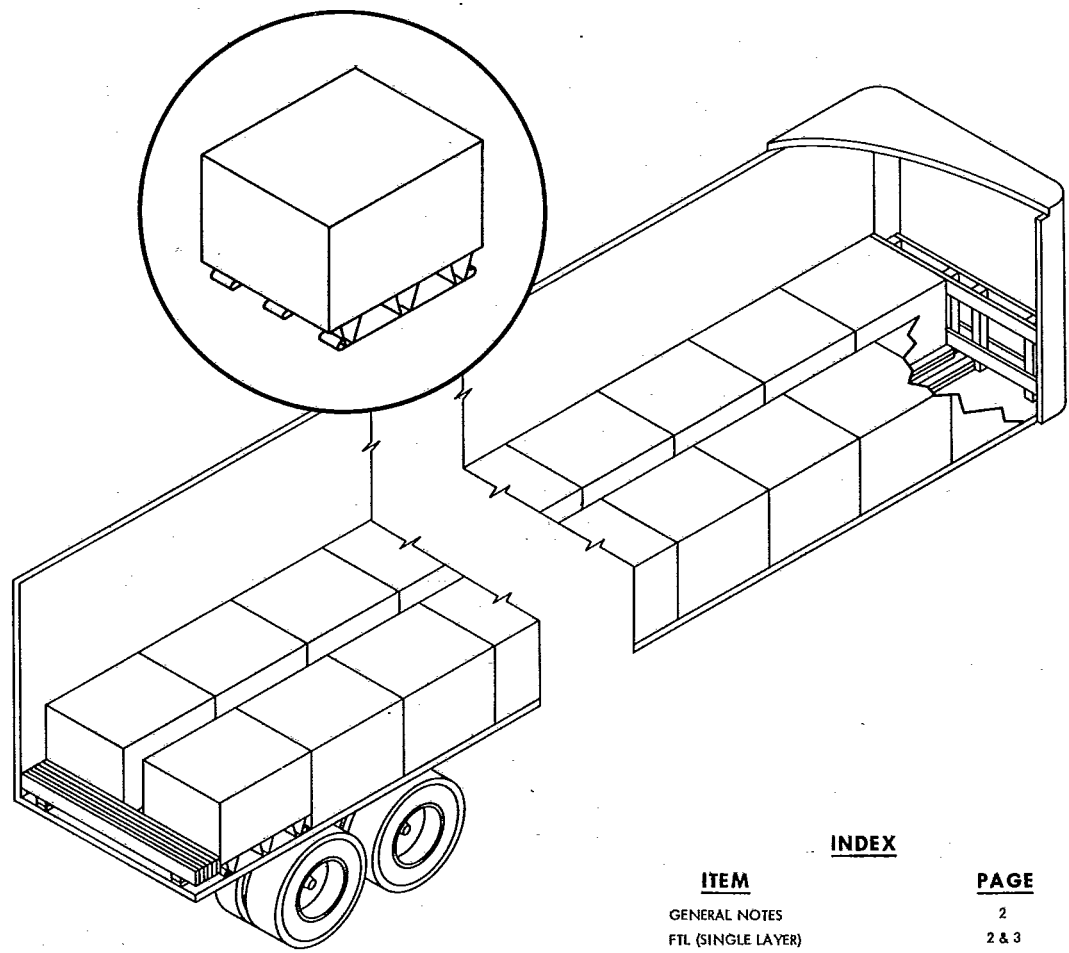


49401

MILITARY STANDARD
TRUCKLOADING OF HAZARDOUS MATERIALS
PALLETIZED UNIT LOADS
DOUBLE ROW PATTERN

MIL-STD-1320-2
(NAVY)
 29 JANUARY 1975
 SUPERSEDING
 WR-51/2A
 22 AUGUST 1967



- NOTES:**
1. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
 2. FOR CROSS REFERENCE TO ASSOCIATED PALLETIZING, CONTAINER-LOADING AND CARLOADING MILITARY STANDARDS. REFER TO INDEX TO STANDARDS, MIL-HDBK-236.

ITEM	INDEX	PAGE
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FTL (SINGLE LAYER)		2 & 3
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DETAILS		6
LTL		7
UNITIZING DETAIL		8

FSC 8140

**AUTHORIZED AND RELEASED
 FOR HIGHWAY SHIPMENTS
 ONLY**

M.S. Gray NWHL 1/29/75
 SIGNATURE TECHNICAL DIRECTION AGENT (TDA) DATE

J.E. [unclear] 1-29-75
 SIGNATURE SEASYS COMBRY DIRECTION DATE

ORIGINATOR *[Signature]*
 SIGNATURE

NAVAL WEAPONS HANDLING LABORATORY
N A D EARLE, NEW JERSEY

PAGE 1 OF 8

MIL-STD-1320-2 (NAVY)

GENERAL NOTES

1. THE INDEX TO STANDARDS FOR PALLETIZING, TRUCKLOADING, RAILCAR LOADING AND CONTAINER LOADING, MIL-HDBK-236 (NAVY) LISTS WEAPON COMPONENTS AND INDICATES THE CORRECT DOCUMENT TO BE USED IN TRUCKLOADING OF EACH ITEM INDEXED. MIL-HDBK-236 INDEXES THE UNIT LOADS THAT ARE AUTHORIZED TO BE TRUCKLOADED IN ACCORDANCE WITH THIS DOCUMENT.
2. THIS DOCUMENT PROVIDES DETAILED TRUCKLOADING INSTRUCTIONS APPLICABLE TO PALLETIZED UNIT LOADS WHEN THE WIDTH OF THE UNIT LOAD PERMITS LOADING IN THE PATTERN PRESCRIBED.
3. PROCEDURES AND PRACTICES CONTAINED HEREIN ARE INTENDED FOR VAN-TYPE TRAILERS OF ALL LENGTHS. THE TRAILERS MAY HAVE WOOD FLOORS, METAL FLOORS, OR METAL FLOORS WITH WOOD NAILING STRIPS.
4. THE BLOCKING METHODS SHOWN ON PAGES 3, 5 & 7 ARE FOR WOOD FLOOR TRAILERS WITH UNIT LOADS OF DIMENSIONS THAT PERMIT THE PROCEDURES SHOWN. WHEN THE TRAILER HAS METAL FLOORS, METAL FLOORS WITH NAILING STRIPS OR THE CHARACTERISTICS OF UNIT LOAD MAKES BLOCKING AND BRACING SHOWN IMPRACTICABLE TO USE, CHOOSE AN APPROPRIATE ALTERNATE METHOD AS EXPLAINED IN THE SPECIFIC INSTRUCTIONS FOR THE LOAD.
5. A FULL TRUCK LOAD (FTL) CONSISTS OF AS MANY UNIT LOADS AS CAN BE ARRANGED IN THE TRAILER CONSIDERING ITS CUBE, PERMISSIBLE GROSS WEIGHT AND AXLE LOAD LIMITATIONS. IF THESE LIMITATIONS PERMIT, UNIT LOADS MAY BE DOUBLE OR TRIPPLE LAYER IN ACCORDANCE WITH THE PRINCIPLES SET FORTH ON PAGES 4 AND 5.
6. A LESS-THAN-TRUCK LOAD (LTL) SHOULD BE ARRANGED CONSIDERING THE WEIGHT DISTRIBUTION ON THE TRUCK. A TYPICAL LTL IS SHOWN ON PAGE 6.
7. AFTER BLOCKING AND BRACING HAS BEEN INSPECTED, ATTACH SHIPPING DOCUMENT TO INSIDE OF TRAILER IN AN ACCESSIBLE AREA, CLOSE AND SEAL TRAILER DOORS AND ATTACH APPROPRIATE PLACARD (IF REQUIRED) TO BOTH SIDES, FRONT, AND BACK OF TRAILER.
8. APPLICABLE MATERIAL SPECIFICATIONS: DUNNAGE LUMBER, MM-L-75; NAILS FF-N-105, TYPE II, STYLE 10, COMMON BRIGHT; STRAPPING QQ-5-781, TYPE I, CLASS A.
9. FOR GENERAL TRUCKLOADING PROCEDURES REFER TO THE GENERAL TRUCKLOADING DOCUMENT MIL-STD-1320 (NAVY).

PROCEDURE (SINGLE LAYER)

1. THE LOAD SHOWN ON PAGE 3 IS INTENDED TO ILLUSTRATE TYPICAL BLOCKING AND BRACING PROCEDURES FOR A SINGLE LAYER LOAD IN A WOOD FLOOR TRAILER. FOR TRAILERS WITH METAL FLOORS OR METAL FLOORS WITH WOOD NAILING STRIP, USE THE APPROPRIATE AUTHORIZED ALTERNATE BLOCKING METHOD. (SEE NOTE 3 BELOW.)

WARNING

DO NOT NAIL BLOCKING OR BRACING INTO METAL FLOORS.

2. WHEN SPACE BETWEEN PALLETS DOES NOT PERMIT SLEEPERS AGAINST EACH PALLET AS SHOWN ON PAGE 3 OR INSTALLATION IS DIFFICULT, A DOUBLED SLEEPER(S) OF TWO INCH NOMINAL THICKNESS AND APPROPRIATE WIDTH(S) MAY BE USED.

NOTE

WHEN THE SPACE BETWEEN THE UNIT LOADS IS LESS THAN 4 INCHES, BLOCKING TO PREVENT LATERAL MOTION MAY BE OMITTED.

3. WHEN THE TRAILER HAS METAL FLOORS OR WOOD NAILING STRIP THAT WILL NOT ACCOMODATE SLEEPERS, USE SWAY BRACES TO PREVENT LATERAL MOTION AS SHOWN FOR THE LOWER UNIT LOADS IN DETAIL G, PAGE 6.
4. WHEN ALL LOADS ARE IN PLACE, INSTALL REAR BLOCKING. TYPE REQUIRED IS DEPENDENT UPON DISTANCE BETWEEN TRAILER DOOR WHEN CLOSED AND REAR OF LADING. DETERMINE THIS DISTANCE AND INSTALL BLOCKING AS INDICATED BELOW:

DISTANCE LESS THAN 12 INCHES

INSTALL BLOCKING DETAIL B AS SHOWN ON PAGE 3.

CAUTION

REAR BLOCKING MUST BEAR AGAINST TRAILER DOOR WHEN DOOR IS IN CLOSED POSITION. DO NOT USE TRAILERS WITH ROLL UP DOORS.

DISTANCE 12 TO 36 INCHES

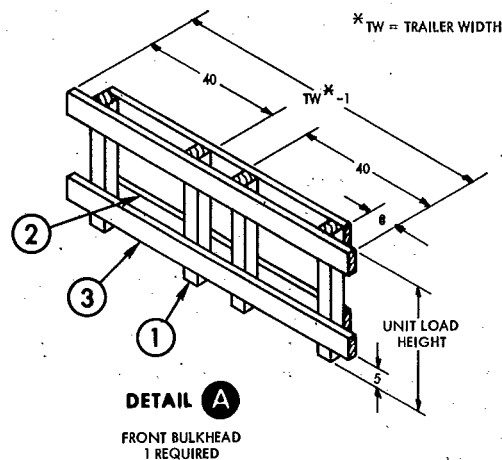
INSTALL BLOCKING DETAIL E AS SHOWN ON PAGE 5.

CAUTION

REAR BLOCKING MUST BEAR AGAINST TRAILER DOOR WHEN DOOR IS IN CLOSED POSITION. DO NOT USE TRAILERS WITH ROLL UP DOORS.

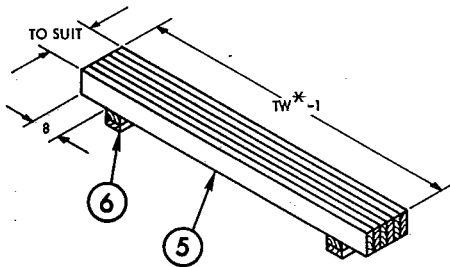
DISTANCE GREATER THAN 36 INCHES

INSTALL BLOCKING AS SHOWN IN TYPICAL LTL, PAGE 7.



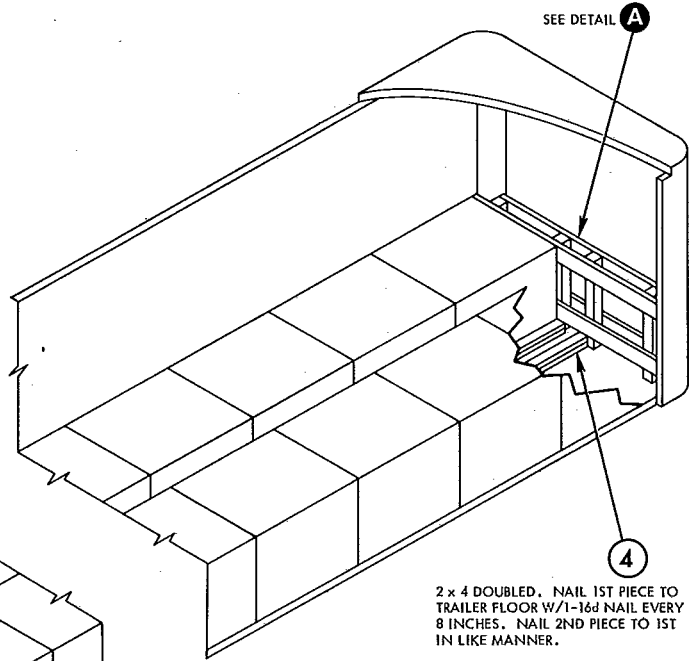
MIL-STD-1320-2 (NAVY)

*TW = TRAILER WIDTH



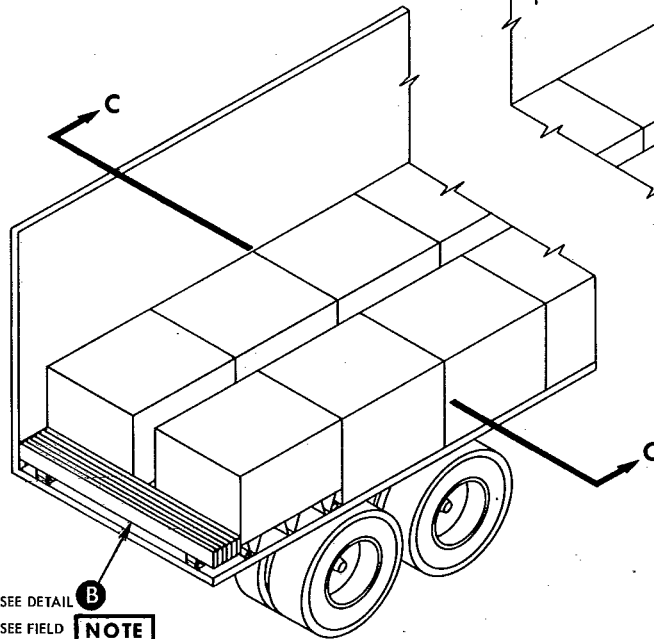
DETAIL B

REAR BLOCKING ASSEMBLY
1 REQUIRED



2 x 4 DOUBLED. NAIL 1ST PIECE TO TRAILER FLOOR W/1-16d NAIL EVERY 8 INCHES. NAIL 2ND PIECE TO 1ST IN LIKE MANNER.

SEE PROCEDURE NOTE 3.

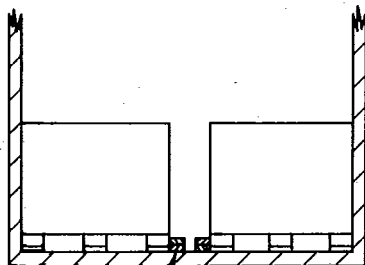


SEE DETAIL B
SEE FIELD

NOTE

NOTE

THIS DRAWING ILLUSTRATES A LOAD WHEN THE DISTANCE BETWEEN THE LADING AND THE TRAILER DOORS, WHEN CLOSED, IS 12 INCHES OR LESS. SEE SINGLE LAYER PROCEDURE NOTE 4 FOR DETAILED INSTRUCTIONS FOR THIS AND OTHER CONFIGURATIONS.



4

SECTION C-C

*TW = TRAILER WIDTH

PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER	SIZE
6	SUPPORT	2 x 4 TO SUIT	4	5 6	3 3	10d 10d
5	SOLID FILL	THICKNESS TO SUIT x 6 x TW*-1	AS REQD	LAMINATE	6/PIECE	TO SUIT
4	SLEEPER	2 x 4 TO SUIT	AS REQD	SEE FIELD NOTE		
3	AFT CROSSMEMBER	2 x 6 x TW*-1	2	1	3/JOINT	12d
2	FWD CROSSMEMBER	2 x 6 TO SUIT	2	1	3/JOINT	12d
1	VERTICAL	4 x 4 x UNIT LOAD HEIGHT	4	SEE 2 & 3	-	-
LIST OF MATERIALS AND NAILING DATA						

FTL SINGLE LAYER (ALL LENGTH TRAILERS)