMENTS SPECIFIED WITHIN THIS DRAWING FOR INSTALLATION OF CROSS MEMBERS ARE IDENTICAL WITH THOSE RECOMMENDED BY THE BUREAU OF EXPLOSIVES PAMPHLET 6C, AND APPENDICES THERETO.
 - VOIDS LENGTHWISE WITHIN A LOAD MUST BE HELD TO A MINIMUM. CROS 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 TRAILER).
 - CROSS MEMBERS IN EMPTY TRAILERS AND THOSE NOT USED IN LOADED TRAILERS MUST BE SECURED FOR SHIPMENT. COMPONENTS ASSIGNED TO EACH TRAILER MUST REMAIN THEREWITH EVEN THOUGH UNUSED DURING SOME SHIPMENTS.
 - 3. A CROSS MEMBER WILL NOT BE RELIED UPON TO RETAIN MORE CONTAINERS THAN SHOWN IN THE LOAD VIEWS.
- G. THE OUTLOADING PROCEDURES SPECIFIED HEREIN CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS WHEN THEY ARE LOADED WITH EMPTY ITEMS OR WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED WITHIN THE DRAWING TITLE.
- H. GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THE APPLICABLE LOADING REQUIREMENTS AND THE SHIPPER WILL LOAD ACCORDINGLY.
- J. NOTICE: A SHIPMENT WILL BE POSITIONED IN THE TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS CONTAINED HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEM.
- K. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED ITEM, 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 HEREIN.
- L. ONE AND ONE-QUARTER INCH (1-1/4") STEEL STRAPPING WILL BE USED TO UNITIZE STACKED CONTAINERS AS SHOWN ON PAGE 3, AND AS SPECIFIED BY THE OUTLOADING METHODS ON PAGES 4 THROUGH 7. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT USED TO LOAD THE CONTAINERS ABOARD A TRAILER PERMITS, IT IS RECOMMENDED THAT THE CONTAINERS BE UNITIZED PRIOR TO PLACEMENT WITHIN THE TRAILER. NOTICE: IN SOME INSTANCES CONTAINERS WILL ALREADY BE UNITIZED WHEN OFFERED FOR LOADING. THESE UNITIZED STACKS SHOULD BE INSPECTED AND AS REQUIRED, LOOSE UNITIZING STEEL STRAPPING MUST BE REPLACED.

(GENERAL NOTES CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

LUMBER ----: SEE TM 743-200-1, DUNNAGE LUMBER, FED SPEC MM-L-751.

NAILS ------
FED SPEC FF-N-105,
ALT: ANNULAR-RING TYPE NAIL OF SAME SIZE,

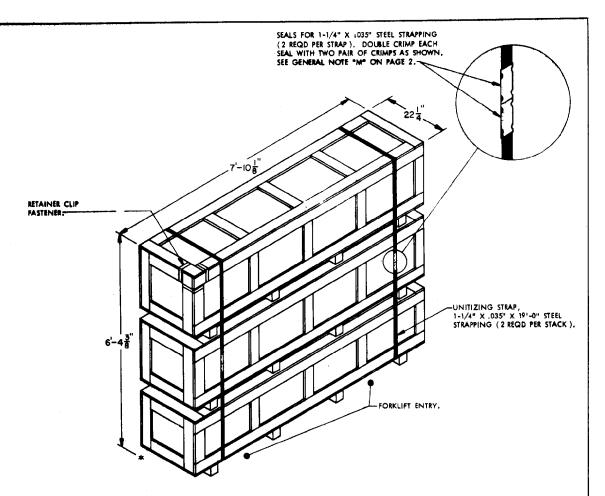
STRAPPING, STEEL: TYPE I OR IV, CLASS A OR 8, FED SPEC QQ-S-781.

WIRE ----- : FED SPEC QQ-W-461. STRAP SEAL ---- : COMMERCIAL GRADE.

PAGE 2

(GENERAL NOTES CONTINUED)

- M. WHEN ANY STACK UNITIZING STRAP IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED. CAUTION: EXERCISE CARE DURING STRAP TENSIONING TO PREVENT DAMAGE TO CONTAINERS.
- N. FOR CONVENTIONAL TYPE TRAILERS NOT EQUIPPED WITH REAR CORNER POSTS, REAR BLOCKING MUST BE EXTENDED TO CONTACT THE REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED.
- O. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-5/8" THICK B' 3-5/8" WIDE AND 4" X 4" MATERIAL IS ACTUALLY 3-5/8" THICK BY 3-5/8" WIDE.
- P. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, 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.
- Q. THROUGHOUT THIS PROCEDURAL DRAWING, PORTIONS OF THE TRAILER BODY DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- R. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3 AND TO THE "SPECIAL NOTES" SECTION WHICH IS IMMEDIATELY ADJACENT TO A DEPICTED OUTLOADING METHOD.



TYPICAL STACK DETAIL

NOTE THAT MOST RETAINER CLIP FASTENERS HAVE BEEN OMITTED INTENTIONALLY.

UNITIZING AND HANDLING PROCEDURAL GUIDANCE

- 1. STACKING CONTAINERS FOR UNITIZING.
 - A. PLACE AN UPPER CONTAINER AS CLOSE AS POSSIBLE IN VERTICAL ALIGNMENT WITH THE NEXT LOWER CONTAINER.
 - 8. POSITION THE FORWARD END OF AN UPPER CONTAINER ABOVE THE FORWARD END OF THE NEXT LOWER CONTAINER.
 - C. THE SKIDS OF AN UPPER CONTAINER MUST BE SEATED IN THE AREA FORMED BY THE EXTERIOR CLEATS ON THE TOP OF A NEXT LOWER CONTAINER.
- 2. INSTALLATION OF 1-1/4" X .035" UNITIZING STEEL STRAPPING. SEE GENERAL NOTES "L" AND "M" ON PAGE 2.
 - A. PLACE EACH UNITIZING STRAP AROUND THE CONTAINERS AS SHOWN. PLACE STRAPPING AS SHOWN NEAR INSIDE OF END SKIDS AND SO THAT STRAPPING LAYS FLAT AND STRAIGHT WITH THE BODY SURFACES OF THE CONTAINERS; I.E., VERTICAL ALONG THE SIDES AND STRAIGHT ACROSS THE TOP AND BOTTOM OF THE STACK.
 - B. STRAPPING WILL BE FIRMLY TENSIONED, AND EACH END-OVER-END LAP JOINT WILL BE SEALED WITH TWO (2) DOUBLE CRIMPED STRAP SEALS AS SHOWN. THE LAP JOINT WILL BE MADE ALONG THE SIDE OF THE STACK SO THAT THE SEALS WILL NOT BE IN CONTACT WITH THE CONTAINERS, DURING STRAP TENSIONING, CARE SHOULD BE EXECUSED TO ENSURE THAT THE CONTAINERS ARE NOT DAMAGED, AND SO THAT THE STRAPPING CRUSHES SLIGHTLY INTO THE OUTSIDE EDGES OF THE CONTAINERS. EXCESS STRAPPING (STRAP ENDS) SHOULD BE CUT OFF OR BROKEN OFF NEAR THE JOINT SEALS.
- 3. CONTAINER OR CONTAINER STACK HANDLING.
 - NOTES: (1) APPROVED MATERIALS HANDLING EQUIPMENT (FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS, SPREADER BARS, ETC.)
 IS SPECIFIED ELSEWHERE THAN HEREIN.
 - (2) PRECAUTIONARY HANDLING TECHNIQUES NORMALLY EMPLOYED OR AS SPECIFIED FOR THE TYPE OF COMMODITY INVOLVED WILL BE OBSERVED.
 - A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIALS HANDLING EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS.

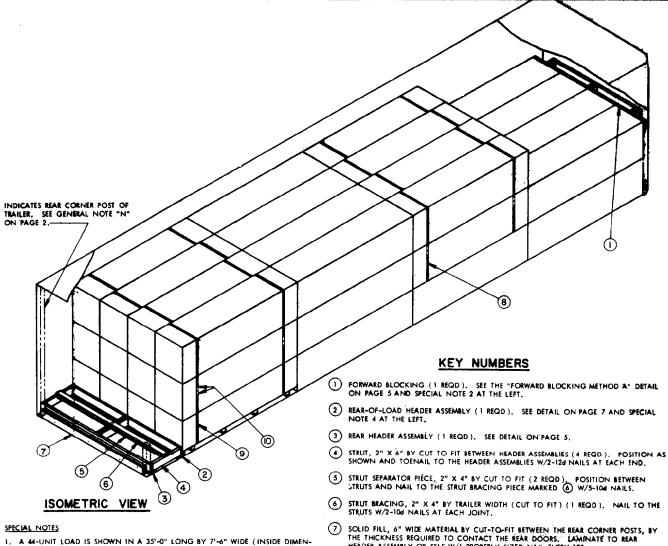
(CONTINUED AT RIGHT)

(UNITIZING AND HANDLING PROCEDURAL GUIDANCE CONTINUED)

B. IF HANDLING IS ACCOMPLISHED WITH A FORKLITT TRUCK, THE
CONTAINERS SHOULD BE HANDLED FROM A SIDE POSITION AS MUCH
AS POSSIBLE. CARE MUST BE EXERCISED WHEN INSERTING FORKS
UNDER A CONTAINER, TO PREVENT DAMAGE TO A CONTAINER BY
THE FORK TINES OR THE FORKLIFT PACKAGE GUARD. FOR VERY
SHORT "INCHING" SPEED MOVEMENTS, SUCH AS WILL BE EXPERIENCED
DURING TRAILER LOADING, A UNITIZED TWO OR THREE-HIGH CONTAINER STACK MAY BE HANDLED BY INSERTING THE FORKS OF A
FORKLIFT TRUCK INTO THE FORK RECEPTACLES OF AN UPPER CONTAINER. IF A CONTAINER OR STACK OF CONTAINERS IS HANDLED
BY SLINGING, THE SLING MUST BE OF SUCH A DESIGN THAT THE
LIFTING IS DONE ON THE BOTTOM OF THE LOWEST CONTAINER.

UNITIZATION AND HANDLING PROCEDURES

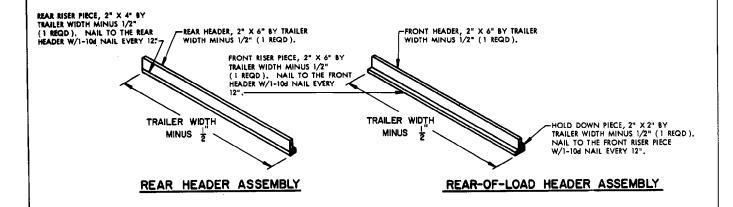
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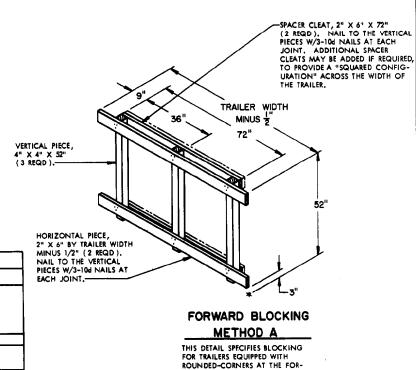


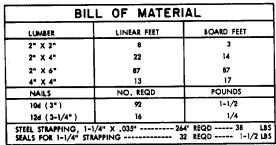
- SION) TRAILER. LONGER OR SHORTER TRAILERS CAN BE USED. A 32'-0" LONG
 TRAILER IS THE SHORTEST TRAILERS TRAILERS CAN BE USED. A 32'-0" LONG
 TRAILER IS THE SHORTEST TRAILER THAN CAN BE USED FOR THE DEPICTED LOAD,
 PROVIDING THE TRAILER HAS A "SQUARE" FRONT. A TRAILER WITH AN INSIDE
 DIMENSION OF LESS THAN 7'-6" CAN NOT BE USED FOR SHIPPING THE DE-PICTED 4-WIDE LOAD.
- A TRAILER WITH ROUNDED-CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD VIEW. IF THE TRAILER BEING LOADED HAS SQUARED CORNERS AT THE FORWARD END, OMIT THE FORWARD BLOCKING AND POSITION THE CON-TAINERS DIRECTLY AGAINST THE FRONT WALL OF THE TRAILER. IF THE TRAILER BEING LOADED HAS A ROUND FRONT, SEE THE "FORWARD BLOCKING METHOD B" ON PAGE 7 FOR APPLICABLE BLOCKING REQUIREMENTS.
- THE DEPICTED LOAD CONFIGURATION MAY BE ADJUSTED TO SATISFY THE THE DEPICTED LOAD CONTRIGUENTION MAY BE ADJUSTED TO SATISFY OF EIGHT (8) OR TWELVE (12) CONTAINERS, OR ADDITIONAL ADJUSTMENTS MAY BE MADE BY OMITTING A CONTAINER FROM ANY CONTAINER STACK. IF A CONTAINER IS OMITTED FROM A CONTAINER STACK ALL STACKS LATERALLY AND LONGITUDINALLY ADJACENT TO THAT STACK MUST BE UNITIZED AS DEPICTED BY THE "UNITIZING AND HANDLING PROCEDURAL GUIDANCE" ON
- IF THE SPACE BETWEEN THE REAR OF THE LOAD AND THE REAR DOORS OF THE TRAILER, WHEN THEY ARE CLOSED, MEASURES 9" OR LESS, SOLID FILL MATERIAL, MARKED AS PIECES (1) ON PAGE 6, WILL BE REQUIRED IN LIEU OF SPECIFIED PIECES MARKED (2) THRU (6).

- O SOLID FILL, 6" WIDE MATERIAL BY CUT-TO-FIT BETWEEN THE REAR CORNER POSTS, BY THE THICKNESS REQUIRED TO CONTACT THE REAR DOORS. LAMINATE TO REAR HEADER ASSEMBLY OR SELF W/I PROPERLY SIZED NAIL EVERY 12".
- (8) UNITIZING STRAP, 1-1/4" X .035" X 14"-0" STEEL STRAPPING (8 REGID). SEE THE "UNITIZING AND HANDLING PROCEDURAL GUIDANCE" ON PAGE 3 AND GENERAL NOTES "L" AND "M" ON PAGE 2.
- (9) UNITIZING STRAP, 1-1/4" X .035" X 19"-0" STEEL STRAPPING (8 REQD.). SEE THE "UNITIZING AND HANDLING PROCEDURAL GUIDANCE ON PAGE 3 AND GENERAL NOTES "L" AND "M" ON PAGE 2.
- (10) SEAL FOR 1-1/4" STRAPPING (32 REQD, 2 PER STRAP).

4



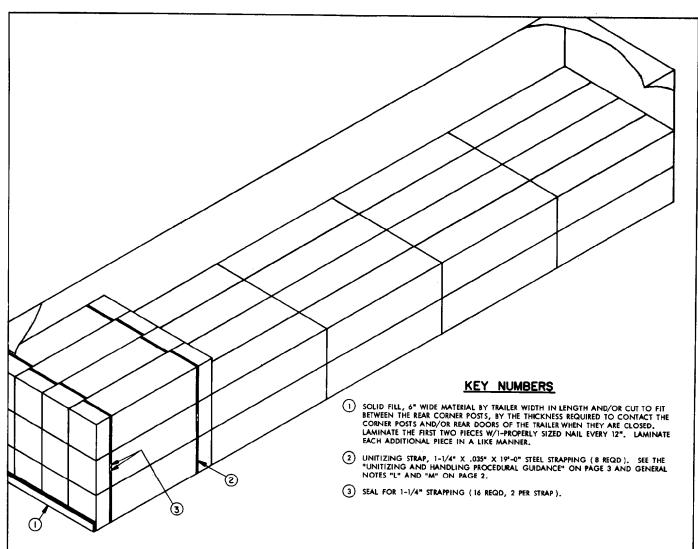




LOAD AS SHOWN

| TEM | QUANTITY | WEIGHT (APPROX) | 105/E CONTAINER ----- 44 ------ 41,360 LBS | DUNNAGE ------ 344 LBS | TOTAL WEIGHT ---- 41,704 LBS |

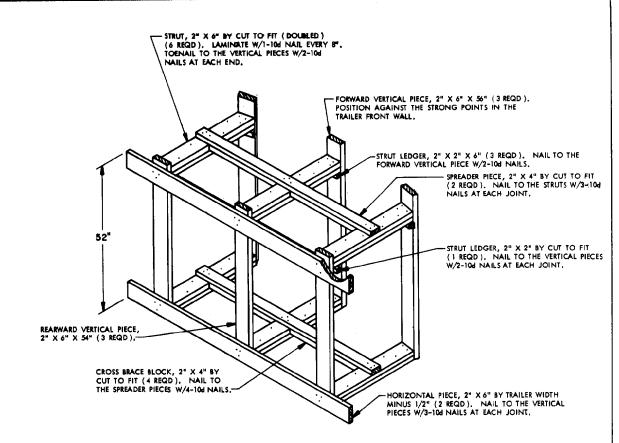
44-UNIT LOAD IN A 35'-0" LONG TRAILER



ISOMETRIC VIEW

SPECIAL NOTES

- A 44-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) TRAILER. A TRAILER WITH AN INSIDE DIMENSION OF LESS THAN 7'-6" CAN NOT BE USED FOR SHIPPING THE DEPICTED 4-WIDE LOAD.
- 2. A SQUARE-FRONT TRAILER IS SHOWN IN THE LOAD VIEW. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS, REFER TO THE FORWARD BLOCKING METHOD DEPICTED ON PAGES 4 AND 5. IF THE TRAILER BEING USED HAS A ROUND-FRONT, REFER TO "FORWARD BLOCKING METHOD B" ON PAGE 7. IF A 40'-0" LONG TRAILER, EQUIPPED WITH ROUNDED CORNERS OR A ROUND-FRONT AT THE FORWARD END IS BEING USED, THE PROCEDURES SHOWN ON PAGE 4 FOR THE 35'-0" LONG TRAILER MUST BE FOLLOWED.
- 3. THE DEPICTED LOAD CONFIGURATION MAY BE ADJUSTED TO SATISFY THE QUANTITY OF ITEMS TO BE SHIPPED BY OMITTING AN ENTIRE BAY OF EIGHT (8) OR TWELVE (12) CONTAINERS OR BY OMITTING THE TOP LAYER OF FOUR (4) CONTAINERS IN THE REARWARD BAY; OR ADDITIONAL ADJUSTMENTS MAY BE MADE BY OMITTING A CONTAINER FROM A CONTAINER STACK. IF A CONTAINER IS OMITTED FROM A CONTAINER STACK, ALL STACKS LATERALLY AND LONGITUDINALLY ADJACENT TO THAT STACK MUST BE UNITIZED AS DEPICTED BY THE "UNITIZING AND HANDLING PROCEDURAL GUIDANCE" ON PAGE 3.



FORWARD BLOCKING METHOD B

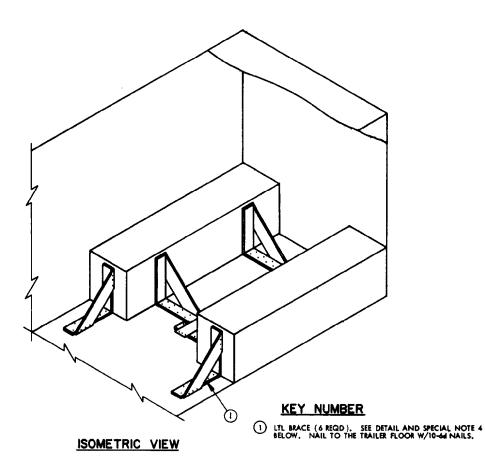
THIS DETAIL SPECIFIES BLOCKING FOR ROUND-FRONT TRAILERS.

BILL OF MATERIAL				
LUMBER	LINEAR FEET	BOARD FEET		
2" X 6"	15	15		
NAILS	NO. REQD	POUNDS		
10d (3")	T 8	NIL		

LOAD AS SHOWN

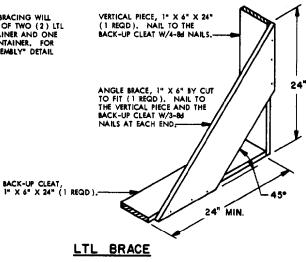
ITEM.	QUANTITY	WEIGHT (APPROX)
105/E CONT	AINER 44	41,360 LBS
DUNNAGE -		- 61 LBS
	TOTAL WEIGHT	41.421 LBS

44-UNIT LOAD IN A 40-0" LONG TRAILER



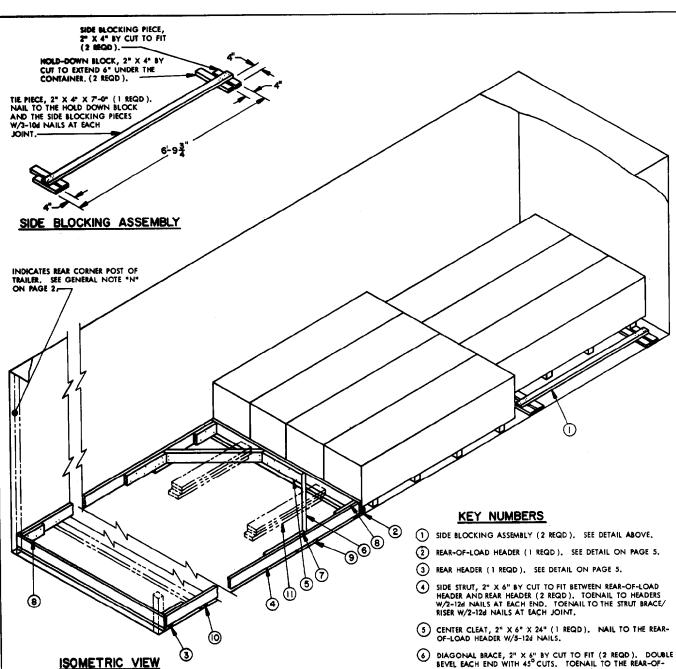
 THESE OUTLOADING PROCEDURES DEPICT THE USE OF THE LTL BRACE METHOD IN A TRAILER WHICH IS EQUIPPED WITH A NAILABLE FLOOR. THESE PROCE-DURES ARE LIMITED TO A ONE CONTAINER HIGH LOAD.

- THESE OUTLOADING PROCEDURES ARE ALSO APPLICABLE FOR LTL LOADS OF MORE THAN TWO CONTAINERS, PROVIDING THE CRITERIA OF SPECIAL NOTE 4 IS OBSERVED.
- 3. IF DESIRED, LTL BRACES MAY ALSO BE INSTALLED AT THE FORWARD END OF THE LADING. ADDITIONALLY, THE CONTAINERS MAY BE POSITIONED TO-GETHER WITH THE LTL BRACES INSTALLED BETWEEN A CONTAINER AND A SIDE WALL OF THE TRAILER, OR THE CONTAINERS MAY BE POSITIONED TO-GETHER AND AGAINST ONE SIDE WALL OF THE TRAILER. FOR THE LATTER LOAD CONFIGURATION, TWO LESS-THAN-SHOWN LTL BRACES WILL BE REQUIRED.
- 4. EACH BRACE AS APPLIED FOR LONGITUDINAL OR LATERAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING. ALSO, A MINIMUM OF TWO (2) LTL BRACES MUST BE USED AGAINST THE LENGTH OF A CONTAINER AND ONE LTL BRACE MUST BE USED AGAINST THE END OF EACH CONTAINER, FOR A THREE-CONTAINER WIDE LOAD SEE "SIDE BLOCKING ASSEMBLY" DETAIL AND PROCEDURES DEPICTED ON PAGE 9.



SEE SPECIAL NOTE 4
ABOVE.

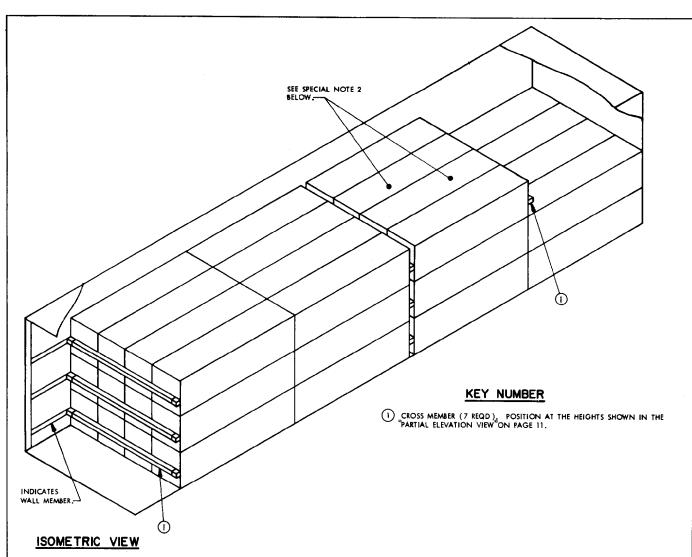
TYPICAL LTL (2-UNIT LOAD)



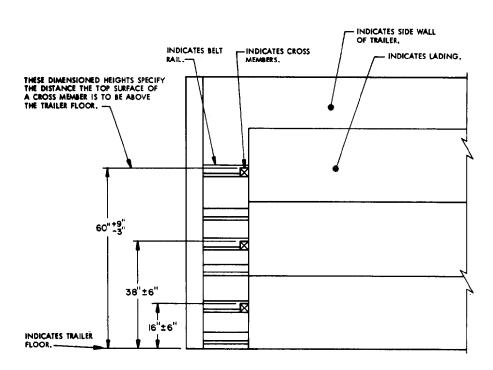
- 1. THESE LTL OUTLOADING PROCEDURES DEPICT A "K-BRACE" TYPE OF BLOCKING AND A NAILED-TO-FLOOR TYPE OF BLOCKING IN A 7"-6" WIDE TRAILER. WIDER TRAILERS CAN ALSO BE USED.
- 2. IF THE TRAILER TO BE LOADED HAS ROUNDED CORNERS AT THE FORWARD END, SEE "FOR-WARD BLOCKING METHOD A" DETAIL ON PAGE 5 AND ADJUST FOR A ONE-CONTAINER HIGH LOAD, IF THE TRAILER HAS A ROUND-FRONT AT THE FORWARD END, SEE "FORWARD BLOCKING METHOD B" ON PAGE 7 AND ADJUST FOR A ONE-CONTAINER HIGH LOAD, THE REAR-OF-LOAD HEADER AND BACK-UP CLEATS, PIECES MARKED (2) AND (1) MAY ALSO BE INSTALLED AT THE FORWARD END OF THE LADING, PROVIDING THE TRAILER HAS A NAIL-
- 3. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED (3) THROUGH (10), IS ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD OF 20,000 POUNDS.
- TWO (2) BACK-UP CLEATS, SHOWN AS PIECES MARKED (1), ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND MAY BE USED IN LIEU OF PIECES MARKED (3) THROUGH (10), WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. TWO (2) BACK-UP CLEATS, SHOWN AS PIECES MARKED (1), ARE ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 12,000 POUNDS.

- (a) DIAGONAL BRACE, 2" X 6" BY CUT TO FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. TOENAIL TO THE REAR-OF-LOAD HEADER AND TO THE SIDE STRUT W/2-164 NAILS AT EACH
- 7) BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO THE SIDE STRUT W/6-12d NAILS, TOENAIL TO THE RISER BLOCK W/2-12d NAILS.
- (9) RISER BLOCK, 2" X 4" X 12" (2 REQD). CENTER UNDER THE JOINT OF THE DIAGONAL BRACE AND THE BACK-UP CLEAT.
- (0) STRUT BRACE/RISER, 2" X 4" BY TRAILER WIDTH (CUT TO FIT)
 (MIN 1 REQD), POSITION ONE (1) NEAR THE REAR OF THE
 TRAILER AND ONE (1) EVERY 7"-0" OF STRUT LENGTH.
- (1) BACK-UP CLEAT, 2" X 6" X 42" (TRIPLED) (2 REQD), POSITION ON A JOINT BETWEEN THE CONTAINERS AS SHOWN AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/11-120 NAILS, NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER, TOENAIL THE TOP PIECE TO THE REAR-OF-LOAD HEADER W/2-12d NAILS. SEE GENERAL NOTE "P" ON PAGE 2 AND SPECIAL NOTE 4 AT LEFT.

TYPICAL LTL (7-UNIT LOAD)



- 1. A 44-UNIT LOAD IS SHOWN IN A 35'-0" LONG BY 7'-6" WIDE (INSIDE DI-MENSION) TRAILER WHICH IS EQUIPPED WITH A MECHNAICAL LOAD BLOCK-ING SYSTEM THAT CONTAINS AT LEAST SEVEN (7) CROSS MEMBERS, AND IS AT LEAST 32'-0" IN LENGTH AS MEASURED FROM THE FRONT WALL OF THE TRAILER TO THE REAR OF THE SYSTEM. A LONGER TRAILER MAY BE USED, BUT A TRAILER WITH AN INSIDE WIDTH DIMENSION OF LESS THAN 7'-6" CAN NOT BE USED FOR A 4-WIDE LOAD.
- 2. IF IT IS NECESSARY TO OMIT ONE OR MORE CONTAINERS FROM THE DE-PICTED LOAD, TO SATISFY A LOAD QUANTITY, THE CONTAINERS LATERALLY ADJACENT TO THE OMITTED CONTAINER MUST BE UNITIZED TO A LOWER CONTAINER WITH TWO (2) 1-1/4" X .035" STELL STRAPS, SEE THE "UNITIZATION AND HANDLING PROCEDURES" GUIDANCE ON PAGE 3. THE CON-TAINER SHOULD BE OMITTED FROM A STACK WHICH HAS A CROSS MEMBER BLOCKING THAT STACK AT EACH END AS NOTED IN THE ISOMETRIC VIEW,
- 3. A SQUARE-FRONT TRAILER IS SHOWN IN THE LOAD VIEW, IF THE TRAILER HAS ROUNDED CORNERS AT THE FORWARD END, TWO (2) ADDITIONAL CROSS MEMBERS MAY BE POSITIONED AT THE FRONT OF THE TRAILER AT THE SAME HEIGHTS AS SPECIFIED IN THE PARTIAL ELEVATION VIEW ON PAGE 11, NOTE; A ROUNDED-CORNER TRAILER MUST HAVE A MECHANICAL LOAD BLOCKING SYSTEM WHICH IS AT LEAST 32'-3" LONG AS MEASURED FROM THE FRONT END OF THE SYSTEM TO THE REAR END OF THE SYSTEM.

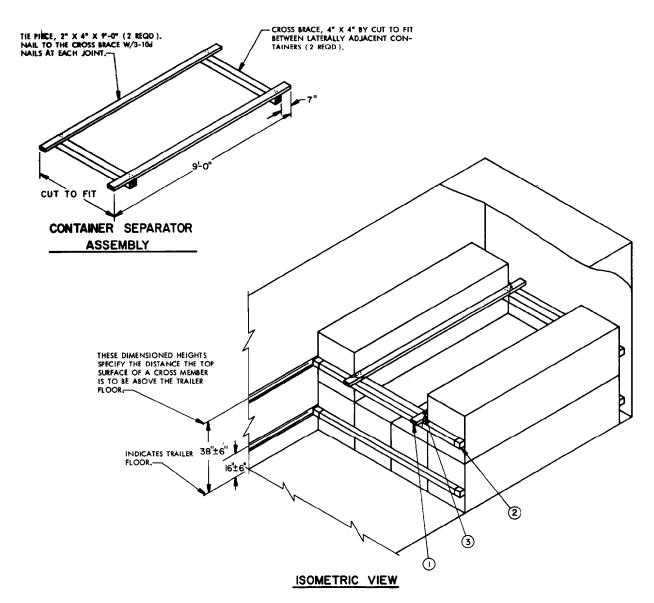


PARTIAL ELEVATION VIEW

LOAD AS SHOWN

44-UNIT LOAD IN A 35'-O" LONG TRAILER (MECHANICAL)

PAGE II



- A 6-UNIT LOAD IS SHOWN IN A TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. THE CONTAINER SEPARATOR MAY BE USED FOR A 5 OR 7-UNIT LOAD BY ADJUSTING THE LENGTH OF THE CROSS BRACE.
- FOUR (4) PIECES OF NO. 14 GAGE WIRE MAY BE USED IN LIEU OF THE NO. 8 GAGE WIRE. WHEN USING NO. 14 GAGE WIRE, INSTALL TWO (2) COMPLETE LOOPS AROUND THE CROSS MEMBER AND THE CONTAINER SEPARATOR ASSEMBLY AT EACH LOCATION.
- 4. IF DESIRED, UNITIZING STRAPS OF 1-1/4" X .035" STEEL STRAPPING MAY BE USED IN LIEU OF THE CONTAINER SEPARATOR ASSEMBLY. EACH CONTAINER ADJACENT TO AN OMITTED CONTAINER WILL BE UNITIZED TO A LOWER CONTAINER WITH TWO (2) 1-1/4" X .035" STEEL STRAPS. SEE "UNITIZATION AND HANDLING PROCEDURES" GUIDANCE ON PAGE 3.

KEY NUMBERS

- () CONTAINER SEPARATOR ASSEMBLY (1 REQD). SEE DETAIL ABOVE.
- (2) CROSS MEMBER (4 REQD), POSITION AT THE HEIGHTS SHOWN.
- (3) TIE WIRE, NO. 8 GAGE BLACK ANNEALED WIRE 30" LONG (4 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE CROSS BRACE AND THE TIE PIECE OF THE CONTAINER SEPARATOR ASSEMBLY, AND THE ADJACENT CROSS MEMBER, BRING THE ENDS TOGETHER AND TWIST TAUT. SEE SPECIAL NOTE 3 AT LEFT.

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TYPICAL LTL (6-UNIT LOAD) (MECHANICAL)