LOADING & BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF 750 POUND HIGH EXPLOSIVE OR MC-I CHEMICAL BOMB, PACKED TWO PER WOODEN PALLET

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CAUTION: THE PROCEDURES SHOWN HEREIN ARE ONLY APPLICABLE FOR HIGHWAY MOVEMENTS, NOT FOR CONTAINER/TRAILER-ON-FLAT-CAR MOVEMENTS.

	U.S. ARMY MATERIEL COMMAND DRAWING					
	APPROVED, U.S. ARMY ARMAI	MENT, MUNITIONS AND	DRAFTS	SMAN	TECHNICIAN	ENGINEER
	CHEMICAL COMMAND		B. LEO	NARD	R. ARNOLD	
Saul & Strekwick				Rainely		
			VALIDAT ENGINEE		TRANSPORTATION ENGINEERING	ENGINEERING
	APPROVED BY ORDER OF COMPARMY MATERIEL COMMAND	MANDING GENERAL, U.S.	DIVISI	ON	DIVISION	OFFICE
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ı	William Fr Ernst		JANUARY 1967			
1	U.S. ARMY DEFENSE AMMUNI	TION CENTER AND SCHOOL	CLASS	DIVISIO	ON DRAWING	FILE
	REVISION ND. 3	JULY 1992	10	40	4002	11001000
	SEE THE REVISION	LISTING ON PAGE 2	19	48	4062	11PB1000

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 HEREIN ARE APPLICABLE TO PALLETIZED T54 SERIES 750-POUND HE BOMBS AND PALLETIZED MC-1 TYPE 750-POUND CBR BOMBS.
- C. DETAILS OF HE BOMB PALLET UNIT (TPO 1325-926-1868):

DIMENSIONS- - - 52-1/4' LONG (55' WITH CONICAL NOSE PLUGS) BY 32-1/4' WIDE BY 22-7/8' HIGH.

GROSS WEIGHT- - - 1,575 POUNDS (APPROX).

DETAILS OF MC-1 BOMB PALLET UNIT:

DIMENSIONS- - - 55" LONG BY 32" WIDE BY 22-7/8" HIGH.

GROSS WEIGHT- - - 1,500 POUNDS (APPROX).

- D. THE DEPICTED "HE" BOMB IS A DOT CLASS "A" EXPLOSIVE. THE MC-1 BOMB IS A DOT CLASS "POISON A".
- E. THE OUTLOADING PROCEDURES DEPICTED IN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE VAN TRAILERS WHICH HAVE WOOD, WOOD AND METAL, OR ALL METAL FLOORS. TRAILERS WHICH ARE 40'-0" AND 45'-0" LONG BY 7'-8" AND 8'-2" WIDE (INSIDE DIMENSIONS) HAVE BEEN SHOWN, HOWEVER, THE PROCEDURES ARE ALSO APPLICABLE FOR TRAILERS WHICH ARE EIGHTY-NINE INCHES (89") THRU NINETY-NINE INCHES (99") IN WIDTH AND FOR TRAILERS OF OTHER LENGTHS FROM THE SHORTEST TO THE LONGEST AVAILABLE (REF: 24' TO 53'), AND FOR STRAIGHT TRUCK VANS. THE LOADING AND BRACING PROCEDURES SPECIFIED HEREIN ARE ALSO ADEQUATE (CONFIGURATION WISE AND STRENGTH WISE) FOR LOADS IN SHORTER OR LONGER VANS AND IN WIDER VANS THAN SHOWN. THE SPECIFIED BRACING IS ADEQUATE FOR LOADS WEIGHING UP TO AND INCLUDING THE MAXIMUM WEIGHTS PERMITTED BY LAW.
- F. 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.
- G. NOTICE: A SHIPMENT WILL BE POSITIONED IN THE TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED AND COMBINATIONS OF THE OUTLOADING PROCEDURES SPECIFIED HEREIN MAY BE USED. HOWEVER, THE APPROVED METHODS SHOWN HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- H. THE FULL LOADS HEREIN DEPICT A 26-UNIT LOAD OF HE BOMBS, FOR AN APPROXIMATE LOADING WEIGHT OF 40,950 POUNDS, OR A 28-UNIT LOAD OF MC-1 BOMBS, FOR AN APPROXIMATE LOADING WEIGHT OF 42,000 POUNDS. THE SPECIFIED BLOCKING AND BRACING OF FULL LOADS IS ADEQUATE FOR RETENTION OF HEAVIER LOADS IF IT IS DESIRED TO INCREASE THE LADING WEIGHT.
- J. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS
 WHICH ARE PARTIALLY LOADED WITH PALLET UNITS OF BOMBS
 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 SPECIFIED HEREIN.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

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

STRAPPING, STEEL - -: ASTM D 3953; FLAT STRAPPING, TYPE 1 OR 2, HEAVY DUTY, COATED FINISH (ORGANIC), ZINC-COATED (GRADE 2), OR UNCOATED.

SEAL, STRAP ---: AZTM D 3953; CLASS H, FINISH A, B (GRADE 2) OR C, TYPE D, STYLE I, II OR IV.

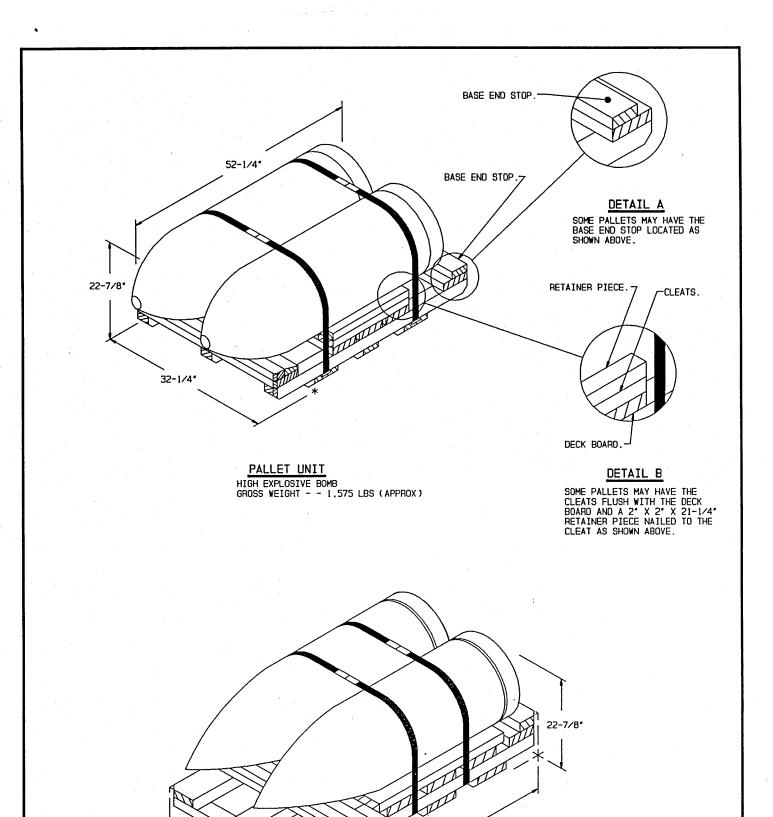
(GENERAL NOTES CONTINUED)

- K. ALL LOADS ARE SHOWN IN TRAILERS HAVING ROUNDED CORNERS AT THE FORWARD END. IF THE TRAILER BEING USED IS EQUIPPED WITH A SQUARE FRONT OR AN INSTALLED BULKHEAD, OMIT THE FORWARD BLOCKING ASSEMBLIES, PIECES MARKED (1) AND (2). NOTE THAT THE LENGTHWISE BOMB UNITS ON THE 45-1/2" LONG PALLET MUST HAVE A "FORWARD SPACER ASSEMBLY" INSTALLED TO PREVENT THE BOMB NOSES FROM CONTACTING THE FRONT WALL; THE CROSSWISE BOMB UNITS AND THE LENGTHWISE BOMB UNITS ON THE 55" LONG PALLET MAY BE POSITIONED DIRECTLY AGAINST THE FRONT WALL.
- L. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF ONE (1) SEAL WITH TWO (2) PAIR OF NOTCHES WILL BE USED TO SEAL THE JOINT WHEN A NOTCH-TYPE SEALER IS BEING USED. A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIR OF CRIMPS PER SEAL WILL BE USED TO SEAL THE JOINT WHEN A CRIMP-TYPE SEALER IS BEING USED. REFER TO THE "STRAP JOINT A" AND "STRAP JOINT B" DETAILS ON PAGE 17 FOR GUIDANCE.
- M. 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 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- N. 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. THE NAILING PATTERN WILL BE ADJUSTED AS REQUIRED SO THAT THE NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN FLOOR BOARDS. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT THE NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- O. POWER DRIVEN STAPLES MAY BE USED AS ALTERNATIVE FASTENERS FOR NAILS WHEN CONSTRUCTING DUNNAGE ASSEMBLIES WHICH ARE TO BE USED IN THE DELINEATED TRAILER LOADS SHOWN THROUGHOUT THIS DRAWING. THE STAPLES TO BE USED MUST BE EQUAL IN LENGTH TO THE SPECIFIED NAIL SIZE AND MUST BE SUBSTITUTED ON A ONE STAPLE FOR ONE NAIL BASIS. STAPLES WHICH ARE 2-1/2" OR LESS IN LENGTH SHOULD BE IN ACCORDANCE WITH FEDERAL SPECIFICATION FF-N-105 AS NEARLY AS PRACTICABLE. STAPLES WHICH ARE LONGER THAN 2-1/2" WILL BE A COMMERCIAL GRADE, OF A QUALITY EQUIVALENT TO THOSE MANUFACTURED BY SENCO PRODUCTS INCORPORATED. NOTE: STAPLES WILL NOT BE SUBSTITUTED FOR NAILS IN ANY LOAD RESTRAINING FLOOR DUNNAGE APPLICATION.
- P. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, END WALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- O. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.
- R. CONVERSION TO METRIC EQUIVALENTS: 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 25.4MM AND ONE POUND EQUALS 0.454KG.

REVISION

REVISION NO. 3 DATED JULY 1992 CONSISTS OF:

- IMPROVING LATERAL WEIGHT DISTRIBUTION FOR THE LOAD ON PAGE 4.
- ADDING PROCEDURES FOR LONGER AND WIDER TRAILERS.
- 3. ADDING PROCEDURES FOR THE MC-I CHEMICAL BOMB.

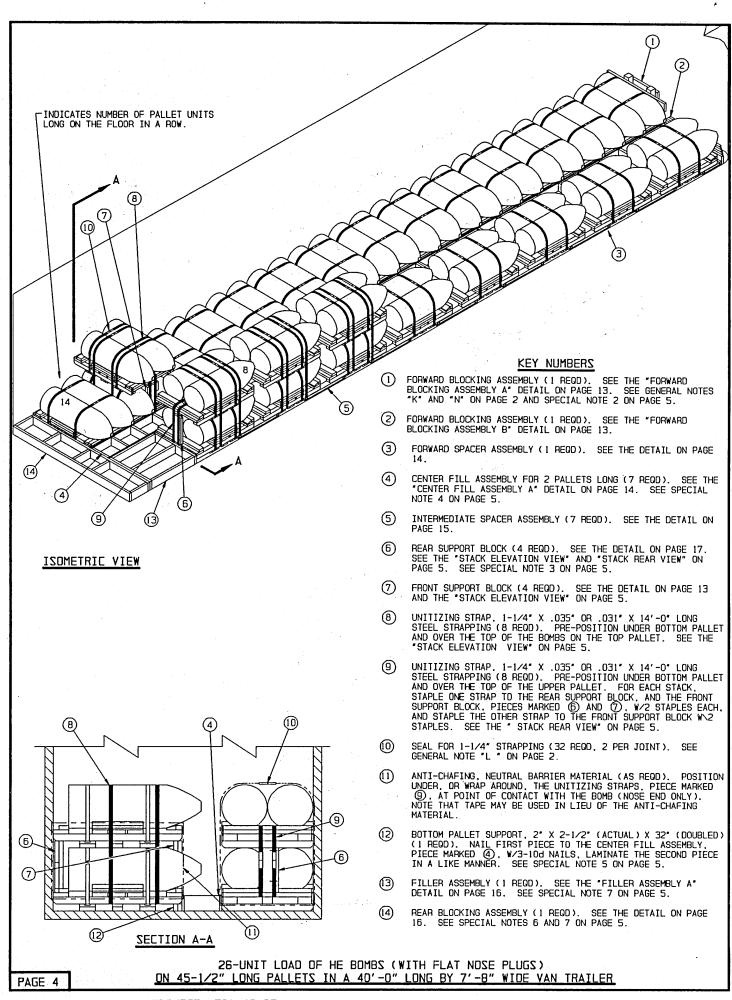


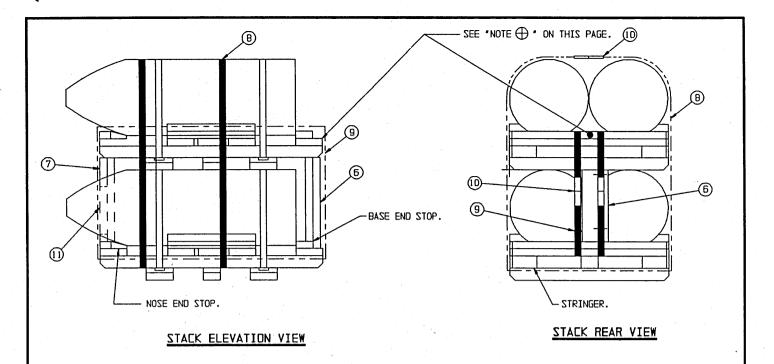
PALLET UNIT

MC-I CHEMICAL BOMB
GROSS WEIGHT - -1,500 LBS (APPROX)

55*

PALLET UNIT DETAILS





SPECIAL NOTES CONTINUED:

B. FOR A LOAD DUANTITY OTHER THAN SHOWN, LINITS SHOULD BE POSITIONED WITH THE NUMBER OF CROSSWISE AND LENGTHWISE UNITS IN A ROW AS FOLLOWS IN ORDER TO PROVIDE FOR THE BEST LATERAL WEIGHT DISTRIBUTION:

NO. LINITS	LOAD WEIGHT(LBS)	NO. CROSSWISE	NO. LENGTHWISE
28	44,100	16	12
27	42,525	15	12
25	39,375	14	11
24	37,800	13	11
23	36,225	. 13	10
22	34,650	13	9 .

9. IF A 45'-0" LONG TRAILER IS FURNISHED FOR LOADING, REFER TO PAGE 6 FOR LOADING GUIDANCE. IF A 48'-0" LONG TRAILER IS FURNISHED, REFER TO SPECIAL NOTE 8 ON PAGE 7.

NOTE \oplus :

IF THE PALLET BEING LOADED HAS THE BASE END STOP POSITIONED AS SHOWN IN 'DETAIL A' ON PAGE 3 A 2' X 2' X 8" PIECE MUST BE POSITIONED UNDER UNITIZING STEEL STRAPPING MARKED (9) ON THE TOP PALLET ONLY.

BILL OF MATERIAL			
LUMBER	LUMBER LINEAR FEET		
1" X 4" 1" X 6" 2" X 2" 2" X 3" 2" X 4" 2" X 6" 4" X 4"	41 75 56 6 48 107 4	14 38 19 3 32 107 6	
NAILS	NO. REDD	2DNU09	
6d (2°) 10d (3°)	354 218	2-1/4 3-1/2	

STEEL STRAPPING, 1-1/4" - 224' REGD - - - 32 LBS SEAL FOR 1-1/4" STRAPPING - - 32 REGD - - 1-1/2 LBS STAPLE, 15/16" X 3/4" - - - 24 REGD - - - - NIL ANTI-CHAFING MATERIAL - - AS REGD - - - - NIL

SPECIAL NOTES:

- A 26-UNIT LOAD OF HIGH EXPLOSIVE BOMBS HAVING A FLAT NOSE PLUG AND PALLETIZED ON A 45-1/2" LONG PALLET IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
- 2. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, THE FORWARD BLOCKING ASSEMBLIES, PIECES MARKED ① AND ②, WILL NOT BE REQUIRED. PALLET UNITS OF CROSSWISE BOMBS CAN BE PLACED DIRECTLY AGAINST THE FRONT WALL OF THE TRAILER. PALLET UNITS OF LENGTHWISE BOMBS WILL BE PLACED AGAINST THE FORWARD SPACER ASSEMBLY, PIECE MARKED ③.
- 3. IF THE PALLET UNIT BEING LOADED HAS THE BASE END STOP PIECE POSITIONED AS SHOWN IN "DETAIL A" ON PAGE 3, THE FRONT PIECE OF THE REAR SUPPORT BLOCK, PIECE MARKED (6), MUST BE 18-5/8" IN LIEU OF 17".
- 4. THE CENTER FILL ASSEMBLY, PIECE MARKED (4), IS SPECIFIED FOR 2 PALLETS LONG. IF THE LENGTH OF AVAILABLE 1° X 6° MATERIAL WILL CUT MORE EFFICIENTLY, 1-LONG ASSEMBLIES MAY BE USED.
- 5. THE BOTTOM PALLET SUPPORT, PIECE MARKED ② , IS ONLY REQUIRED UNDER THE BOTTOM PALLET OF 2-HIGH STACKS OF CROSSWISE BOMBS.
- 6. IF THE SPACE AT THE REAR OF A TRAILER IS LESS THAN 9°, SOLID FILL TYPE BLOCKING MUST BE USED. SOLID FILL WILL CONSIST OF 2° X 6° AND/OR 1° X 6° MATERIAL POSITIONED ON EDGE. LAMINATE W/1 APPROPRIATELY SIZED NAIL EVERY 18°.
- 7. EACH ROW OF PALLET UNITS WILL PROBABLY NOT BE THE SAME LENGTH. EITHER A FILLER ASSEMBLY AS SHOWN BY PIECE MARKED (3) IN THE LOAD SHOWN ON PAGE 4 OR A SIMILAR FILLER, OR 6" WIDE MATERIAL OF AN APPROPRIATE THICKNESS AND LENGTH MUST BE LAMINATED TO THE FORWARD SIDE OF THE REAR BLOCKING ASSEMBLY, PIECE MARKED (3), OR TO SOLID FILL IF USED, IN LIEU WITH THE SHORT ROW TO PROVIDE AN EVEN BEARING SURFACE.

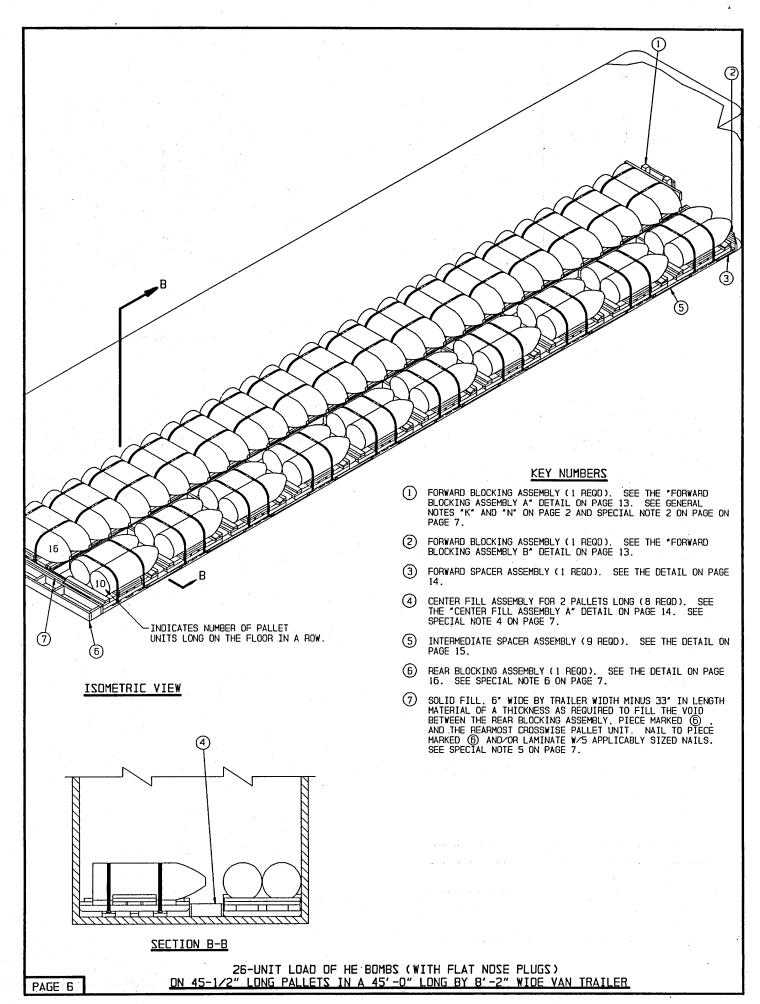
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LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT -	26	40,950 LBS
DUNNAGE		478 LBS

TOTAL WEIGHT - - - - - - 41,428 LBS (APPROX)

26-UNIT LOAD OF HE BOMBS (WITH FLAT NOSE PLUGS)
ON 45-1/2" LONG PALLETS IN A 40'-0" LONG BY 7'-8" WIDE VAN TRAILER



SPECIAL NOTES:

- 1. A 26-UNIT LOAD OF HIGH EXPLOSIVE BOMBS HAVING FLAT NOSE PLUGS AND PALLETIZED ON A 45-1/2* LONG PALLET IS SHOWN IN A 45'-0* LONG BY 8'-2" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
- 2. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, THE FORWARD BLOCKING ASSEMBLIES, PIECES MARKED ① AND ②, WILL NOT BE REQUIRED. PALLET UNITS OF CROSSWISE BOMBS CAN BE PLACED DIRECTLY AGAINST THE FRONT WALL OF THE TRAILER. PALLET UNITS OF LENGTHWISE BOMBS WILL BE PLACED AGAINST THE FORWARD SPACER ASSEMBLY, PIECE MARKED ③.
- 3. IF THE PALLET UNIT BEING LOADED HAS THE BASE END STOP PIECE POSITIONED AS SHOWN IN "DETAIL A" ON PAGE 3, AND THE GUANTITY BEING SHIPPED IS SUCH THAT ONE OR MORE PALLET UNITS MUST BE PLACED IN THE SECOND LAYER, THE FRONT PIECE OF THE REAR SUPPORT BLOCK, PIECE MARKED (6) ON PAGE 4, MUST BE 18-5/8" LONG IN LIEU OF 17". PIECES MARKED (7) ON PAGE 4 WILL BE REGUIRED WHEN PALLET UNITS ARE STACKED.
- 4. THE CENTER FILL ASSEMBLY, PIECE MARKED (4), IS SPECIFIED FOR 2 PALLETS LONG. IF THE LENGTH OF AVAILABLE 1' X 6' MATERIAL WILL CUT MORE EFFICIENTLY, 1-LONG ASSEMBLIES MAY BE USED.
- 5. DEPENDING ON THE DUANTITY OF PALLET UNITS BEING LOADED AND/OR THE LOAD CONFIGURATION, THE ROW OF CROSSWISE BOMBS MAY NOT BE THE SHORTEST ROW. IN THAT CASE, OMIT THE SOLID FILL, PIECE MARKED (?), OR A FILLER ASSEMBLY B AS DETAILED ON PAGE 15 IF USED IN LIEU OF SOLID FILL AND SUBSTITUTE "FILLER ASSEMBLY A" OR 32" LONG SOLID FILL SIMILAR TO PIECE MARKED (?), AS APPLICABLE, WHICH WILL BE INSTALLED AT THE REAR OF THE LENGTHWISE BOMB UNITS. SEE THE "FILLER ASSEMBLY A" DETAIL ON PAGE 16.
- 6. IF THE SPACE AT THE REAR OF THE TRAILER IS LESS THAN 9", SOLID FILL TYPE BLOCKING MUST BE USED. SOLID FILL WILL CONSIST OF 2" X 6" AND/OR 1" X 6" MATERIAL POSITIONED ON EDGE. LAMINATE W/1 APPROPRIATELY SIZED NAIL EVERY 18".
- 7. FOR A LOAD DUANTITY OTHER THAN SHOWN, UNITS SHOULD BE POSITIONED WITH THE NUMBER OF CROSSWISE AND LENGTHWISE UNITS IN A ROW AS FOLLOWS IN ORDER TO PROVIDE THE BEST LATERAL WEIGHT DISTRIBUTION:

2TINU .ON	LOAD WEIGHT	(LBZ)	NO. CROSSWISE	NO. LENGTHWISE
28	44,100		16	12
27	42.525		15	12
25	39.375		. 14	11
24	37,800		13	11
23	36,225		- 13	10
22	34,650		13	9

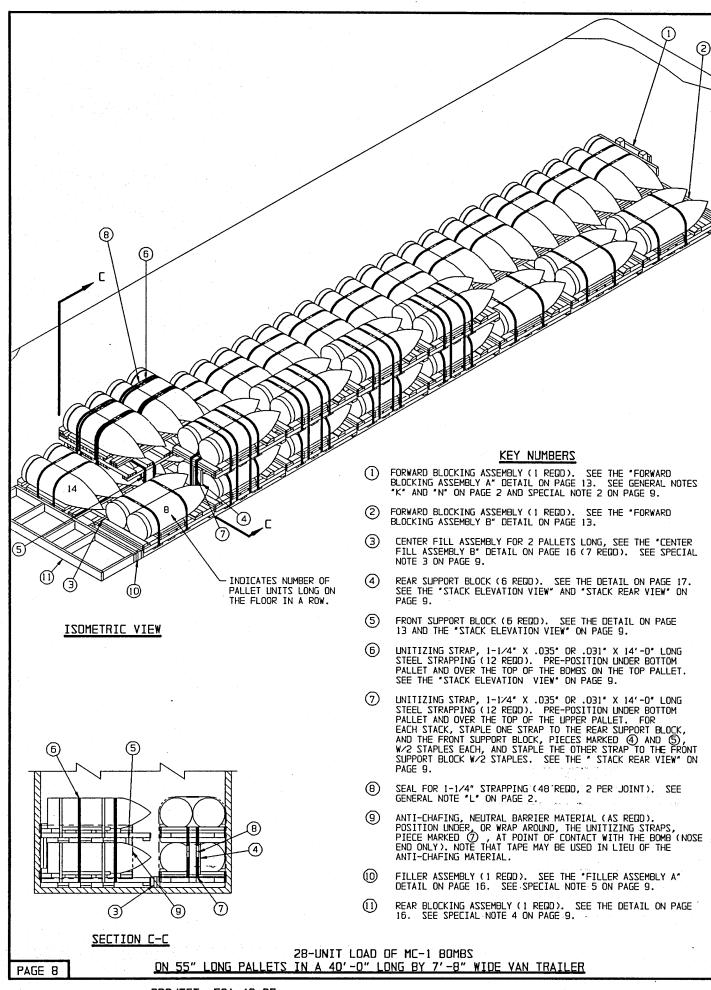
B. IF A 48'-O" LONG TRAILER IS FURNISHED FOR LOADING, THE LOAD SHOULD BE DIVIDED. IT IS RECOMMENDED THAT 6 CROSSWISE PALLET UNITS AND 4 LENGTHWISE PALLET UNITS BE LOADED IN THE FRONT PORTION OF THE LOAD. THESE QUANTITIES MAY BE ADJUSTED TO SUIT. POSITION AN ASSEMBLY WHICH IS SIMILAR TO THE "REAR BLOCKING ASSEMBLY" DETAILED ON PAGE 16 BUT CONSTRUCTED APPROXIMATELY 42" (REF) AT THE REAR OF THE LONG ROW. A "FILLER ASSEMBLY A" OR "FILLER ASSEMBLY B" MUST BE POSITIONED BETWEEN THE END OF THE SHORT ROW AND THE "REAR BLOCKING ASSEMBLY" WHICH IS PLACED WITHIN THE LOAD. LOADING CAN THEN CONTINUE FROM THE REAR BLOCKING ASSEMBLY TOWARD THE REAR OF THE TRAILER.

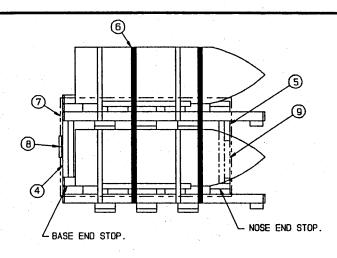
BILL OF MATERIAL			
LUMBER	LUMBER LINEAR FEET		
1" X 4" 1" X 6" 2" X 2" 2" X 4" 2" X 6" 4" X 4"	50 86 54 46 101 4	17 43 18 31 101 6	
NAILS	NO. REDD	SQNDOA	
6d (2°) 10d (3°)	420 159	2-1/2 2-1/2	

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT DUNNAGE	26 	40,950 LBS 437 LBS
TOTAL WEI	GHT	41,387 LBS (APPROX)

26-UNIT LOAD OF HE BOMBS (WITH FLAT NOSE PLUGS)
ON 45-1/2" LONG PALLETS IN A 45'-0" LONG BY B'-2" WIDE VAN TRAILER





STACK ELEVATION VIEW

BILL OF MATERIAL

LINEAR FEET

19

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NO. REQD

STEEL STRAPPING, 1-1/4" - - 336' REQD - - - - SEAL FOR 1-1/4" STRAPPING - - 48 REQD - - - - STAPLE, 15/16" X 3/4" - - - 36 REQD - - - - ANTI-CHAFING MATERIAL - - - AS REQD - - - -

BOARD FEET

181

POUNDS

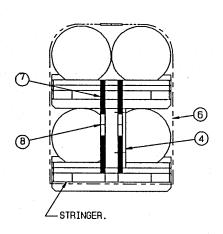
S TBS

LUMBER

2" X 2 2" X 4"

2° X 6° 4° X 4°

NAILS ("E) b01



STACK REAR VIEW

SPECIAL NOTES:

- 1. A 28-UNIT LOAD OF MC-1 CHEMICAL BOMBS PALLETIZED ON A 55° LONG PALLET IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
- 2. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, THE FORWARD BLOCKING ASSEMBLIES, PIECES MARKED ① AND ②. WILL NOT BE REQUIRED.
- 3. THE CENTER FILL. PIECE MARKED ③ . IS SPECIFIED FOR 2 PALLETS LONG. THE CENTER FILL MAY BE CONSTRUCTED 32 LONG FOR 1 PALLET IN LENGTH OR RANDOM LENGTH PIECES MAY BE USED.
- 4. IF THE SPACE AT THE REAR OF THE TRAILER IS LESS THAN 9°. SOLID FILL TYPE BLOCKING MUST BE USED. SOLID FILL WILL CONSIST OF 2" X 6" AND/OR 1" X 6" MATERIAL POSITIONED ON EDGE. LAMINATE W/1 APPROPRIATELY SIZED NAIL EVERY 18".
- 5. EACH ROW OF PALLET UNITS WILL PROBABLY NOT BE THE SAME LENGTH. EITHER A FILLER ASSEMBLY AS SHOWN BY PIECE () IN THE LOAD ON PAGE 8 OR A SIMILAR FILLER WILL BE USED. OR 6' WIDE MATERIAL OF AN APPROPRIATE THICKNESS AND LENGTH MUST BE LAMINATED TO THE FORWARD SIDE OF THE REAR BLOCKING ASSEMBLY. PIECE MARKED (). OR TO SOLID FILL IF USED, IN LINE WITH THE SHORT ROW TO PROVIDE AN EVEN BEARING SURFACE.
- 6. FOR A LOAD QUANTITY DTHER THAN SHOWN, UNITS SHOULD BE POSITIONED WITH THE NUMBER OF CROSSWISE AND LENGTHWISE UNITS IN A ROW AS FOLLOWS IN ORDER TO PROVIDE THE BEST LATERAL WEIGHT DISTRIBUTION:

NO. UNITS LOAD WEIGHT (LBS) NO. CROSSWISE NO. LENGTHWISE

30	45.000	17	13
29	43.500	16	13
27	40.500	15	12
26	39,000	15	11
25	37,500	14	11
24	36.000	14	10
23	34.500	13	10

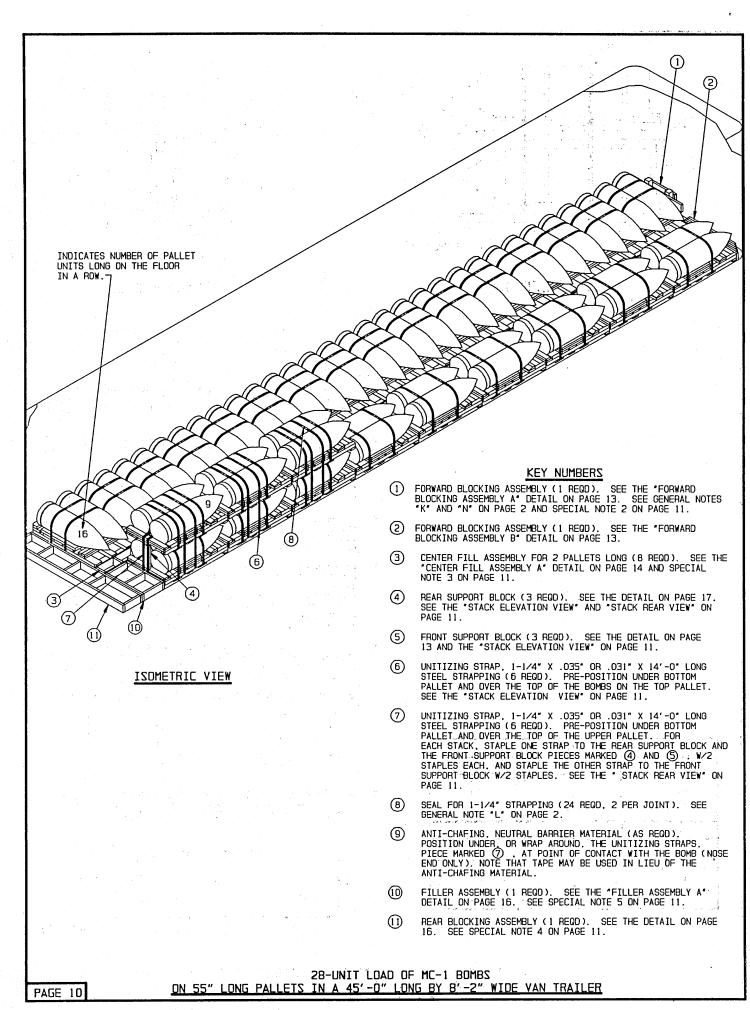
7. IF A 45'-0" LONG TRAILER IS FURNISHED FOR LOADING, REFER TO PAGE 10 FOR LOADING GUIDANCE. IF A 48'-0" LONG TRAILER IS FURNISHED, REFER TO SPECIAL NOTE 7 DN PAGE 11.

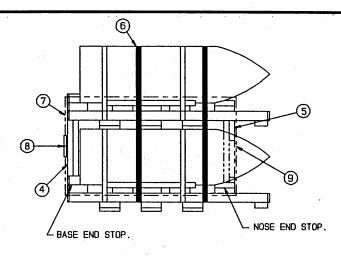
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
	28	

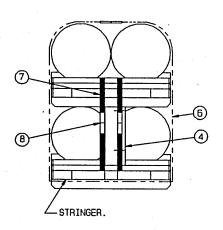
TOTAL WEIGHT - - - - - - 42.466 LBS (APPROX)

28-UNIT LOAD OF MC-1 BOMBS ON 55" LONG PALLETS
IN A 40'-0" LONG BY 7'-8" WIDE VAN TRAILER









STACK REAR VIEW

SPECIAL NOTES:

- 1. A 28-UNIT LOAD OF MC-1 CHEMICAL BOMBS PALLETIZED ON A 55° LONG PALLET IS SHOWN IN A 45'-0° LONG BY 8'-2° WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
- 2. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, THE FORWARD BLOCKING ASSEMBLIES, PIECES MARKED ① AND ② WILL NOT BE REQUIRED.
- 3. THE CENTER FILL, PIECE MARKED (3), IS SPECIFIED FOR 2
 PALLETS LONG. IF THE LENGTH OF AVAILABLE 1" X 6" MATERIAL
 WILL CUT MORE EFFICIENTLY, 1-LONG ASSEMBLIES MAY BE USED.
- 4. IF THE SPACE AT THE REAR OF THE TRAILER IS LESS THAN 9°. SOLID FILL TYPE BLOCKING MUST BE USED. SOLID FILL WILL CONSIST OF 2° X 6° AND/OR 1° X 6° MATERIAL POSITIONED ON EDGE. LAMINATE W/1 APPROPRIATELY SIZED NAIL EVERY 18°.
- 5. EACH ROW OF PALLET UNITS WILL PROBABLY NOT BE THE SAME LENGTH. EITHER A FILLER ASSEMBLY AS SHOWN BY PIECE MARKED (1) IN THE LOAD ON PAGE 10 OR A SIMILAR FILLER, OR B' WIDE MATERIAL OF AN APPROPRIATE THICKNESS AND LENGTH MUST BE LAMINATED TO THE FORWARD SIDE OF THE REAR BLOCKING ASSEMBLY. PIECE MARKED (1), OR TO SOLID FILL IF USED, IN LINE WITH THE SHORT ROW TO PROVIDE AN EVEN BEARING SURFACE.
- 5. FOR A LOAD QUANTITY OTHER THAN SHOWN. UNITS SHOULD BE POSITIONED WITH THE NUMBER OF CROSSWISE AND LENGTHWISE UNITS IN A ROW AS FOLLOWS IN ORDER TO PROVIDE THE BEST LATERAL WEIGHT DISTRIBUTION:

NO. UNITS LOAD WEIGHT (LABS) NO. CROSSWISE NO. LENGTHWISE

30 29	45.000 43.500	17 16	13 13
27	40.500	15	12
26	39.000	15	11
25	37,500	14	11
24	36,000	14	10
27	34 500	13	10

7. IF A 48'-0" LONG TRAILER IS FURNISHED FOR LOADING, TWO PALLET UNITS CAN BE OMITTED FROM THE TOP LAYER AND PLACED ON THE FLOOR, ONE IN EACH ROW. A "FILLER ASSEMBLY B", AS DETAILED ON PAGE 15. WILL THEN BE USED AT THE REAR OF THE CROSSWISE ROW IN LIEU OF USING PIECE MARKED (1) AT THE REAR OF THE LENGTHWISE ROW.

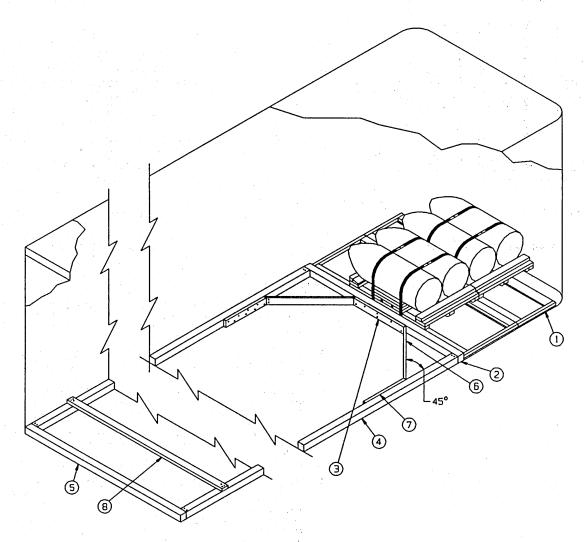
LOAD AS SHOWN

I I EM	QUANTITY	WEIGHT (APPROX)
PALLET UNI DUNNAGE	IT 28	
*****	TOTAL WEIGHT	- 42.337 LBS (APPROX)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" × 6" 2" X 2" 2" X 4" 2" X 6" 4" X 4"	86 10 9 95 4	43 4 6 95 6
NAILS	NO. REQD	POUNDS
6d (2°) 10d (3°)	240 134	1-1/2 2-1/4

STEEL STRAPPING. 1-1/4" - - 168' REQD - - - - 24 LBS SEAL FOR 1-1/4" STRAPPING - - 24 REQD - - 1-1\4 LBS STAPLE. 15/16" X 3/4" - - - 18 REQD - - - - NIL ANTI-CHAFING MATERIAL - - AS REQD - - - - NIL

28-UNIT LOAD OF MC-1 BOMBS ON 55" LONG PALLETS
IN A 45'-0" LONG BY 8'-2" WIDE VAN TRAILER



ISOMETRIC VIEW

SPECIAL NOTES:

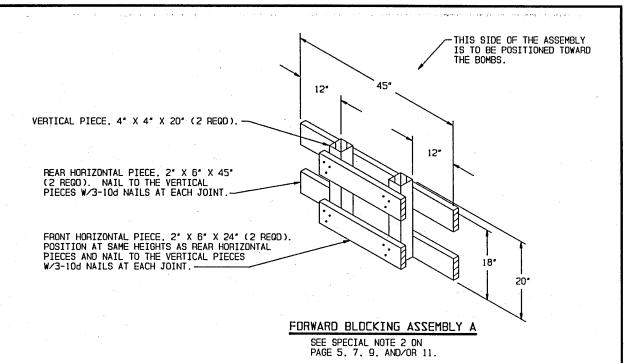
- THESE LTL PROCEDURES DEPICT THE USE OF BOTH "K-BRACE BLOCKING AND NAILED FLOORLINE BLOCKING FOR THE BRACING OF A PARTIAL SHIPMENT. SEE SPECIAL NOTE 5.
- 2. THE "K-BRACE" BLOCKING PIECES MARKED ② THRU ⑧, IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 24,000 POLINIS.
- 3. THE SIDE BLOCKING, PIECE MARKED (), CONSISTS OF THE INTERMEDIATE SPACER ASSEMBLY CONSTRUCTED TO FIT BETWEEN THE SKIDS OF THE PALLET UNIT AND THE TRAILER SIDEWALL MINUS 1/2". NOTE THAT THE PALLET UNIT SHALL BE POSITIONED SO THE SKIDS OF THE PALLET (NOT THE BOMBS) ARE CENTERED IN THE WIDTH OF THE TRAILER ALSO NOTE THAT IF THE TRAILER HAS ROUNDED FRONT CORNERS AS SHOWN, THE 32" DIMENSION OF THE SIDE BLOCKING MUST BE REDUCED BY THE AMOUNT OF THE RADIUS OF THE CORNER.
- 4. THE HE BOMBS ON 45-1/2" LONG PALLETS ARE SHOWN. IF MC-I BOMBS ARE BEING LOADED, PIECE MARKED ① AT THE NOSE END OF THE PALLET UNITS MUST BE REPLACED WITH A "FILLER ASSEMBLY A" CONSTRUCTED TO FIT BETWEEN THE PALLET STRINGERS AND THE TRAILER SIDEWALL MINUS 1/2".
- 5. IF DESIRED IN TRAILERS EQUIPPED WITH NAILABLE FLOORS, A NAILED HEADER MAY BE USED FOR REAR BLOCKING. THE HEADER WILL BE DOUBLED 2" X 4" X 48" PIECES CENTERED ON THE SKIDS OF THE PALLET. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/10-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST PIECE IN A LIKE MANNER. THE NAILED HEADER WILL RETAIN THE MAXIMUM LENGTH ROW OF PALLET UNITS.

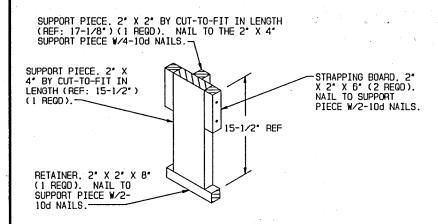
KEY NUMBERS

- SIDE BLOCKING (4 REOD). SEE THE "INTERMEDIATE SPACER
 ASSEMBLY" DETAIL ON PAGE 15 AND SPECIAL NOTES 3 AND
 4 AT LEFT.
- (2) HEADER 4" X 4" BY TRAILER WIDTH (CUT TO FIT) (1 REOD). SEE SPECIAL NOTE 5 AT LEFT.
- ③ SPACER CLEAT, 2" X 4" X 30" (1 REOD). NAIL TO PIECE MARKED ② W∕6-12d NAILS.
- 4 SIDE STRUT, 4" X 4" BY CUT TO FIT (2 REOD). TOENAIL TO PIECES MARKED ② AND ⑤ W/2-16d NAILS AT EACH END.
- (5) CROSS BRACE, 4" X 4" BY TRAILER WIDTH (CUT TO FIT)
- (6) DIAGONAL BRACE, 2" X 4" BY CUT TO FIT (2 REOD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT 45° ANGLE AS SHOWN AND NAIL TO PIECES MARKED (2) AND (4) W/2-16d NAILS AT EACH END.
- (7) SIDE CLEAT, 2" X 4" X 24" (2 REOD). NAIL TO PIECE MARKED (4) W/8-12d NAILS.
- (B) STRUT BRACING, 2" X 4" BY TRAILER WIDTH (CUT TO FIT) (MINIMUM OF 1 REOO). POSITION EVERY 7'-0". NAIL TO PIECES MARKED (4) W/3-12d NAILS AT EACH END.

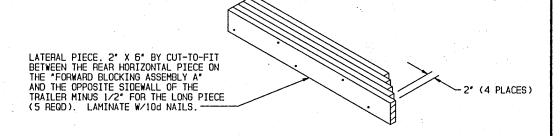
PAGE 12

TYPICAL LTL





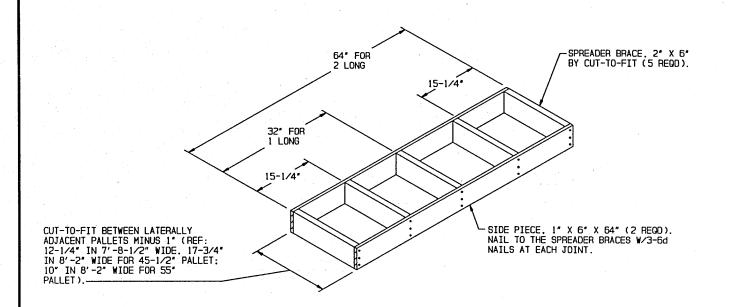
FRONT SUPPORT BLOCK



FORWARD BLOCKING ASSEMBLY B

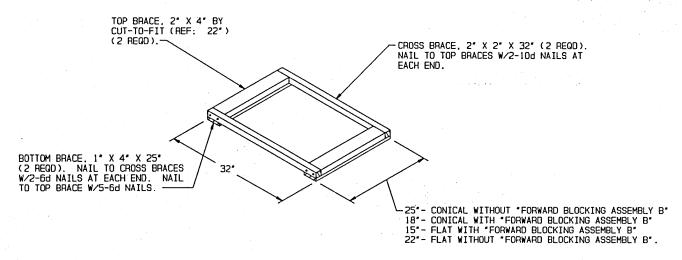
SEE SPECIAL NOTE 2 ON PAGE 5, 7, 9, AND/OR 11.

DETAILS

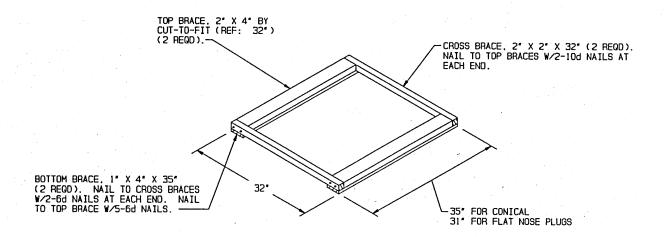


CENTER FILL ASSEMBLY A

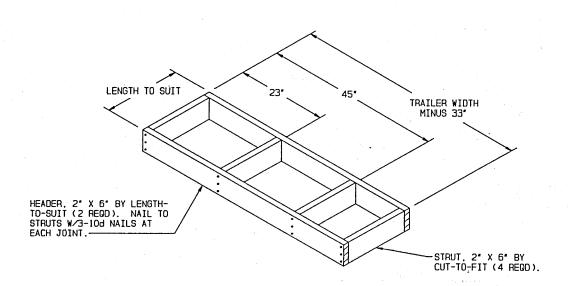
SEE SPECIAL NOTE 4 ON PAGE 5 AND/OR 7 AND SPECIAL NOTE 3 ON PAGE 11.



FORWARD SPACER ASSEMBLY



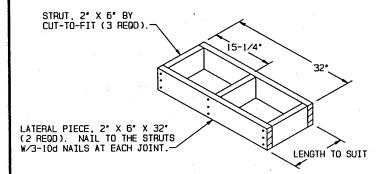
INTERMEDIATE SPACER ASSEMBLY



FILLER ASSEMBLY B

TO BE USED TO FILL EXCESS SPACE GREATER THAN 9° BETWEEN THE END OF A PALLET ROW OF BOMBS CROSSWISE AND THE REAR BLOCKING ASSEMBLY OR SOLID FILL. AS APPLICABLE.

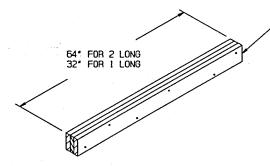
DETAILS



FILLER ASSEMBLY A

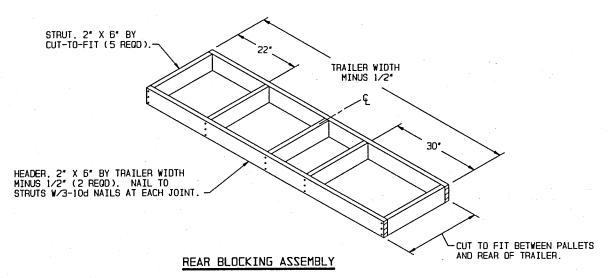
TO BE USED TO FILL EXCESS SPACE GREATER THAN 9° BETWEEN THE END OF A PALLET ROW OF LENGTHWISE BOMBS AND THE REAR BLOCKING ASSEMBLY, OR SOLID FILL, AS APPLICABLE. THIS ASSEMBLY IS ALSO FOR USE AS SIDE BLOCKING FOR MC-1 BOMBS IN AN LTL LOAD. SEE SPECIAL NOTE 4 ON PAGE 12.

LONGITUDINAL PIECE. 2° X 6° MATERIAL OF A LENGTH-TO-SUIT (TRIPLED) (1 REQD).
LAMINATE THE SECOND PIECE TO THE FIRST W/1-10d NAIL EVERY 12°. LAMINATE THE THIRD PIECE IN A LIKE MANNER.



CENTER FILL ASSEMBLY B

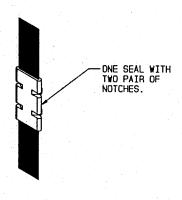
ONLY FOR 55" LONG PALLETS IN A TRAILER APPROXIMATELY 7'-8-1/2" WIDE.

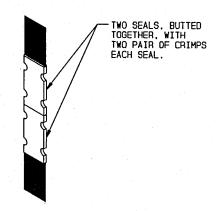


THIS TYPE OF BLOCKING IS REQUIRED WHEN EXCESS SPACE AT THE REAR OF THE LADING MEASURES 9" OR MORE. FOR EXCESS SPACE LESS THAN 9" USE SOLID FILL. 6" WIDE MATERIAL BY TRAILER WIDTH BY THICKNESS REQUIRED TO CONTACT THE REAR DOORS WHEN THEY ARE CLOSED. LAMINATE IT W/Sd APPLICABLY SIZED NAILS.

PAGE 16

DETAILS





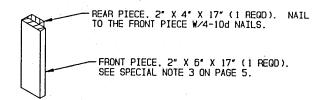
STRAP JOINT A

METHOD OF SECURING A STRAP JOINT WHEN USING A NOTCH-TYPE SEALER.

STRAP JOINT B

METHOD OF SECURING A STRAP JOINT WHEN USING A CRIMP-TYPE SEALER.

END-DVER-END LAP JOINT DETAILS



REAR SUPPORT BLOCK

SEE SPECIAL NOTE 3 ON PAGE 5 AND/OR 7.

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