	APPROVED BY
E	BUREAU OF EXPLOSIVES
1	J. Grasomuck_
	BOR, MILITARY & INTERMODAL SERVICES
DATE_	9/24/78
	REVISION NO I
SIGNE	0 <u>2. P. B. Mari</u> Notes

# STINGER

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF THE COMPLETE ROUND PACKED IN WIREBOUND AND/OR ALUMINUM CONTAINER (UNITIZED AND UNUNITIZED OR PALLETIZED AND UNPALLETIZED)

## INDEX

<u>ITEM</u> <u>P</u>	AGE (S)
GENERAL NOTES, AND MATERIAL SPECIFICATIONS	4 5
ALUMINUM CONTAINER DETAIL  TYPICAL LOAD CONFIGURATIONS FOR UNUNITIZED WIREBOUND CONTAINERS  TYPICAL LOAD CONFIGURATIONS FOR UNITIZED WIREBOUND CONTAINERS  TYPICAL LOAD CONFIGURATIONS FOR UNPALLETIZED ALUMINUM CONTAINERS	8-15 16-23 24-31
TYPICAL LOAD CONFIGURATIONS FOR PALLETIZED ALUMINUM CONTAINERS	3

THIS DOCUMENT INCLUDES PROCEDURES FOR CONVENTIONAL TYPE TRAILERS AND FOR TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES AS APPROVED BY THE BUREAU OF EXPLOSIVES, ASSOCIATION OF AMERICAN RAILROADS. CAUTION: PROCEDURES SHOWN HEREIN, FOR BOTH TYPES OF TRAILERS ARE ONLY APPLICABLE FOR HIGHWAY MOVEMENTS, NOT FOR CONTAINER/TRAILER-ON-FLAT-CAR MOVEMENTS.

Γ	REVISIONS .			104 517		5/ww/		
Γ		JUNE 83	w/	Hospitan	JAM APPROVED.	200		16 tyme
-		30112 00	% D	John By of	1	lam J	Ho	guen
-			K-		MATERIEL D	TO ORDER OF CO.	io readiness co	RAL, U. S. ARMY DWM AND (DARCOM)
			_		U.S.	ARMY [		DRAWING
1						OCTO	BER IS	978
L			<u>/</u>		CLASS	DIVISION	DRAWING	FILE
					19	48	5947	G M IISRI

DO NOT SCALE

#### **GENERAL NOTES**

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 ( CHAPTER 5 ).
- B. THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE TO THE STINGER GUIDED MISSILE PACKED IN WIREBOUND CONTAINER AND/OR ALUMINUM CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER MEANS WIREBOUND CONTAINER AND/OR ALUMINUM CONTAINER WITH CONTENTS. ALSO, SUBSEQUENT REFERENCE TO SKIDDED UNIT MEANS THE SKIDDED UNIT OF NINE (9) WIREBOUND CONTAINERS WITH CONTENTS AND SUBSEQUENT REFERENCE TO PALLETIZED UNIT MEANS THE PALLETIZED UNIT OF NINE (9) ALUMINUM CONTAINERS WITH CONTENTS.
- C. FOR DETAILS OF THE WIREBOUND CONTAINER, SEE US ARMY MISSILE COMMAND DRAWING NO. 11509503 AND "CONTAINER" DETAIL ON PAGE 5.

CONTAINER DIMENSIONS --- 67-1/4" LONG X 13-1/8" WIDE X 10-1/2" HIGH (APPROX).

GROSS WEIGHT ----- 77 POUNDS (APPROX).

CUBE ------ 5,4 CUBIC FEET.

D. FOR DETAILS OF THE ALLIMINUM CONTAINER, SEE US ARMY MISSILE COMMAND DRAWING NO. 11486952 AND "CONTAINER" DETAIL ON PAGE 7.

E. FOR DETAILS OF THE UNITIZED WIREBOUND CONTAINERS, SEE US ARMY DARCOM DRAWING NO. 19-48-5239-GM20SR1 AND "SKIDDED UNIT" ON PAGE 4.

F. FOR DETAILS OF THE PALLETIZED ALUMINUM CONTAINERS, SEE US ARMY DARCOM DRAWING NO. 19-48-5239-GM20SR1 AND "ALUMINUM CONTAINER (PALLETIZED)" ON PAGE 6.

- G. THIS ITEM IS A DOT CLASS "A" EXPLOSIVE. 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.
- H. THE LOADS AS SHOWN HEREIN ARE FOR CLOSED OR OPEN TOP VAN TRAILERS WHICH ARE 89" TO 93" WIDE ( INSIDE DIMENSION ) AND OF VARIOUS LENGTHS, UP TO AND INCLUDING 45"-0" LONG. THEY ARE LIMITED TO HIGHWAY MOVEMENT 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.
- J. THE OUTLOADING PROCEDURES SPECIFIED IN THE ISOMETRIC VIEWS ARE FOR CONVENTIONAL TYPE VAN TRAILERS.
- K. THE OUTLOADING PROCEDURES SPECIFIED IN THE "PARTIAL ELEVATION VIEWS"ON PAGES 9, 11, 17, 19, 25, 27, 33, AND 35 AND THE "ISOMETRIC VIEW" ON PAGES 15, 23, 31, AND 39 ARE FOR TRAILERS EQUIPPED WITH VARIOUS TYPES OF SELF CONTAINED MECHANICAL BRACING DEVICES, AND ARE LIMITED TO HIGHWAY MOVEMENT ONLY. THE HEIGHT REQUIREMENTS SPECIFIED WITHIN THIS DRAWING FOR THE INSTALLATION OF CROSS MEMBERS ARE IDENTICAL WITH THOSE RECOMMENDED BY THE BUREAU OF EXPLOSIVES PAMPHLET 6C, AND APPENDICES THERETO. CAUTION: TRAILERS EQUIPPED WITH WALL MEMBERS WHICH DO NOT MEET THE LOCATION REQUIREMENTS MUST NOT BE USED.
  - 1. 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 "MATEO" POSITIONS (AT EQUAL HEIGHTS AND AT EQUAL DISTANCES FROM THE END OF THE TRAILET).

## ( CONTINUED AT RIGHT )

# MATERIAL SPECIFICATIONS

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

NAILS ----:: FED SPEC FF-N-105, COMMON.

STRAPPING, STEEL ---:: CLASS I, TYPE I OR IV. HEAVY DUTY, FINISH A, B

(GRADE 2), OR C; FED SPEC QQ-S-781.

STRAP SEALS ----:: TYPE D, STYLE I, II, OR IV, CLASS H, FED SPEC QQ-S-781.

WIRE ----:: FED SPEC QQ-W-461.

#### ( GENERAL NOTES CONTINUED )

- 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.
- ONE (1) CROSS MEMBER WILL BE REQUIRED FOR EACH 10,000 POUNDS OF LADING, AND SHOULD NOT BE RELIED UPON TO RETAIN A GREATER WEIGHT. CROSS MEMBERS WILL NOT BE DOUBLED; THAT IS, TWO CROSS MEMBERS AT THE SAME HEIGHT LOCATION WILL NOT BE PLACED SIDE BY SIDE.
- SELECTION OF A VEHICLE TO BE USED TO TRANSPORT THE DESIGNATED ITEM MUST COMPLY WITH AR 55-355, CHAPTER 213, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES. IN FULL.
- M. THE 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. THE TOTAL WEIGHT OF THE LADING, OF THE DUNNAGE, OF THE TRACTOR AND OF THE SEMI-TRAILER CARRYING THE LADING MUST NOT EXCEED THE MAXIMUM GROSS WEIGHT ALLOWED FOR THE STATE OR STATES THRU WHICH THE LOAD IS TO BE TRANSPORTED BY MOTOR CARRIER. LIKEWISE, THE GROSS WEIGHT ON A SINGLE OR TANDEM AXLE MUST NOT EXCEED THE MAXIMUM ALLOWABLE WEIGHT. IF THERE IS ANY DOUBT AS TO WHETHER THE TOTAL GROSS WEIGHT EXCEEDS THE MAXIMUM ALLOWED, PROPER WEIGHT DISTRIBUTION SHOULD BE VERIFIED BY ACTUALLY WEIGHING THE LOADED VEHICLE.
- N. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO SUIT THE CAPACITY OF THE TRAILER BEING LOADED OR THE QUANTITY TO BE SHIPPED. HOWEVER, THE APPROVED METHODS SPECIFIED HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE LOADS.
- O. PALLETIZED UNITS OR SKIDDED UNITS WHICH DO NOT CONTAIN A FULL QUANTITY OF CONTAINERS CAN BE TRANSPORTED. A PARTIAL UNIT MAY BE POSITIONED ON TOP OF THE LOAD, TRAILER HEIGHT PERMITTING, AND SECURED TO THE UNIT DRECTLY BELOW WITH STEEL STRAPPING. REFER TO THE "SHIPMENT OF PARTIAL UNITS" ON PAGES 51 THRU 53 FOR GUIDANCE. FOR THE TRANSPORTATION OF A QUANTITY OF CONTAINERS INSUFFICIENT TO FORM A PARTIAL UNIT (A PARTIAL UNIT WILL CONSIST OF PULL LAYERS) REFER TO THE "SHIPMENT OF LEFTOVER CONTAINERS" PROCEDURES ON PAGES 54 AND 55 FOR GUIDANCE.
- P. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS 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 HEREIN.
- Q. FOR TRAILERS NOT EQUIPPED WITH REAR CORNER POSTS, REAR BLOCKING MUST BE EXTENDED TO CONTACT THE REAR DOORS WHEN THEY ARE CLOSED.
- R. IN SOME INSTANCES CONTAINERS WILL ALREADY BE UNITIZED WHEN OFFERED FOR LOADING. THESE UNITS SHOULD BE INSPECTED AND, AS REQUIRED, LOOSE UNITIZING STEEL STRAPPING MUST BE REPLACED OR RETENSIONED.
- S. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 4" X 4" MATERIAL IS ACTUALLY 3-1/2" THICK BY 3-1/2" WIDE.
- T. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES. ALSO, 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.
- U. PORTIONS OF THE TRAILER BODIES DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- V. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIRS OF CRIMPS PER SEAL, MUST BE USED TO SEAL THE JOINT.
- W. WHEN REFERING TO THE PALLET UNIT LENGTH OR UNIT WIDTH THE 40" DIMENSION OF THE PALLET BASE CONSTITUTES THE LENGTH AND THE 48" DIMENSION CONSTITUTES THE WIDTH, SEE THE PALLETIZED UNIT ON PAGE 6, WHEN REFERING TO THE SKIDDED UNIT LENGTH OR WIDTH THE 38-1/2" DIMENSION OF THE SKIDDED BASE CONSTITUTES THE LENGTH AND THE 66" DIMENSION CONSTITUTES THE WIDTH. SEE THE SKIDDED UNIT ON PAGE 4.
- X. CONVERSION TO METRIC EQUIVALENT: 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 25.4 MM, AND ONE POUND EQUALS 0.454 KG.
- Y. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.

# ITEMIZED INDEX

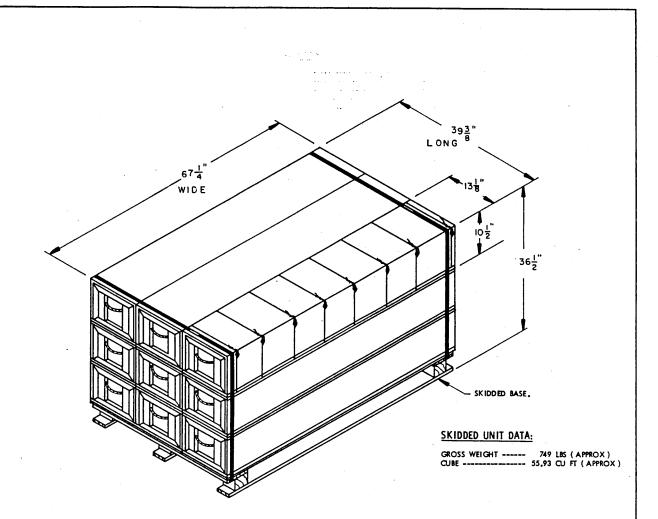
- and spect

TEM	PAGE (S
GENERAL NOTES, AND MATERIAL SPECIFICATIONS	
WIREBOUND CONTAINER (UNITIZED)	
WIREBOUND CONTAINER DETAIL	
ALUMINUM CONTAINER ( PALLETIZED )	
ALUMINUM CONTAINER DETAIL	
TYPICAL LOAD CONFIGURATIONS FOR UNUNITIZED WREBOUND CONTAINERS 324 UNUNITIZED WREBOUND CONTAINERS IN A 40"-0" LONG CONVENTIONAL TYPE VAN TRAILER	5: 8,5
288 UNUNITIZED WREBOUND CONTAINERS IN A 40'-0" LONG CONVENTIONAL TYPE VAN TRAILER	
TYPICAL LTL-60 UNUNITIZED WIREBOUND CONTAINERS IN A CONVENTIONAL TYPE VAN TRAILER	10, 11
TYPICAL LTL-23 UNUNITIZED WIREBOUND CONTAINERS IN A	
TYPICAL LIT-2 UNUNITIZED WIREBOUND CONTAINERS IN A CONVENTIONAL TYPE VAN TRAILER	
TYPICAL LTL-3 UNUNITIZED WIREBOUND CONTAINERS IN A TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES	
TYPICAL LOAD CONFIGURATIONS FOR UNITIZED WIREBOUND CONTAINERS:  28 SKIDDED UNITS OF WREBOUND CONTAINERS IN A 40'-0" LONG	
23 SKIDDED UNITS OF WIREBOUND CONTAINERS IN A 40'-0" LONG	16, 17
I YPICAL LIL - 5 SKIDDED UNITS OF WIREBOUND CONTAINERS IN A	18, 19
CONVENTIONAL TYPE VAN TRAILER  TYPICAL LITL-5 SKIDDED UNITS OF WIREBOUND CONTAINERS IN A CONVENTIONAL TYPE VAN TRAILER	20
TYPICAL LTL - 1 SKIDDED UNIT OF WIREBOUND CONTAINERS IN A	21
CONVENTIONAL TYPE VAN TRAILER  TYPICAL LTL - 1 SKIDDED UNIT OF WIREBOUND CONTAINERS IN A	
TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES	
TYPICAL LOAD CONFIGURATIONS FOR UNPALLETIZED ALUMINUM CONTAINESS 282 UNPALLETIZED ALUMINUM CONTAINERS IN A 40'-0" LONG	
252 GIVALLE IZED ALDMINUM CONTAINERS IN A 40'-0" LONG	24,25
ITPICAL LIL - 84 UNPALLETIZED ALUMINUM CONTAINERS IN A	26,27
CONVENTIONAL TYPE VAN TRAILER	28
CONVENTIONAL TYPE VAN TRAILERTYPICAL LTL - 2 UNPALLETIZED ALUMINUM CONTAINERS IN A	29
CONVENTIONAL TYPE VAN TRAILER	30
EQUIPPED WITH MECHANICAL BRACING DEVICES	31
TYPICAL LOAD CONFIGURATIONS FOR PALLETIZED ALUMINUM CONTAINERS:  26 PALLETIZED UNITS OF ALUMINUM CONTAINERS IN A 40'-0" LONG CONVENTIONAL TYPE VAN TRAILER	
25 PALLETIZED UNITS OF ALUMINUM CONTAINERS IN A 40'-0" LONG	32,33
TYPICAL LTL - 5 PALLETIZED UNITS OF ALUMINUM CONTAINERS IN A CONVENTIONAL TYPE VAN TRAILER	34,35
TYPICAL LTL - 5 PALLETIZED UNITS OF ALUMINUM CONTAINERS IN A CONVENTIONAL TYPE VAN TRAILER	36
TYPICAL LTL - 1 PALLETIZED UNIT OF ALUMINUM CONTAINERS IN A CONVENTIONAL TYPE VAN TRAILER	37
TYPICAL LIL - I PALLETIZED UNIT OF ALUMINUM CONTAINERS IN A	38
TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES	39
DETAILS	
SHIPMENT OF A PARTIAL UNIT	51-53
PROCEDURES FOR SHIPMENT OF LEFTOVER ALLMINUM CONTAINERS	54 55

#### **REVISIONS**

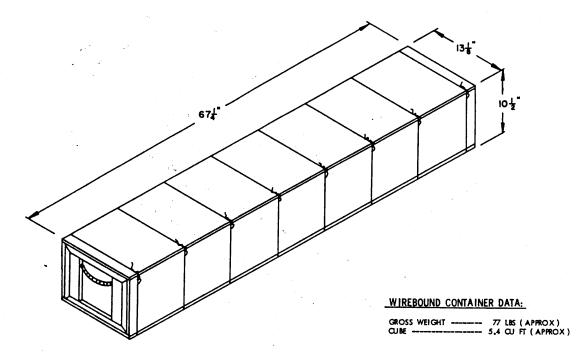
REVISION NO. 1 DATED JUNE 1983, CONSISTS OF:

- CHANGING THE DUNNAGE ASSEMBLIES, AND STRAPPING, ON THE PALLETIZED UNIT OF ALUMINUM CONTAINERS, SHOWN ON PAGE 6.
- CHANGING ALL DUNNAGE ASSEMBLIES IN LOADS OF PALLETIZED ALUMINUM CONTAINERS AS REQUIRED.

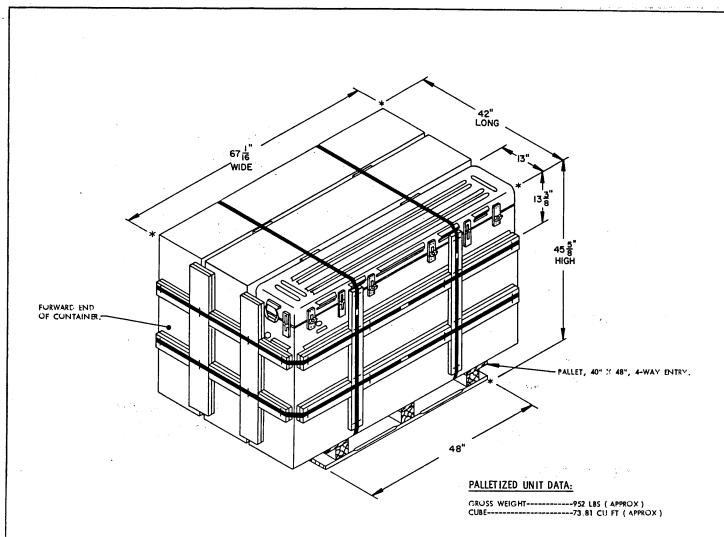


SKIDDED UNIT OF NINE (9) GUIDED MISSILES, PACKED ONE (1) PER WIREBOUND (WOODEN) BOX

PAGE 4 WIREBOUND CONTAINERS (UNITIZED)

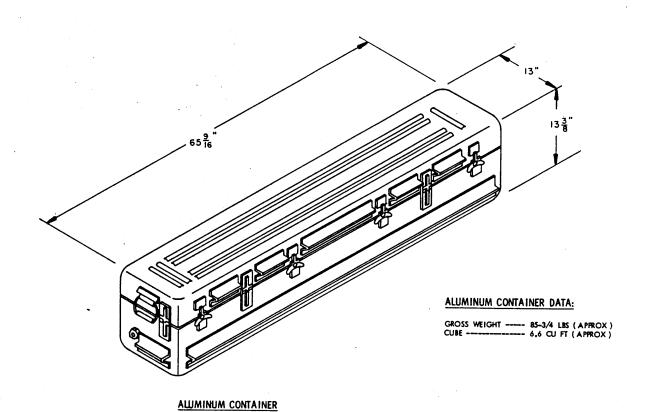


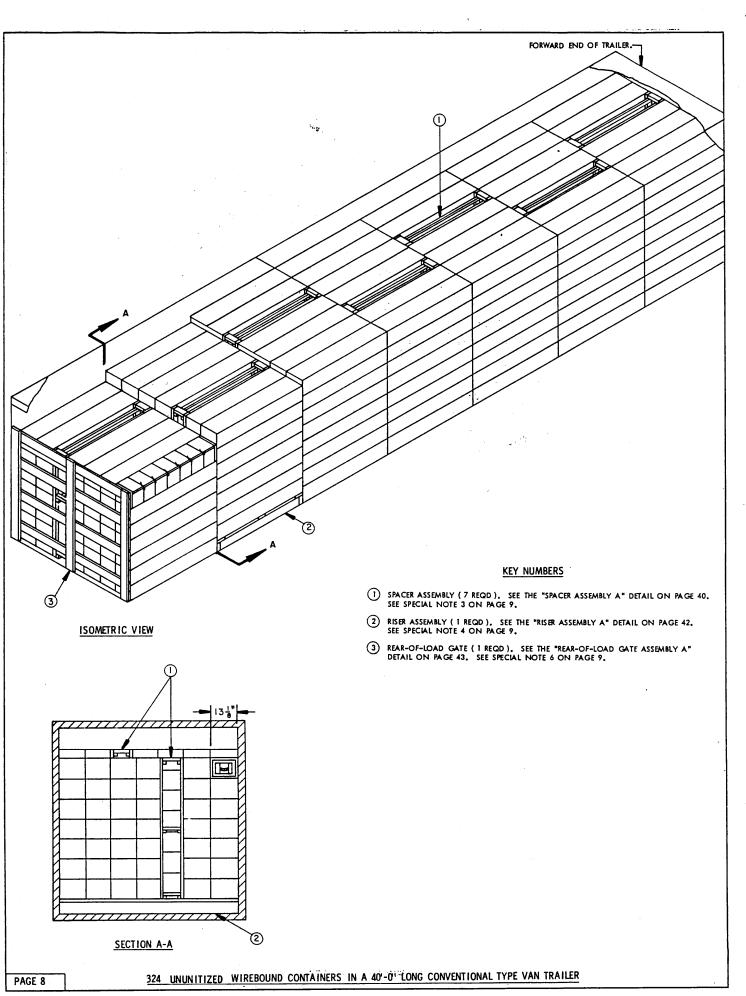
WIREBOUND CONTAINER



PALLETIZED UNIT OF NINE (9) GUIDED MISSILES, PACKED ONE (1) PER ALUMINUM CONTAINER

PAGE 6





- A 324-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE ( INSIDE DIMENSION ) CONVENTIONAL VAN TYPE TRAILER.
- A TRAILER WITH A LESSER INSIDE HEIGHT THAN SHOWN MAY BE USED. OMIT THE RISER ASSEMBLY AND POSITION SEVEN (7) STACKS (7 CONTAINERS HIGH) OF FORTY-TWO (42) CONTAINERS EACH WITHIN THE TRAILER LENGTH.
- A WIDER, OR A NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "SPACER ASSEMBLY" AS NECESSARY TO PROVIDE A "TIGHT" LOAD ACROSS THE WIDTH OF THE TRAILER. ALSO, THE "SPACER ASSEMBLY" SHOULD BE ALTERNATED AS SHOWN IN THE "ISOMETRIC VIEW" ON PAGE 8.
- THE USE OF THE "RISER ASSEMBLY" IS ONLY SPECIFIED FOR THE DEPICTED LOAD TO SHOW TYPICAL APPLICATION. WITHOUT THE "RISER ASSEMBLY" 336-UNITS (SEVEN STACKS OF FORTY-EIGHT CONTAINERS) CAN BE SHIPPED IN THE SAME SIZE TRAILER SHOWN, PROVIDING THE HEIGHT OF THE DOOR OPENING IS SUFFICIENT AND NECESSAY HEIGHT CHANGES ARE MADE TO THE "REAR-OF-THE-LOAD GATE". ADDITIONALLY, TO SATISFY THE NUMBER OF CONTAINERS TO BE SHIPPED, THE LOAD AS SHOWN MAY BE INCREASED OR DECREASED BY MULTIPLES OF SIX (6) CONTAINERS BY ADJUSTING THE LOCATION OF THE DEPICTED "RISER ASSEMBLY", OR CHANGED AS REQUIRED BY THE USE OF "FILLER ASSEMBLIES" AS SHOWN ON PAGE 13.
- IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 10 FOR "FORWARD BLOCKING" SPECIFICATIONS WHICH MUST BE USED.
- IF THE VOID AT THE REAR OF THE LOAD BETWEEN THE CONTAINERS AND THE TRAILER DOORS, MEASURES MORE THAN 3" BUT NOT LESS THAN 12", ADDITIONAL FILL PIECES OF 1" X 6" OR 2" X 6" MATERIAL OF AN APPROPRIATE LENGTH MUST BE LAMINATED TO THE VERTICAL PIECES ON THE "REAR-OF-LOAD GATE" WITH APPROPRIATELY SIZED NAILS EVERY 12". IF THE VOID AT THE REAR OF THE LOAD EXCEDS 12", USE REAR BLOCKING AS SHOWN ON PAGE 10. IF THE VOID AT THE PEAR OF THE LOAD IS 1-1/2" OF LESS. NO BEAR BLOCKING WILL BE REQUIRED. REAR OF THE LOAD IS 1-1/2" OR LESS, NO REAR BLOCKING WILL BE REQUIRED.
- IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS A WALL BELT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET 6C AND THE APPENDICES THEREO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE AND ON PAGE 11. IF THE INSIDE HEIGHT OF THE TRAILER PROHIBITS AN EIGHT CONTAINER HIGH STACK, OMIT THE RISER ASSEMBLY AND POSITION SEVEN (7) STACKS (7 CONTAINERS HIGH) OF FORTY-TWO (42) CONTAINERS EACH WITHIN THE TRAILER LENGTH. THE MECHANICAL BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 39"-6" AS MEASURED FROM THE FRONT WALL OF THE TRAILER. TRAILERS HAVING A SHORTER MECHANICAL SYSTEM WILL BE LIMITED TO A LOAD CONSISTING OF LESS-THAN SEVEN (7) CONTAINER STACKS IN LENGTH. IF A TRAILER HAS ROUNDED CORNERS AT THE FORWARD END, A FORWARD BLOCKING ASSEMBLY AS SHOWN IN THE LOAD ON PAGE 10 MUST BE USED. NOTE THAT A 40"-0" LONG TRAILER WITH ROUNDED CORNERS WILL ONLY HOLD SIX (6) STACKS.
- IF A HIGH VOLUME, CONVENTIONAL TYPE, VAN TRAILER IS BEING LOADED, THE FIRST FIVE STACKS MAY BE NINE CONTAINERS HIGH IN LIEU OF EIGHT CONTAINERS HIGH, THE SIXTH STACK MAY BE EIGHT CONTAINERS HIGH, AND THE SEVENTH STACK MAY BE EIGHT CONTAINERS HIGH, AND THE SEVENTH STACK MAY BE EIGHT CONTAINERS HIGH IN LIEU OF SEVEN CONTAINERS HIGH. THE QUANTITY OF CONTAINERS WILL BE 366 IN LIEU OF 324. USE THE "REAR-OF-LOAD GATE ASSEMBLY B", SHOWN ON PAGE 43, IN LIEU OF THE "REAR-OF-LOAD GATE ASSEMBLY A", SHOWN IN THE LOAD ON PAGE 8. SEE SPECIAL NOTE 6 ABOVE.

THESE DIMENSIONED HEIGHTS SPECIFY THE DISTANCE THE TOP SURFACE OF A CROSS MEMBER IS TO BE ABOVE THE TRAILER FLOOR. INDICATES CROSS MEMBERS (3 REQD). (3) 60"+15" 38 TRAILER FLOOR

# PARTIAL ELEVATION VIEW

THE VIEW SHOWN ABOVE INDICATES THE REAR PORTION OF THE LOAD SHOWN ON PAGE 8. SEE SPECIAL NOTE 7 ON THIS PAGE AND "PARTIAL ELEVATION VIEW" ON PAGE 11 FOR ALTERNATIVE METHOD.

	BILL OF MATERIAL	
LUMBER	LINEAR FEET	BOARD FEET
2" X 2" 2" X 4" 2" X 6"	235 279 49	78 186 49
NA ILS	NO. REQD	POUNDS
104	420	6-1/2

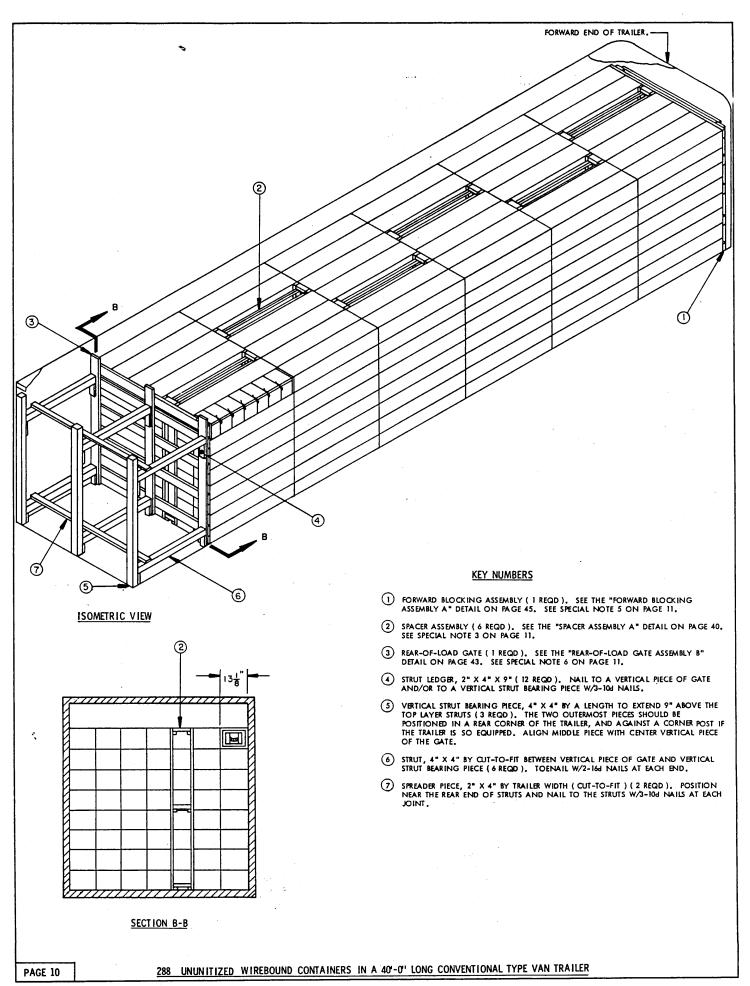
# LOAD AS SHOWN

ITEM	QUANTITY	WEIGH	I (APPROX)
CONTAINER W/ITEM DUNNA GE	324	24,948 633	LBS LBS
TOTAL WEIGH	it	25,581	LBS

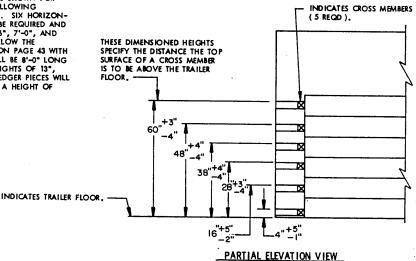
324 UNUNITIZED WIREBOUND CONTAINERS IN A 40'-0' LONG CONVENTIONAL TYPE VAN TRAILER

INDICATES

PAGE 9



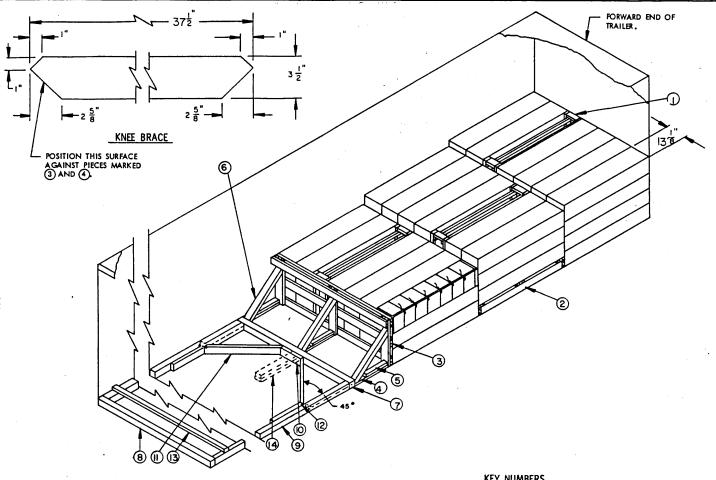
- A 288-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE ( INSIDE DIMENSION ) CONVENTIONAL TYPE VAN TRAILER.
- A TRAILER WITH A LESSER INSIDE HEIGHT THAN SHOWN MAY BE USED. OMIT THE TOP LAYER FROM ALL STACKS AND ADJUST THE HEIGHT OF THE "FORWARD BLOCKING ASSEMBLY A", "SPACER ASSEMBLY A", AND "REAR-OF-LOAD GATE ASSEMBLY B".
- 3. A WIDER OR NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "SPACER ASSEMBLY" AS NECESSARY TO PROVIDE A "TIGHT" LOAD ACROSS THE WIDTH OF THE TRAILER. ALSO, THE "SPACER ASSEMBLY SHOULD BE ALTERNATED AS SHOWN IN THE "ISOMETRIC VIEW" ON PAGE 10.
- 4. TO SATISFY THE NUMBER OF CONTAINERS TO BE SHIPPED, THE LOAD AS SHOWN MAY BE INCREASED OR DECREASED BY MULTIPLES OF SIX (6) CONTAINERS BY USING A "RISER ASSEMBLY" AS SHOWN ON PAGE 8, OR CHANGED AS REQUIRED BY THE USE OF "FILLER ASSEMBLIES" AS SHOWN ON PAGE 13.
- IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, SEE PAGE 8 FOR AN ALTERNATIVE LOADING METHOD.
- 6. IF THE VOID AT THE REAR OF THE LOAD, BETWEN THE CONTAINERS AND THE REAR DOORS, MEASURES MORE THAN 2", BUT LESS THAN 12", OMIT PIECES MARKED (4) (5) (6) AND (7) AND LAMINATE FILL PIECES OF 1" X 6" OR 2" X 6" MATERIAL OF AN APPROPRIATE LENGTH TO THE VERTICAL PIECES ON THE "REAR-OF-LOAD GATE" WITH APPROPRIATELY SIZED NAILS EVERY 12". IF THE VOID AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, NO REAR BLOCKING WILL BE REQUIRED.
- 7. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS A WALL BELT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BURBAU OF EXPLOSIVES PAMPHLET 6C AND APPENDICES THERETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE AND ON PAGE 9. IF THE INSIDE HEIGHT OF THE TRAILER ROHIBITS AN EIGHT CONTAINER HIGH STACK, OMIT THE TOP LAYER OF SIX (6) CONTAINERS FROM EACH STACK. THE MECHANICAL BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 34'-6" AS MEASURED FROM THE FRONT WALL OF THE TRAILER. IF THE TRAILER HAS A SQUARE FRONT OMIT THE "FORWARD BLOCKING ASSEMBLY", SHOWN AS PIECE MARKED (1)ON PAGE 10, AND POSITION THE CONTAINERS AGAINST THE FRONT WALL OF THE TRAILER. NOTE: A SEVENTH STACK MAY BE LOADED IN A SQUARE RONT TRAILER AS SHOWN IN THE LOAD ON PAGE 10.
- 8. IF A HIGH VOLUME, CONVENTIONAL TYPE, VAN TRAILER IS BEING LOADED, THE CONTAINERS MAY BE STACKED NINE HIGH IN LIEU OF EIGHT HIGH. THE QUANTITY OF CONTAINERS WILL BE 264 IN LIEU OF 228. WHEN FABRICATING THE "FORWARD BLOCKING ASSEMBLY" FOLLOW THE PROCEDURES SHOWN FOR "FORWARD BLOCKING ASSEMBLY A" ON PAGE 45 WITH THE FOLLOWING EXCEPTIONS. THE TWO VERTICAL PIECES WILL BE 7'-11" LONG. SIX HORIZONTAL PIECES, SIX FILLER CLEATS, AND SIX SPACER CLEATS WILL BE REQUIRED AND THEY WILL BE POSITIONED AT HEIGHTS OF 5-1/2", 24", 45", 45", 65", 7", AND 7'-10-1/2". WHEN FABRICATING THE REAR-OF-LOAD GATE FOLLOW THE PROCEDURES SHOWN FOR "REAR-OF-LOAD GATE ASSEMBLY B" ON PAGE 43 WITH THE FOLLOWING EXCEPTIONS. THE THREE VERTICAL PIECES WILL BE 9"-0" LONG AND THE FIVE HORIZONTAL PIECES WILL BE POSITIONED AT HEIGHTS OF 13", 34", 55", 6"-3", AND 7'-10-1/2". THE THREE BOTTOM STRUT LEDGER PIECES WILL BE MAND THE SAME BUT THE TOP THREE WILL BE POSITIONED AT A HEIGHT OF 6'-11". SEE SPECIAL NOTE 6 ABOVE.



	BILL OF MATERIAL	·
LUMBER	LINEAR FEET	BOARD FEET
2" X 2" 2" X 4" 2" X 6" 4" X 4"	20 1 196 143 53	67 131 143 71
NAILS	NO, REQD	POUNDS
104	471	7

THE VIEW SHOWN ABOVE INDICATES A SIX (6) CONTAINER HIGH STACK AT THE REAR OF A LOAD. SEE SPECIAL NOTE 7 ON THIS PAGE.

# LOAD AS SHOWN



#### SPECIAL NOTES:

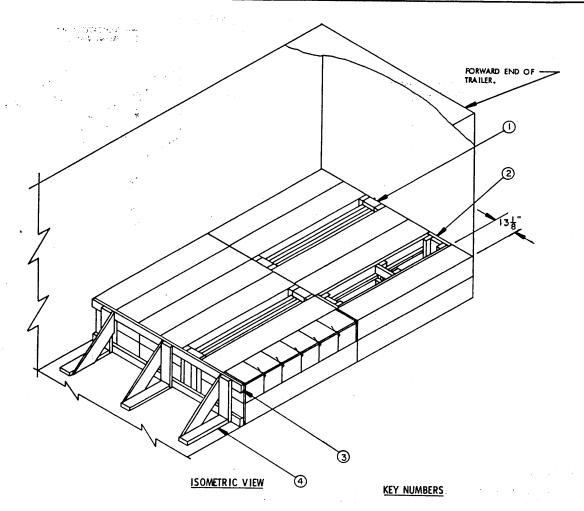
PAGE 12

- 1. THESE LTL OUTLOADING PROCEDURES ARE SHOWN DEPICTING THE USE OF "KNEE-BRACE" BLOCKING IN A 7'-6" WIDE TRAILER. WIDER OR NARROWER TRAILERS CAN BE USED.
- THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED (3) THROUGH (3) IS ADEQUATE FOR RETAINING NOT MORE THAN 18,000 POUNDS OF LADING.
- PIECES MARKED (4) ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED (8) THROUGH (3) WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. THREE (3) BACK-UP CLEATS, SHOWN AS PIECES MARKED (4), ARE ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD OF 15,000 POUNDS.
- SPACER ASSEMBLY, PIECES MARKED (1), SHOULD BE OFF-SET THROUGHOUT THE LENGTH OF THE LOAD AS SHOWN. ONE OR MORE FILLER ASSEMBLIES, SHOWN AS PIECE MARKED (2) ON PAGE 13, MAY BE USED IN PLACE OF OMITTED CONTAINERS IN THE TOP LAYER ONLY. A RISER, PIECE MARKED (2) MUST BE USED WHEN LONGITUDINALLY ADJACENT STACKS ARE STEPPED UP OR DOWN.
- IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 10 FOR "FORWARD BLOCKING" SPECI-FICATIONS WHICH MUST BE USED.
- IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, THEY MAY BE USED IN LIEU OF PIECES MARKED (3) THRU (4). POSITION THE CROSS MEMBERS AT THE 4", 16" AND 38" HEIGHT DIMENSIONS FOR THE LOAD SHOWN ABOVE. INSTALL CROSS MEMBERS TIGHTLY AGAINST THE CONTAINERS. SEE "PARTIAL ELEVATION VIEW" AND SPECIAL NOTE 7 ON PAGE 11 FOR ADDITIONAL GUIDANCE.
- THE USE OF A RISER ASSEMBLY IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. RISER ASSEMBLIES MAY BE USED IN THE LOAD AS REQUIRED TO ADJUST THE LOADING PATTERN FOR THE NUMBER OF CONTAINERS TO BE SHIPPED.

# **KEY NUMBERS**

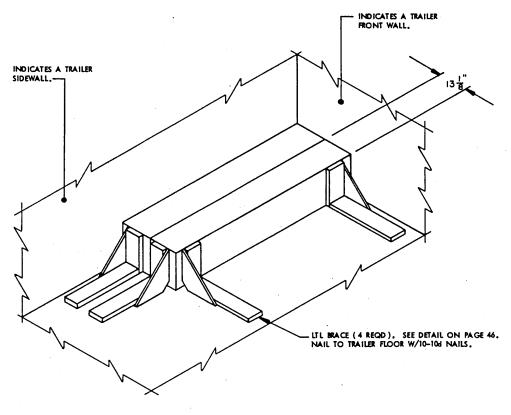
- SPACER ASSEMBLY ( 3 REQD ). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 4 ON THIS PAGE.
- (2) RISER ASSEMBLY ( I REQD ). SEE THE "RISER ASSEMBLY A" DETAIL ON PAGE 42. SEE SPECIAL NOTES 4 AND 7 ON THIS PAGE.
- REAR-OF-LOAD GATE (1 REQD). SEE THE "REAR-OF-LOAD GATE ASSEMBLY C" DETAIL ON PAGE 44 AND GENERAL NOTE "T" ON PAGE 2.
- (4) FLOOR CLEAT, 2" X 4" BY CUT-TO-FIT (26-1/2" REF) (3 REQD).
- POCKET CLEAT, 2" X 4" X 18" ( 3 REQD ). NAIL TO PIECE MARKED 4 W/5-10d NAILS. TOENAIL TO THE VERTICAL PIECE ON REAR-OF-LOAD GATE, MARKED 3 W/2-12d NAILS.
- (6) KNEE BRACE, 4" X 4" X 37-1/2" (3 REQD). SEE THE "KNEE BRACE" DETAIL ABOVE FOR THE BEVEL CUTS REQUIRED. TO ENAIL TO PIECES MARKED (3) AND (4) W/2-16d NAILS AT EACH END.
- FORWARD HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (1 REQD). TOENAIL TO PIECE MARKED (6) W/2-16d NAILS AT EACH JOINT.
- (8) REAR HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (1 REQD.). POSITION AGAINST REAR CORNER POSTS IF THE TRAILER IS SO EQUIPPED, OR POSITION TO CONTACT REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. SEE SPECIAL NOTE 2 ON THIS PAGE.
- 9 SIDE STRUT, 4" X 4" BY CUT TO FIT BETWEEN PIECES MARKED (7) AND (8) (2 REQD). TOENAIL TO PIECES MARKED (7) AND (8) W/2-16d NAILS AT EACH END.
- (10) CENTER CLEAT, 2" X 4" X 18" ( 1 REQD ). NAIL TO PIECE MARKED (7) W/4-12d NAILS.
- DIAGONAL BRACE, 2" X 4" BY CUT-TO-FIT ( 2 REQD ). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO PIECES MARKED 7 AND 9 W/2-16d NAILS AT EACH END.
- (12) BACK-UP CLEAT, 2" X 4" X 24" ( 2 REQD ). NAIL TO PIECE MARKED (9) W/6-12d NAILS.
- STRUT BRACING, 2" X 4" BY TRAILER WIDTH ( CUT TO FIT ) ( MINIMUM OF 1 REQD ). INSTALL ONE (1) NEAR REAR END OF STRUTS MARKED (9) AS SHOWN. ONE (1) ADDITIONAL PIECE REQUIRED FOR EVERY 7'-0" OF STRUT LENGTH. NAIL TO PIECES MARKED (9) W/3-12d NAILS AT EACH END.
- BACK-UP CLEAT, 2" X 4" X 30" ( DOUBLED ) ( 3 REQD ). ALIGN WITH A KNEE BRACE MARKED (6) AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/7-124 NAILS.
  NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 3 ON THIS PAGE.

TYPICAL LTL - 60 UNUNITIZED WIREBOUND CONTAINERS IN A CONVENTIONAL TYPE VAN TRAILER

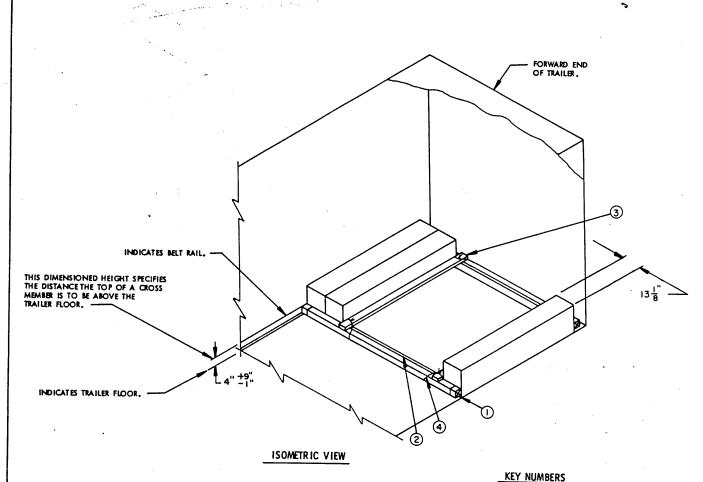


- THESE OUTLOADING PROCEDURES DEPICT THE OUTLOADING OF A TWO (2)
  CONTAINER HIGH LOAD IN A TRAILER WHICH HAS A NAILABLE FLOOR, TRAILERS
  WITH A NON-NAILABLE FLOOR CANNOT BE USED. CONTAINERS WILL NOT BE
  STACKED MORE THAN TWO (2) HIGH WHEN USING THE LTL BRACE.
- IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD BND, A "FORWARD BLOCKING ASSEMBLY" MUST BE USED OR "LTL BRACES" AND "HORIZONTAL PIECES" AS SHOWN AT THE REAR MAY ALSO BE USED AT THE FRONT.
- 3. NOT LESS THAN TWO (2) LTL BRACES MARKED (4) SHALL BE USED FOR LONGITUDINAL BRACING. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL RETAIN 2,000 POUNDS OF LADING.
- 4. SPACER ASSEMBLIES, PIECES MARKED (1) SHOULD BE OFF-SET THROUGHOUT THE LENGTH OF THE LOAD AS SHOWN. ONE OR MORE FILLER ASSEMBLIES, SHOWN AS MECE MARKED (2), MAY BE USED IN PLACE OF OMITTED CONTAINERS IN THE TOP LAYER ONLY.
- 5. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, THEY MAY BE USED IN LIEU OF PIECES MARKED (3) AND (4). POSITION THE CROSS MEMBERS AT THE 4" AND 16" HEIGHTS FOR THE LOAD SHOWN ABOVE. INSTALL THE CROSS MEMBERS TIGHTLY AGAINST THE CONTAINERS.

- SPACER ASSEMBLY (2 REQD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 4 ON THIS PAGE.
- (2) FILLER ASSEMBLY ( 1 REQD ). SEE THE "FILLER ASSEMBLY A" DETAIL ON PAGE 47. SEE SPECIAL NOTE 4 ON THIS PAGE.
- (3) LOAD BEARING PIECE, 2"  $\times$  4" BY TRAILER WIDTH MINUS 1/2" ( 2 REQD ). LOCATE AS SHOWN.
- 4 LTL BRACE (4 REQD), SEE THE DETAIL ON PAGE 46. NAIL TO PIECES MARKED 3 W/3-10d NAILS AT EACH JOINT. NAIL EACH BRACE TO TRAILER FLOOR W/10-10d NAILS. SEE SPECIAL NOTE 2 ON THIS PAGE.

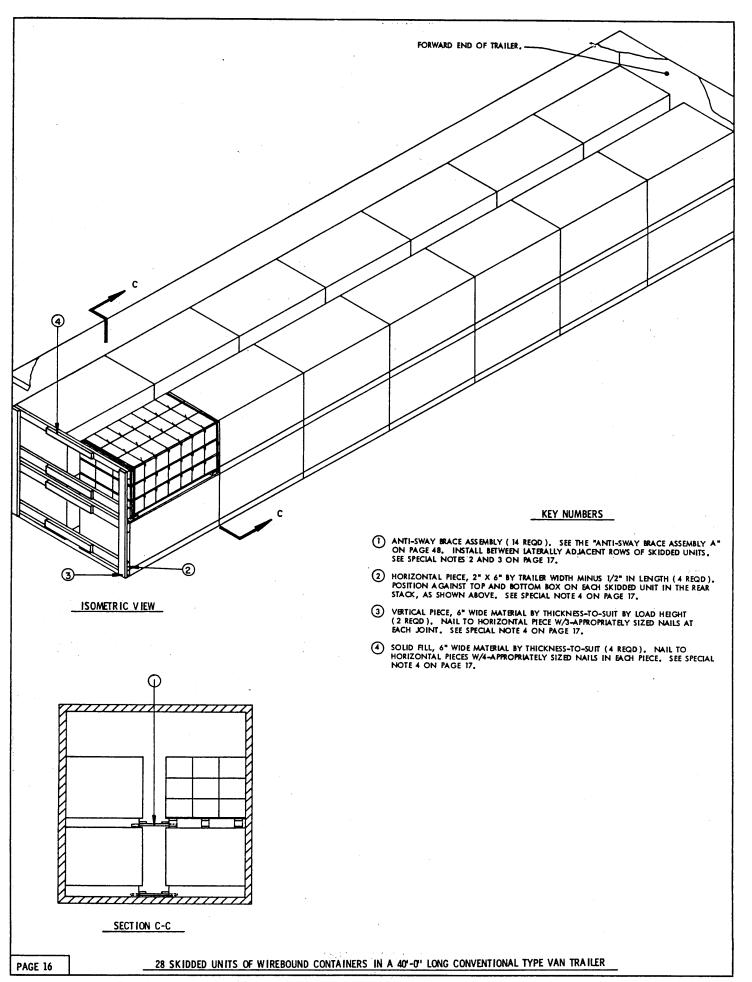


- THESE OUTLOADING PROCEDURES DEPICT THE OUTLOADING OF A ONE (1)
  CONTAINER HIGH LOAD IN A TRAILER WHICH HAS A NAILABLE FLOOR, TRAILERS
  WITH A NON-NAILABLE FLOOR CANNOT BE USED.
- 2. IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD END, TWO ADDITIONAL LTL BRACES MAY BE USED AT THE FORWARD END OF THE LADING.
- 3. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, SEE PAGE 15 FOR ALTERNATIVE METHOD.
- 4. THE "VERTICAL PIECE" ON THE LTL BRACE MUST BE 10-1/2" HIGH AND THE "BACK-UP CLEAT" MUST BE 24" LONG.

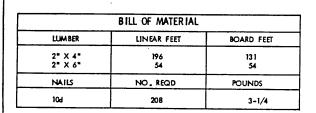


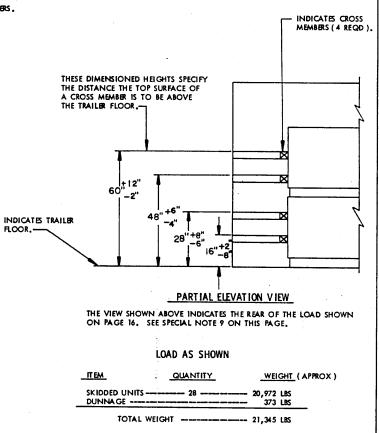
- 1. A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES IS SHOWN, TRAILERS OF OTHER WIDTHS CAN BE USED.
- 2. THE METHOD SHOWN IN THE "ISOMETRIC VIEW" FOR SIDE BLOCKING MAY BE USED FOR OTHER QUANTITIES OF WREBOUND CONTAINERS BY ADJUSTING THE LENGTH OF PIECE MARKED (2)
- FOUR (4) PIECES OF NO. 14 GAGE WIRE MAY BE USED IN LIEU OF THE NO. 8
  GAGE WIRE. WHEN USING NO. 16 GAGE WIRE, INSTALL TWO (2) COMPLETE
  LOOPS AROUND THE CROSS MEMBER, CROSS BRACE, AND TIE PIECE.

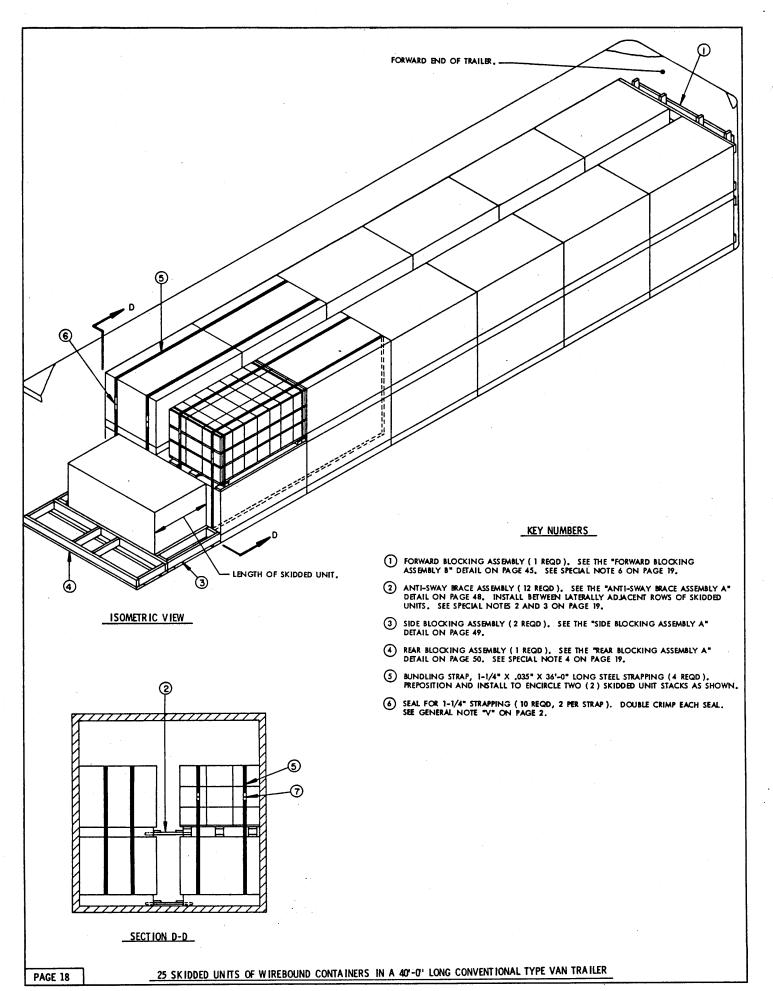
- \_\_\_\_\_
- (1) CROSS MEMBER (2 REQD). POSITION AT THE HEIGHT SHOWN IN THE "ISOMETRIC VIEW" ABOVE.
- 2 CROSS BRACE, 2" X 4" BY CUT-TO-FIT BETWEEN THE CONTAINERS (2 REQD).
- (3) TIE PIECE, 2" X 4" X 72" ( 2 REQD ). POSITION HORIZONTALLY AGAINST THE CONTAINERS. NAIL TO THE CROSS BRACE, PIECE MARKED (2), W/2-104 NAILS AT EACH JOINT.
- (4) THE WIRE, NO. 8 GAGE BLACK ANNEALED WIRE 24" LONG (4 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE CROSS BRACE, THE THE MECE, AND THE CROSS MEMBERS. BRING THE ENDS TOGETHER AND TWIST TAUT. SEE SPECIAL NOTE 3 AT LEFT.



- A LOAD OF 28 SKIDDED UNITS IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL TYPE VAN TRAILER.
- A WIDER OR NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "ANTI-SWAY BRACE ASSEMBLY A" AS NECESSARY.
- 3. THE ANTI-SWAY BRACING MAY BE OMITTED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 5" OR LESS, AS MEASURED FROM CONTAINER TO CONTAINER ON LATERALLY ADJACENT UNITS.
- 4. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE SKIDDED UNITS AND THE REAR DOORS, MEASURES 1-1/2" OR LESS, NO REAR BLOCKING IS REQUIRED. IF THE VOID AT THE REAR OF THE LOAD IS CREATER THAN 1-1/2" BUT LESS THAN 12", ADDITIONAL FILL PIECES OF 6" WIDE MATERIAL MUST BE LAMINATED TO PIECES MARKED (3) AND PIECES MARKED (4) WITH APPROPRIATELY SIZED NAILS. IF THE VOID AT THE REAR OF THE LOAD EXCEEDS 12", USE THE "REAR BLOCKING ASSEMBLY A" AND UNITIZE THE TWO REAR STACKS IN EACH ROW WITH "BUNDLING STRAPS" AS SHOWN IN THE LOAD ON PAGE 18.
- 5. TO SATISFY THE QUANTITY OF SKIDDED UNITS TO BE SHIPPED, THE LOAD AS SHOWN MAY BE DECREASED BY OMITTING TWO (2) ADJACENT SKIDDED UNITS AT A TIME FROM THE TOP LAYBE, OR THE ENTIRE TOP LAYER CAN BE LEFT OFF. ALSO SEE PAGES IB THROUGH 23 AND 51 THROUGH 54.
- IF THE TRAILER BEING LOADED HAS A ROUND FRONT OR ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 18 FOR "FORWARD BLOCKING" SPECIFICATIONS WHICH MUST BE USED.
- 7. IF A SKIDDED UNIT WHICH DOES NOT CONTAIN A FULL QUANTITY OF CONTAINERS IS TO BE TRANSPORTED, REFER TO THE "SHIPMENT OF A PARTIAL SKIDDED UNIT" PROCEDURES ON PAGES 51, 52 AND 53 FOR GUIDANCE.
- 8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED THE QUANTITY IN ONE LAYER OF A UNIT, MAY BE SECURED TO THE TOP OF A FULL SKIDDED UNIT FOR SHIPMENT, REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER WIRE-BOUND CONTAINERS" ON PAGE 54 FOR GUIDANCE.
- 9. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS A WALL BELT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BURBAU OF EXPLOSIVES PAMPHLET 6C AND AFPENDICES THERETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE AND ON PAGE 19. THE MECHANICAL BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 39"-6" AS MEASURED FROM THE FRONT WALL OF THE TRAILER, SEE GENERAL NOTE "K" ON PAGE 2.
- 10. WHEN LAMINATING THINNER SOLID FILL MATERIAL TO THE 2" X 6" HORIZONTAL PIECES, SHOWN AS PIECES MARKED (2), THE NAILS WHICH ARE USED MUST BE SIZED TO THE THICKNESS OF THE FILL MATERIAL BEING INSTALLED SO THAT THE NAILS CANNOT BE DRIVEN THROUGH THE HEADER AND INTO THE PALLETIZED CONTAINES.

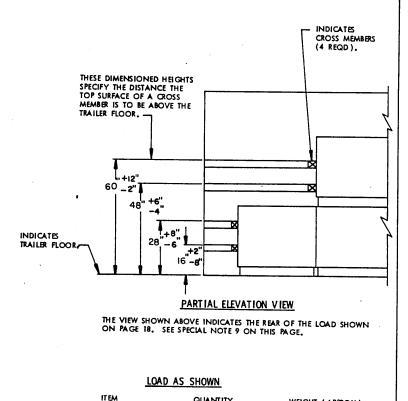






- A LOAD OF 25 SKIDDED UNITS IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE ( INSIDE DIMENSION ) CONVENTIONAL TYPE VAN TRAILER.
- A WIDER OR NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "ANTI-SWAY BRACE ASSEMBLY A" AS NECESSARY.
- 3. THE ANTI-SWAY BRACING MAY BE OMITTED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 5" OR LESS, AS MEASURED FROM CONTAINER TO CONTAINER ON LATERALLY ADJACENT SKIDDED UNITS.
- IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE SKIDDED UNIT AND THE REAR DOORS, MEASURES 1-1/2" OR LESS, NO REAR BLOCKING IS REQUIRED. IF THE VOID AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT NOT LESS THAN 12", USE A "SOLID FILL" BLOCKING OF 2" X6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH POSITIONED ON BOE AND LAMINATE 6" WIDE MATERIAL, BY THICKNESS TO SUIT, TO THE 2" X 6" ON EDGE TO FILL THE VOID SPACE BETWEEN THE REARMOST SKIDDED UNIT AND THE REAR DOORS. IF THE VOID AT THE REAR OF THE LOAD IS 12" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY A" AS SHOWN IN THE LOAD ON PAGE 1B. ON PAGE 18.
- TO SATISFY THE QUANTITY OF SKIDDED UNITS TO BE SHIPPED, THE LOAD SHOWN MAY BE DECREASED BY OMITTING THE REAR SKIDDED UNIT OR BY OMITTING TWO (2) ADJACENT SKIDDED UNITS AT A TIME FROM THE TOP LAYER, OR THE ENTIRE TOP LAYER CAN BE LEFT OFF. ALSO, SEE PAGES 20 THROUGH 23 AND 51 THROUGH
- IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, OMIT THE "FORWARD BLOCKING ASSEMBLY B" AS SHOWN IN THE LOAD ON PAGE 18 AND POSITION THE SKIDDED UNITS DIRECTLY AGAINST THE FRONT WALL AS SHOWN IN THE LOAD ON PAGE 16.
- IF A SKIDDED UNIT WHICH DOES NOT CONTAIN A FULL QUANTITY OF CONTAINESS IS TO BE TRANSPORTED, REFER TO THE "SHIPMENT OF A PARTIAL SKIDDED UNIT" PROCEDURES ON PAGES 51, 52 AND 53 FOR GUIDANCE.
- LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED THE QUANTITY IN ONE LAYER OF A UNIT, MAY BE SECURED TO THE TOP OF A FULL SKIDDED UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER WIREBOUND CONTAINERS" ON PAGE 54 FOR GUIDANCE.
- IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS A WALL BELT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SEF FORTH WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET 6C AND APPENDICES THERETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE AND ON PAGE 17. THE MECHANICAL BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 38"-0" AS MEASURED FROM THE FRONT WALL OF THE TRAILER, SEE GENERAL NOTE "K" ON PAGE 2. NOTE "K" ON PAGE 2.

LUMBER	LINEAR FEET	BOARD FEET
2" X 4" 2" X 6"	212 92	14 1 92
NAILS	NO. REQD	POUNDS
104	306	5



QUANTITY

WEIGHT (APPROX)

18.725 LBS

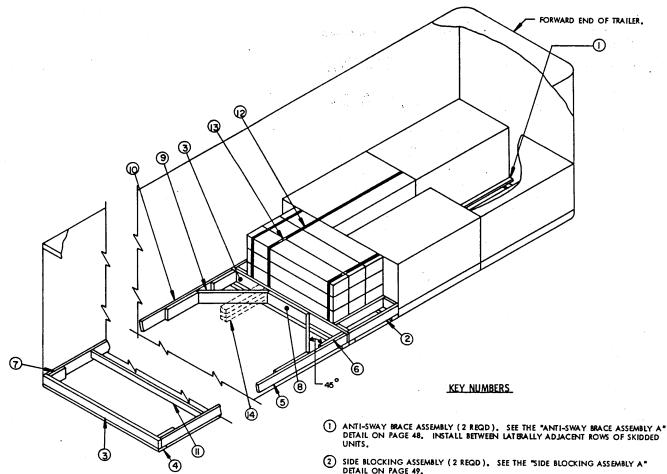
19,220 LBS

495 LBS

TOTAL WEIGHT ---

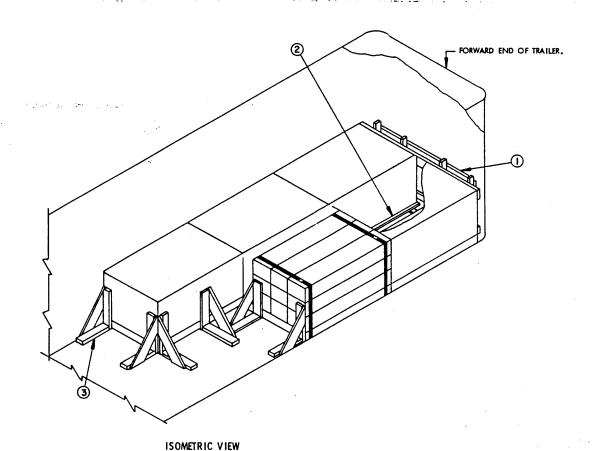
SKIDDED UNIT .

DUNNA GE -



- THESE OUTLOADING PROCEDURES DEPICT THE USE OF K-BRACE BLOCKING IN A 7"-6" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH OR WITHOUT NAILABLE FLOORS AND REAR CORNER POSTS.
- PIECES MARKED (4) ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED (5) THROUGH (1) WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. FOUR (4) BACK UP CLEATS, SHOWN AS PIECES MARKED (4), ARE ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD OF 20,000 POUNDS. ALSO REFER TO PAGE 21 FOR LOAD BLOCKING SPECIFICATIONS WHICH MAY BE USED IN LIEU OF THE DEPICTED BLOCKING.
- IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END, USE "FORWARD BLOCKING ASSEMBLY B" AS SHOWN IN THE LOAD ON PAGE 21.
- THE DEPICTED K-BRACE BLOCKING WILL RETAIN A MAXIMUM SIZE LTL LOAD.
- IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, THEY MAY BE USED IN LIEU OF THE DEPICTED BLOCKING. SEE THE "PARTIAL ELEVATION VIEW" ON PAGE 19 FOR POSITIONING OF CROSS MEMBERS.
- IF THE SIDE STRUTS SHOWN AS PIECES MARKED (3) ARE FORMED FROM MORE THAN ONE PIECE OF MATERIAL, THEY MAY BE SPLICED BY CENTERING A  $2^{\circ}$  X  $6^{\circ}$  X  $24^{\circ}$  PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING W/4-104 NAILS AT EACH
- IF THE SPACE BETWEEN THE REAR SKIDDED UNIT AND THE REAR OF THE TRAILER IS GREATER THAN 12'-0", A 2" X 4" X 12" SUPPORT BLOCK MUST BE POSITIONED UNDER PIECES MARKED ③ EVERY 12'-0". TOENAIL PIECE MARKED ⑤ TO THE SUPPORT BLOCK W/2-12d NAILS.

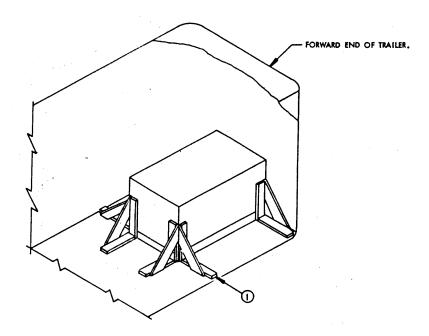
- (3) HEADER, 2" X 6" BY TRAILER WIDTH ( CUT-TO-FIT ) (2 REQD ).
- HEADER SUPPORT AND STRUT LEDGER MECE, 2" X 4" BY TRAILER WIDTH (QUT-TO-FIT) (2 REQD). NAIL TO BOTTOM EDGE OF HEADER MARKED ③ W/1-104 NAIL EVERY 8".
- (5) SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN HEADERS MARKED (3) (2 REQD). SEE SPECIAL NOTE 7 ON THIS PAGE.
- POCKET CLEAT, 2" X 6" X 18" (2 REQD). NAIL TO STRUT MARKED ③ W/5-100 NAILS. TOENAIL TO THE ADJACENT HEADER MARKED ③ W/3-12d NAILS.
- STRUT RETAINING BLOCK, 2" X 6" X 12" (2 REQD). NAIL TO STRUT MARKED (3) W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER MARKED (3) W/3-12d NAILS.
- (8) CENTER CLEAT, 2" X 6" X 30" ( 1 REQD ). NAIL TO HEADER MARKED (3) W/6-10d NAILS.
- DIAGONAL BRACE, 2" X 6" BY CUT-TO-FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45" CUTS. INSTALL AT A 45" ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER MARKED (3) AND STRUT MARKED (3) W/2-164 NAILS AT EACH END.
- BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO A STRUT MARKED (5) W/8-104
- STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 3-1/4" (CUT-TO-FIT) (MINIMUM OF I REQD). INSTALL ONE (1) NEAR REAR END OF STRUTS MARKED (3) AS SHOWN. ONE (1) ADDITIONAL PIECE REQUIRED FOR EVERY 7"-0" OF STRUT LOGISH. TOE-NAIL TO STRUTS MARKED (3) W/4-124 NAILS AT EACH END. CAUTION: USE CARE WHEN TOENAILING TO PREVENT NAILING THRU AND INTO A SIDE WALL OF THE TRAILER.
- 12 BUNDLING STRAPS, 1-1/4" X .035" X 23'-0" LONG STEEL STRAPPING ( 1 REQD ). PREPOSITION AND INSTALL TO ENCRCLE TWO ( 2 ) SKIDDED UNITS, AS SHOWN.
- SEAL FOR 1-1/4" STRAPPING (2 REQD), DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "V" ON PAGE 2.
- BACK-UP CLEAT, 2" X 4" X 30" (TRIPLED) (4 REQD). POSITION ONE AGAINST EACH END OF THE HEADER MARKED ③ AND EQUALLY SPACE THE CENTER TWO. NAIL THE FIRST PIECE TO THE TRAILE FLOOR W/7-T2M NAILS, NAIL SACH ADDITIONAL PIECE IN A LIKE MANNER. TOENAIL THE TOP PIECE TO A HEADER PIECE MARKED ③ W/2-12M NAILS. SEE SPECIAL NOTE 2 ON THIS PAGE.



- THESE OUTLOADING PROCEDURES DEPICT THE USE OF LTL BRACE BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH NAILABLE FLOORS.
- 2. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, OMIT THE FORWARD BLOCKING ASSEMBLY AND POSITION THE SKIDDED UNITS AGAINST THE FRONT WALL.
- 3. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING, HOWEVER, NOT LESS THAN TWO (2) BRACES WILL BE USED AGAINST EACH SKIDDED UNIT ACROSS THE WIDTH OF THE TRAILER.
- 4. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, THEY MAY BE USED IN LIEU OF THE DEPICTED BLOCKING.
- 5. IF A PALLETIZED UNIT WHICH DOE NOT CONTAIN A FULL QUANTITY OF CONTAINERS IS TO BE TRANSPORTED REFER TO THE "SHIPMENT OF A PARTIAL SKIDDED UNIT" PROCEDURES ON PAGES 51, 52, AND 53 FOR GUIDANCE.
- 6. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED THE QUANTITY IN ONE LAYER OF A UNIT, MAY BE SECURED TO THE TOP OF A FULL SKIDDED UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER WIREBOUND CONTAINERS" ON PAGE 54 FOR GUIDANCE.

# KEY NUMBERS

- (1) FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 45. SEE SPECIAL NOTE 2 ON THIS PAGE.
- (2) ANTI-SWAY BRACE ASSEMBLY (2 REQD). SEE THE "ANTI-SWAY BRACE ASSEMBLY A"
  DETAIL ON PAGE 48. INSTALL BETWEEN LATERALLY ADJACENT ROWS ON SKIDDED
  UNITS.
- (3) LTL BRACE (6 REQD). SEE THE DETAIL ON PAGE 46. POSITION AS SHOWN AND NAIL EACH BRACE TO THE TRAILER FLOOR W/10-104 NAILS.



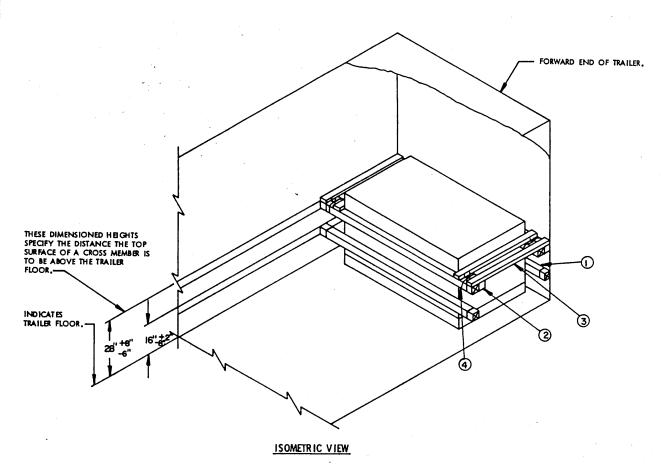
# SPECIAL NOTES:

- 1. THESE OUTLOADING PROCEDURES DEPICT THE USE OF LTL BRACE BLOCKING IN A 7"-6" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH NAILABLE FLOORS.
- EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000
  POUNDS OF LADING, HOWEVER, NOT LESS THAN TWO (2) BRACES WILL BE USED
  AGAINST EACH SKIDDED UNIT ACROSS THE WIDTH OF THE TRAILER.
- 3. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, THEY MAY BE USED IN LIEU OF THE DEPICTED BLOCKING, AS SHOWN ON PAGE 23.

## KEY NUMBER

(1) LTL BRACE (6 REQD). SEE THE DETAIL ON PAGE 46. POSITION AS SHOWN AND NAIL EACH BRACE TO THE TRAILER FLOOR W/10-104 NAILS.

TYPICAL LTL - 1 SKIDDED UNIT OF WIREBOUND CONTAINERS IN A CONVENTIONAL TYPE VAN TRAILER



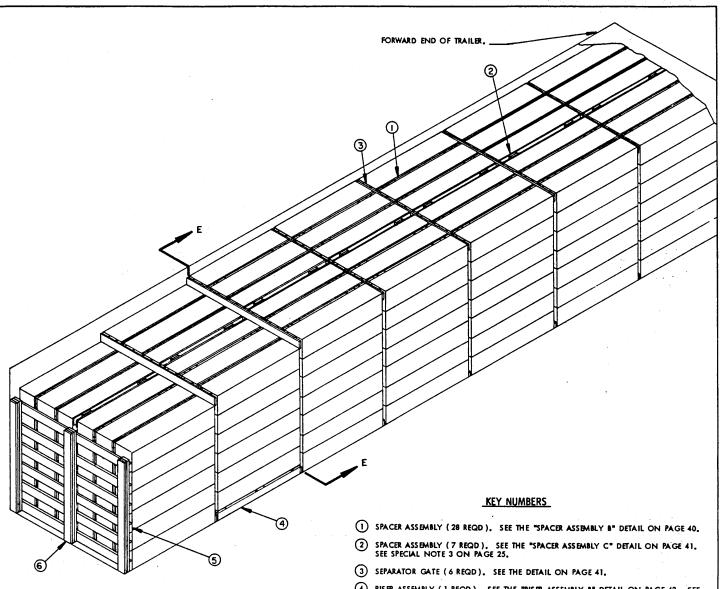
- THESE OUTLOADING PROCEDURES DEPICT A VAN TRAILER WHICH IS EQUIPPED WITH MECHANICAL BRACING DEVICES, SEE GENERAL NOTE "K" ON PAGE 2.
- IN ADDITION TO BEING USED FOR SHIPMENTS OF ONE PALLETIZED UNIT, THE DE-PICTED PROCEDURES CAN BE USED IN CONJUNCTION WITH THE OUTLOADING PROCEDURES ON PAGES 16 THROUGH 19 FOR THE ADJUSTMENT OF A LOAD QUANTITY.
- 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 SIDE BLOCKING.

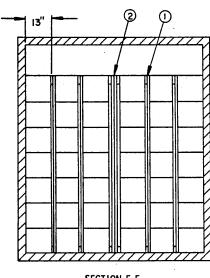
## KEY NUMBERS

- CROSS MEMBER (4 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE ISOMETRIC VIEW ABOVE. SEE GENERAL NOTE "K" ON PAGE 2.
- SIDE BLOCKING, 4" X 4" BY CUT-TO-FIT BETWEEN THE SKIDDED UNIT AND THE TRAILER SIDEWALL (4 REQD).
- 3 SUPPORT PIECE, 2" X 4" X 45" (4 REQD). NAIL TO PIECES MARKED @W/3-12d NAILS AT EACH END.
- 4 TIE WIRE, NO. 8 GAGE BLACK ANNEALED WIRE 30" LONG (4 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE CROSS MEMBER AND SIDE BLOCKING. BRING THE ENDS TOGETHER AND TWIST TAUT. SEE SPECIAL NOTE 3 AT LEFT.

TYPICAL LTL - 1 SKIDDED UNIT OF WIREBOUND CONTAINERS IN A TRAILER

<u>EQUIPPED WITH MECHANICAL BRACING DEVICES</u>

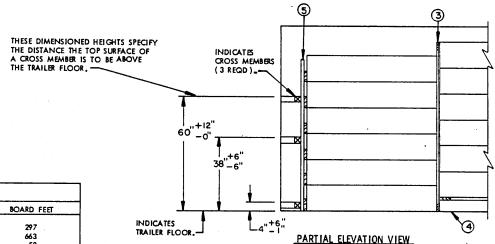




SECTION E-E

- RISER ASSEMBLY (1 REQD), SEE THE "RISER ASSEMBLY B" DETAIL ON PAGE 42. SEE SPECIAL NOTE 4 ON PAGE 25.
- (3) REAR-OF-LOAD GATE (1 REQD). SEE THE "REAR-OF-LOAD GATE ASSEMBLY D" ON PAGE 44. SEE SPECIAL NOTE 6 ON PAGE 25.
- 6) SOLID FILL, 6" WIDE MATERIAL BY THICKNESS TO SUIT (AS REQUIRED TO FILL THE VOID AT THE REAR OF THE LOAD), NAIL THE FIRST PIECE TO PIECE MARKED (3) W/1-10d NAIL EVERY 12". NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER. SEE SPECIAL NOTE 6 ON PAGE 25.

- A 282-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION)
  CONVENTIONAL TYPE VAN TRAILER.
- A TRAILER WITH A LESSER INSIDE HEIGHT THAN SHOWN MAY BE USED. OMIT THE RISER ASSEMBLY AND POSITION SEVEN (7) STACKS (6 CONTAINERS HIGH) OF THIRTY-SIX (36) CONTAINERS EACH WITHIN THE TRAILER LENGTH.
- A WIDER OR A NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "SPACER ASSEMBLY" AS NECESSARY TO PROVIDE A "TIGHT" LOAD ACROSS THE WIDTH OF THE TRAILER.
- 4. THE USE OF THE "RISER ASSEMBLY" IS ONLY SPECIFIED FOR THE DEPICTED LOAD TO SHOW TYPICAL APPLICATION-WITHOUT THE "RISER ASSEMBLY", 294-UNITS (SEVEN STACKS OF FORTY-TWO CONTAINERS) CAN BE SHIPPED IN THE SAME SIZE TRAILER SHOWN, ROVIDING THE HEIGHT OF THE DOOR OPENING IS SUFFICIENT AND NECESSARY HEIGHT CHANGES ARE MADE TO THE "REAR-OF-LOAD GATE". ADDITIONALLY, TO SATISFY THE NUMBER OF CONTAINERS TO BE SHIPPED, THE LOAD AS SHOWN MAY BE INCREASED OR DECREASED BY MULTIPLES OF SIX (6) CONTAINERS BY ADJUSTING THE LOCATION OF THE DEPICTED "RISER ASSEMBLY", OR CHANGED AS REQUIRED BY THE USE OF "FILLER ASSEMBLIES" AS SHOWN ON PAGE 29.
- IF THE TRAILER BEING LOADED HAS A ROUND FRONT OR ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 26 FOR "FORWARD BLOCKING" SPECIFICATIONS WHICH MUST BE USED.
- 6. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE CONTAINERS AND THE TRAILER DOORS, MEASURES MORE THAN 3" BUT LESS THAN 12", ADDITIONAL FILL PIECES OF 1" X 6" OR 2" X 6" MATERIAL OF AN APPROPRIATE LENGTH MUST BE LAMINATED TO THE VERTICAL PIECES ON THE "REAR-OF-LOAD GATE" WITH APPROPRIATELY SIZED NAILS EVERY 12". IF THE VOID AT THE REAR OF THE LOAD EXCEEDS 12", USE REAR BLOCKING AS SHOWN ON PAGE 26. IF THE VOID AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, NO REAR BLOCKING WILL BE REQUIRED.
- 7. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS A WALL BELT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BUREAU OF EXPLOSIVE PAMPHLET 6C AND THE APPENDICES THRETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE, IF THE INSIDE HEIGHT OF THE TRAILER PROHIBITS A SEVEN CONTAINER HIGH STACK, OMIT THE RISER ASSEMBLY AND POSITION SEVEN (7) STACKS (6 CONTAINERS, OMIT THE RISER ASSEMBLY AND POSITION SEVEN (7) STACKS (6 CONTAINERS, HIGH) OF THIRTY-SIX (36) CONTAINERS EACH WITHIN THE TRAILER LENGTH, THE MECHANICAL BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 39"-6" AS MEASURED FROM THE FRONT WALL OF THE TRAILER. TRAILERS HAVING A SHORTER MECHANICAL SYSTEM WILL BE LIMITED TO A LOAD CONSISTING OF LESS-THAN SEVEN (7) CONTAINER STACKS IN LENGTH. IF A TRAILER HAS ROUNDED CORNERS AT THE FORWARD END, A "FORWARD IN THE LOAD ON PAGE 26 MUST BE USED. NOTE THAT A 40"-0" LONG TRAILER WITH ROUNDED CORNERS WILL ONLY HOLD SIX (6) STACKS.



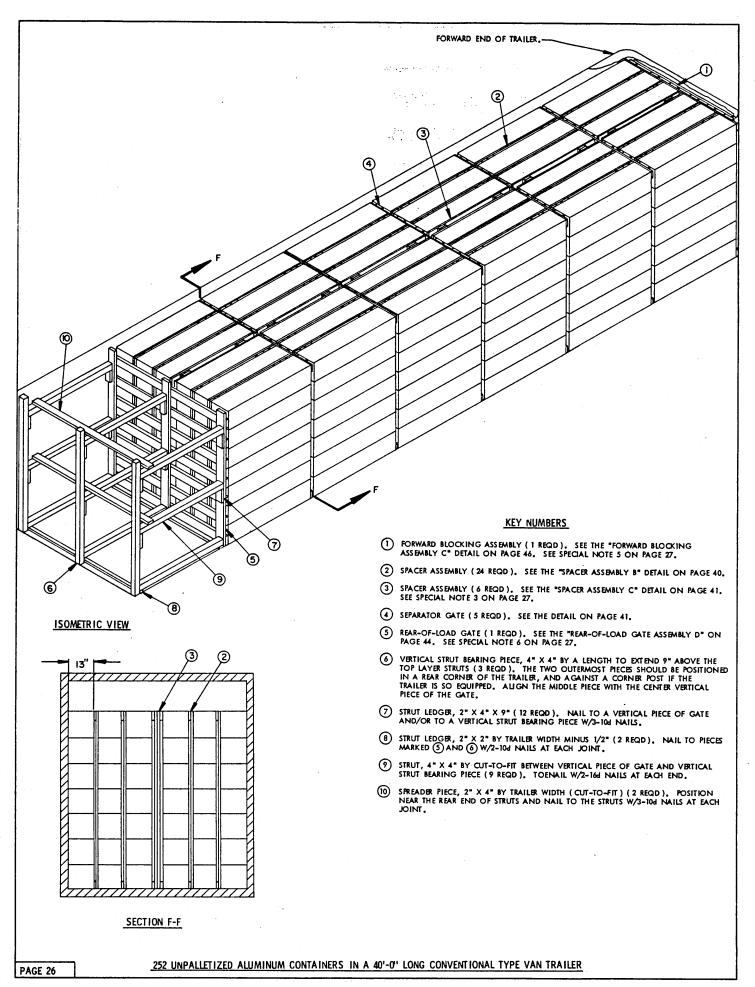
	BILL OF MATERIAL	
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 1" X 6" 2" X 4" 2" X 6"	890 1325 77 561	297 663 52 561
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	1708 464	10-1/4 7-1/4

LOAD AS SHOWN

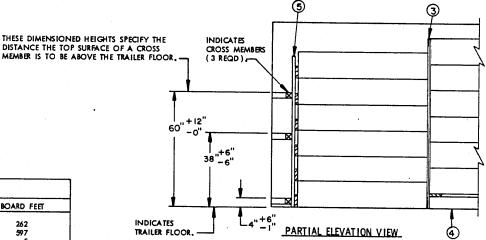
THE VIEW SHOWN ABOVE INDICATES THE REAR PORTION OF THE LOAD SHOWN ON PAGE 24. SEE SPECIAL NOTE 7 ON THIS PAGE.

TOTAL WEIGHT ----- 27,346 LBS

282 UNPALLETIZED ALUMINUM CONTAINERS IN A 40'-0" LONG CONVENTIONAL TYPE VAN TRAILER



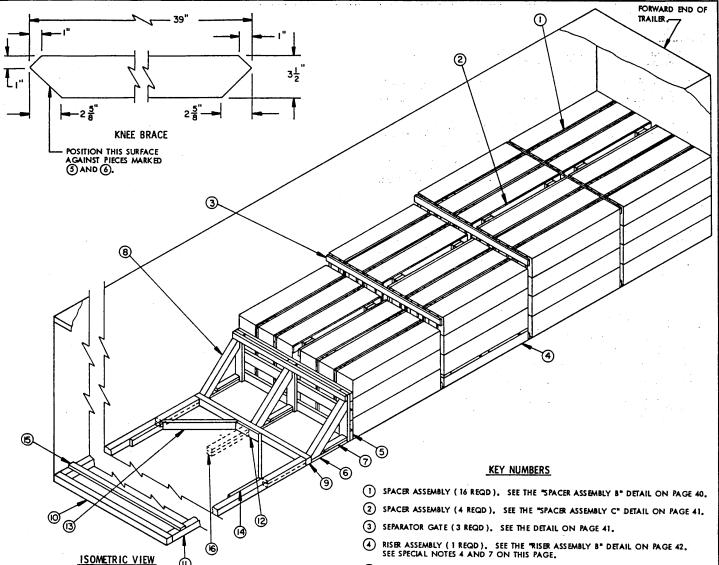
- A 252-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL TYPE VAN TRAILER.
- A TRAILER WITH A LESSER INSIDE HEIGHT THAN SHOWN MAY BE USED. OMIT THE
  TOP LAYER ROM ALL STACKS AND ADJUST THE HEIGHT OF THE "FORWARD
  BLOCKING ASSEMBLY "C", "SPACER ASSEMBLIES B AND C", "SEPARATOR GATE" AND
  "REAR-OF-LOAD GATE ASSEMBLY D".
- A WIDER OR A NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "SPACER ASSEMBLIES" AS NECESSARY TO PROVIDE A "TIGHT" LOAD ACROSS THE WIDTH OF THE TRAILER.
- 4. TO SATISFY THE NUMBER OF CONTAINERS TO BE SHIPPED, THE LOAD AS SHOWN MAY BE INCREASED OR DECREASED BY MULTIPLES OF SIX (6) CONTAINERS BY USING A "RISER ASSEMBLY" AS SHOWN ON PAGE 24, OR CHANGED AS REQUIRED BY THE USE OF "FILLER ASSEMBLIES" AS SHOWN ON PAGE 29.
- 5. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, SEE PAGE 24 FOR AN ALTERNATIVE LOADING METHOD.
- 6. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE CONTAINERS AND THE REAR DOORS, MEASURES MORE THAN 3" BUT LESS THAN 12", OMIT PIECES MARKED (6)THRU (10) AND LAMINATE FILL PIECES OF 1" X 6" OR 2" X 6" MATERIAL OF AN APPROPRIATE LENGTH TO THE VERTICAL PIECES ON THE "REAR-OF-LOAD GATE" WITH APPROPRIATELY SIZED NAILS EVERY 12". IF THE VOID AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, NO REAR BLOCKING WILL BE REQUIRED.
- 7. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS WALL BELT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET &C AND APPENDICES THERETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE. NOTE: THE REAR STACK MUST BE REDUCED IN HEIGHT ROOM SEVEN CONTAINES HIGH TO SIX CONTAINES HIGH AS SHOWN IN THE LOAD ON PAGE 24. IF THE INSIDE HEIGHT OF THE TRAILER PROHIBITS A SEVEN CONTAINER HIGH STACK, OMIT THE TOP LAYER OF SIX (6) CONTAINES FROM BACH STACK, THE MECHANICA BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 34'-6" AS MEASURED FROM THE FRONT WALL OF THE TRAILER. IF THE TRAILER HAS A SQUARE FRONT OMIT THE "FORWARD BLOCKING ASSEMBLY", SHOWN AS PIECE MARKD (1) ON PAGE 24, AND POSITION THE CONTAINERS AGAINST THE FRONT WALL OF THE TRAILER. NOTE: A SEVENTH STACK MAY BE LOADED IN A SQUARE FRONT TRAILER AS SHOWN IN THE LOAD ON PAGE 24.



	BILL OF MATERIAL	
LUM BER	LINEAR FEET	BOARD FEET
1" X 4" 1" X 6" 2" X 2" 2" X 4" 2" X 6" 4" X 4"	785 1193 15 89 523 72	262 597 5 60 523 96
NAILS	NO. REQD	POUNDS
6d (2") 10d (3") 16d (3-1/2")	. 1536 399 36	9-1/4 6-1/4

THE VIEW SHOWN ABOVE INDICATES THE REAR PORTION OF THE LOAD SHOWN ON PAGE 24. SEE SPECIAL NOTE 7 ON THIS PAGE AND KEY NUMBERS ③, ④, AND ③ ON PAGE 24.

# LOAD AS SHOWN



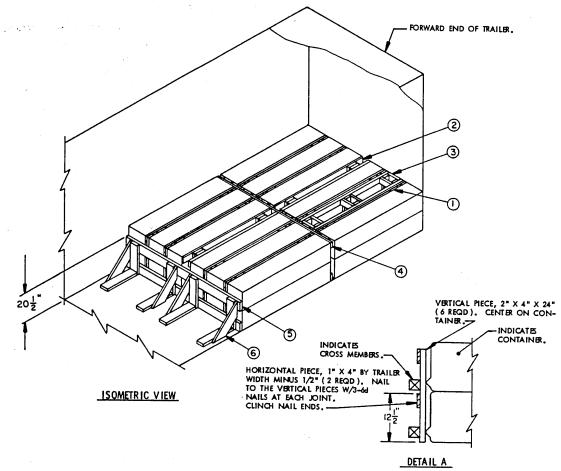
- SPECIAL NOTES:
- 1. THESE LTL OUTLOADING PROCEDURES ARE SHOWN DEPICTING THE USE OF "KNEE-BRACE" BLOCKING IN A 7"-6" WIDE TRAILER. WIDER OR NARROWER TRAILERS CAN BE USED.
- 2. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED (1) THROUGH (1) IS ADEQUATE FOR RETAINING NOT MORE THAN 18,000 POUNDS OF LADING.
- 3. PIECES MARKED (8) ARE FOR USE IN A TRAILER WHICH HAS A NAILBLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED (10) THROUGH (15) WHICH APPLY TO TRAILERS HAVING NON-HALLABLE FLOORS. THREE (3) BACK-UP CLEATS, SHOWN AS PIECES MARKED (8), ARE ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD OF 15,000 POUNDS.
- 4. ONE OR MORE FILLER ASSEMBLIES, SHOWN AS PIECE MARKED ③ ON PAGE 29, MAY BE USED IN PLACE OF OMITTED CONTAINERS IN THE TOP LAYER ONLY. A RISER, PIECE MARKED ④, MUST BE USED WHEN LONGITUDINALLY ADJACENT STACKS ARE STEPPED UP OR DOWN.
- IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 45 FOR "FORWARD BLOCKING" SPECIFICATIONS WHICH MUST BE USED.
- 6. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, THEY MAY BE USED IN LIEU OF PIECES MARKED (6) THRU (6) . POSITION THE CROSS MEMBERS AT THE 4", 16" AND 28" HEIGHT DIMENSIONS FOR THE LOAD SHOWN ABOVE. INSTALL CROSS MEMBERS TIGHTLY AGAINST THE REAR-OF-LOAD GATE.
- 7. THE USE OF A RISER ASSEMBLY IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. RISER ASSEMBLIES MAY BE USED IN THE LOAD AS REQUIRED TO ADJUST THE LOADING PATTERN FOR THE NUMBER OF CONTAINERS TO BE SHIPPED.

- (5) REAR-OF-LOAD GATE (1 REQD), SEE THE REAR-OF-LOAD GATE ASSMEBLY CT DETAIL ON PAGE 44.
- (6) FLOOR CLEAT, 2" X 4" BY CUT-TO-FIT (27-1/2" REF) (3 REQD).
- (7) POCKET CLEAT, 2" X 4" X 18" (3 REQD). NAIL TO FLOOR CLEAT MARKED (6)
  W/5-10d NAILS. TOENAIL TO THE VERTICAL PIECE ON REAR-OF-LOAD GATE, PIECE
  MARKED (3), W/2-12d NAILS AT EACH JOINT.
- (8) KNEE BRACE, 4" X 4" X 39" (3 REQD), SEE THE "KNEE BRACE" DETAIL ABOVE FOR THE BEVEL CUTS REQUIRED. TO BNAIL TO PIECES MARKED (3) AND (3) W/2-164 NAILS AT EACH END.
- (9) FORWARD HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (1 REQD). TOENAIL TO PIECE MARKED (8) W/2-164 NAILS AT EACH JOINT.
- (1) REAR HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (1 REQD). POSITION AGAINST REAR CORNER POSTS IF THE TRAILER IS SO EQUIPPED, OR POSITION TO CONTACT REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. SEE SPECIAL NOTE 2 ON THIS PAGE.
- (1) SIDE STRUT, 4" X 4" BY CUT-TO-FIT BETWEEN PIECES MARKED (9 AND (10) (2 REQD).
  TO ENAIL TO PIECES MARKED (9) AND (10) W/2-164 NAILS AT EACH END.
- (2) CENTER CLEAT, 2" X 4" X 18" ( 1 REQD ). NAIL TO PIECE MARKED (9) W/4-12d NAILS.
- (13) DIAGONAL BRACE, 2" X 4" BY CUT-TO-FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45" CUTS. INSTALL AT A 45" ANGLE AS SHOWN AND TOENAIL TO PIECES MARKED (9) AND (11) W/2-164 NAILS AT EACH END.
- (4) BACK-UP CLEAT, 2" X 4" X 24" (2 REQD). NAIL TO PIECE MARKED (1) W/6-12d NAILS.
- (5) STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (MINIMUM OF 1 REQD). INSTALL ONE (1) NEAR REAR END OF STRUTS MARKED (1) AS SHOWN. ONE (1) ADDITIONAL PIECE REQUIRED FOR EVERY 7'-0" OF STRUT LENGTH. NAIL TO MECES MARKED (1) W/3-124 NAILS AT EACH END.
- (6) BACK-UP CLEAT, 2" X 4" X 30" (DOUBLED) (3 REQD). ALIGN WITH A KNEE

  BRACE MARKED (8) AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/7-124 NAILS.

  NAIL THE SECOND TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 3 ON THIS PAGE.

TYPICAL LTL - 84 UNPALLETIZED ALUMINUM CONTAINERS IN A CONVENTIONAL TYPE VAN TRAILER

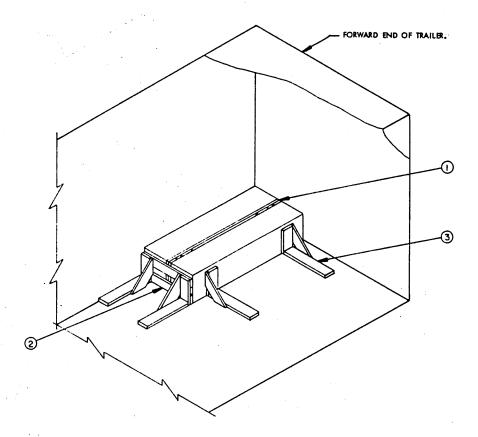


SEE SPECIAL NOTE 5 ON THIS PAGE.

- THESE OUTLOADING PROCEDURES DEPICT THE OUTLOADING OF A TWO (2)
   CONTAINER HIGH LOAD IN A TRAILER WHICH HAS A NAILABLE FLOOR, TRAILERS
   WITH A NON-NAILABLE FLOOR CANNOT BE USED.
- IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD END, A "FORWARD BLOCKING ASSEMBLY" MUST BE USED OR "LITL BRACES" AND HORIZONTAL PIECES" AS SHOWN AT THE REAR MAY ALSO BE USED AT THE FRONT.
- 3. NOT LESS THAN TWO (2) LTL BRACES MARKED (4) SHALL BE USED FOR LONGITUDINAL BRACING. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL RETAIN 2,000 POUNDS OF LADING.
- 4. ONE OR MORE FILLER ASSEMBLIES, SHOWN AS PIECE MARKED ③, MAY BE USED IN PLACE OF OMITTED CONTAINERS IN THE TOP LAYER ONLY.
- 5. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, THEY MAY BE USED IN LIEU OF PIECES MARKED (3) AND (6). POSITION THE CROSS MEMBERS AT THE 4" AND 16" HEIGHTS FOR THE LOAD SHOWN ABOVE. USE VERTICAL AND HORIZONTAL PIECES, AS SHOWN IN "DETAIL A" ABOVE.

## KEY NUMBERS

- (1) SPACER ASSEMBLY (8 REQD). SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 40.
- SPACER ASSEMBLY (2 REQD). SEE THE "SPACER ASSEMBLY C" DETAIL ON PAGE 41.
- 3 FILLER ASSEMBLY (1 REQD). SEE THE "FILLER ASSEMBLY B" DETAIL ON PAGE 47. SEE SPECIAL NOTE 4 ON THIS PAGE.
- 4 SEPARATOR GATE ( 1 REQD ). SEE THE DETAIL ON PAGE 41.
- (3) LOAD BEARING PIECE, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (2 REQD). POSITION AS SHOWN.
- (6) LTL BRACE (4 REQD). SEE THE DETAIL ON PAGE 46. NAIL TO PIECE MARKED (5) W/3-10d NAILS AT EACH JOINT. NAIL TO THE TRAILER FLOOR W/10-10d NAILS. SEE SPECIAL NOTE 2 ON THIS PAGE.

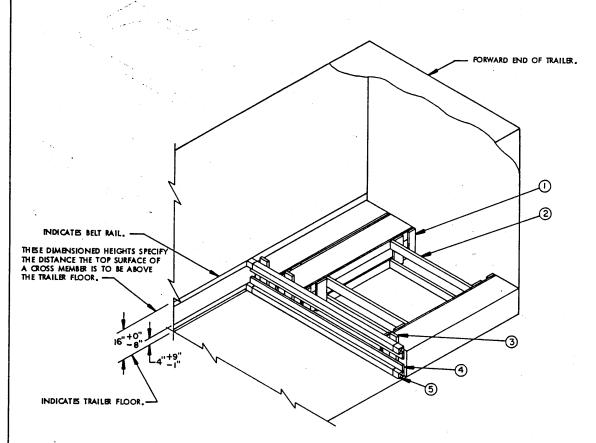


# SPECIAL NOTES:

- THESE OUTLOADING PROCEDURES DEPICT THE OUTLOADING OF A ONE (1) CONTAINER HIGH LOAD IN A TRAILER WHICH HAS A NAILABLE FLOOR. TRAILERS WITH A NON-NAILABLE FLOOR CANNOT BE USED.
- 2. IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD END, TWO ADDITIONAL LIL BRACES AND TWO ADDITIONAL LOAD BEARING PIECES MAY BE USED AT THE FORWARD END OF THE LADING.
- 3. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, SEE PAGE 31 FOR ALTERNATIVE METHOD.
- 4. THE "VERTICAL PIECE" ON THE LTL BRACE MUST BE 13" HIGH AND THE "BACK-UP CLEAT" MUST BE 24" LONG.

# KEY NUMBERS

- O SPACER ASSEMBLY (1 REQD). SEE THE "SPACER ASSEMBLY 8" DETAIL ON PAGE 40.
- 2 LOAD BEARING PIECE, 2" X 4" X 26" (2 REQD). POSITION AS SHOWN.
- 3 LTL BRACE (4 REQD). SEE THE DETAIL ON PAGE 46. NAIL TO PIECES MARKED 2 W/3-10d NAILS AT EACH JOINT. NAIL TO THE TRAILER FLOOR W/10-10d NAILS. SEE SPECIAL NOTE 2 ON THIS PAGE.



# SPECIAL NOTES:

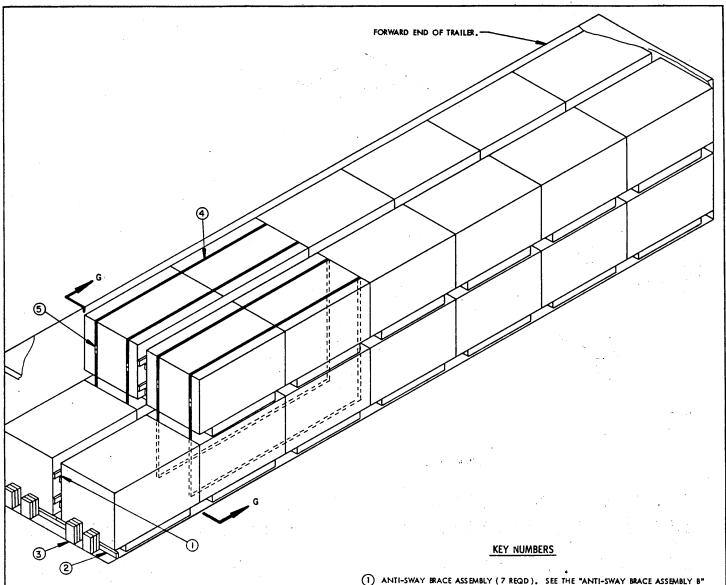
- A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
- 2. THE METHOD SHOWN IN THE "ISOMETRIC VIEW" FOR SIDE BLOCKING MAY BE USED FOR OTHER QUANTITIES OF ALUMINUM CONTAINERS BY ADJUSTING THE LENGTH OF PIECES MARKED (2).
- 3. WHEN FABRICATING PIECES MARKED (1) USE 2" X 4" MATERIAL FOR THE VERTICAL PIECES AT EACH LOCATION WHERE PIECE MARKED (2) IS TO BE NAILED.

# KEY NUMBERS

- SPACER ASSEMBLY (3 REQD). SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 40. SEE SPECIAL NOTE 3 ON THIS PAGE.
- 2) STRUT, 2" X 4" BY CUT-TO-FIT (4 REQD). NAIL TO THE VERTICAL PIECE ON THE SPACER ASSEMBLY W/2-10d NAILS EACH END. SEE SPECIAL NOTE 3 ON THIS PAGE.
- 3 VERTICAL PIECE, 2" X 4" X 18" (3 REQD). CENTER ON CONTAINERS.
- (4) HORIZONTAL PIECE, 1" X 4" BY TRAILER WIDTH MINUS 1/2" (2 REQD). NAIL TO THE VERTICAL PIECES W/3-64 NAILS AT EACH JOINT. CLINCH NAIL ENDS.
- GOOSS MEMBER ( 2 REQD ). POSITION AT THE HEIGHT SHOWN IN THE ISOMETRIC VIEW ABOVE.

TYPICAL LTL - 3 UNPALLETIZED ALUMINUM CONTAINERS
IN A TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES

PAGE 31



PAGE 32

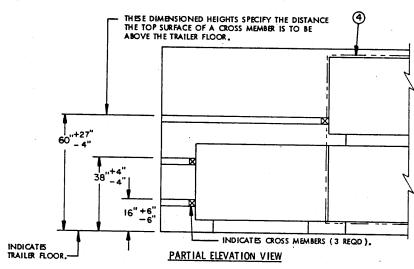
5

SECTION G-G

- (1) ANTI-SWAY BRACE ASSEMBLY (7 REQD), SEE THE "ANTI-SWAY BRACE ASSEMBLY B" DETAIL ON PAGE 48, INSTALL BETWEEN LATERALLY ADJACENT ROWS OF PALLETIZED UNITS, SEE SPECIAL NOTES 2 AND 3 ON PAGE 33.
- (2) TIE PIECE, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH. SEE SPECIAL NOTE 4 ON PAGE 33.
- 3 SOLID FILL, 6" WIDE MATERIAL BY 12" LONG BY THICKNESS TO SUIT (AS REQD), NAIL FRST PIECE TO PIECE MARKED (2) W/3-10d NAILS. NAIL EACH ADDITIONAL PIECE TO THE FRST PIECE W/3-10d NAILS. SEE SPECIAL NOTE 4 ON PAGE 33.
- 4 BUNDLING STRAP, 1-1/4" X .035" X 38"-6" LONG STEEL STRAPPING (4 REQD), PREPOSITION AND INSTALL SO AS TO ENCIRCLE TWO (2) PALLETIZED UNIT STACKS AS SHOWN.
- (5) SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "V" ON PAGE 2.

- A LOAD OF 26 PALLETIZED UNITS IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL TYPE VAN TRAILER.
- A WIDER OR NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "ANTI-SWAY BRACE ASSEMBLY 8" AS NECESSARY.
- THE ANTI-SWAY BRACING MAY BE OMITTED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 5" OR LESS, AS MEASURED FROM CONTAINER TO CONTAINER ON LATERALLY ADJACENT UNITS.
- 4. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLETIZED CONTAINERS AND THE REAR DOORS, MEASURES 1-1/2" OR LESS, NO REAR BLOCKING IS REQUIRED. IF THE VOID AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 12" ADDITIONAL FILL PIECES OF 6" WIDE MATERIAL MUST BE LAMINATED TO PIECES MARKED (3). IF THE VOID AT THE REAR OF THE LOAD EXCEEDS 12", USE REAR BLOCKING AS SHOWN ON PAGE 34.
- 5. TO SATISFY THE QUANTITY OF PALLETIZED UNITS TO BE SHIPPED, THE LOAD AS SHOWN MAY BE DECREASED BY OMITTING TWO (2) ADJACENT PALLETIZED UNITS AT A TIME. TWO ADDITIONAL PALLET UNITS CAN BE LOADED IF DOOR HEIGHT PERMITS.
- IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 34 FOR "FORWARD BLOCKING" SPECIFICATIONS WHICH MUST BE USED.
- IF A PALLETIZED UNIT WHICH DOES NOT CONTAIN A FULL QUANTITY OF CONTAINERS IS TO BE TRANSPORTED, REFER TO THE "SHIPMENT OF A PARTIAL PALLETIZED-UNIT" PROCEDURES ON PAGES 51, 52, AND 53 FOR GUIDANCE.
- 8. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED THE QUANTITY IN ONE LAYER OF A UNIT, MAY BE SECURED TO THE TOP OF A FULL PALLETIZED UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER ALLMINUM CONTAINERS" ON PAGE 55 FOR GUIDANCE.
- 9. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS A WALL BELT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET 6C AND APPENDICES THEREO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE. THE MECHANICAL BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 39"-6" AS MEASURED ROM THE RONT WALL OF THE TRAILER.

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	393	262
1" X 6" 2" X 6"	4 8	2 8
NAILS	NO, REQD	POUNDS
10d (3°)	240	3-3/4



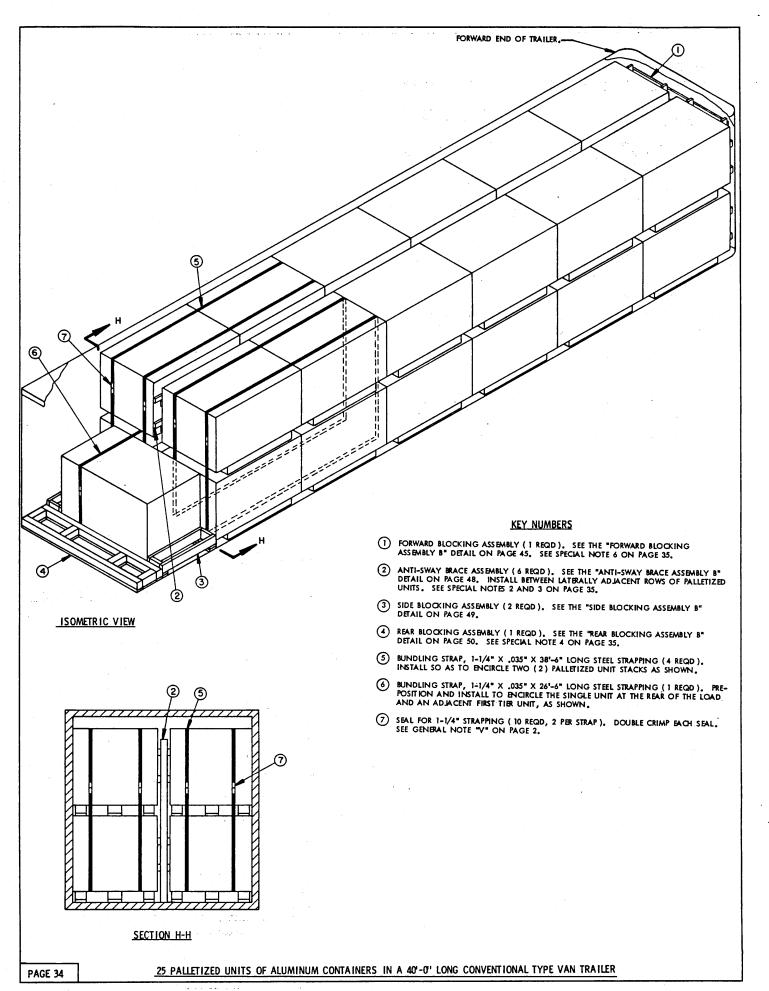
THE VIEW SHOWN ABOVE INDICATES THE REAR OF THE LOAD SHOWN ON PAGE 32. SEE SPECIAL NOTE 9 ON THIS PAGE.

# LOAD AS SHOWN

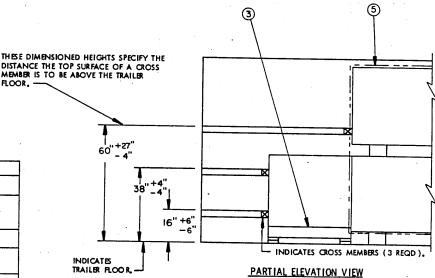
ПЕМ	QUANTITY	WEIGHT (APPROX)
PALLETIZED UNIT	26	24,752 LBS
DUNNAGE		570 LBS
TOTAL	WEIGHT	25 322 LBS

26 PALLETIZED UNITS OF ALUMINUM CONTAINERS IN A 40'-0' LONG CONVENTIONAL TYPE VAN TRAILER

PAGE 33



- 1. A LOAD OF 25 PALLETIZED UNITS IS SHOWN IN A 40'-0" LONG BY 7"-6" WIDE (INSIDE DIMENSION) CONVENTIONAL TYPE VAN TRAILER.
- A WIDER OR NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "ANTI-SWAY BRACE ASSEMBLY B" AS NECESSARY.
- 3. THE ANTI-SWAY BRACING MAY BE OMITTED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 5" OR LESS, AS MEASURED FROM CONTAINER TO CONTAINER ON LATERALLY ADJACENT UNITS.
- 4. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLETIZED CONTAINERS AND THE REAR DOOR MEASURES 1-1/2" OR LESS NO REAR BLOCKING IS REQUIRED. IF THE VOID AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 12", USE REAR BLOCKING AS SHOWN ON PAGE 32.
- 5. TO SATISFY THE QUANTITY OF PALLETIZED UNITS TO BE SHIPPED, THE LOAD SHOWN MAY BE DECREASED BY OMITTING THE REAR PALLETIZED UNIT OR BY OMITTING TWO (2) ADJACENT PALLETIZED UNITS AT A TIME.
- 6. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, SEE PAGE 32 FOR AN ALLERNATIVE LOADING METHOD.
- IF A PALLETIZED UNIT WHICH DOES NOT CONTAIN A FULL QUANTITY OF CONTAINERS IS TO BE TRANSPORTED, REFER TO THE "SHIPMENT OF A PARTIAL PALLETIZED UNIT" PROCEDURES ON PAGES 51, 52, AND 53 FOR GUIDANCE.
- 8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED THE QUANTITY IN ONE LAYER OF A UNIT, MAY BE SECURED TO THE TOP OF A FULL PALLETIZED UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER ALLMINUM CONTAINERS" ON PAGE 55 FOR GUIDANCE.
- 9. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS A WALL BEIT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BUREAU OF EXPLOSIVES PAMFILET 6C AND APPENDICES THERETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE, THE MECHANICAL BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 38"-0" AS MEASURED FROM THE FRONT WALL OF THE TRAILER.

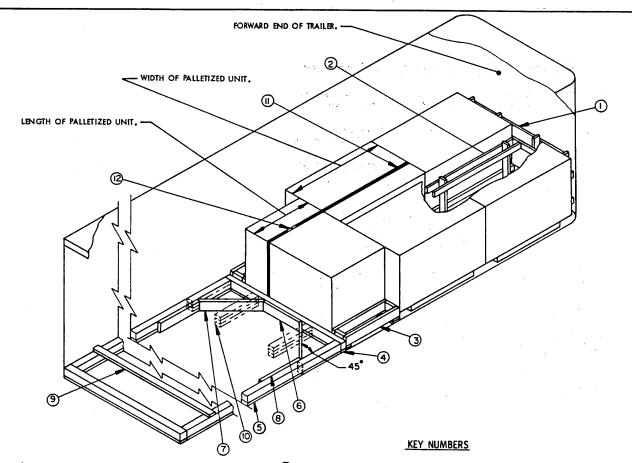


LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	413	276
2" X 6"	88	88
4" X 4"	21	28
NAILS	NO . REQD	POUNDS
104 (3")	354	5-1/2
16d (3-1/2")	16	1/2

LOAD AS SHOWN

THE VIEW SHOWN ABOVE INDICATES THE REAR OF THE LOAD SHOWN ON PAGE 34. SEE SPECIAL NOTE 9 ON THIS PAGE.

25 PALLETIZED UNITS OF ALUMINUM CONTAINERS IN A 40'-0' LONG CONVENTIONAL TYPE VAN TRAILER

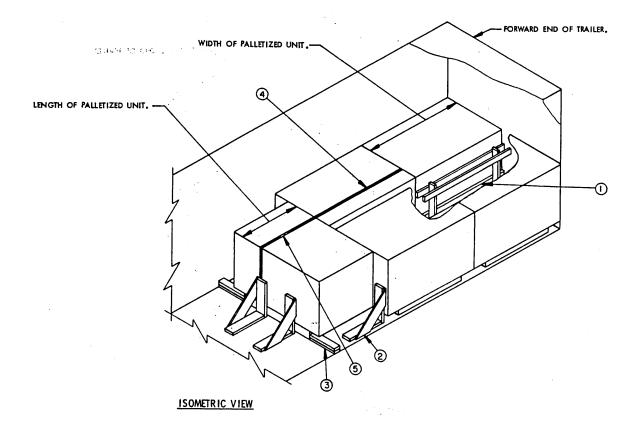


## SPECIAL NOTES:

PAGE 36

- 1. THESE OUTLOADING PROCEDURES DEPICT THE USE OF K-BRACE BLOCKING IN A 7"-6" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH OR WITHOUT NAILABLE FLOORS AND REAR CORNER POSTS.
- 2. PIECE MARKED (1) ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED (3) THROUGH (7) WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. FOUR (4) BACK-UP CLEATS, SHOWN AS PIECES (10), ARE ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD OF 20,000 POUNDS. ALSO REFER TO PAGE 37 FOR LOAD BLOCKING, SPECIFICATIONS WHICH MAY BE USED IN LIEU OF THE DEPICTED BLOCKING.
- IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, OMIT THE FORWARD BLOCK-ING ASSEMBLY AND POSITION THE PALLETIZED UNITS AGAINST THE FRONT WALL.
- 4. THE DEPICTED K-BRACE BLOCKING WILL RETAIN A MAXIMUM SIZE LTL LOAD.
- 5. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS DISCRIBED IN GENERAL NOTE "K" ON PAGE 2, THEY MAY BE USED IN LIEU OF THE DEPICTED BLOCKING. SEE THE "PARTIAL ELEVATION VIEW" ON PAGE 35 FOR POSITIONING OF CROSS MEMBERS.
- 6. IF THE SIDE STRUTS SHOWN AS PIECES MARKED (3) ARE FORMED FROM MORE THAN ONE PIECE OF MATERIAL, THEY MAY BE SPLICED BY CENTERING A 2" X 6" X 24" PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING W/4-104 NAILS AT EACH END.
- 7. ONE (1) ADDITIONAL PIECE OF STRUT BRACING IS REQUIRED FOR EVERY 7'-0"
  OF STRUT LENGTH, NAIL TO PIECES MARKED (3) W/2-12d NAILS AT EACH END.

- (1) FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 45. SEE SPECIAL NOTE 3 ON THIS PAGE.
- 2 ANTI-SWAY BRACE ASSEMBLY (2 REQD). SEE THE "ANTI-SWAY BRACE ASSEMBLY 8" DETAIL ON PAGE 48. INSTALL BETWEEN LATBRALLY ADJACENT ROWS OF PALLETIZED UNITS.
- SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE "SIDE BLOCKING ASSEMBLY B" DETAIL ON PAGE 49.
- (4) HEADER, 4" X 4" AND 2" X 4", BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD).
  LAMINATE THE 2" X 4" TO THE 4" X 4" W/1-104 NAIL EVERY 8".
- (5) SIDE STRUT, 4" X 4" AND 2" X 4", BY CUT TO FIT BETWEEN THE FORWARD AND REAR HEADERS, PIECES MARKED (4), (2 REQD). TOENAIL TO THE HEADERS W/2-164 NAILS AT EACH END. SEE SPECIAL NOTE 6 ON THIS PAGE.
- 6 CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO A HEADER, PIECE MARKED 4, W/7-104 NAILS.
- DIAGONAL BRACE, 2" X 6" BY CUT TO FIT (2 REQD). DOUBLE BEVEL FACH END WITH 49" CUTS. INSTALL AT A 49" ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER MARKED (4) AND STRUT MARKED (5) W/2-164 NAILS AT EACH END.
- (B) SIDE CLEAT, 2" X 6" X 30" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED (S), W/B-10d NAILS.
- (9) STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (MINIMUM OF ONE REQUIRED), POSITION NEAR REAR OF TRAILER AND NAIL TO THE SIDE STRUTS, PIECES MARKED (5), W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 7.
- (10) BACK-UP CLEAT, 2" X 4" X 30" (TRIPLED) (4 REQD). POSITION AS SHOWN. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/7-12d NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER. TOENAIL THE TOP PIECE TO A HEADER PIECE MARKED 4. W/2-12d NAILS. SEE SPECIAL NOTE 2 ON THIS PAGE.
- (1) BUNDLING STRAP, 1-1/4" X .035" X 27'-0" LONG (REF) STEEL STRAPPING (1 REQD). PRE-POSITION AND INSTALL SO AS TO ENCIRCLE TWO (2) PALLETIZED UNITS, AS SHOWN.
- (2) SEAL FOR 1-1/4" STRAPPING (2 REQD). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "V" ON PAGE 2.

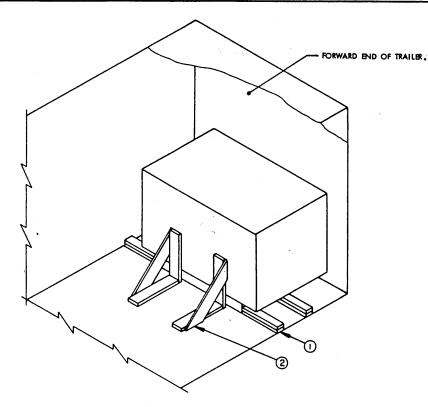


### SPECIAL NOTES:

- 1. THESE OUTLOADING PROCEDURES DEPICT THE USE OF LTL BRACE BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH NAILABLE FLOORS.
- 2. IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD END, FOUR (4) ADDITIONAL LTL BRACES MAY BE USED AT THE FORWARD END OF THE LADING, OR A FORWARD BLOCKING ASSEMBLY, SHOWN AS KEY NUMBER (1) ON PAGE 36, MAY BE USED.
- EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000
  POUNDS OF LADING, HOWEVER, NOT LESS THAN TWO (2) BRACES WILL BE USED
  AGAINST EACH PALLETIZED UNIT ACROSS THE WIDTH OF THE TRAILER.
- 4. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS DEPICTED IN GENERAL NOTE "K" ON PAGE 2, THEY MAY BE USED IN LIEU OF THE DEPICTED BLOCKING, SEE THE "PARTIAL ELEVATION VIEW" ON PAGE 35 FOR POSITIONING OF CROSS MEMBERS.
- IF A PALLETIZED UNIT WHICH DOES NOT CONTAIN A FULL QUANTITY OF CON-TAINERS IS TO BE TRANSPORTED, REFER TO THE "SHIPMENT OF A PARTIAL PALLETIZED UNIT" PROCEDURES ON PAGES 51, 52, AND 53 FOR GUIDANCE.
- 6. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED THE QUANTITY IN ONE LAYER OF A UNIT, MAY BE SECURED TO THE TOP OF A FULL PALLETIZED UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER ALUMINUM CONTAINERS" ON PAGE 55 FOR GUIDANCE.

#### KEY NUMBERS

- ANTI-SWAY BRACE ASSEMBLY (2 REQD), SEE THE "ANTI-SWAY BRACE ASSEMBLY B"
  DETAIL ON PAGE 48, INSTALL BETWEEN LATERALLY ADJACENT ROWS OF
  PALLETIZED UNITS.
- (2) LTL BRACE (4 REQD). SEE THE DETAIL ON PAGE 46. POSITION AGAINST STRONG POINTS ON PALLETIZED UNITS AND NAIL TO THE TRAILER FLOOR W/10-10d NAILS.
- 3 SIDE BLOCKING, 2" X 4" BY CUT-TO-FIT (DOUBLED) (2 REQD). POSITION IN LINE WITH EDGE OF PALLET. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- BUNDLING STRAP, 1-1/4" X .035" X 26'-6" LONG STEEL STRAPPING (1 REQD). PRE-POSITION AND INSTALL TO ENCIRCLE TWO (2) PALLETIZED UNITS, AS SHOWN.
- SEAL FOR 1-1/4" STRAPPING (2 REQD). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "V" ON PAGE 2.



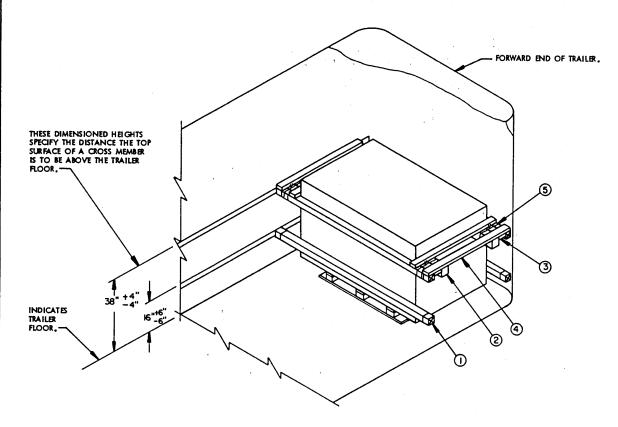
ISOMETRIC VIEW

#### SPECIAL NOTES:

- THESE OUTLOADING PROCEDURES DEPICT THE USE OF LTL BRACE BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH NAILABLE FLOORS.
- 2. IF THE TRAILER BEING LOADED HAS A ROUND FRONT OR ROUNDED CORNERS AT THE FORWARD END, TWO (2) ADDITIONAL LTL BRACES MAY BE POSITIONED AT THE FORWARD END OF THE LADING OR A FORWARD BLOCKING ASSEMBLY, SHOWN AS KEY NUMBER (1) ON PAGE 36, MAY BE USED.
- 3. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING; HOWEVER, NOT LESS THAN TWO (2) BRACES WILL BE USED AGAINST EACH PALLETIZED UNIT.
- 4. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS DESCRIBED IN GENERAL NOTE "K" ON PAGE 2, SEE PAGE 39 FOR ALTERNATIVE METHOD.

### KEY NUMBERS

- (1) SIDE BLOCKING, 2" X 4" BY CUT-TO-FIT (DOUBLED) (4 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/3-104 NAILS. NAIL THE SECOND PIECE IN A LIKE MANNER.
- (2) LTL BRACE (2 REQD). SEE THE DETAIL ON PAGE 46. POSITION AGAINST STRONG POINTS ON PALLETIZED UNIT AND NAIL TO THE TRAILER FLOOR W/10-104 NAILS.



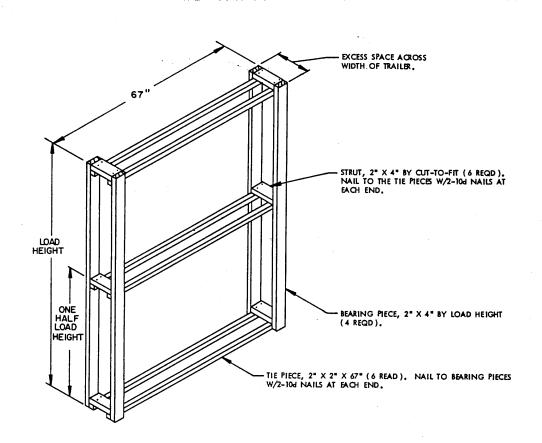
# ISOMETRIC VIEW

#### SPECIAL NOTES:

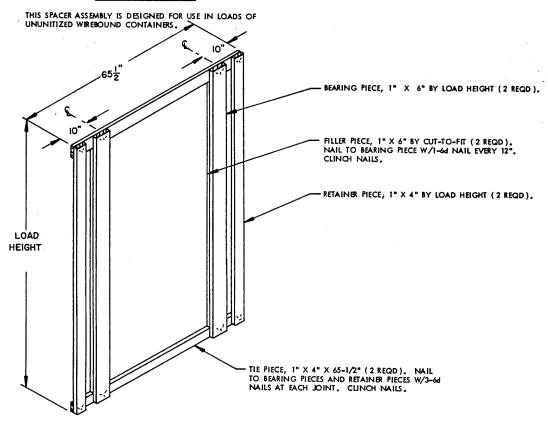
- THESE OUTLOADING PROCEDURES DEPICT A VAN TRAILER WHICH IS EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. IN ADDITION TO BEING USED FOR SHIPMENTS OF ONE PALLETIZED UNIT, THE DEPICTED PROCEDURES CAN BE USED IN CONJUNCTION WITH THE OUTLOADING PROCEDURES ON PAGES 32 THRU 35 FOR THE ADJUSTMENT OF A LOAD QUANTITY. NOTE THAT THE PRINCIPLES CAN ALSO BE APPLIED FOR ONE (1) PALLETIZED UNIT IN AN UPPER TIER OF A LOAD.
- FOUR (4) PIECES OF NO. 14 GAGE WIRE MAY BE USED IN LIEU OF THE NO. 8
  GAGE WIRE, WHEN USING THE NO. 14 GAGE WIRE, INSTALL TWO (2) COMPLETE
  LOOPS AROUND THE CROSS MEMBER, SIDE BLOCKING, AND SPACER.

# KEY NUMBERS

- (1) CROSS MEMBER (4 REQD). POSITION AT THE HEIGHTS AS SPECIFIED IN THE ISOMETRIC VIEW ABOVE. SEE GENERAL NOTE "K" ON PAGE 2.
- SIDE BLOCKING, 4" X 4" BY CUT TO FIT BETWEEN THE PALLETIZED UNIT AND THE TRAILER SIDE WALL (4 REQD).
- $\ensuremath{\mathfrak{J}}$  Spacer, 2" X 4" By cut to fit between the palletized unit and the trailer side wall (4 regd).
- (4) SUPPORT PIECE, 2" X 4" X 48" (4 REQD). NAIL TO PIECES MARKED (3) W/3-10d NAILS AT EACH JOINT. NAIL TO PIECES MARKED (2) W/3-12d NAILS AT EACH JOINT.
- (5) TIE WIRE, NO. 8 GAGE BLACK ANNEALED WIRE 36" LONG (4 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE CROSS MEMBER, PIECE MARKED (2), AND PIECE MARKED (3). BRING THE ENDS TOGETHER AND TWIST TAUT. SEE SPECIAL NOTE 3 AT LEFT.



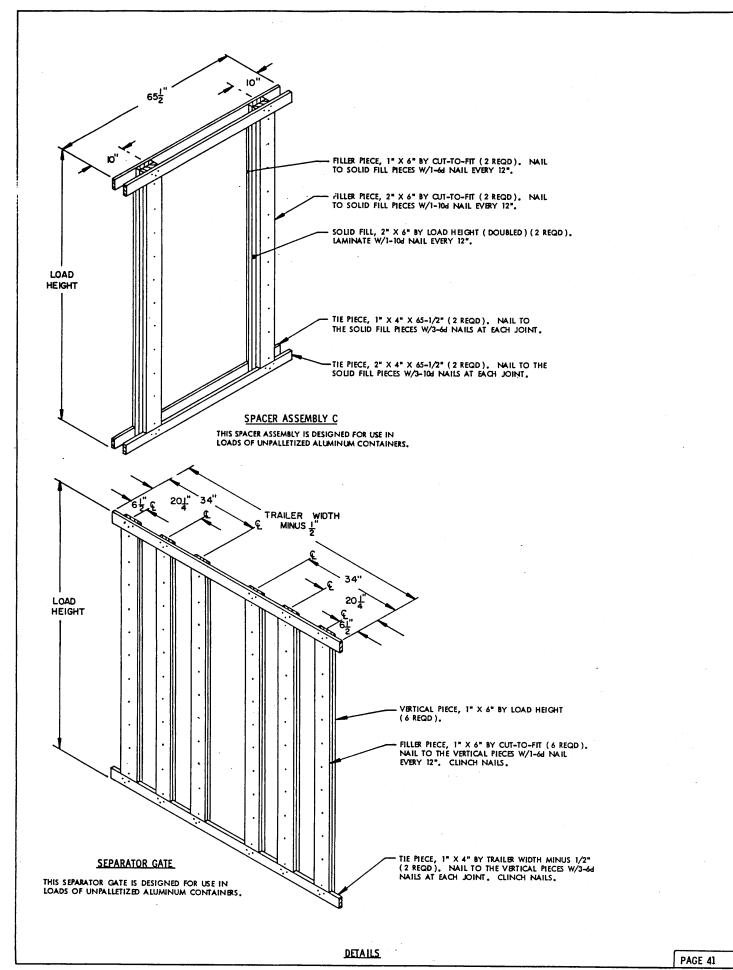
### SPACER ASSEMBLY A

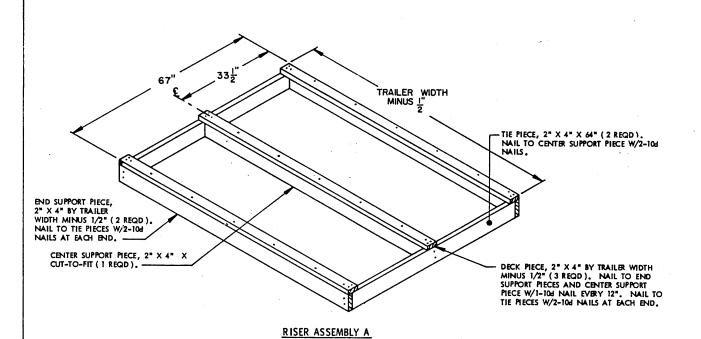


### SPACER ASSEMBLY B

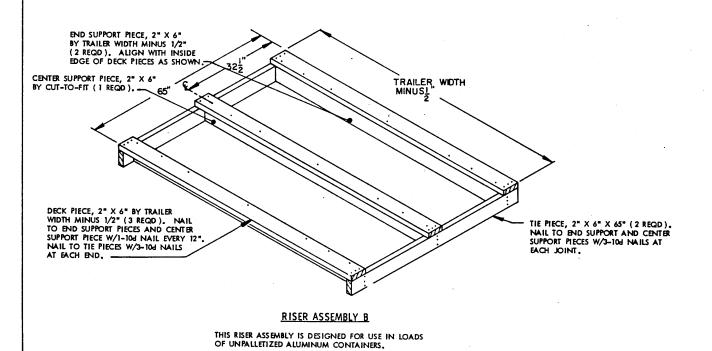
THIS SPACER ASSEMBLY IS DESIGNED FOR USE IN LOADS OF UNPALLETIZED ALUMINUM CONTAINERS.

<u>DETAILS</u>





THIS RISER ASSEMBLY IS DESIGNED FOR USE IN LOADS OF UNUNITIZED WIREBOUND CONTAINERS.



**DETAILS** 

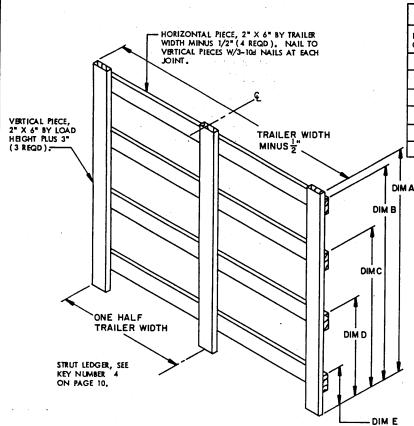


CHART A ( SEE NOTE  BELOW )								
LAYERS OF CONTAINERS	DIM A	DIM B	DIM C	DIM D	DIM E			
2	24"	21"	*	*	13			
3	34"	31"	*	*	13			
4	45"	42"	24	*	13			
5	55*	52"	34	*	13			
- 6	66"	63"	34	45	13			
7	76"	73*	55	34	13			

FOR LOADS OF EIGHT LAYERS SEE "REAR-OF-LOAD GATE ASSEMBLY B" BELOW.

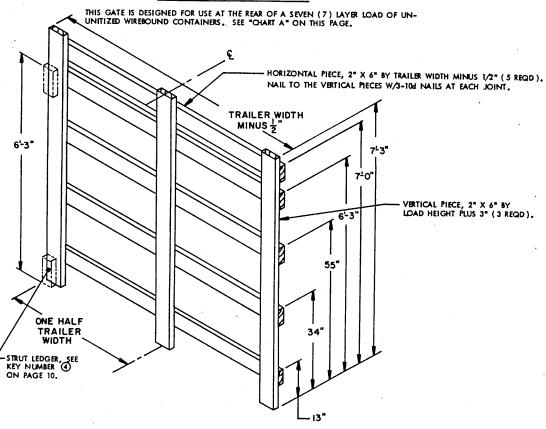
#### NOTE ⊕:

WHEN FARRICATING GATES FOR SEVEN LAYER LOADS, OR LESS, USE "CHART A" ABOVE FOR PROPER LOCATION OF THE HORIZONTAL PIECES. NOTE: IF DESIRED 1/2" PLYWOOD MAY BE USED IN LIEU OF THE 2" X 6" HORIZONTAL PIECES. THE PLYWOOD MUST BE TRAILER WIDTH MINUS 1/2" BY LOAD HEIGHT. SECURE THE PLYWOOD TO THE VERTICAL PIECES W/1-64 NAIL EVERY 12". ALL PLYWOOD JOINTS MUST CENTER ON THE MIDDLE VERTICAL PIECE.

#### NOTE:

# HORIZONTAL PIECE IS NOT REQUIRED AT THIS LOCATION.

### REAR OF LOAD GATE ASSEMBLY A



# REAR OF LOAD GATE ASSEMBLY B

THIS GATE IS DESIGNED FOR USE AT THE REAR OF AN EIGHT (8) LAYER LOAD OF UN-UNITIZED WIREBOUND CONTAINERS. SEE "CHART A" ON THIS PAGE.

**DETAILS** 

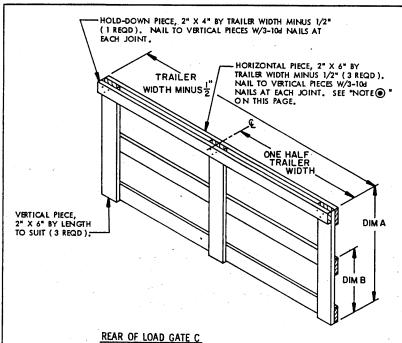


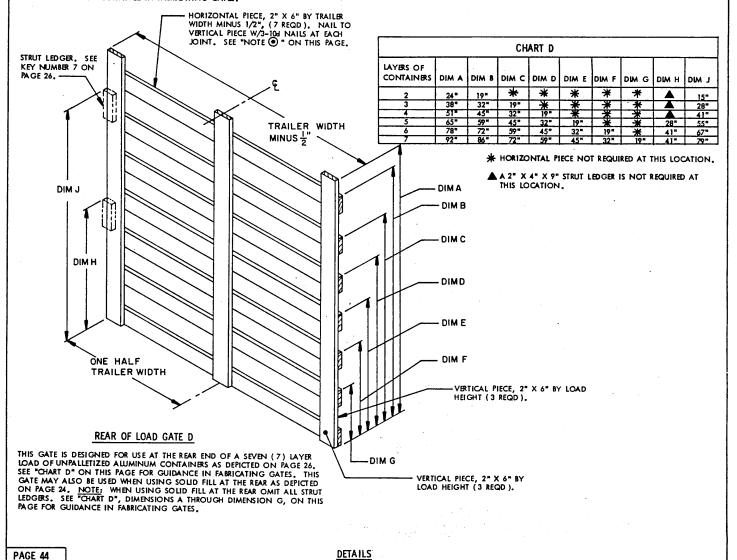
CHART C						
THREE (3) LAYER LOAD	DIM A	DIM B				
WIREBOUND CONTAINERS ALLMINUM CONTAINERS	31-1/2" 33-1/2"	19" 20-1/2"				
TWO (2) LAYER LOAD	DIM A	DIM B				
WIREBOUND CONTAINESS ALLMINUM CONTAINESS	21" 20-1/2"	*				

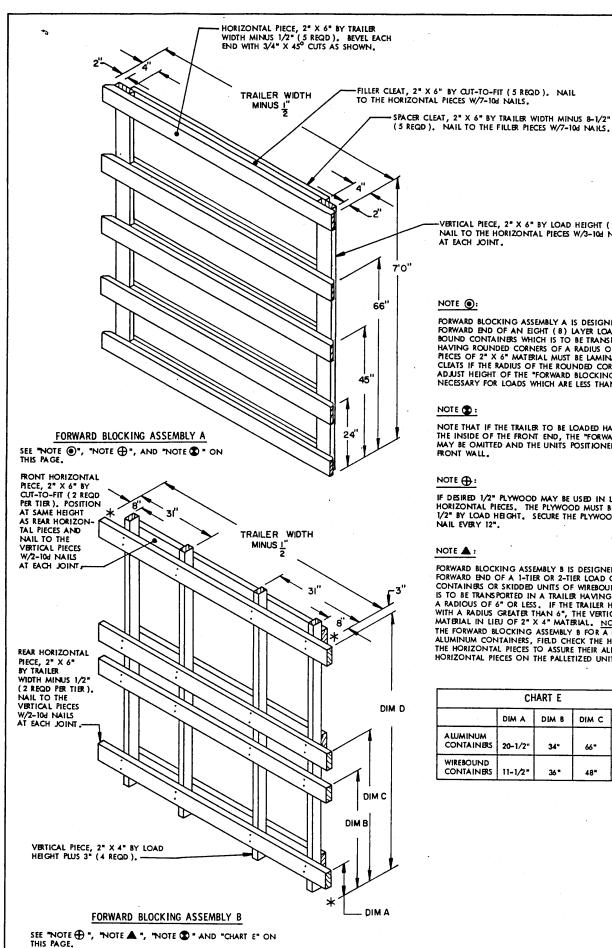
\* HORIZONTAL PIECE NOT REQUIRED AT THIS LOCATION.

#### NOTE :

IF DESIRED 1/2" PLYWOOD MAY BE USED IN LIBU OF THE 2" X 6" HORIZONTAL PIECES, THE PLYWOOD MUST BE TRAILER WIDTH MINUS 1/2" BY LOAD HEIGHT, SECURE THE PLYWOOD TO THE VERTICAL PIECES W/1-64 NAIL EVERY 12", ALL PLYWOOD JOINTS MUST CENTER ON THE MIDDLE VERTICAL PIECE.

THIS GATE IS DESIGNED FOR USE AT THE REAR END OF A THREE (3) LAYER LOAD OF UNUNITIZED WIREBOUND CONTAINERS OR UNPALLETIZED ALUMINUM CONTAINERS AS DEPICTED ON PAGES 12 AND 28, NOTE: THIS TYPE OF GATE CAN ONLY BE USED AGAINST THE REAR OF A TWO OR THREE LAYER UNPALLETIZED LOAD. SEE "CHART C" ON THIS PAGE FOR GUIDANCE IN FABRICATING GATES.





VERTICAL PIECE, 2" X 6" BY LOAD HEIGHT (2 REQD).
NAIL TO THE HORIZONTAL PIECES W/3-101 NAILS AT EACH JOINT.

# NOTE ():

FORWARD BLOCKING ASSEMBLY A IS DESIGNED FOR USE AT THE FORWARD END OF AN EIGHT (8) LAYER LOAD OF UNUNITIZED WIRE-BOUND CONTAINERS WHICH IS TO BE TRANSPORTED IN A TRAILER HAVING ROUNDED CORNERS OF A RADIUS OF 5° OR LESS. ADDITIONAL PIECES OF 2" X 6" MATERIAL MUST BE LAMINATED TO THE SPACER CLEATS IF THE RADIUS OF THE ROUNDED CORNERS IS CREATER THAN 5". ADJUST HEIGHT OF THE "FORWARD BLOCKING ASSEMBLY A" AS NECESSARY FOR LOADS WHICH ARE LESS THAN EIGHT (8) LAYERS HIGH.

# NOTE 🕲 :

NOTE THAT IF THE TRAILER TO BE LOADED HAS SQUARE CORNERS ON THE INSIDE OF THE FRONT END, THE "FORWARD BLOCKING ASSEMBLY" MAY BE OMITTED AND THE UNITS POSITIONED DIRECTLY AGAINST THE FRONT WALL.

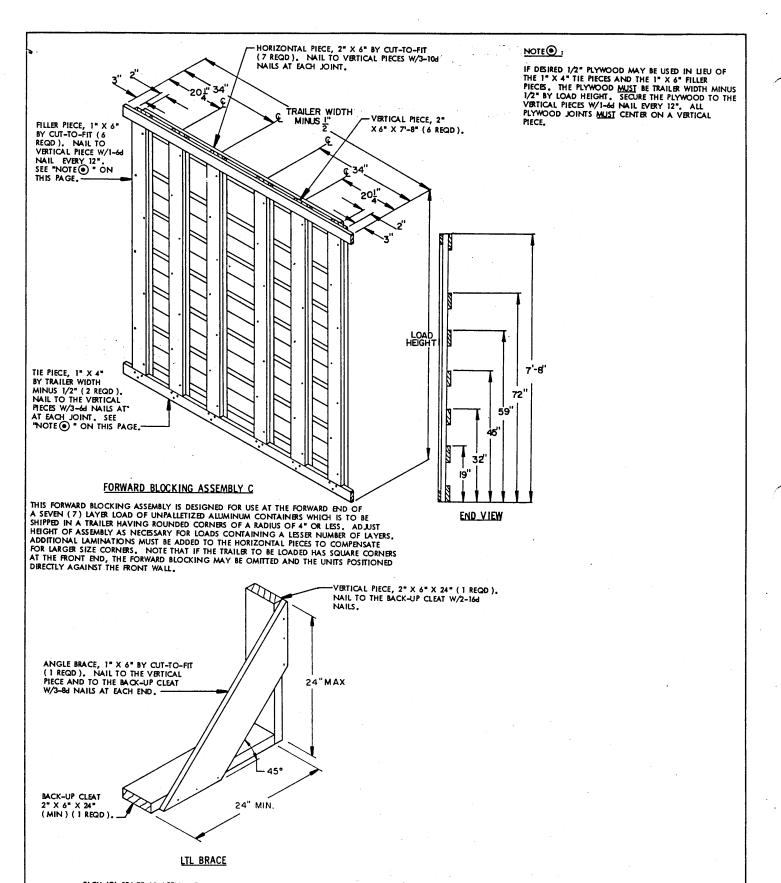
#### NOTE +:

IF DESIRED 1/2" PLYWOOD MAY BE USED IN LIEU OF THE 2" X 6"
HORIZONTAL PIECES. THE PLYWOOD MUST BE TRAILER WIDTH MINUS
1/2" BY LOAD HEIGHT. SECURE THE PLYWOOD TO THE VERTICAL W/1-6d

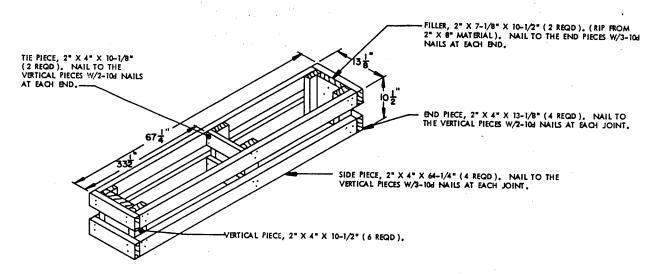
### NOTE A:

FORWARD BLOCKING ASSEMBLY B IS DESIGNED FOR USE AT THE FORWARD BND OF A 1-TIER OR 2-TIER LOAD OF PALLETIZED ALIJMINUM CONTAINERS OR SKIDDED UNITS OF WIREBOUND CONTAINERS WHICH IS TO BE TRANSPORTED IN A TRAILER HAVING ROUNDED CORNERS OF A RADIOUS OF 6" OR LESS. IF THE TRAILER HAS ROUNDED COPNERS WITH A RADIUS GREATER THAN 6", THE VERTICAL PIECES MUST BE 2" X 6" MATERIAL IN LIEU OF 2" X 4" MATERIAL. NOTE: WHEN FABRICATING THE FORWARD BLOCKING ASSEMBLY B FOR A LOAD OF PALLETIZED ALUMINUM CONTAINERS, FIELD CHECK THE HEIGHT DIMENSIONS OF THE HORIZONTAL PIECES TO ASSURE THEIR ALIGNMENT WITH THE HORIZONTAL PIECES ON THE PALLETIZED UNIT.

CHART E							
	DIM A	DIM B	DIM C	DIM D			
ALUMINUM CONTAINERS	20-1/2"	34"	66"	79-1/2"			
WIREBOUND CONTAINERS	11-1/2"	36*	48"	72"			

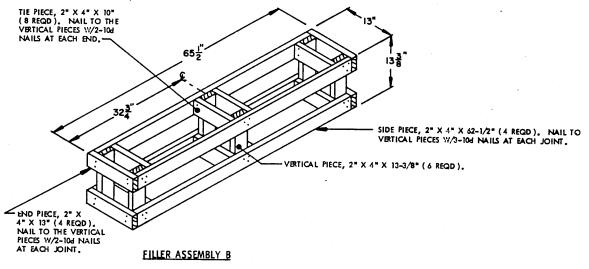


EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING; HOWEVER, NOT LESS THAN TWO (2) BRACES WILL BE USED AGAINST EACH PALLETIZED UNIT ACROSS THE WIDTH OF THE TRAILER.

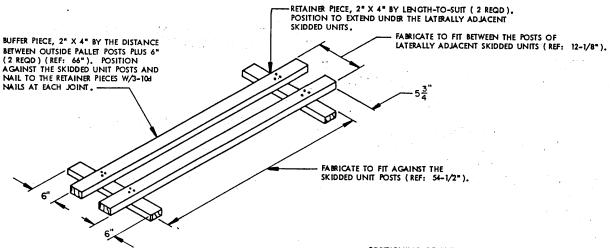


# FILLER ASSEMBLY A

THE FILLER ASSEMBLY SHOWN ABOVE IS TO BE USED WITHIN LOADS TO TAKE THE PLACE OF AN OMITTED WIREBOUND CONTAINER. IT MUST BE USED IN THE TOP LAYER ONLY.

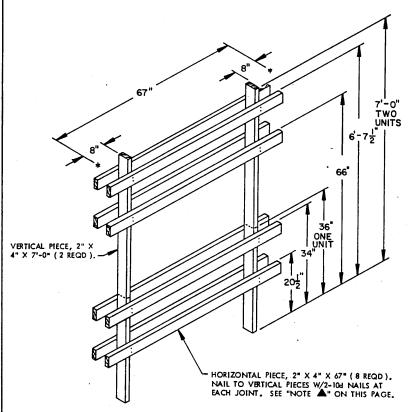


THE FILLER ASSEMBLY SHOWN ABOVE IS TO BE USED WITHIN LOADS TO TAKE THE PLACE OF AN OMITTED ALUMINUM CONTAINER, IT MUST BE USED IN THE TOP LAYER ONLY.



#### ANTI-SWAY BRACE ASSEMBLY A

THIS ANTI-SWAY BRACE IS DESIGNED FOR USE BETWEEN 1-TIER OR 2-TIER LOADS OF UNITIZED WIREBOUND CONTAINERS (SKIDDED UNITS). SEE THE "POSITIONING OF ANTI-SWAY BRACE ASSEMBLY A" ON THIS PAGE.



# ANTI-SWAY BRACE ASSEMBLY B

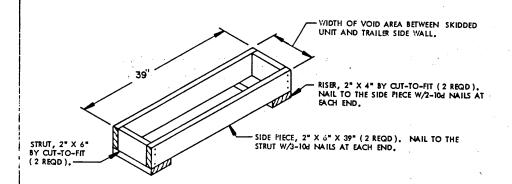
THIS ANTI-SWAY BRACE IS DESIGNED FOR USE BETWEEN 1-TIER OR 2-TIER LOADS OF PALLETIZED ALUMINUM CONTAINERS.

### POSITIONING OF ANTI-SWAY BRACE ASSEMBLY A:

- 1. THE "ANTI-SWAY BRACE ASSEMBLY A" MUST BE FABRICATED IN PLACE BETWEEN LATERALLY ADJACENT SKIDDED UNITS.
  - A. POSITION THE FIRST RETAINER PIECE JUST BEHIND THE NEAR POSTS ON LATERALLY ADJACENT SKIDDED UNITS, SPANNING THE VOID BETWEEN THEM AND RESTING ON THE BOTTOM BOARDS OF THE SKIDDED UNITS.
  - B. POSITION A 2" X 4" X 66" BUFFER PIECE 6" FROM THE END OF THE FIRST RETAINER PIECE AND EXTENDING 5-3/4" BEYOND THE EDGE OF THE FIRST RETAINER PIECE. NAIL THE BUFFER PIECE TO THE RETAINER PIECE W/3-104 NAILS.
  - C. KEEPING THE FIRST BUFFER PIECE AGAINST THE SIDE OF A SKIDDED UNIT, POSITION THE SECOND BUFFER PIECE AGAINST THE SIDE OF THE LATERALLY ADJACENT SKIDDED UNIT AND EXTENDING 5-3/4\* BEYOND THE EDGE OF THE FIRST RETAINER PIECE. NAIL THE BUFFER PIECE TO THE RETAINER PIECE W/3-104 NAILS.
  - D. HOLD THE ENDS OF BOTH BUFFER PIECES AND PUSH THE PARTIAL ASSEMBLY FORWARD UNTIL THE FIRST RETAINER PIECE CONTACTS THE SKIDDED UNIT POSTS ON THE FAR END.
  - E. POSITION THE SECOND RETAINER PIECE JUST BEHIND AND CONTACTING THE NEAR POSTS ON LATERALLY ADJACENT SKIDDED UNITS.
  - F. KEEP THE TWO BUFFER PIECES AGAINST THE SIDES OF THE LATERALLY ADJACENT SKIDDED UNITS AND NAIL EACH ONE TO THE SECOND RETAINER PIECE W/3-10d NAILS.

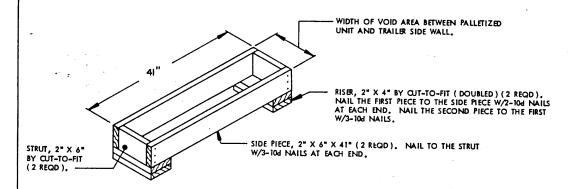
#### NOTE A:

IF THE VOID SPACE BETWEEN LATERALLY ADJACENT PALLETIZED UNITS IS GREATER THAN 7-1/2", ADDITIONAL PIECES OF 4" WIDE MATERIAL BY THICKNESS-TO-SUIT, MAY BE LAMINATED TO THE HORIZONTAL PIECES, IF THE VOID SPACE IS LESS THAN 6-1/2" 1" X 4" MATERIAL MAY BE USED FOR THE HORIZONTAL PIECES IN LIEU OF 2" X 4" MATERIAL. WHEN FABRICATING THE ANTI-SWAY BRACE ASSEMBLY 8, FIELD CHECK THE HEIGHT DIMENSIONS OF THE HORIZONTAL PIECES TO ASSURE THEIR ALIGNMENT WITH THE HORIZONTAL PIECES ON THE PALLETIZED UNIT.



# SIDE BLOCKING ASSEMBLY A

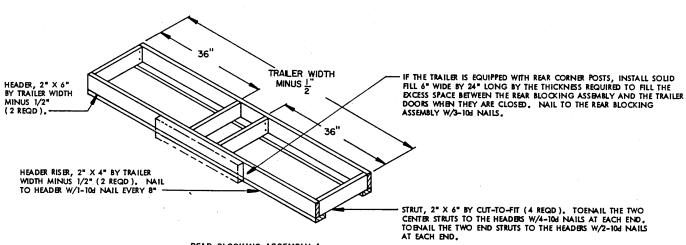
THIS SIDE BLOCKING ASSEMBLY IS DESIGNED FOR USE IN LOADS OF UNITIZED WIREBOUND CONTAINERS.



# SIDE BLOCKING ASSEMBLY B

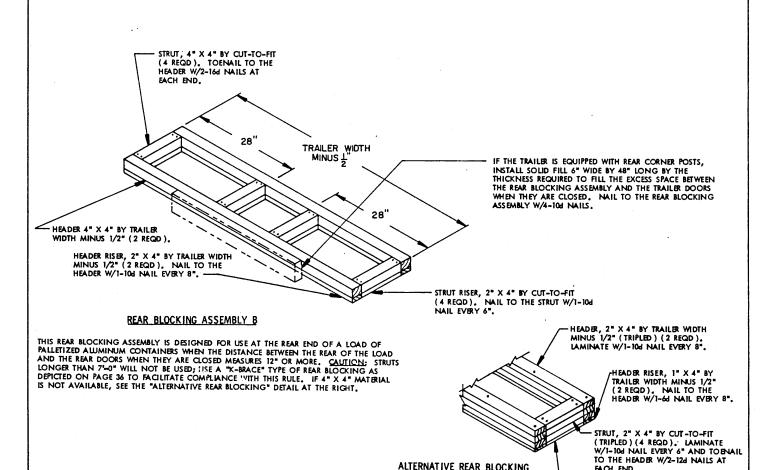
THIS SIDE BLOCKING ASSEMBLY IS DESIGNED FOR USE IN LOADS OF UNPALLETIZED ALUMINUM CONTAINERS.

**DETAILS** 



#### REAR BLOCKING ASSEMBLY A

THIS REAR BLOCKING ASSEMBLY IS DESIGNED FOR USE AT THE REAR END OF A LOAD OF UNITIZED WREBOUND CONTAINERS WHEN THE DISTANCE BETWEEN THE REAR OF THE LOAD AND THE REAR DOORS WHEN THEY ARE CLOSED MEASURES 12" OR MORE. <u>CAUTION</u>: STRUTS LONGER THAN 60" WILL NOT BE USED; USE A "K-RACCE" TYPE OR REAR BLOCKING AS DEPICTED ON PAGE 20 TO FACILITATE COMPLIANCE WITH THIS RULE.

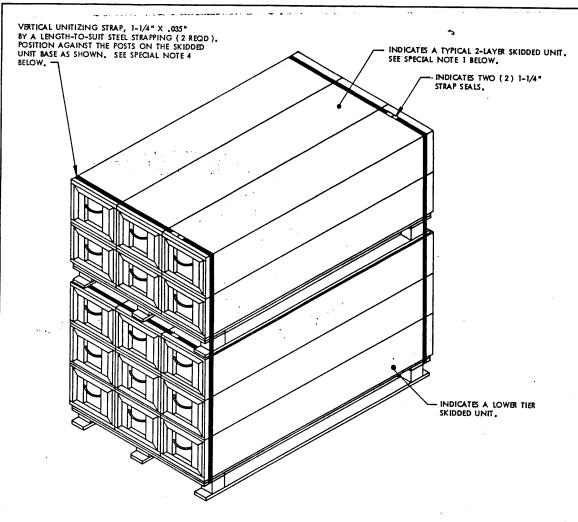


**DETAILS** 

ALTERNATIVE REAR BLOCKING

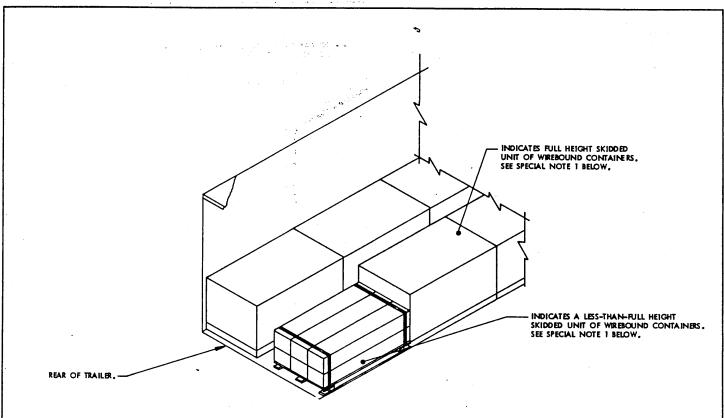
STRUT RISER, 1" X 4" BY CUT-TO-FIT (4 REQD). NAIL TO THE STRUT W/1-64 NAIL EVERY 6".

EACH END.



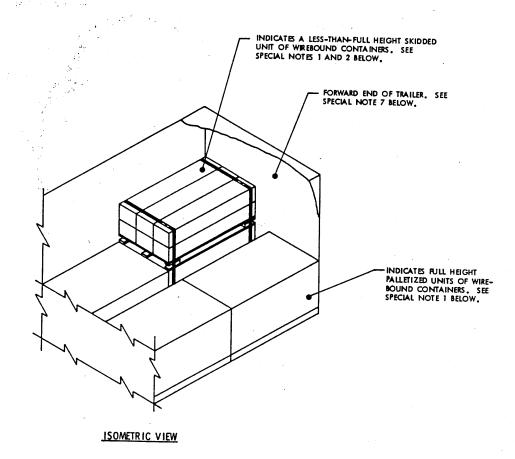
### SECUREMENT OF A PARTIAL SKIDDED UNIT ON TOP OF A FULL SKIDDED UNIT

- THE VIEW SHOWN ABOVE DEPICTS SKIDDED BASE WIREBOUND CONTAINERS; HOWEVER, THESE PROCEDURES WILL ALSO APPLY TO PALLETIZED ALUMINUM CONTAINERS. DUNNAGE ASSEMBLIES ON PALLETIZED ALUMINUM CONTAINERS MUST BE ADJUSTED TO THE UNIT HEIGHT.
- 2. SHIPMENTS OF PALLETIZED OR SKIDDED UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT, OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LESS-THAN-FULL PALLETIZED OR SKIDDED UNITS WITHIN A LOAD. THE PROCEDURES ON THIS PAGE AND ON PAGES 52 AND 53 ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF THESE PARTIAL UNITS.
- 3. FOR SHIPMENT OF A LESS-THAN-FULL-HEIGHT PALLETIZED OR SKIDDED UNIT WITHIN A LOAD, SEE PAGES 52 AND 53.
- 4. WHEN UNITIZING A PARTIAL PALLETIZED UNIT OF ALIMINUM CONTAINERS ON TOP OF A FULL HEIGHT PALLETIZED UNIT OF ALIMINUM CONTAINERS THE VERTICAL UNITIZING STRAPS MUST BE CENTERED ON THE VERTICAL PIECES IN THE DUNNAGE ASSEMBLY.
- FOR SHIPMENT OF "LEFT OVER" CONTAINERS SEE THE PROCEDURES ON PAGES 54 AND 55.

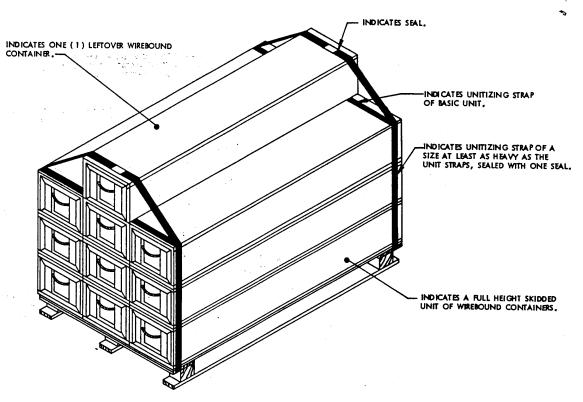


#### ISOMETRIC VIEW

- THE ISOMETRIC VIEW SHOWN ABOVE DEPICTS SKIDDED UNITS OF WIREBOUND CONTAINERS; HOWEVER, THESE PROCEDURES WILL ALSO APPLY TO PALLETIZED ALLIMINUM CONTAINERS.
- FOR SECUREMENT OF A PARTIAL PALLETIZED OR SKIDDED UNIT ON TOP OF A PULL-HEIGHT PALLETIZED OR SKIDDED UNIT, SEE PAGE 51.
- 3. SHIPMENT OF PALLETIZED OR SKIDDED UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LESS-THAN-FULL UNITS WITHIN A LOAD. THE PROCEDURES ON THIS PAGE AND ON PAGE 53 ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF THESE PARTIAL UNITS.
- 4. THE PROCEDURES SHOWN ON THIS PAGE ARE ONLY APPLICABLE TO PARTIAL PALLETIZED OR SKIDDED UNITS CONSISTING OF ONE OR TWO LAYERS OF CONTAINERS. FOR SHIPMENT OF "LEFTOVER" CONTAINERS, SEE THE PROCEDURES ON PAGES 54 AND 55.
- 5. THE PROCEDURES SHOWN ARE ALSO APPLICABLE TO LOADS IN TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 6. THE PARTIAL PALLETIZED OR SKIDDED UNIT MAY BE POSITIONED ANYWHERE WITHIN A ONE-TIER LOAD.
- 7. NOTE: ONLY A PARTIAL VIEW OF A LOAD IS SHOWN. THE ANTI-SWAY BRACING AND REAR BLOCKING ARE OMITTED.

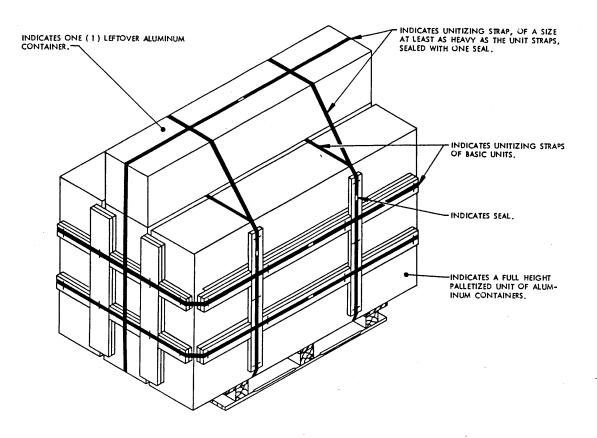


- THE ISOMETRIC VIEW SHOWN ABOVE DEPICTS SKIDDED UNITS OF WIREBOUND CONTAINERS; HOWEVER, THE PROCEDURES WILL ALSO APPLY TO PALLETIZED ALLMINUM CONTAINERS.
- 2. FOR SECUREMENT OF A PARTIAL PALLETIZED OR SKIDDED UNIT ON TOP OF A FULL HEIGHT PALLETIZED OR SKIDDED UNIT, SEE PAGE 51.
- 3. SHIPMENTS OF PALLETIZED OR SKIDDED UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT OR THE QUANTITY OF TEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LESS-THAN-FULL UNITS WITHIN A LOAD. THE PROCEDURES ON THIS PAGE AND ON PAGE 52 ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF PARTIAL UNITS.
- 4. A PARTIAL PALLETIZED OR SKIDDED UNIT MUST NOT BE POSITIONED ON THE REARMOST UNIT WITHIN THE LOAD.
- THE PROCEDURES SHOWN ON THIS PAGE ARE ONLY APPLICABLE TO PARTIAL PALLETIZED OR SKIDDED UNITS CONSISTING OF ONE OR TWO LAYERS OF CONTAINERS. FOR SHIPMENT OF "LEFTOVER" CONTAINERS, SEE THE PROCEDURES ON PAGES 54 AND 55.
- 6. THE PROCEDURES SHOWN ARE APPLICABLE TO LOADS IN TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES.
- IF THE TRAILER BEING USED IS EQUIPPED WITH ROUNDED CORNERS AT THE FORWARD END, USE A "FORWARD BLOCKING ASSEMBLY B" AS SHOWN IN THE DETAIL ON PAGE 45.
- 8. NOTE: ONLY A PARTIAL VIEW OF A LOAD IS SHOWN. THE ANTI-SWAY BRACING AND REAR BLOCKING ARE OMITTED.



### SECUREMENT OF LEFTOVER CONTAINERS

- THE ISOMETRIC VIEW SHOWN ABOVE DEPICTS WIREBOUND CONTAINERS. FOR ALLIMINUM CONTAINERS, SEE THE PROCEDURES ON PAGE 55.
- SHIPMENTS OF SKIDDED UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER
  UNITS TO THE MAXIMUM EXTENT POSSIBLE, HOWEVER, THE END OF A LOT OR THE
  QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE
  SHIPMENT OF ONE OR MORE LEFTOVER CONTAINERS.
- 3. THE QUANTITY OF LEFTOVER CONTAINERS WHICH CAN BE SECURED TO A FULL HEIGHT SKIDDED UNIT WILL NOT EXCEED TWO. IF THREE LEFTOVER CONTAINERS ARE TO BE SHIPPED, ONE CONTAINER WILL BE SECURED TO THE TOP OF ONE SKIDDED UNIT AND TWO CONTAINERS WILL BE SECURED TO THE TOP OF A DIFFERENT SKIDDED UNIT.
- 4. LEFTOVER CONTAINERS MUST BE SECURED TO A FULL HEIGHT SKIDDED UNIT WITH A MINIMUM OF TWO (2) PIECES OF STEEL STRAPPING (SEPARATE FROM UNIT STRAPS) OF A SIZE AT LEAST AS HEAVY AS THE UNITIZING STRAPPING. THREAD A STRAP UNDER THE TOP DECK BOARDS IN LINE WITH EXISTING UNITIZING STRAPS, COMPLETELY ENCIRCLE THE SKIDDED UNIT AND LEFTOVER CONTAINERS, TENSION, AND SEAL THE STRAP JOINT WITH ONE DOUBLE CRIMPED SEAL.
- 5. LEFTOVER CONTAINERS MAY ALSO BE SECURED ON TOP OF A PARTIAL SKIDDED UNIT.
- 6. SHIPMENT OF LEFTOVER CONTAINERS IS APPLICABLE FOR CONUS AND OCONUS MOTOR CARRIER SHIPMENTS FROM DEPOT TO DEPOT OR FROM DEPOTS TO POSTS, CAMPS, AND STATIONS, OR UPON APPROVAL FROM HIGHER HEADQUARTERS, FOR SHIPMENTS FROM LOAD, ASSEMBLE AND PACK PLANTS TO DEPOTS. CAUTIONS: A LOAD CONTAINING LEFTOVER CONTAININESS IN AN AMOUNT WHICH IS LESS THAN A FULL LAYER, AND SECURED TO THE TOP OF A FULL OR PARTIAL UNIT, MUST NOT BE DESTINED FOR SHIPMENT OVERSEAS BY WATER CARRIER.



# SECUREMENT OF LEFTOVER CONTAINERS

#### SPECIAL NOTES

- THE ISOMETRIC VIEW SHOWN ABOVE DEPICTS ALUMINUM CONTAINERS. FOR WIRE-BOUND CONTAINERS, SEE THE PROCEDURES ON PAGE 54.
- SHIPMENTS OF PALLETIZED UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER
  UNITS TO THE MAXIMUM EXTENT POSSIBLE, HOWEVER, THE END OF A LOT OR THE
  QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LEFTOVER CONTAINERS.
- 3. THE QUANTITY OF LEFTOVER CONTAINERS WHICH CAN BE SECURED TO A FULL HEIGHT PALLETIZED UNIT WILL NOT EXCEED ONE.
- 4. LEFTOVER CONTAINERS MUST BE SECURED TO A FULL HEIGHT PALLETIZED UNIT WITH A MINIMUM OF THREE (3) PIECES OF STEEL STRAPPING (SEPARATE FROM UNIT STRAPS) OR A SIZE AT LEAST AS HEAVY AS THE UNITIZING STRAPPING. THREAD A STRAP UNDER THE TOP DECK BOARDS AND TO CENTER ON THE VERTICAL DUNNAGE ON BASIC UNIT AS SHOWN ABOVE, COMPLETELY ENCIRCLE THE PALLETIZED UNIT AND LEFTOVER CONTAINERS, TENSION, AND SEAL THE STRAP JOINT WITH ONE DOUBLE CRIMPED SEAL.
- LEFTOVER CONTAINERS MAY ALSO BE SECURED ON TOP OF A PARTIAL PALLETIZED UNIT.
- 6. SHIPMENT OF LEFTOVER CONTAINERS IS APPLICABLE FOR CONUS AND OCONUS MOTOR CARRIER SHIPMENTS FROM DEPOT TO DEFOT OR FROM DEPOTS TO POSTS, CAMPS, AND STATIONS, OR, UPON APPROVAL FROM HIGHER HEADQUARTERS, FOR SHIPMENTS FROM LOAD, ASSEMBLE, AND PACK PLANTS TO DEPOTS. <u>CAUTION</u>: A LOAD CONTAINING LEFTOVER CONTAINIERS IN AN AMOUNT WHICH IS LESS THAN A FULL LAYER, AND SECURED TO THE TOP OF A FULL OR PARTIAL UNIT, MUST NOT BE DESTINED FOR SHIPMENT OVERSEAS BY WATER CARRIER.

PROCEDURES FOR SHIPMENT OF LEFTOVER ALUMINUM CONTAINERS