REV NO. I APPROVED BY
BUREAU OF EXPLOSIVES

SOFERVISOR MILITARY & INTERMODAL SERVICES

DATE 5/180

LANCE

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF CONTROL SURFACE, M30 PACKED IN THE M596 CONTAINER, OR A PLYWOOD CONTAINER, AND THE M29 PACKED IN THE M597 CONTAINER (PALLETIZED AND UNPALLETIZED)

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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 FOR MECHANICAL BRACING DEVICE EQUIPPED TRAILERS ARE <u>ONLY</u> APPLICABLE FOR HIGHWAY MOVEMENT: <u>NOT</u> FOR CONTAINER/TRAILER-ON-FLAT-CAR MOVEMENTS.

THIS DRAWING, INCLUDING REVISION NUMBER 1, SUPERSEDES DRAWING 19-48-5921-GM11A138, DATED JUNE 1971.

RSEDES

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GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1, (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE TO THE LANCE CONTROL SURFACE M30 WHEN PACKED IN THE M596 CONTAINER OR IN A PLYWOOD CONTAINER, AND THE M29 WHEN PACKED IN THE M597 CONTAINER, SUBSEQUENT REFERENCE TO CONTAINER MEANS THE M596, M597, AND/OR THE PLYWOOD CONTAINER, WITH CONTENTS.
- C. FOR DETAILS OF THE M596 CONTAINER, SEE USANICOM: DRAWING NO. 10745730 AND "CONTAINER" DETAIL ON PAGE 3 OF THIS DRAWING.

D. FOR DETAILS OF THE M597 CONTAINER, SEE USAMICOM DRAWING NO. 10245740 AND P. "CONTAINER" DETAIL ON PAGE 3 OF THIS DRAWING.

CONTAINER DIMENSIONS ----- 69-1/2" LONG BY 27-3/4" WIDE BY 6-3/4" HIGH. GROSS WEIGHT ------ 117 POUNDS (APPROX).
TARE WEIGHT ----- 7.5 CUBIC FEET.

E. FOR DETAILS OF THE PLYWOOD CONTAINER, SEE "USAMICOM DRAWING NO. 10166845 AND "CONTAINER" DETAIL ON PAGE 3 OF THIS DRAWING.

CONTAINER DIMENSIONS ----- 60" LONG BY 24" WIDE BY 5-1/2" HIGH.
GROSS WEIGHT ------ 84 POUNDS (APPROX).
TARE WEIGHT ------- 52 POUNDS (APPROX).
CUBE ------- 4.6 CLIBIC FEFT.

F. FOR DETAILS OF THE M596 CONTAINER PALLET UNIT, SEE US ARMY DARCOM DRAWING NO. 19-48-5236-GM20LC1 AND THE .
"PALLETIZED UNIT" DETAIL ON PAGE 3 OF THIS DRAWING.

PALLETIZED UNIT DIMENSIONS- 57-1/2" LONG BY 29-1/4" WIDE BY 38-7/8" HIGH. GROSS WEIGHT----- 571 POUNDS (APPROX). CUBE ----- 37.8 CUBIC FEET.

G. FOR DETAILS OF THE M597 CONTAINER PALLET UNIT, SEE US ARMY DARCOM DRAWING NO. 19-48-5236-GM20LCI AND THE . "PALLETIZED UNIT" DETAIL ON PAGE 3 OF THIS DRAWING.

PALLET UNIT DIMENSIONS ----- 71" LONG BY 29-1/4" WIDE BY 38-7/8" HIGH. GROSS WEIGHT ------ 682 POUNDS (APROX), CUBE.---------------- 46.7 CUBIS (FET.

H. FOR DETAILS OF THE PLYWOOD CONTAINER PALLET UNIT, SEE US ARMY DARCOM DRAWING NO. 19-48-5236-GM20LC1 AND THE "PALLETIZED UNIT" DETAIL ON PAGE 3 OF THIS DRAWING.

PALLET UNIT DIMENSIONS ---- 62" LONG BY 26" WIDE BY 34" HIGH. GROSS WEIGHT ------ 481 POUNDS (APPROX). CUBE ------ 31.7 CUBIC FEET.

- J. CAUTION: UNPALLETIZED CONTAINERS MUST NOT BE STACKED MORE THAN SIX (6) CONTAINERS HIGH.
- K. THE LOADS AS SHOWN ARE BASED ON 40'-0" LONG BY 7"-6" WIDE (INSIDE DIMENSION) CLOSED OR OPEN TOP VAN TRAILERS AND THEY ARE LIMITED TO HIGHWAY MOVEMENTS ONLY. THE DEPICTED LOADS ARE BASED ON TRAILERS OF THE CONVENTIONAL TYPE OR ARE BASED ON TRAILERS WHICH ARE EQUIPPED WITH SELF-CONTAINED MECHANICAL BRACING DEVICES (CROSS MEMBERS AND WALL MEMBERS) AND APPLY TO TRAILERS HAVING WOOD, WOOD AND METAL, OR METAL ELOOPS
- L. THE OUTLOADING PROCEDURES SPECIFIED ON PAGES 4 THROUGH 17 ARE FOR CONVENTIONAL TYPE VAN TRAILERS.
- M. THE OUTLOADING PROCEDURES SPECIFIED ON PAGES 22 THROUGH 32 ARE FOR TRAILERS EQUIPPED WITH VARIOUS TYPES OF SELF-CONTAINED MECHANICAL BRACING DEVICES. HOWEVER, CROSS MEMBER ATTACHMENT FACILITIES WITHIN THESE TRAILERS MUST PROVIDE FOR THE INSTALLATION OF LOAD BLOCKING CROSS MEMBERS AT THE HEIGHTS SPECIFIED HEREIN. CAUTION: TRAILERS EQUIPPED WITH FACILITIES WHICH DO NOT MEET THE LOCATION REQUIREMENTS MUST NOT BE USED. THE HEIGHT DIMENSIONS SPECIFIED WITHIN THIS DRAWING FOR INSTALLATION OF CROSS MEMBERS ARE IDENTICAL WITH THOSE RECOMMENDED BY THE BUREAU OF EXPLOSIVES PAMPHLET 6C, AND APPENDICES THERETO.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

* IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER EXTERIOR GRADE MAY BE SUBSTITUTED.

(GENERAL NOTES CONTINUED)

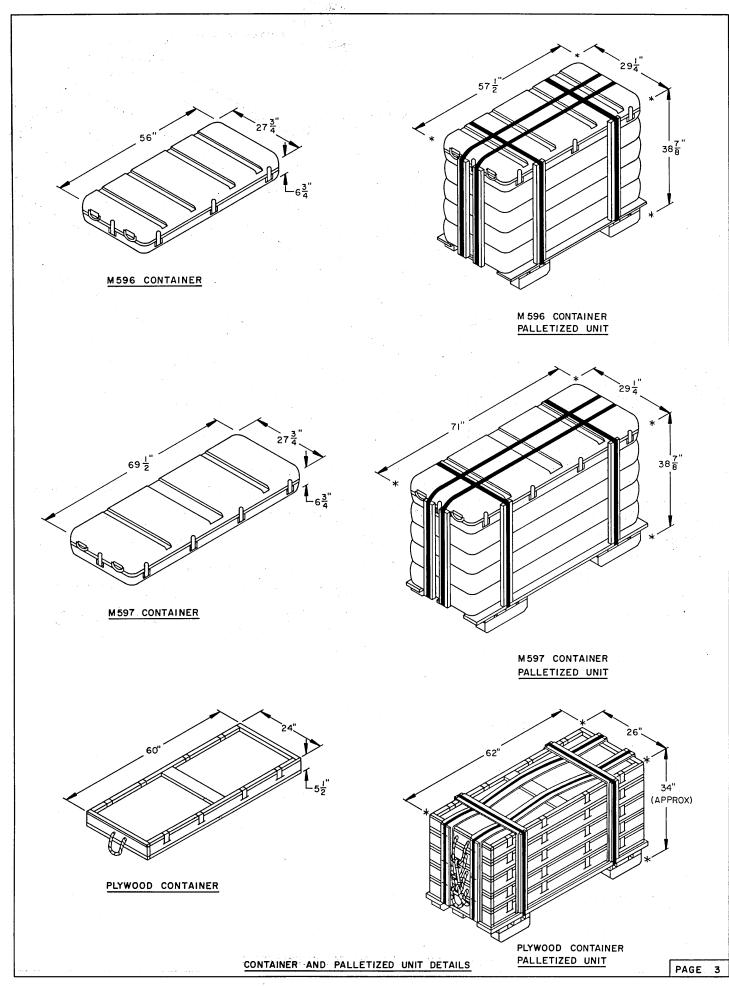
- N. VOIDS LENGTHWISE BETWEEN ITEMS MUST BE MINIMUM. FOR CONVENTIONAL TRAILERS, REAR BLOCKING MUST CONTACT REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. FOR TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES, THE CROSS MEMBERS MUST BE PLACED AGAINST THE LADING AS TIGHTLY AS THE WALL MEMBER LOCKING HOLE SPACING PERMITS: CROSS MEMBERS WILL BE INSTALLED WITH EACH END ATTACHED AS NEARLY AS POSSIBLE IN "MATED" POSITIONS (AT EQUAL HEIGHTS AND AT EQUAL DISTANCES FROM END OF TRAILER), MECHANICAL CROSS MEMBERS IN EMPTY TRAILERS AND THOSE UNUSED IN LOADED TRAILERS MUST BE "SECURED" FOR SHIPMENT. COMPONENTS ASSIGNED TO EACH TRAILER MUST REMAIN THEREWITH EVEN THOUGH UNUSED DURING SOME SHIPMENTS. A CROSS MEMBER WILL NOT BE RELIED UPON TO RETAIN MORE ITEMS THAN SHOWN IN THE LOAD VIEWS.
- O. 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.
- P. 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. NOTICE: A SHIPMENT WILL BE POSITIONED IN A TRAILER CONSISTENT WITH THE WEIGHT LAWS OF THE STATES THROUGH WHICH THE TRAILER WILL BE TRANSPORTED BY HIGHWAY (MOTOR CARRIER).
- Q. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED, HOWEVER, THE APPROVED METHODS SHOWN WITHIN THIS DRAWING MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- R. THE OUTLOADING PROCEDURES SPECIFIED CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS WHEN THEY ARE EMPTY OR LOADED WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED WITHIN THE DRAWING TITLE,
- S. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED CONTAINERS, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED IN THIS DRAWING.
- T. EXCEPT FOR PLYWOOD, DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE, FOR EXAMPLE, 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE, AND 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE.
- U. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHENEVER 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, A 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.
- V. WHEN ANY STRAP IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED. CAUTION: EXERCISE CARE DURING TENSIONING TO PREVENT DAMAGE TO CONTAINERS.
- W. PORTIONS OF THE SEMITRAILER BODIES DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- X. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "UNIT DETAILS" ON PAGE 3 AND TO THE "SPECIAL NOTES" SECTION WHICH IS IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.

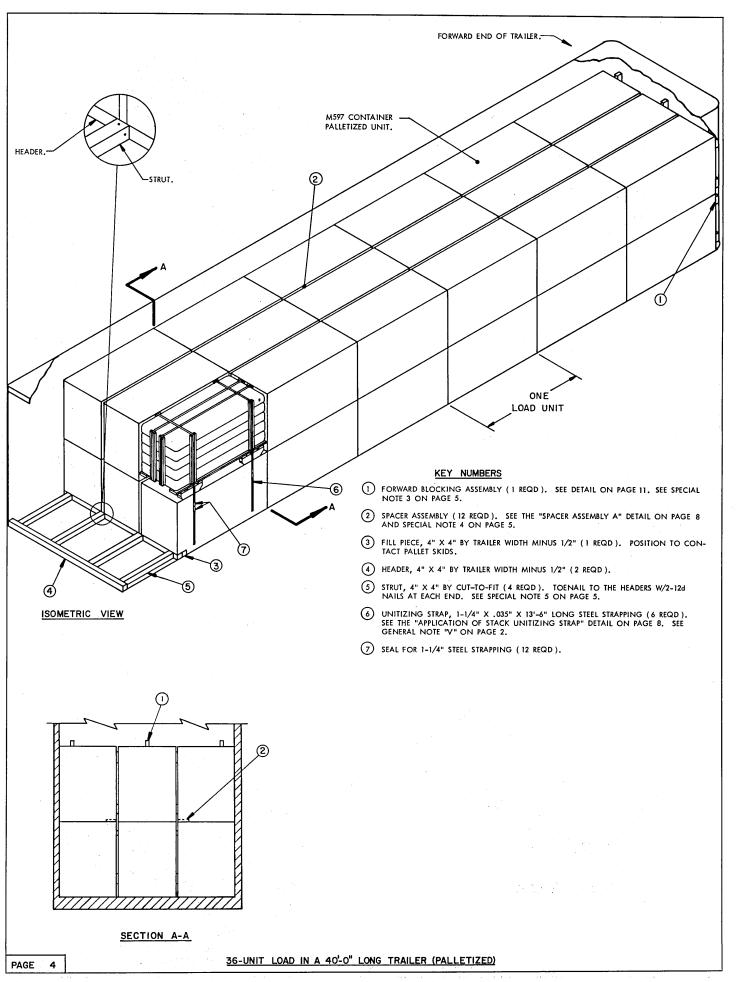
REVISION

REVISION NO. 1, DATED JANUARY 1980, CONSISTS OF:

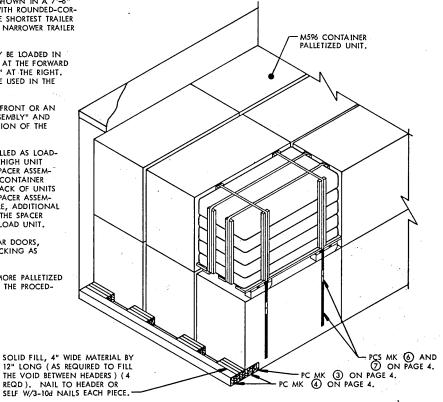
- ADDED PROCEDURES FOR THE CONTROL SURFACE, M30, IN PLYWOOD CONTAINER.
- 2. DELETED "X" FROM ALL CONTROL SURFACE AND CONTAINER MODEL NUMBERS.
- 3. CHANGED DRAWING FILE NUMBER FROM GM 11A138 TO GM 11LC1.
- UPDATED GENERAL NOTES, MATERIAL SPECIFICATIONS, AND DRAWING FORMAT.

PAGE 2





- A 36-UNIT LOAD OF THE PALLETIZED M597 CONTAINERS IS SHOWN IN A 7'-6" WIDE (INSIDE DIMENSION) BY 40'-0" LONG VAN TRAILER WITH ROUNDED-COR-NERS AT THE FORWARD END. A 36'-0" LONG TRAILER IS THE SHORTEST TRAILER THAT CAN BE USED TO SHIP A 36-UNIT LOAD. A WIDER OR NARROWER TRAILER CAN BE USED FOR THE DEPICTED LOAD.
- 2. A 48-UNIT LOAD OF THE PALLETIZED M5% CONTAINERS MAY BE LOADED IN A 40'-0" LONG VAN TYPE TRAILER WITH ROUNDED-CORNERS AT THE FORWARD END USING THE REAR BLOCKING AS DEPICTED IN "DETAIL A" AT THE RIGHT. THE "FORWARD BLOCKING ASSEMBLY" AND "SPACER" WILL BE USED IN THE SAME MANNER AS DEPICTED IN THE VIEWS ON PAGE 4.
- IF THE TRAILER BEING LOADED IS EQUIPPED WITH A SQUARE FRONT OR AN INSTALLED BULKHEAD, DELETE THE "FORWARD BLOCKING ASSEMBLY" AND POSITION THE UNITS DIRECTLY AGAINST THE FORWARD PORTION OF THE TRAILER
- 4. THE SPACER ASSEMBLY, PIECE MARKED ② , MUST BE INSTALLED AS LOAD-ING PROGRESSES. FIRST, POSITION THE OUTSIDE TWO (2) HIGH UNIT STACKS AGAINST THE TRAILER SIDE WALLS. INSTALL TWO SPACER ASSEMBLIES WITH THE 2" X 6" X 6" RETAINER PIECES ON THE TOP CONTAINER OF THE LOWER PALLETIZED UNIT. POSITION THE CENTER STACK OF UNITS IN PLACE. FIELD CHECK FOR EXCESS SPACE BETWEEN THE SPACER ASSEMBLY AND THE UNITS. IF THE EXCESS SPACE IS 3/4" OR MORE, ADDITIONAL PIECES WILL HAVE TO BE LAMINATED TO ONE OR BOTH OF THE SPACER ASSEMBLIES. THIS PROCEDURE WILL BE REPEATED FOR EACH LOAD UNIT.
- IF THE SPACE BETWEEN THE REAR OF THE LOAD AND THE REAR DOORS, WHEN THEY ARE CLOSED, MEASURES 12" OR LESS, REAR BLOCKING AS DEPICTED IN "DETAIL A" MUST BE USED.
- TO SATISFY A LESS-THAN-FULL-LOAD QUANTITY, ONE OR MORE PALLETIZED UNITS MAY BE OMITTED FROM THE TOP LAYER BY APPLYING THE PROCED-URES SPECIFIED ON PAGE 8.
- 7. FOR TYPICAL LTL LOADS SEE PAGES 9 AND 10.



DETAIL A

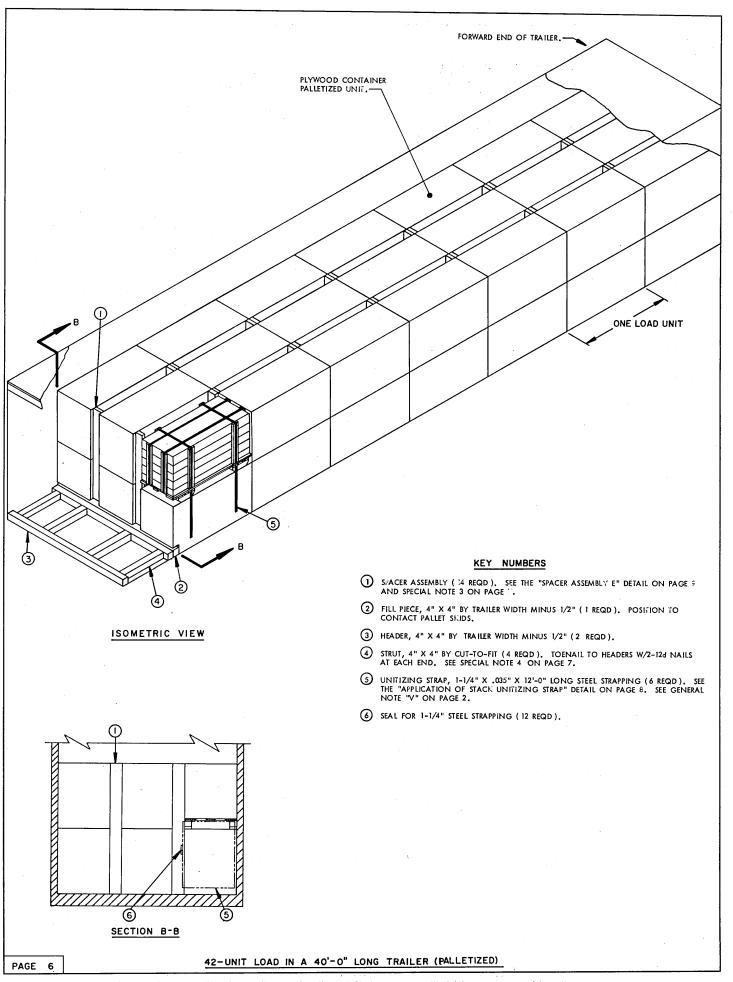
THE DETAIL ABOVE DEPICTS THE REAR BLOCKING FOR A 48-UNIT LOAD OF M596 CONTAINER PALLETIZED UNITS IN A 40'-0" LONG TRAILER. FOR "FORWARD BLOCKING" SEE KEY NUMBER (1) ON PAGE 4 AND SPECIAL NOTE 3 'ABOVE. FOR "SPACER ASSEMBLIES" SEE KEY NUMBER (2) ON PAGE 4 AND SPECIAL NOTE 4 ABOVE. THIS METHOD CAN ALSO BE USED WHEN OUTLOADING PALLETIZED M597 CONTAINERS AND PALLETIZED PLYWOOD CONTAINERS IN SHORTER TRAILERS. SEE SPECIAL NOTE 5 ON THIS PAGE.

| | BILL OF MATERIA | \L |
|--|----------------------|----------------------|
| LUMBER | LINEAR FEET | BOARD FEET |
| 1" X 8" 2" X 4" 2" X 6" 4" X 4" | 48 20 67 36 | 32 14 67 48 |
| NAILS | NO. REQD | POUNDS |
| 10d (3") 12d (3-1/4") | 96 16 | 1-1/2 1/4 |

THIS BILL OF MATERIAL IS FOR THE 36-UNIT LOAD SHOWN ON PAGE 4.

LOAD AS SHOWN

| ITEM | QUANTITY | WEI | GHT | (APPROX) |
|------------|------------|--------|-----|----------|
| PALLETIZED | UNIT | | | |
| | R) 48 | | LBS | |
| DUNNAGE - | | 338 | LBS | |
| 101 | AL WEIGHT | 27,746 | LBS | |
| PALLETIZED | UNIT | | | |
| (M597 CNT | R) 36 | 24,552 | LBS | |
| DUNNAGE - | | 337 | LBS | |
| 101 | TAL WEIGHT | 24,889 | LBS | |

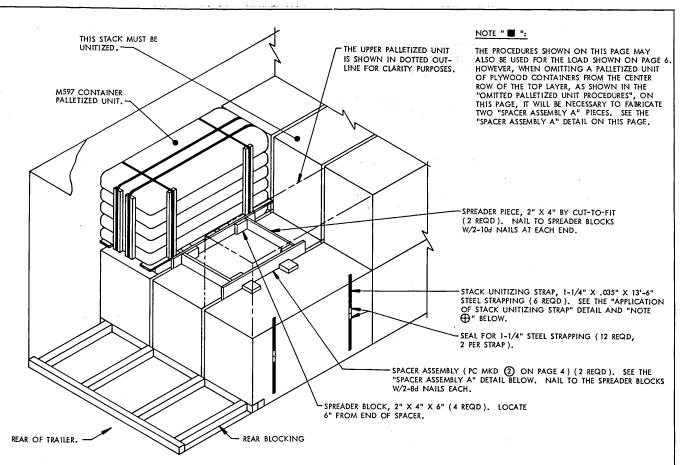


- 1. A 42-UNIT LOAD OF THE PALLETIZED PLYWOOD CONTAINERS IS SHOWN IN A 7'-6" WIDE (INSIDE DIMENSION) BY 40'-0" LONG VAN TRAILER HAVING A SQUARE FRONT. A 37'-0" LONG TRAILER IS THE SHORTEST TRAILER THAT CAN BE USED TO SHIP A 42-UNIT LOAD. A WIDER OR NARROWER TRAILER CAN BE USED FOR THE DEPICTED LOAD.
- 2. IF THE TRAILER BEING LOADED HAS ROUNDED-CORNERS AT THE FORWARD END, A "FORWARD BLOCKING ASSEMBLY" AS SHOWN IN THE LOAD ON PAGE 4 WILL BE REQUIRED. SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 11.
- THE SPACER ASSEMBLY, PIECE MARKED ①, MUST BE INSTALLED AS LOADING PROGRESSES.
- 4. IF THE SPACE BETWEEN THE REAR OF THE LOAD AND THE REAR DOORS, WHEN THEY ARE CLOSED, MEASURES 12" OR LESS, REAR BLOCKING AS DEPICTED IN "DETAIL A" ON PAGE 5 MUST BE USED.
- 5. TO SATISFY A LESS-THAN-FULL LOAD QUANTITY, ONE OR MORE PALLETIZED UNITS MAY BE OMITTED FROM THE TOP LAYER BY APPLYING THE PROCEDURES SPECIFIED IN "NOTE " ON PAGE 8.
- 6. FOR TYPICAL LTL LOADS, SEE PAGES 9 AND 10.

| В | ILL OF MATERIAL | • |
|--------------------------|---------------------|--------------|
| LUMBER | LINEAR FEET | BOARD FEET |
| 2" X 6" 4" X 4" | 297 34 | 297 46 |
| NAILS | NO. REQD | POUNDS |
| 10d (3") 12d (3-1/4") | 112 16 | 1-3/4 1/4 |
| | /4" X .035" 72' REG | |

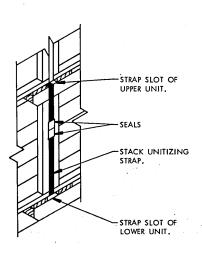
LOAD AS SHOWN

| ITEM | QUANTITY | WEIGH | T (APPROX) |
|------|------------------|--------|------------|
| | UNIT CNTR) 42 | | LBS LBS |
| | TOTAL WEIGHT | 20,902 | LBS |



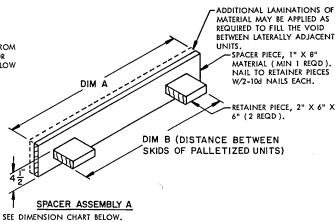
OMITTED PALLETIZED UNIT PROCEDURES

THE ABOVE VIEW DEPICTS PROCEDURES TO BE APPLIED WHEN OMITTING ONE OR MORE PALLETIZED UNITS FROM THE TOP LAYER OF THE LOAD SHOWN ON PAGE 4 OR THE LOAD SHOWN ON PAGE 6. SEE "NOTE \(\ext{MOST } \)" BELOW FOR STACK UNITIZING REQUIREMENTS,



APPLICATION OF STACK UNITIZING STRAP

THREAD THE UNITIZING STRAP THRU THE STRAP SLOTS AS SHOWN AND SEAL WITH TWO SEALS. DOUBLE CRIMP EACH SEAL. STACKS MUST BE UNITIZED PRIOR TO FINAL PLACEMENT IN THE TRAILER. SEE "NOTE \bigoplus " AT RIGHT.



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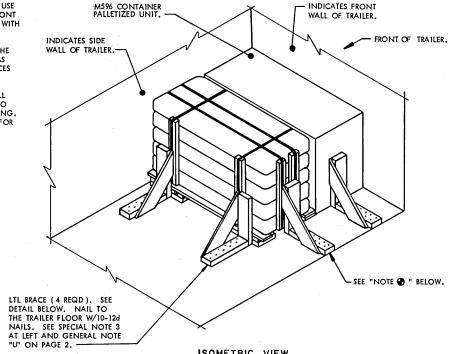
ALL 2-HIGH STACKS AT THE REAR OF THE LOAD OR ADJACENT TO A 1-HIGH STACK MUST BE UNITIZED WITH TWO (2) STEEL STRAPS.

| DIMENSION CHART | | | | | | |
|-----------------|--------------------------------|--------------------------------|--|--|--|--|
| DIMENSION | M596 CONTAINER PALLETIZED UNIT | M597 CONTAINER PALLETIZED UNIT | | | | |
| Α | 42" | 48" | | | | |
| В | 23" | 27" | | | | |

NOTE: WHEN FABRICATING A "SPACER ASSEMBLY A" TO BE USED WHEN OMITTING A PALLETIZED UNIT OF PLYWOOD CONTAINERS, DIMENSION A MUST BE 38" AND DIMENSION B MUST BE 32".

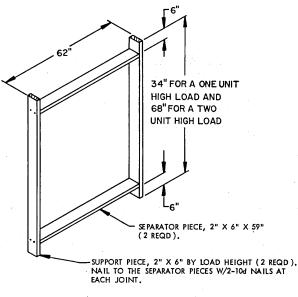
DETAILS

- A TWO-PALLETIZED UNIT LOAD IS SHOWN DEPICTING THE USE OF LTL BRACES IN A TRAILER EQUIPPED WITH A SQUARE FRONT AND WHICH HAS A NAILABLE FLOOR. TRAILERS EQUIPPED WITH NON-NAILABLE FLOORS CANNOT BE USED.
- IF THE TRAILER IS EQUIPPED WITH ROUNDED CORNERS AT THE FORWARD END, EITHER "FORWARD BLOCKING" ASSEMBLY AS DETAILED ON PAGE 9, OR TWO (2) ADDITIONAL LTL BRACES CAN BE USED AT THE FRONT OF THE LOAD.
- EACH BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING. NOT LESS THAN TWO
 (2) LTL BRACES SHALL BE USED FOR LONGITUDINAL BRACING. ONE (1) BRACE IS REQUIRED FOR EACH PALLETIZED UNIT FOR LATERAL BRACING. PALLETIZED UNITS WILL NOT BE MORE THAN ONE (1) UNIT HIGH WHEN USING THE LTL BRACE.
- THE LTL BRACE SHOWN ON THIS PAGE MAY BE USED FOR RETAINING THE M5% CONTAINER PALLETIZED UNIT, THE M597 CONTAINER PALLETIZED UNIT, OR THE PLYWOOD CONTAINER PALLETIZED UNIT.
- FOR AN ALTERNATIVE METHOD, SEE THE TYPICAL LTL SHOWN ON PAGE 10.



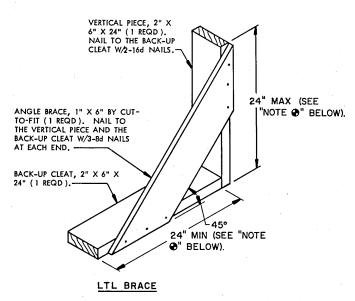
ISOMETRIC VIEW

DEPICTING A TWO (2) UNIT PALLETIZED LOAD IN A TRAILER EQUIPPED WITH A SQUARE FRONT OR AN INSTALLED BULK-



SPACER ASSEMBLY E

THIS ASSEMBLY IS FOR USE IN LOADS OF PALLETIZED PLYWOOD CONTAINERS, AS SHOWN ON PAGE 6. IF THE TRAILER BEING LOADED IS WIDER OR NARROWER THAN 7'-6", LUMBER OF A WIDTH TO SUIT MAY BE

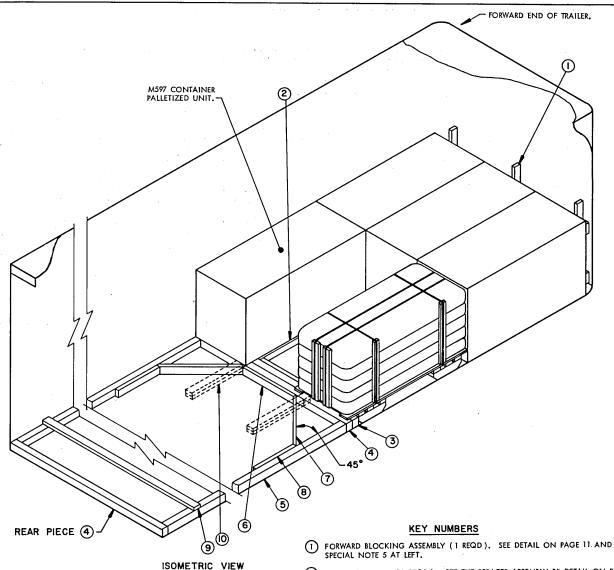


WHEN AN LTL BRACE IS USED FOR SIDE BLOCKING AGAINST THE M597 CONTAINER PALLETIZED UNIT THE LENGTH OF THE BACK-UP CLEAT AND VERTICAL PIECE MUST BE SHORTENED TO 17" FOR EACH PIECE.

TYPICAL LTL (2-UNIT LOAD) (PALLETIZED)

PAGE

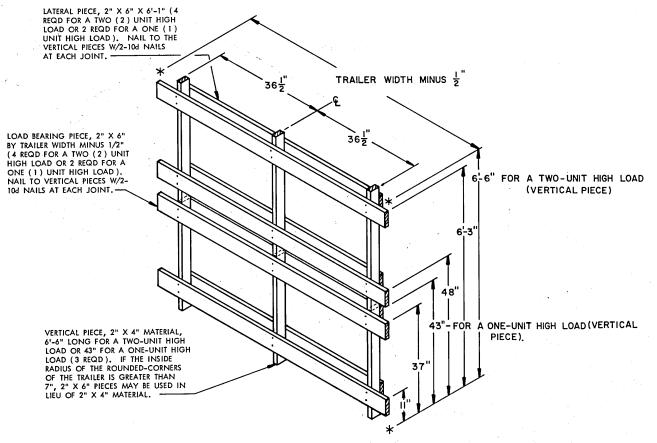
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- THESE OUTLOADING PROCEDURES ARE SHOWN DEPICTING THE USE OF TWO METHODS OF BLOCKING, THE USE OF A "K-BRACE" AND "NAILED FLOOR LINE" BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) TRAILER EQUIPPED WITH ROUNDED CORNERS AT THE FORWARD END. A WIDER OR NARROWER TRAILER CAN ALSO BE USED.
- 2. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED (4) THRU (9) IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD.
- BACK-UP CLEATS, SHOWN AS PIECES MARKED (1) , ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED (2) THRU (2) WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. FOUR (4) BACK-UP CLEATS, SHOWN AS PIECES MARKED (1) , ARE ADEQUATE FOR RETAINING AN LTL LOAD OF NOT MORE THAN 15,600 POUNDS.
- THE USE OF THE "SPACER ASSEMBLY" IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. A "SPACER ASSEMBLY" MAY BE USED IN THE LOAD AS REQUIRED TO ADJUST THE LOADING PATTERN FOR THE NUMBER OF UNITS TO BE SHIPPED.
- IF THE TRAILER BEING LOADED IS EQUIPPED WITH A SQUARE FRONT OR AN INSTALLED BULKHEAD DELETE THE "FORWARD BLOCKING ASSEMBLY" AND POSITION THE UNITS DIRECTLY AGAINST THE FORWARD PORTION OF THE
- THE M597 PALLETIZED UNIT IS SHOWN IN THE LOAD ABOVE. HOWEVER, THE PROCEDURES SHOWN MAY ALSO BE USED FOR THE M596 CONTAINER PALLETIZED UNIT OR THE PLYWOOD CONTAINER PALLETIZED UNIT.

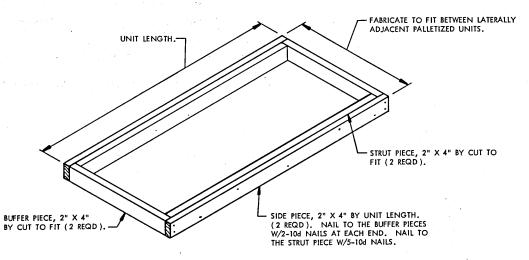
- SPACER ASSEMBLY (1 REQD). SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 11 AND SPECIAL NOTE 4 AT LEFT.
- FILL PIECE, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (1 REQD). POSITION TO CONTACT PALLET SKIDS.
- 4 HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (2 REQD). SEE SPECIAL NOTE 2 AT LEFT.
- SIDE STRUT, 4" X 4" BY CUT TO FIT (2 REQD). TOENAIL TO THE HEADERS W/2-12d NAILS AT EACH END.
- 6 CENTER CLEAT, 2" X 4" X 30" (1 REQD). NAIL TO THE FRONT HEADER W/6-12d
- 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 FRONT HEADER AND SIDE STRUT W/2-16d NAILS AT EACH END.
- (8) SIDE CLEAT, 2" X 4" X 24" (2 REQD). NAIL TO THE SIDE STRUT W/8-12d NAILS.
- STRUT BRACING, 2" X 4" BY TRAILER WIDTH (CUT TO FIT) (MINIMUM OF ONE REQD). INSTALL ONE (1) NEAR ENDS OF STRUTS AS SHOWN. ONE (1) ADDITIONAL PIECE IS REQUIRED FOR EVERY 7'-0" OF STRUT LENGTH. NAIL TO THE STRUTS W/3-12d NAILS AT EACH END.
- BACK-UP CLEAT, 2" X 4" X 30" (DOUBLED) (4 REQD). ALIGN WITH SKID OF PALLETIZED UNIT AND AGAINST FILL PIECE. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/7-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 3 AT LEFT.

TYPICAL LTL (5-UNIT LOAD) (PALLETIZED)

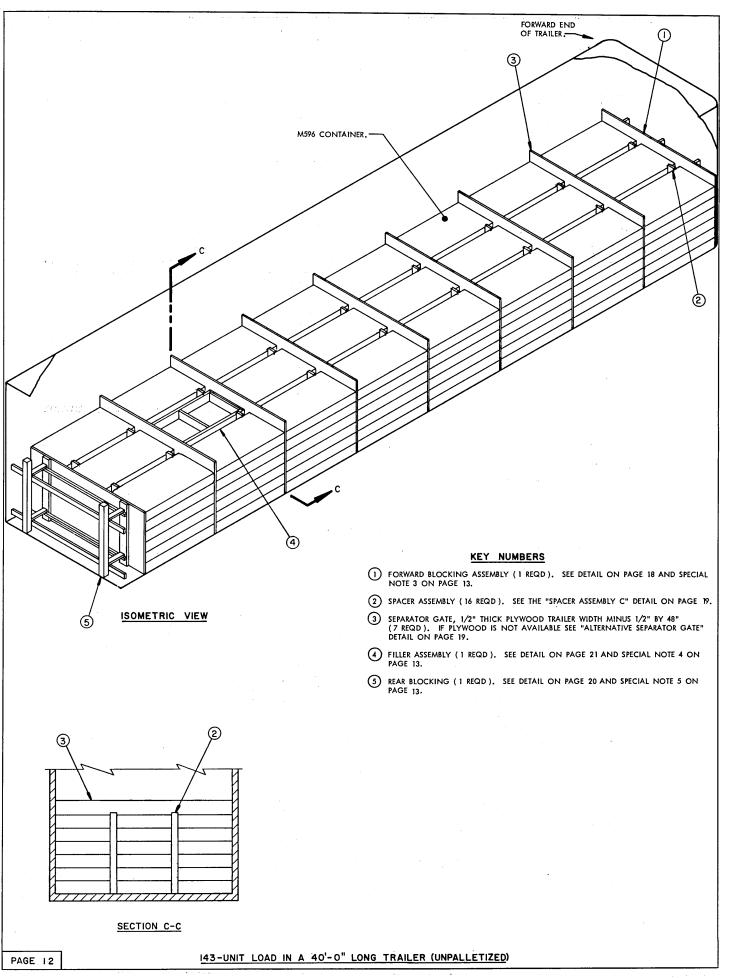


FORWARD BLOCKING ASSEMBLY

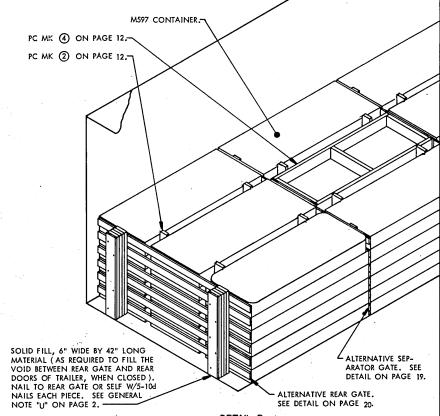
THIS ASSEMBLY IS FOR A ONE (1) UNIT HIGH LOAD OR A TWO (2) UNIT HIGH LOAD OF PALLETIZED M596 OR M597 CONTAINERS. WHEN LOADING PALLETIZED PLYWOOD CONTAINERS, CHANGE THE HEIGHT OF THE SECOND LOAD BEARING PIECE FROM 37" TO 34", THE THIRD LOAD BEARING PIECE FROM 48" TO 45", AND THE TOP LOAD BEARING PIECE FROM 6'-3" TO 68". THE HEIGHT OF THE VERTICAL PIECE FOR A ONE UNIT HIGH LOAD MUST BE CHANGED FROM 43" TO 40" AND FOR A TWO UNIT HIGH LOAD FROM 6'-6" TO 72".



SPACER ASSEMBLY B



- 1. A 143-UNIT LOAD OF M5% CONTAINERS IS SHOWN IN A 7"-6" WIDE (INSIDE DIMENSION) BY 40'-0" LONG VAN TRAILER WITH ROUNDED-CORNERS AT THE FORWARD END. A 39'-0" LONG TRAILER IS THE SHORTEST TRAILER THAT CAN BE USED TO SHIP A 144-UNIT LOAD. A WIDER OR NARROWER TRAILER CAN BE USED FOR THE DEPICTED LOAD. SEE GENERAL NOTE "J" ON PAGE 2.
- 2. A 108-UNIT LOAD OF M597 CONTAINERS MAY BE LOADED IN TRAILERS WHICH ARE 37'-0" TO 40'-0" LONG, EQUIPPED WITH ROUNDED-CORNERS AT THE FORWARD END, AND USING THE REAR BLOCKING AS DEPICTED IN THE ISOMETRIC VIEW ON PAGE 12. SEE GENERAL NOTE " J" ON PAGE 2.
- 3. IF THE TRAILER BEING LOADED IS EQUIPPED WITH A SQUARE FRONT OR AN INSTALLED BULKHEAD, DELETE THE "FORWARD BLOCKING ASSEMBLY" AND INSTALL A PLYWOOD OR NOMINAL LUMBER SEPARATOR GATE AT THE FRONT OF THE TRAILER.
- 4. THE USE OF THE "FILLER ASSEMBLY" IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. "FILLER ASSEMBLIES" MAY BE USED IN THE TOP LAYER OF THE LOAD AS REQUIRED TO ADJUST THE LOADING PATTERN FOR THE NUMBER OF CONTAINERS TO BE SHIPPED.
- IF THE SPACE BETWEEN THE REAR GATE AND THE TRAILER DOORS, WHEN CLOSED, MEASURES 12" OR LESS, USE THE SOLID FILL TYPE BLOCKING AS DEPICTED IN "DETAIL B" AT THE RIGHT.
- IF PLYWOOD CONTAINERS ARE BEING LOADED, SEE THE PROCEDURES ON PAGES 14 AND 15.



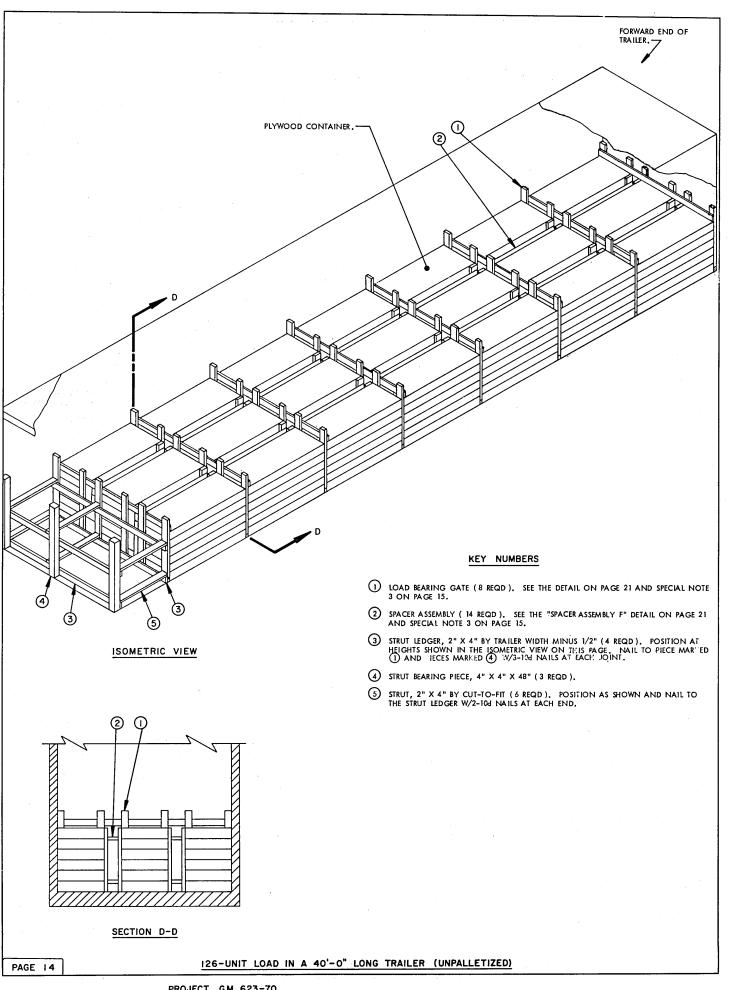
DETAIL B

THE DETAIL ABOVE DEPICTS ALTERNATIVE REAR BLOCKING, ALTERNATIVE REAR GATE AND ALTERNATIVE SEPARATOR GATES USED IN A TRAILER LOAD OF M597 CONTAINERS. THE USE OF THE ALTERNATIVE ASSEMBLIES IS SPECIFIED IN THE DETAIL ONLY TO SHOW A TYPICAL APPLICATION, THE NOMINAL LUMBER ASSEMBLIES AND/OR PLYWOOD ASSEMBLIES MAY BE USED WITH EITHER THE M596 OR THE M597 CONTAINERS DEPENDING ON THE AVAILABILITY OF THE DUNNAGE LUMBER. THE ALTERNATIVE REAR BLOCKING SHOWN ABOVE IS ALSO APPLICABLE TO LOADS OF PLYWOOD CONTAINERS

| LUMBER | LINEAR FEET | BOARD FEET |
|--------------|-------------|------------|
| 1" X 6" | 5 | 3 |
| 2" X 2" | 11 | 4 |
| 2" X 4" | 130 | 87 |
| 2" X 6" | 147 | 147 |
| 4" X 4" | 8 | 11 |
| NAILS | NO. REQD | POUNDS |
| 4d (1-1/2") | 30 | 1/4 |
| 6d (2") | 8 | 1/4 |
| 10d (3") | 184 | 2-3/4 |
| 12d (3-1/4") | 16 | 1/4 |

THIS BILL OF MATERIAL IS FOR THE 143-UNIT LOAD OF M596 CONTAINERS SHOWN ON PAGE 12.

| | LOAD AS SHOW | <u>VN</u> |
|-----------------------------|--------------|-----------------------|
| ITEM | QUANTITY | WEIGHT (APPROX) |
| M596 CONTAINE DUNNAGE | R 143 | 13,871 LBS 874 LBS |
| * | TOTAL WEIGHT | |
| | R 108 | |
| | TOTAL WEIGHT | 13,322 LBS |



- 1. A 126-UNIT LOAD OF UNPALLETIZED PLYWOOD CONTAINERS IS SHOWN IN A 7'-6" WIDE (INSIDE DIMENSION) BY 40'-0" LONG VAN TRAILER HAVING A SQUARE FRONT. A 37'-0" LONG TRAILER IS THE SHORTEST TRAILER THAT CAN BE USED TO SHIP A 126-UNIT LOAD. A WIDER OR NARROWER TRAILER CAN BE USED FOR THE DEPICTED LOAD.
- IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END, A
 "FORWARD BLOCKING ASSEMBLY" AS SHOWN IN THE LOAD ON PAGE 12 WILL BE
 REQUIRED. SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 18.
 POSITION THE "FORWARD BLOCKING ASSEMBLY" BETWEEN THE "FORWARD LOAD
 BEARING GATE" AND THE FRONT WALL OF THE TRAILER.
- 3. THE "LOAD BEARING GATES" AND THE "SPACER ASSEMBLIES" MUST BE INSTALLED AS LOADING PROGRESSES. NOTE: LOAD BEARING GATES ARE REQUIRED TO ALLOW ROOM FOR THE ROPE HANDLE AT EACH END OF THE PLYWOOD CONTAINER.
- 4. IF THE SPACE BETWEEN THE REAR OF THE LOAD AND THE REAR DOORS, WHEN THEY ARE CLOSED, MEASURES 12" OR LESS, USE THE SOLID FILL TYPE BLOCKING AS SHOWN IN THE "ALTERNATIVE REAR BLOCKING" ON THIS PAGE.
- 5. A "FILLER ASSEMBLY", SHOWN AS PIECE MARKED (a) IN THE LOAD ON PAGE 12, MAY BE USED IN THE TOP LAYER OF THE LOAD IN PLACE OF AN OMITTED CONTAINER. SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 21.
- FOR A METHOD OF BLOCKING A LESS-THAN-TRAILER LOAD, SEE THE PROCEDURES ON PAGES 16 AND 17.

| SOLID FILL, 6" WIDE BY 42" LONG MATERIAL (AS REQUIRED TO FILL THE VOID BETWEEN THE REAR "LOAD BEARING GATE" AND THE REAR DOORS OF THE TRAILER, WHEN CLOSED), NAIL TO REAR GATE OR SELF W/5-10d NAILS IN EACH PIECE, SEE GENERAL NOTE "U" ON PAGE 2. | ② 1) |
|---|---------|
|---|---------|

ALTERNATIVE REAR BLOCKING

SEE SPECIAL NOTE 4 ON THIS PAGE.

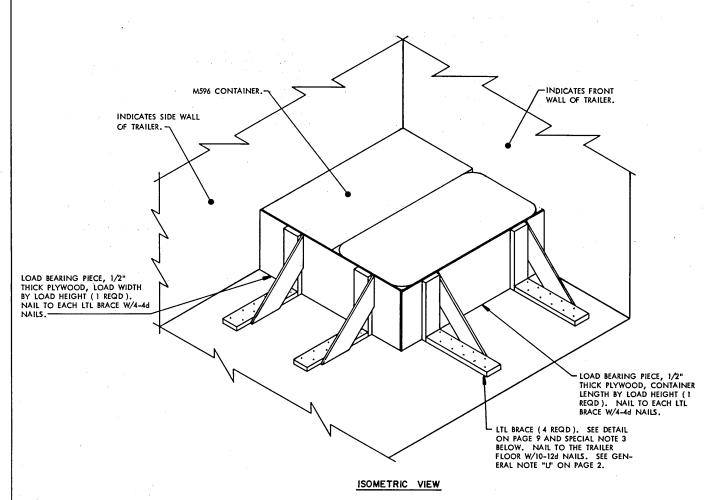
| LUMBER | LINEAR FEET | BOARD FEET |
|--------------|-------------|------------|
| 1" X 4" | 60 | 20 |
| 2" X 2" | 60 | 20 |
| 2" X 4" | 365 | 243 |
| 2" X 6" | 140 | 140 |
| 4" X 4" | 12 | . 16 |
| NAILS | NO. REQD | POUNDS |
| ód (2") | 144 | 1 |
| 10d (3") | 3 56 | 5-1/2 |
| 12d (3-1/4") | 24 | 1/2 |

LOAD AS SHOWN

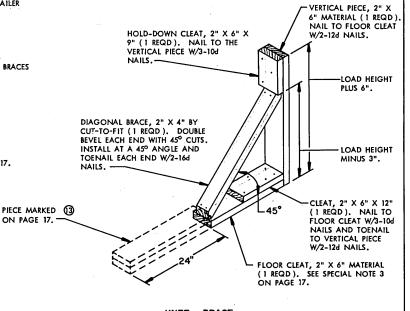
| ITEM | QUANTITY | WEIGH | (APPROX) |
|------|---------------|--------|----------|
| | CONTAINER 126 | | |
| | TOTAL WEIGHT | 11,469 | LBS |

126-UNIT LOAD IN A 40'-0" LONG TRAILER (UNPALLETIZED)

PAGE 15

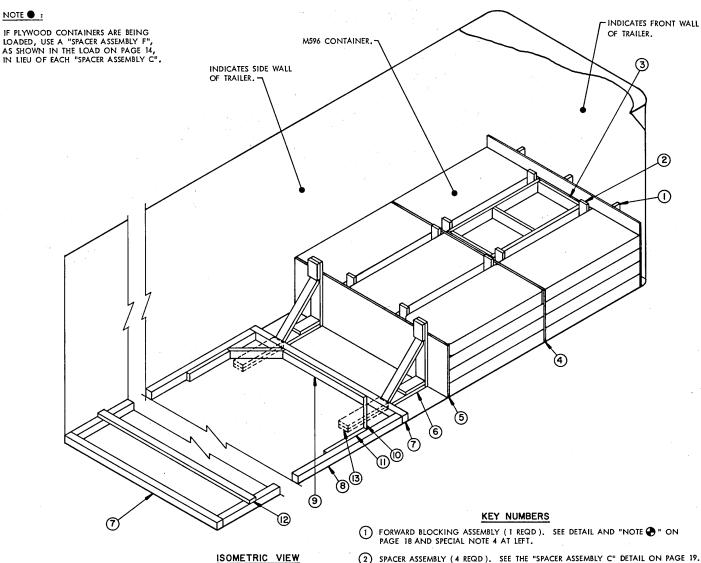


- THESE OUTLOADING PROCEDURES DEPICT THE USE OF LTL BRACES IN A TRAILER EQUIPPED WITH A SQUARE FRONT AND WHICH HAS A NAILABLE FLOOR. TRAILERS EQUIPPED WITH NON-NAILABLE FLOORS CANNOT BE USED.
- IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END ONE ADDITIONAL LOAD BEARING PIECE AND TWO ADDITIONAL LTL BRACES MAY BE USED AT THE FORWARD END OF THE LADING.
- EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS. ALSO, A MINIMUM OF TWO (2) BRACES MUST BE USED AGAINST THE SIDE OF A CONTAINER STACK AS SHOWN.
- THE LTL BRACE SHOWN ON THIS PAGE MAY BE USED FOR RETAINING THE M596 CONTAINERS, THE M597 CONTAINERS AND THE PLYWOOD CONTAINERS.
- 5. FOR AN ALTERNATIVE METHOD, SEE THE TYPICAL LTL SHOWN ON PAGE 17.



KNEE BRACE

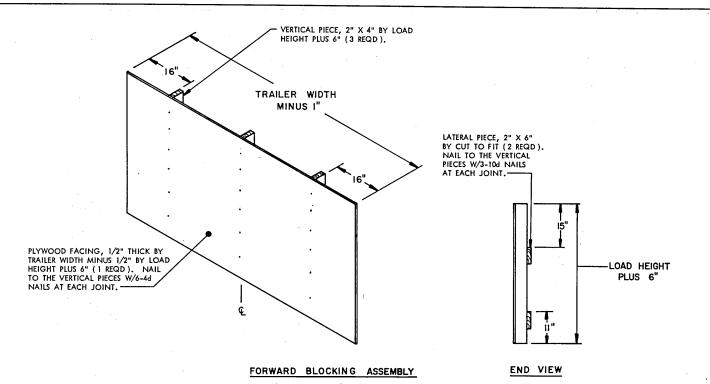
TYPICAL LTL (6-UNIT LOAD) (UNPALLETIZED)



- THESE OUTLOADING PROCEDURES ARE SHOWN DEPICTING THE USE OF TWO METHODS OF BLOCKING, THE USE OF A "K-BRACE" AND "NAILED FLOOR LINE" BLOCKING IN A 7'-6" WIDE TRAILER. WIDER OR NARROWER TRAILERS CAN BE USED. SEE GENERAL NOTE "J" ON PAGE 2.
- THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED (7) THRU (2), IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD.
- THE VIEW ABOVE DEPICTS THE BLOCKING IN A TRAILER EQUIPPED WITH A NON-NAILABLE FLOOR. IN A TRAILER EQUIPPED WITH A NAILABLE FLOOR, EXTEND THE FLOOR CLEAT OF THE "KNEE BRACE", PIECE MARKED (3), AN ADDITIONAL 24". NAIL THE FLOOR CLEAT TO THE TRAILER FLOOR W/6-12d NAILS. NAIL THE BACK-UP CLEAT, PIECE MARKED (3), TO THE FLOOR CLEAT W/6-12d NAILS. THE "NAILED FLOOR LINE" BLOCKING METHOD SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED (7) THRU (7). TWO (2) BACK-UP CLEATS, PIECES MARKED (3), ARE ADEQUATE FOR RETAINING A MAXIMUM FOUR (4) CONTAINER HIGH LTL LOAD. THE VIEW ABOVE DEPICTS THE BLOCKING IN A TRAILER EQUIPPED WITH A NON-
- IF THE TRAILER BEING LOADED IS EQUIPPED WITH A SQUARE FRONT OR AN INSTALLED BULKHEAD, DELETE THE "FORWARD BLOCKING ASSEMBLY" AND INSTALL PLYWOOD OR NOMINAL LUMBER SEPARATOR GATE AT THE FRONT OF THE
- THE USE OF THE "FILLER ASSEMBLY" IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. "FILLER ASSEMBLIES" MAY BE USED IN THE TOP LAYER OF THE LOAD AS REQUIRED TO ADJUST THE LOADING PATTERN FOR THE NUMBER OF CONTAINERS TO BE SHIPPED.
- THE PROCEDURES SHOWN ABOVE MAY BE USED FOR RETAINING THE M596 CONTAINERS, THE M597 CONTAINERS, AND THE PLYWOOD CONTAINER. WHEN LOADING THE PLYWOOD CONTAINER, USE A "LOAD BEARING GATE" SHOWN AS PIECE MARKED () IN THE LOAD ON PAGE 14 IN LIEU OF THE "SEPARATOR GATE" SHOWN AS PIECE MARKED (4) ON THIS PAGE. ALSO USE A "LOAD BEARING GATE" BETWEEN PIECE MARKED (1) AND THE PLYWOOD CONTAINERS AND BETWEEN PIECE MARKED (3) AND THE PLYWOOD CONTAINERS. SEE SPECIAL NOTE 3 ON PAGE 15.

- SPACER ASSEMBLY (4 REQD). SEE THE "SPACER ASSEMBLY C" DETAIL ON PAGE 19. SEE "NOTE " ABOVE.
 FILLER ASSEMBLY (1 REQD). SEE DETAIL ON PAGE 21 AND SPECIAL NOTE 5 (2)
- AT LEFT.
- SEPARATOR GATE, 1/2" THICK PLYWOOD TRAILER WIDTH MINUS 1/2" BY LADING HEIGHT (1 REQD). IF PLYWOOD IS NOT AVAILABLE, SEE THE "ALTERNATIVE SEPARATOR GATE" DETAIL ON PAGE 19.
- REAR GATE, 1/2" THICK PLYWOOD TRAILER WIDTH MINUS 1/2" BY LADING HEIGHT (1 REQD). NAIL TO THE VERTICAL PIECE OF "KNEE BRACES" MARKED ② W/6-4d NAILS EACH.
- KNEE BRACE (2 REQD). SEE DETAIL ON PAGE 16 AND SPECIAL NOTE 3 AT LEFT. SEE GENERAL NOTE "U" ON PAGE 2.
- HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (2 REQD). TOENAIL FORWARD HEADER TO KNEE BRACES MARKED (6) W/2-12d NAILS EACH. SEE SPECIAL NOTE 2
- (8) SIDE STRUT, 4" X 4" BY CUT TO FIT (2 REQD). TOENAIL TO THE HEADERS W/2-12d NAILS AT EACH END.
- (9) CENTER CLEAT, 2" X 4" X 48" (1 REQD). NAIL TO THE FORWARD HEADER W/6-
- DIAGONAL BRACE, 2" X 4" BY CUT TO FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AND TOENAIL TO HEADER AND SIDE STRUT W/2-16d NAILS AT EACH END.
- BACK-UP CLEAT, 2" X 4" X 24" (2 REQD). NAIL TO THE SIDE STRUT W/6-12d
- STRUT BRACING, 2" X 4" BY TRAILER WIDTH (CUT TO FIT) (MINIMUM OF 1 REQD). INSTALL ONE (1) NEAR THE ENDS OF THE SIDE STRUTS AS SHOWN. ONE (1) ADDITIONAL PIECE REQUIRED FOR EVERY 7'-0" OF STRUT LENGTH. NAIL TO SIDE STRUTS W/3-10d NAILS AT EACH END.
- BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). POSITION ON FLOOR CLEAT AND AGAINST DIAGONAL BRACE OF THE KNEE BRACE. NAIL TO THE FLOOR CLEAT OF THE KNEE BRACE W/6-12d NAILS. SEE SPECIAL NOTE 3 AT LEFT AND GENERAL NOTE "U" ON PAGE 2.

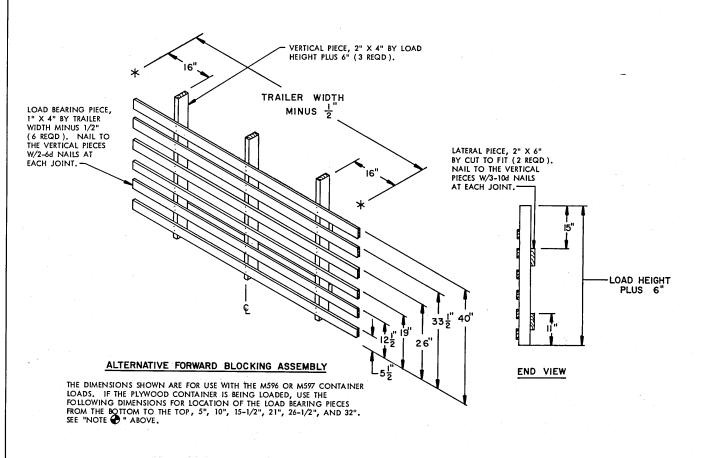
TYPICAL LTL (23-UNIT LOAD) (UNPALLETIZED)



THE FORWARD BLOCKING ASSEMBLY SHOWN ABOVE IS FOR USE IN LOADS OF UNPALLETIZED CONTAINERS. SEE "NOTE \bigoplus " ON THIS PAGE.

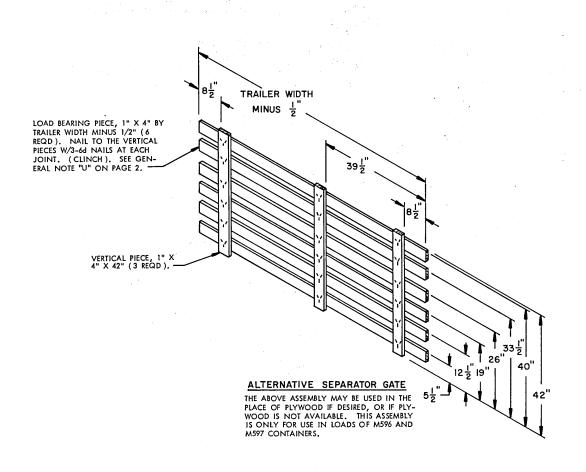
NOTE 💮 :

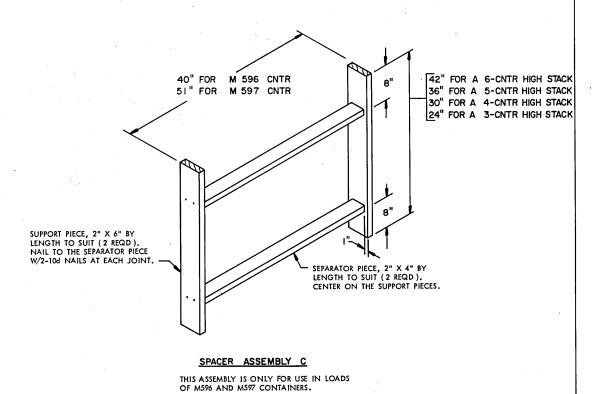
IF DESIRED, OR IF PLYWOOD IS NOT AVAILABLE, THE "ALTERNATIVE FORWARD BLOCKING ASSEMBLY", AS DETAILED BELOW, MAY BE USED.



PAGE 18

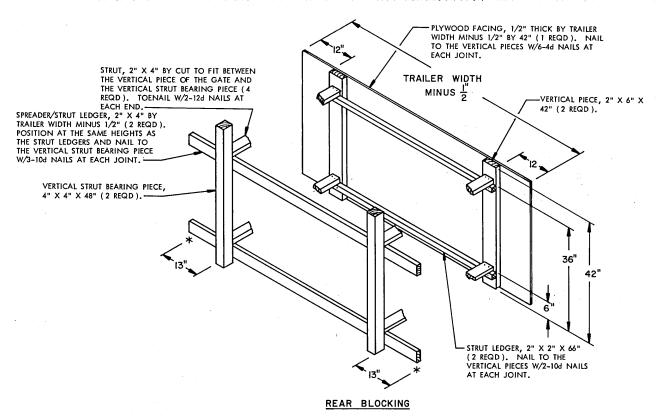
DETAILS



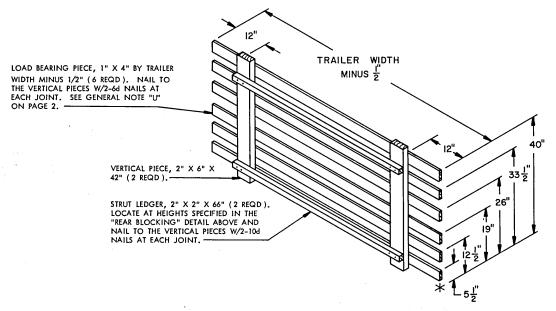


DETAILS

PAGE 19



THIS REAR BLOCKING IS TO BE USED AT THE REAR OF UNPALLETIZED LOADS OF M596 AND M597 CONTAINERS, AS SHOWN IN THE LOAD ON PAGE 12.

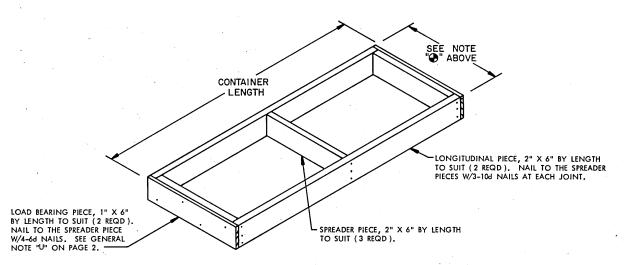


ALTERNATIVE REAR GATE

THE ABOVE ASSEMBLY MAY BE USED IN THE PLACE OF THE PLYWOOD ASSEMBLY IF DESIRED, OR IF PLYWOOD IS NOT AVAILABLE. USE IN UNPALLETIZED LOADS OF M596 AND M597 CONTAINERS. NOTE: WHEN THIS GATE IS USED FOR ALTERNATIVE REAR BLOCKING, AS SHOWN IN "DETAIL B" ON PAGE 13, THE STRUT LEDGERS MUST BE OMITTED,

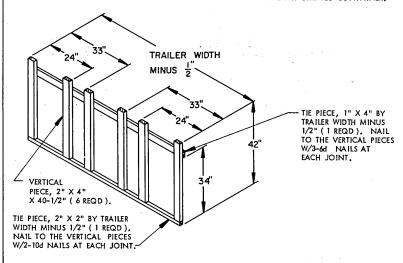
NOTE 🕀:

THE FILLER ASSEMBLY WILL BE 26" WIDE IF USED IN THE PLACE OF A CONTAINER ADJACENT TO A SIDE WALL, AND 26-7/8" WIDE IF USED IN THE PLACE OF A CONTAINER IN A CENTER STACK. ALL FILLER ASSEMBLIES USED IN PLACE OF AN OMITTED PLYWOOD CONTAINER MUST BE 24" WIDE.



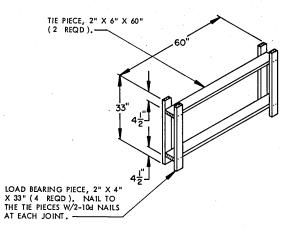
FILLER ASSEMBLY

THIS ASSEMBLY MAY BE USED WHEN A CONTAINER IS OMITTED FROM THE TOP LAYER OF A LOAD, AS SHOWN IN THE LOAD ON PAGE 17. USE ONE FILLER ASSEMBLY FOR EACH OMITTED CONTAINER.



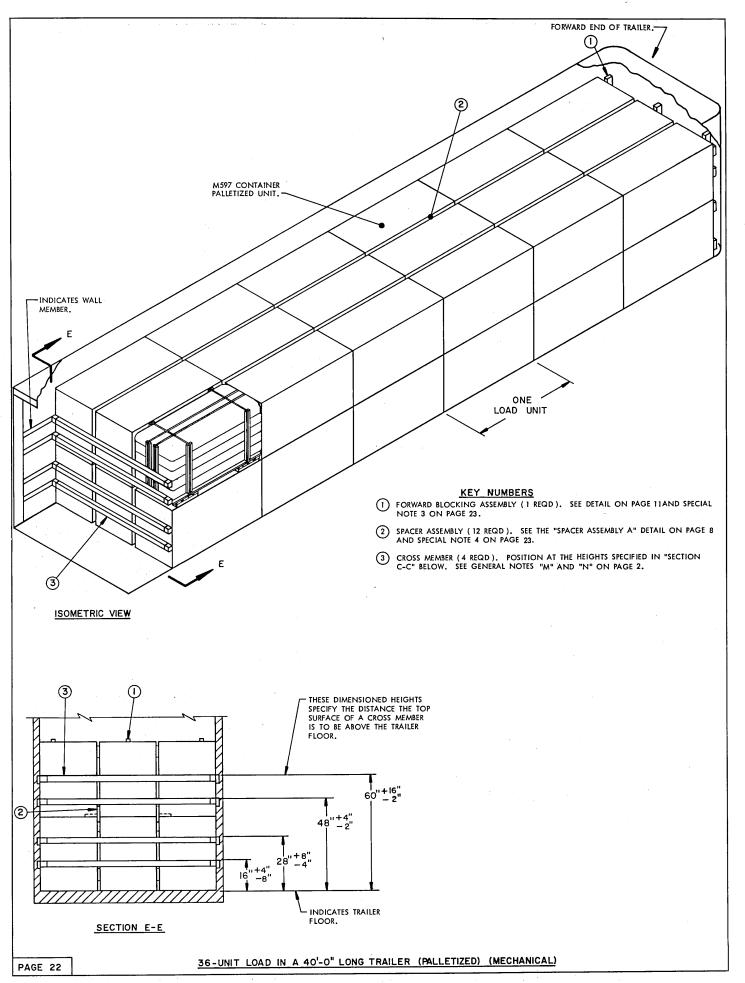
LOAD BEARING GATE

THIS ASSEMBLY IS TO BE USED IN LOADS OF UNPALLETIZED PLYWOOD BOXES, AS SHOWN IN THE LOAD ON PAGE 14. THE VERTICAL PIECES WILL PROVIDE SOLID CONTACT BETWEEN THE PLYWOOD BOXES AND ALSO ALLOW SPACE FOR THE ROPE HANDLES ON EACH END OF THE PLYWOOD BOX.



SPACER ASSEMBLY F

THIS ASSEMBLY IS TO BE USED IN LOADS OF UNPALLETIZED PLYWOOD BOXES, AS SHOWN IN THE LOAD ON PAGE 14. IF A WIDER TRAILER IS USED, ADDITIONAL LOAD BEARING PIECES OR A THICKNESS TO SUIT MAY BE LAMINATED TO THE ASSEMBLY ABOVE. IF A NARROWER TRAILER IS USED, MATERIAL OF A LESSER THICKNESS OR WIDTH MAY BE USED.



- 1. A 36-UNIT LOAD OF THE PALLETIZED M597 CONTAINERS IS SHOWN IN A 7"-6" WIDE (INSIDE DIMENSION) BY 40'-0" LONG VAN TRAILER WITH ROUNDED CORNERS AT THE FORWARD END AND WHICH IS EQUIPPED WITH A MECHANICAL LOAD BLOCKING SYSTEM THAT CONTAINS AT LEAST FOUR (4) CROSS MEMBERS, AND IS AT LEAST 36'-6" IN LENGTH AS MEASURED FROM THE FRONT WALL OF THE TRAILER. A WIDER OR NARROWER TRAILER CAN BE USED.
- 2. A 48-UNIT LOAD OF THE PALLETIZED M596 CONTAINERS MAY BE LOADED IN.A 40'-0" LONG VAN TRAILER WITH ROUNDED CORNERS AT THE FOR-WARD END USING THE SAME BLOCKING METHODS AS DEPICTED IN THE LOAD VIEW ON PAGE 22. HOWEVER, THE LENGTH OF THE MECHANICAL LOAD BLOCKING SYSTEM MUST BE AT LEAST 39"-2" AS MEASURED FROM THE FRONT WALL OF THE TRAILER.
- 3. IF THE TRAILER BEING LOADED IS EQUIPPED WITH A SQUARE FRONT OR AN INSTALLED BULKHEAD, DELETE THE "FORWARD BLOCKING ASSEMBLY" AND POSITION THE UNITS DIRECTLY AGAINST THE FORWARD PORTION OF THE TRAILER. ALSO, IF DESIRED, THE METHOD OF BLOCKING THE REAR OF THE LOAD MAY BE UTILIZED FOR BLOCKING THE FRONT OF THE LOAD.
- 4. THE SPACER ASSEMBLY, PIECE MARKED ② , MUST BE INSTALLED AS LOADING PROGRESSES. FIRST, POSITION THE OUTER 2-UNIT HIGH STACKS AGAINST THE TRAILER SIDE WALLS. INSTALL TWO (2) SPACER ASSEMBLIES WITH THE 2" X 6" X 6" RETAINER PIECES PLACED ON THE TOP CONTAINER OF EACH LOWER PALLETIZED UNIT. POSITION THE CENTER STACK. IF THE VOID ACROSS THE WIDTH OF THE TRAILER EXCEEDS 3/4", ADDITIONAL 1" X 8" PIECES MUST BE LAMINATED TO ONE OR BOTH OF THE SPACER ASSEMBLIES. THIS PROCEDURE WILL BE REPEATED FOR EACH LOAD UNIT.
- 5. TO SATISFY A LESS-THAN-FULL-LOAD QUANTITY, A PALLETIZED UNIT MAY
 BE OMITTED FROM THE TOP LAYER OF THE CENTER STACK IN ONE OR MORE
 LOAD UNITS BY APPLYING THE PROCEDURES SPECIFIED ON PAGE 26.
- 6. IF IT IS NECESSARY TO OMIT THREE (3) PALLETIZED UNITS FROM THE DE-PICTED LOAD TO SATISFY A LOAD QUANTITY REQUIREMENT, THE TOP LAYER OF THE REARWARD MOST LOAD UNIT MUST BE OMITTED AND THE TOP TWO (2) CROSS MEMBERS MUST BE MOVED FORWARD TO BEAR AGAINST THE LADING.

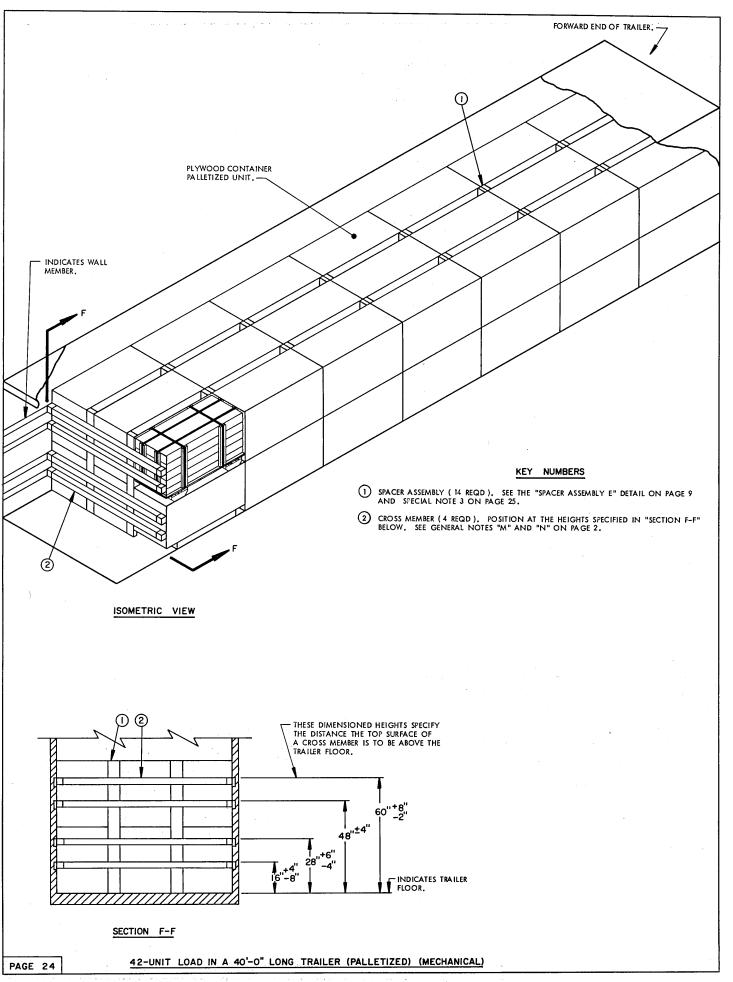
| BILL OF MATERIAL | | |
|-------------------------------|----------------|----------------|
| LUMBER | LINEAR FEET | BOARD FEET |
| 1" X 8" 2" X 4" 2" X 6" | 48 20 67 | 32 14 67 |
| NAILS | NO. REQD | POUNDS |
| 10d (3") | 96 | 2 |

THIS BILL OF MATERIAL IS FOR THE 36-UNIT LOAD SHOWN ON PAGE 22.

LOAD AS SHOWN

| ITEM | QUANTITY | WEIG | GHT (APPROX) |
|------|-------------------------|--------|--------------|
| | D UNIT ITR) 48 : | | LBS LBS |
| | TOTAL WEIGHT | 27,704 | LBS |
| | D UNIT TR) 36 | | LBS LBS |
| | TOTAL WEIGHT | 24,780 | LBS |

36-UNIT LOAD IN A 40'-0" LONG TRAILER (PALLETIZED) (MECHANICAL)

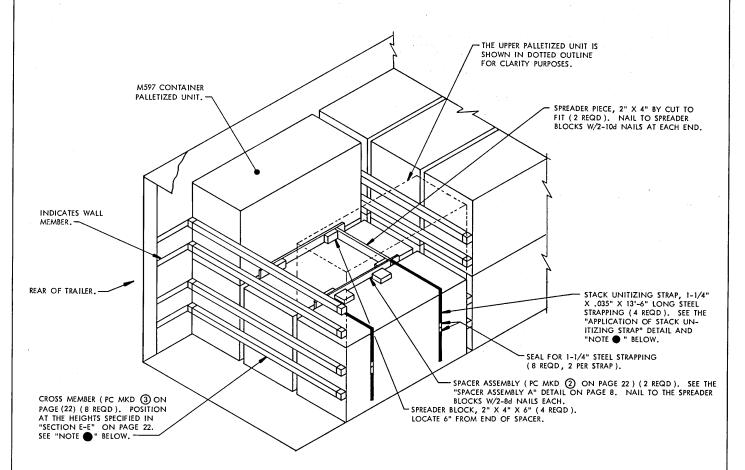


- 1. A 42-UNIT LOAD OF THE PALLETIZED PLYWOOD CONTAINERS IS SHOWN IN A 7'-6" WIDE (INSIDE DIMENSION) BY 40'-0" LONG VAN TRAILER HAVING A SQUARE FRONT. THE TRAILER IS EQUIPPED WITH A MECHANICAL LOAD BLOCKING SYSTEM THAT CONTAINS AT LEAST FOUR (4) CROSS MEMBERS, AND IS AT LEAST 37'-0" IN LENGTH AS MEASURED FROM THE FRONT WALL OF THE TRAILER. A WIDER OR NARROWER TRAILER CAN BE USED.
- 2. IF THE TRAILER BEING LOADED HAS ROUNDED-CORNERS AT THE FORWARD END, A "FORWARD BLOCKING ASSEMBLY" AS SHOWN IN THE LOAD ON PAGE 4 WILL BE REQUIRED. SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 11. NOTE: IF DESIRED, FOUR (4) CROSS MEMBERS MAY BE POSITIONED AT THE FORWARD END OF THE LOAD IN LIEU OF A "FORWARD BLOCKING ASSEMBLY". POSITION THE CROSS MEMBERS AT THE HEIGHTS SPECIFIED IN "SECTION F-F" ON PAGE 24.
- 3. THE SPACER ASSEMBLY, PIECE MARKED ①, MUST BE INSTALLED AS LOADING
- 4. TO SATISFY A LESS-THAN-FULL LOAD QUANTITY, ONE OR MORE PALLETIZED UNITS MAY BE OMITTED FROM THE TOP LAYER BY APPLYING THE PROCEDURES SPECIFIED ON PAGE 8. USE FOUR (4) CROSS MEMBERS AS SHOWN IN THE LOAD ON PAGE 24 IN LIEU OF THE REAR BLOCKING.
- 5. FOR TYPICAL LTL LOAD, SEE PAGE 27.

| BILL OF MATERIAL | | | |
|------------------|-------------|------------|--|
| LUMBER | LINEAR FEET | BOARD FEET | |
| 2" X 6" | 297 | 297 | |
| NAILS | NO. REQD | POUNDS | |
| 10d (3") | 112 | 2 | |

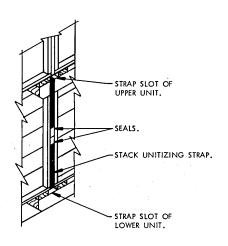
LOAD AS SHOWN

| ITEM | QUANTITY | WEIGHT (APPROX) |
|------|-------------------|-----------------|
| | UNIT OCNTR) 42 | |
| | TOTAL WEIGHT | 20.798 LBS |



OMITTED PALLETIZED UNIT PROCEDURES (MECHANICAL)

THE ABOVE VIEW DEPICTS PROCEDURES TO BE APPLIED WHEN OMITTING ONE OR MORE PALLETIZED UNITS FROM THE TOP LAYER OF THE LOAD SHOWN ON PAGE 22. SEE "NOTE "" "BELOW FOR STACK UNITIZING AND ADDITIONAL CROSS MEMBER REQUIREMENTS.



APPLICATION OF STACK UNITIZING STRAP

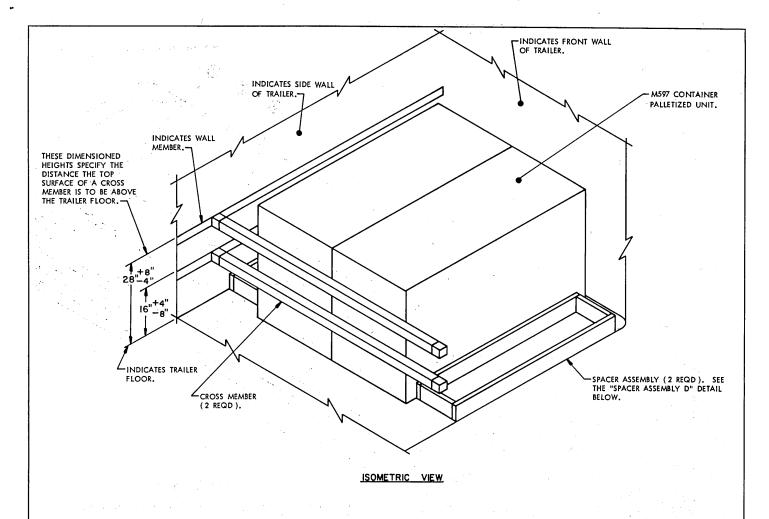
THREAD THE UNITIZING STRAP THRU THE STRAP SLOTS AS SHOWN AND SEAL WITH TWO SEALS. DOUBLE CRIMP EACH SEAL. STACKS MUST BE UNITIZED PRIOR TO FINAL PLACEMENT IN THE TRAILER. SEE "NOTE • " AT RIGHT.

NOTE :

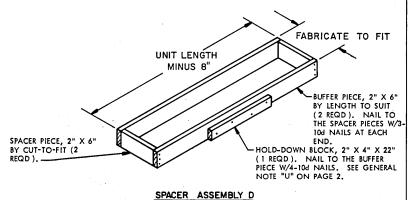
ALL 2-HIGH STACKS LATERALLY ADJACENT TO A 1-HIGH STACK MUST BE UNITIZED WITH TWO (2) STEEL STRAPS. ALSO, FOUR (4) ADDITIONAL CROSS MEMBERS WILL BE REQUIRED TO BLOCK A FULL LOAD UNIT WHICH IS ADJACENT TO A LOAD UNIT WITH AN OMITTED PALLETIZED UNIT.

PAGE 26

DETAILS

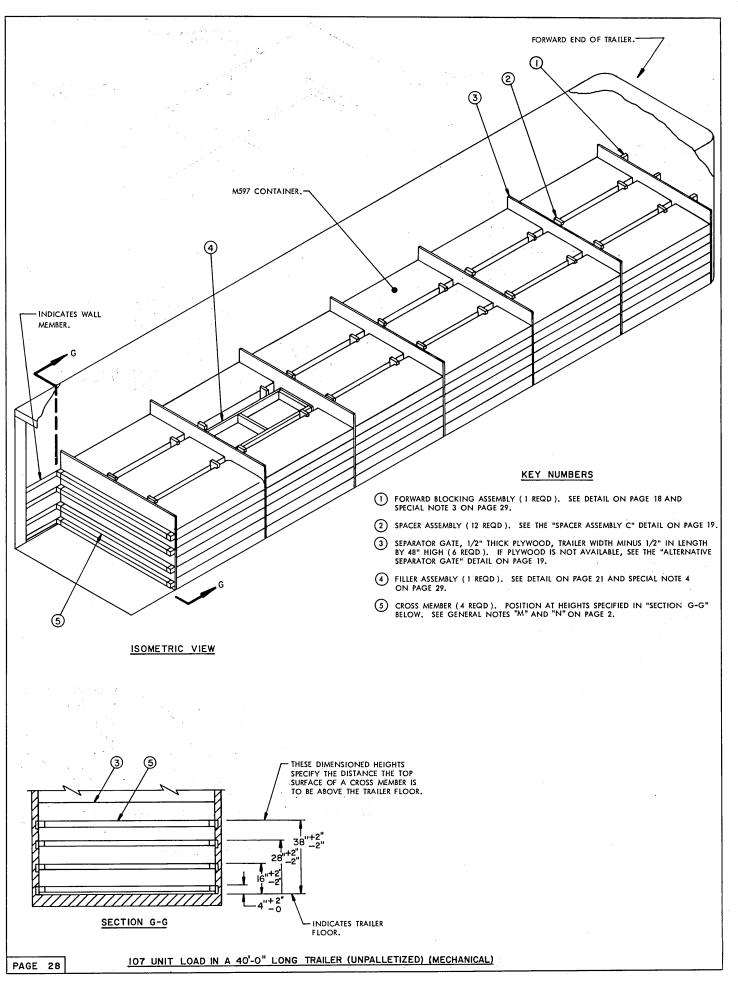


- A TWO-UNIT LOAD IS SHOWN IN A TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES AND ROUNDED CORNERS AT THE FORWARD END.
- 2. IF DESIRED, THE METHOD FOR BLOCKING THE REAR OF THE LOAD MAY ALSO BE UTILIZED FOR BLOCKING THE FRONT OF THE LOAD.
- 3. THE BLOCKING METHOD DEPICTED ABOVE IS ADEQUATE FOR RETAINING A FULL ONE LAYER LOAD OF TWELVE (12) PALLETIZED UNITS.
- 4. THE PROCEDURES SHOWN ABOVE MAY BE USED FOR THE PALLETIZED M596 CONTAINERS, M597 CONTAINERS, AND PLYWOOD CONTAINERS.



TYPICAL LTL (2-UNIT LOAD) (PALLETIZED) (MECHANICAL)

PAGE 27



- A 107-UNIT LOAD OF M597 CONTAINERS IS SHOWN IN A 7'-6" WIDE (INSIDE DIMENSION) BY 40'-0" LONG VAN TRAILER WITH ROUNDED CORNERS AT THE FORWARD END AND WHICH IS EQUIPPED WITH A MECHANICAL LOAD BLOCKING SYSTEM THAT CONTAINS AT LEAST FOUR (4) CROSS MEMBERS, AND IS AT LEAST 30'-6" IN LENGTH AS MEASURED FROM THE FRONT WALL OF THE TRAILER. A WIDER OR NARROWER TRAILER CAN BE USED FOR THE DEPICTED LOAD. SEE GENERAL NOTE "I" ON PAGE 2 NOTE "J" ON PAGE 2.
- A 144-UNIT LOAD OF M596 CONTAINERS MAY BE LOADED IN A 40'-0" LONG VAN TRAILER WITH ROUNDED CORNERS AT THE FORWARD END USING THE SAME BLOCKING METHODS AS DEPICTED IN THE LOAD VIEW ON PAGE 28. HOWEVER, THE LENGTH OF THE MECHANICAL LOAD BLOCKING SYSTEM MUST BE AT LEAST 38'-6" AS MEASURED FROM THE FRONT WALL OF THE TRAILER. SEE GENERAL NOTE "J" ON PAGE 2.
- IF THE TRAILER BEING LOADED IS EQUIPPED WITH A SQUARE FRONT OR AN INSTALLED BULKHEAD, DELETE THE "FORWARD BLOCKING ASSEMBLY" AND INSTALL A PLYWOOD OR NOMINAL LUMBER SEPARATOR GATE AT THE FRONT OF THE TRAILER. ALSO, IF DESIRED, THE METHOD OF BLOCKING THE REAR OF THE LOAD MAY BE UTILIZED FOR BLOCKING THE FRONT OF THE LOAD MAY BE UTILIZED FOR BLOCKING THE FRONT OF THE LOAD.
- THE USE OF THE "FILLER ASSEMBLY" IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. "FILLER ASSEMBLIES" MAY BE USED IN THE TOP LAYER OF THE LOAD AS REQUIRED TO SAT-ISFY THE QUANTITY OF UNITS TO BE SHIPPED.
- FOR TYPICAL LTL LOAD, SEE PAGE 32.

| LUMBER | LINEAR FEET | BOARD FEET |
|-------------|-------------|------------|
| 1" X 6" | 5 | 3 |
| 2" X 4" | 108 | 72 |
| 2" X 6" | 112 | 112 |
| NAILS | NO. REQD | POUNDS |
| 4d (1-1/2") | 18 | NIL |
| 6d (2") | 8 | NIL |
| 10d (3") | 132 | 2 |

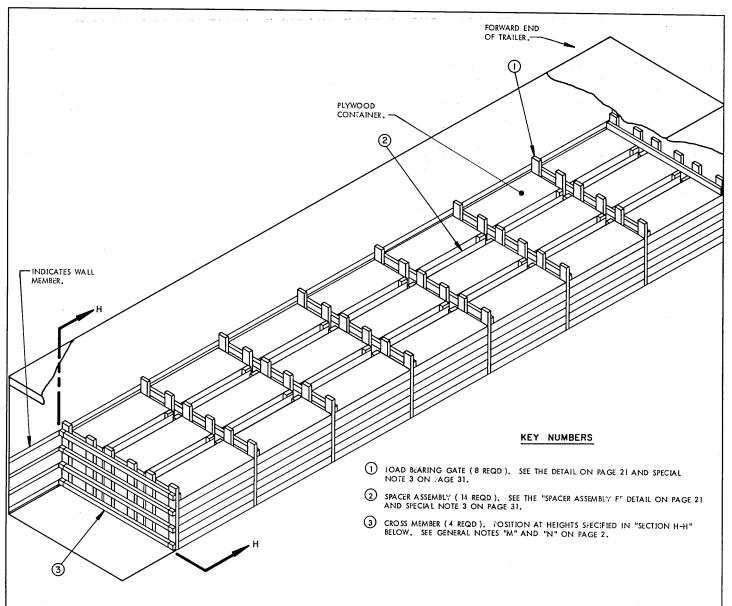
THIS BILL OF MATERIAL IS FOR THE 107-UNIT LOAD SHOWN ON PAGE 28.

QUANTITY WEIGHT (APPROX) M5% CONTAINER ------ 144 ------ 13,968 LBS DUNNAGE ----- 764 LBS TOTAL WEIGHT ----- 14,732 LBS

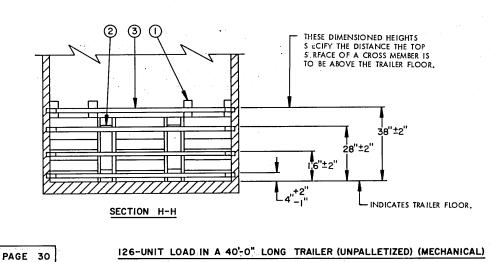
LOAD AS SHOWN

ITEM

107-UNIT LOAD IN A 40'-0" LONG TRAILER (UNPALLETIZED) (MECHANICAL)



ISOMETRIC VIEW

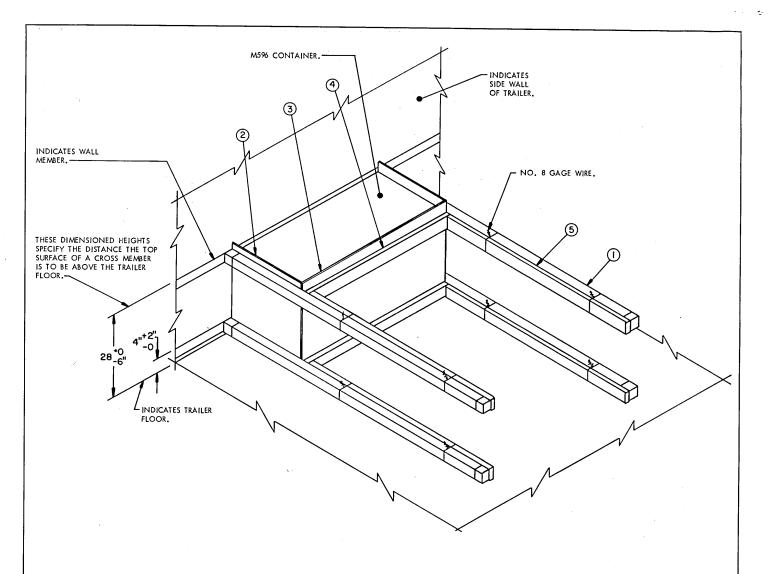


- 1. A 126-UNIT LOAD OF UNPALLETIZED PLYWOOD CONTAINERS IS SHOWN IN A 7'-6" WIDE (INSIDE DIMENSION) BY 40'-0" LONG VAN TRAILER HAVING A SQUARE FRONT. THE TRAILER IS EQUIPPED WITH A MECHANICAL LOAD BIOCKING SYSTEM THAT CONTAINS AT LEAST FOUR (4) CROSS MEMBERS, AND IS AT LEAST 3:"-0" IN LENGTH AS MEASURED FROM THE FRONT WALL OF THE TRAILER. A WIDER OR NARROWER TRAILER CAN BE USED FOR THE DEPICTED LOAD. SEE GENERAL NOTE "J" ON PAGE 2.
- 2. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END, A "FORWARD BLOCKING ASSEMBLY" AS SHOWN IN THE LOAD ON PAGE 12 WILL BE REQUIRED. SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 18. POSITION THE "FORWARD BLOCKING ASSEMBLY" BETWEEN THE FORWARD INCOME BEARING GATE" AND THE FRONT WALL OF THE TRAILER. NOTE: IF DESIRED, FOUR (4) CROSS MEMBERS MAY BE POSITIONED AT THE FORWARD END OF THE LOAD IN LIEU OF A "FORWARD BLOCKING ASSEMBLY". POSITION THE CROSS MEMBERS AGAINST THE FORWARD "LOAD BEARING GATE" AT THE HEIGHTS SPECIFIED IN "SECTION H-H" ON PAGE 30.
- THE "LOAD BEARING GATES" AND THE "SPACER ASSEMBLIES" MUST BE INSTALLED AS LOADING PROGRESSES. <u>NOTE</u>: LOAD BEARING GATES ARE REQUIRED TO ALLOW ROOM FOR THE ROPE HANDLE AT EACH END OF THE PLYWOOD CONTAINER.
- 4. A "FILLER ASSEMBLY", SHOWN AS PIECE MARKED (4) IN THE LOAD ON PAGE 28, MAY BE USED IN THE TOP LAYER OF THE LOAD IN PLACE OF AN OMITTED CONTAINER. SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 21.
- 5. FOR TYPICAL LTL LOAD, SEE PAGE 32.

| BILL OF MATERIAL | | | |
|--|------------------------|------------------------|--|
| LUMBER | LINEAR FEET | BOARD FEET | |
| 1" X 4" 2" X 2" 2" X 4" 2" X 6" | 60 60 313 140 | 20 20 211 140 | |
| NAILS | NO. REQD | POUNDS | |
| 6d (2") 10d (3") | 144 320 | 1 5 | |

LOAD AS SHOWN

| ITEM | QUANTIT_ | WEIGH. | _ (A.:-ROX |
|------|---------------|--------|-------------|
| | CONTAINER 126 | | |
| | TOTAL WEIGHT | 11,372 | LBS |



ISOMETRIC VIEW

SPECIAL NOTES:

- THESE OUTLOADING PROCEDURES DEPICT A FOUR (4) CONTAINER HIGH LTL LOAD IN A TRAILER WHICH IS EQUIPPED WITH MECHANICAL BRACING DEVICES. SEE GENERAL NOTE "J" ON PAGE 2.
- 2. A FOUR CONTAINER HIGH STACK IS SHOWN ABOVE AS TYPICAL. CONTAINERS MUST NOT BE STACKED MORE THAN SIX (6) HIGH. NOTE: ADJUST HEIGHT OF PIECES MARKED ①, ②, AND ③ WHEN BLOCKING HIGHER OR LOWER STACKS THAN SHOWN.
- 3. THE PROCEDURES SHOWN ABOVE MAY BE USED FOR UNPALLETIZED M596, M597, AND PLYWOOD CONTAINERS.

KEY NUMBERS

- (1) CROSS MEMBER (4 REQD). SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
- ② END BEARING GATE, 1/2" THICK PLYWOOD, LOAD WIDTH BY 30" HIGH (2 REQD).
- 3 SIDE BEARING GATE, 1/2" THICK PLYWOOD, CONTAINER LENGTH PLUS. 1" BY 30" HIGH (1 REQD). NAIL TO THE LOAD BEARING PIECES W/5-6d NAILS EACH.
- 4 LOAD BEARING PIECE, 2" X 4" BY CONTAINER LENGTH PLUS 1" (2 REQD).
- (3) LATERAL SUPPORT PIECE, 2" X 4" BY CUT-TO-FIT (4 REQD). WIRE TIE TO THE CROSS MEMBER WITH NO. 8 GAGE WIRE AS SHOWN.

PAGE 32

TYPICAL LTL (4-UNIT LOAD) (UNPALLETIZED) (MECHANICAL)