

NOTICE OF  
VALIDATION

INCH FOUND

MIL-STD-1320/172(OS)

NOTICE 2

14 March 1989

MILITARY SPECIFICATION

TRUCKLOADING DISPENSER AND BOMB AIRCRAFT  
CBU-59/B, COMPLETE (AFAM) DISPENSER AND BOMB,  
AIRCRAFT, CBU-59(T-1)/B, TRAINING IN CONTAINER  
MK 427 MOD 1 FLEET ISSUE UNIT LOADS

MIL-STD-1320/172(OS) dated 12 Jan. 1976 , has been reviewed and determined to be valid for use in acquisition.

Preparing Activity:  
Navy - OS

AMSC N/A

FSC 8140

DISTRIBUTION STATEMENT A: Approved for public release,  
distribution is unlimited.

MILITARY STANDARD  
TRUCKLOADING  
Dispenser and Bomb, Aircraft, CBU-59/B, Complete (APAM)  
Dispenser and Bomb, Aircraft, CBU-59(T-1)/B, Training  
in Container Mk 427 Mod 1  
Fleet Issue Unit Load

TO ALL HOLDERS OF MIL-STD-1320-172 (NAVY)

Page 2

1. In general note 5, delete "Chains and load binders are not authorized for this load as they will cause the load to exceed 96 inches in width." and substitute "Chains and load binders may be used interchangeably with steel strap for tie-downs on a 1 to 1 basis. Chain, fittings and loadbinders shall meet the requirement of and installed in accordance with the basic Truckloading Document, MIL-STD-1320 (NAVY)
2. In general note 5, delete "Class A" and substitute "Heavy Duty, Finish A, B, or C."

Review Activities:

NAVY - OS, AS

Preparing Activity:

NAVY - OS  
(Project No. 8140-N195)

# MILITARY STANDARD

MIL-STD-1320-172  
(NAVY)

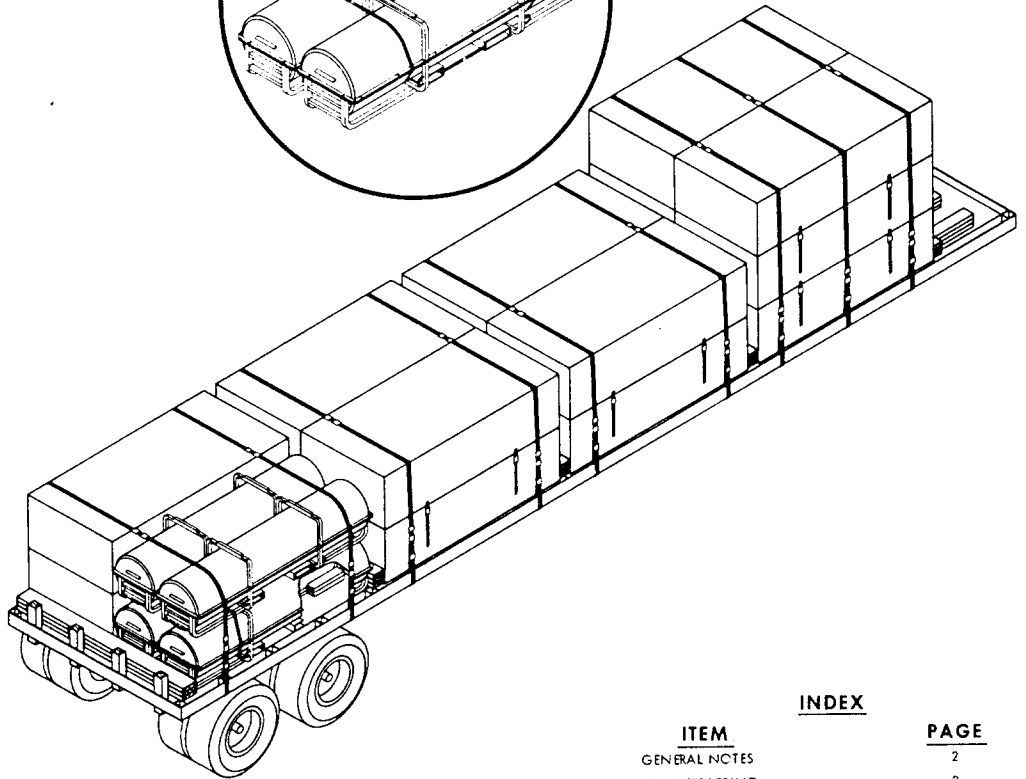
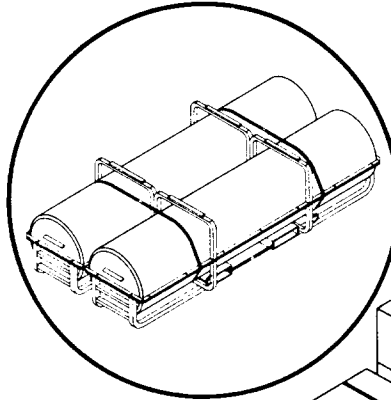
## TRUCKLOADING

DISPENSER AND BOMB, AIRCRAFT, CBU-59/B, COMPLETE (APAM)  
DISPENSER AND BOMB, AIRCRAFT, CBU-59(T-1)/B, TRAINING  
IN CONTAINER MK 427 MOD 1  
FLEET ISSUE UNIT LOAD

12 JANUARY 1976

### UNIT LOAD DATA

DIMENSIONS ..... L-103, W-47, H-52  
WEIGHT (APPROX) ..... 2368 LBS  
CUBE ..... 73.9 CU. FT.  
DOT HAZARD CLASSIFICATION:  
CBU-59/B ..... EXPLOSIVES A  
CBU-59(T-1)/B ..... EXPLOSIVES C  
UNIT LOAD DWG ..... WR-54/286



**NOTES:**

- UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
- FOR CROSS REFERENCE TO ASSOCIATED PALLETIZING, CONTAINERLOADING AND CARLOADING MILITARY STANDARDS. REFER TO INDEX TO STANDARDS, MIL-HDBK-236. (NAVY).

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FSC 8140

**AUTHORIZED AND  
RELEASED FOR HIGHWAY  
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*M.S. Gray* *NWHL* *12/15/75*  
SIGNATURE TECHNICAL DIRECTION AGENT (TDA) DATE  
*J.E. Kelly* *12/15/75*  
SIGNATURE AIR SYSCOM BY DIRECTION DATE

ORIGINATOR

*Charles M. Brooks* *12/15/75*  
SIGNATURE

NAVAL WEAPONS HANDLING LABORATORY  
WPNSTA EARLE, NEW JERSEY

PAGE 1 OF 6

# MIL-STD-1320-172 (NAVY)

## GENERAL NOTES

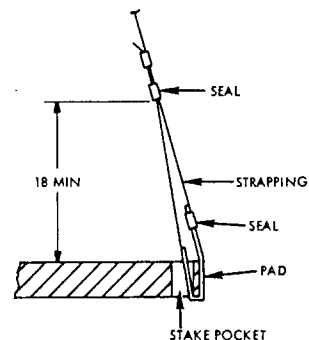
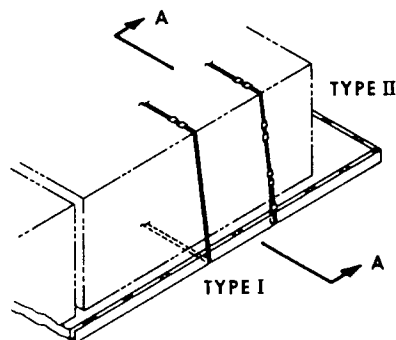
1. THIS DOCUMENT GIVES DETAILED INSTRUCTIONS FOR TRUCKLOADING THE DISPENSER AND BOMB, AIRCRAFT CBU-59/B, COMPLETE (APAM) AND CBU-59(T-1)/B, TRAINING, IN CONTAINER MK 427 MCD 1. THE CONTAINERS SHALL BE UNITIZED IN ACCORDANCE WITH WR-54/286.
2. PROCEDURE AND PRACTICES DESCRIBED HEREIN ARE INTENDED FOR A 40 FT FLATBED TRAILER. THE TRAILER'S TANDEM AXLES SHALL BE LOCATED IN THE "WESTERN" POSITION (AT THE EXTREME REAR OF THE TRAILER). DO NOT USE TRAILERS WITH METAL FLOORS.
3. WHEN THE UNIT LOADS ARE STACKED TWO (2) OR MORE HIGH, THEY SHALL BE STACKED AND STRAPPED AS SHOWN ON PAGE 6.
4. SLEEPER, PIECE NO. 3, MUST BE PREPOSITIONED. IT SHOULD BE LOCATED AGAINST THE INSIDE EDGE OF THE INBOARD RUNNER OF THE CONTAINER AS SHOWN IN SECTION C-C.
5. HOLD-DOWN STRAPS SHALL BE 2 X .050 AND APPLIED AS SPECIFIED BY THE LOAD STRAPPING REQUIREMENT SHOWN BELOW.

### NOTE

CHAINS AND LOAD BINDERS ARE NOT AUTHORIZED FOR THIS LOAD AS THEY WILL CAUSE THE LOAD TO EXCEED 96 INCHES IN WIDTH.

6. THE MAXIMUM GROSS WEIGHT OF THE TRACTOR-TRAILER AND THE ALLOWABLE AXLE WEIGHTS ARE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THESE LIMITATIONS AND THE SHIPPER SHALL LOAD THE TRAILER IN SUCH A MANNER THAT THE TRACTOR-TRAILER WILL NOT EXCEED THESE LIMITATIONS.
7. AFTER BLOCKING AND BRACING HAS BEEN INSPECTED, ATTACH SHIPPING DOCUMENTS TO AN ACCESSIBLE AREA AND ATTACH APPROPRIATE PLACARD (SEE UNIT LOAD DATA, PAGE 1) TO BOTH SIDES, FRONT, AND BACK OF TRAILER.
8. APPLICABLE MATERIAL SPECIFICATIONS: DUNNAGE LUMBER, MM-L-751; 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.

## LOAD STRAPPING



SECTION A-A

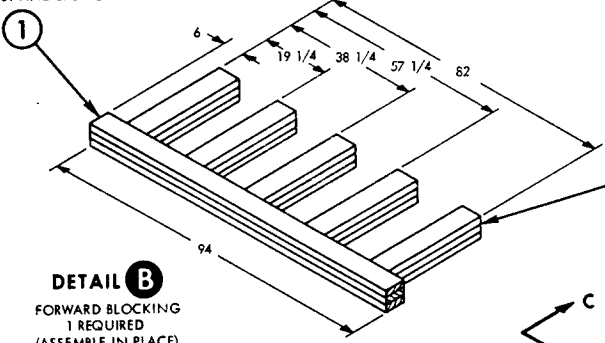
### TIE-DOWN STRAPPING

THE FOLLOWING TWO METHODS OF TIE-DOWN STRAPPING ARE APPROVED FOR USE WITH THE SHIPMENT OF LOADS ON FLATBED TRAILERS. STEEL STRAPPING SHALL BE IN ACCORDANCE WITH FEDERAL SPECIFICATION QQ-5-781. STRAPPING SEALS SHALL HAVE A MINIMUM TENSILE STRENGTH EQUAL TO 75 PERCENT OF THE STRAP STRENGTH. FOR EACH OF THE TYPES ILLUSTRATED ABOVE IT IS PREFERRED TO POSITION, TENSION, AND DOUBLE CRIMP THE STRAP SEALS AT THE TOP OF THE LOAD, IF PRACTICABLE.

TYPE I - CONTINUOUS STRAPPING AROUND THE FLATBED AND THE LOAD.

TYPE II - THE STRAPPING IS SECURED TO THE STAKE POCKETS, ONE PIECE ON EACH SIDE OF THE TRAILER, AND IS BROUGHT UP OVER THE LOAD, TENSIONED, AND SEALED WITH TWO DOUBLE-CRIMPED SEALS ON THE TOP. METHOD OF SECURING STRAPPING TO STAKE POCKET IS SHOWN IN SECTION A-A. THE SHORT END IS ON THE INSIDE AND IS SECURED WITH TWO DOUBLE-CRIMPED SEALS AT A MINIMUM OF 18 INCHES ABOVE THE TRAILER BED. A STAKE POCKET PAD (A SHORT PIECE OF THE SAME STRAPPING 18 INCHES LONG) IS INSERTED BETWEEN THE MAIN STRAP AND THE STAKE POCKET AND IS SECURED TO THE MAIN STRAP WITH A SEAL AS SHOWN.

2 X 6 TRIPLED CENTERED ACROSS TRAILER. NAIL 1ST PIECE TO TRAILER FLOOR W/1-16d NAIL EVERY 8 INCHES. NAIL 2ND PIECE TO 1ST AND 3RD TO 2ND IN LIKE MANNER.

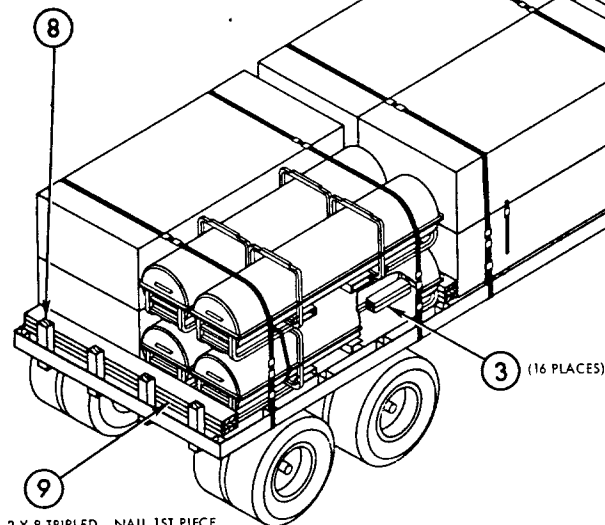


**DETAIL B**  
FORWARD BLOCKING  
1 REQUIRED  
(ASSEMBLE IN PLACE)

2 X 6 TRIPLED. NAIL 1ST PIECE TO TRAILER FLOOR W/6-16d NAILS. NAIL 2ND PIECE TO 1ST PIECE AND 3RD PIECE TO 2ND PIECE IN LIKE MANNER.

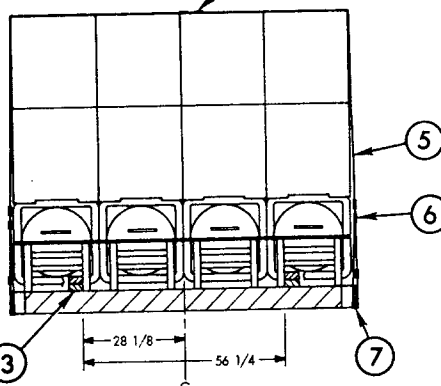
**NOTE**  
UNIT LOAD STRAPS  
OMITTED FOR CLARITY

STUB STAKE (4 MIN REQ'D). SIZE TO FIT STAKE POCKET, CUT TO EXTEND APPROX 9" ABOVE TRAILER FLOOR AND 3" BELOW STAKE POCKET. DRIVE 1-20d NAIL INTO STAKE BELOW STACK POCKET ALLOWING APPROX 1" TO PROTRUDE TO PREVENT STAKE FROM WORKING OUT OF PLACE.



2 X 6 TRIPLED. NAIL 1ST PIECE TO TRAILER FLOOR W/1-16d NAIL EVERY 8 INCHES. NAIL 2ND PIECE TO 1ST AND 3RD TO 2ND IN LIKE MANNER.

2 X 8 TRIPLED. NAIL 1ST PIECE TO TRAILER FLOOR W/1-16d NAIL EVERY 8 INCHES. NAIL 2ND PIECE TO 1ST AND 3RD TO 2ND IN LIKE MANNER.



2 X 4 DOUBLED. NAIL 1ST PIECE TO TRAILER FLOOR W/6-20d NAILS. NAIL 2ND PIECE TO 1ST IN LIKE MANNER.

**SECTION C-C**

**TRUCKLOAD DATA**

NUMBER OF UNIT LOADS ..... 18  
NUMBER OF CONTAINERS ..... 36  
WEIGHT (APPROX) ..... 42, 624 LBS

PIECE NO.	DESCRIPTION	SIZE	NO. OF PIECES REQ'D	NAIL TO	NUMBER	SIZE
11	SEAL	FOR 1 1/4 IN. STRAP	20	-	-	-
10	UNITIZING STRAP	1 1/4 X .035 X 13 FT 0	20	SEE PAGE 7		
9	AFT CROSS MEMBER	2 X 8 X 92	3	SEE FIELD NOTE		
8	STUB STAKE	TO SUIT	4 MIN.	SEE FIELD NOTE		
7	STAKE POCKET PAD (STRAPPING)	2 X .050 X 24	18	-	-	-
6	SEAL	FOR 2 INCH STRAP	72	-	-	-
5	TIE DOWN STRAP	2 X .050 X LENGTH TO SUIT	9	SEE LOAD STRAPPING, PAGE 2		
4	SEPARATOR	2 X 6 X 92	9	SEE FIELD NOTE		
3	SLEEPER	2 X 4 X 18	32	SEE SECTION B-B		
2	CLEAT	2 X 6 X 30	15	SEE DETAIL A		
1	FWD CROSS MEMBER	2 X 6 X 92	3	SEE DETAIL A		
LIST OF MATERIALS & NAILING DATA						

MIL-STD-1320-172 (NAVY)

LTL 40 FT TRAILER (FLATBED)

1. WHEN REQUIRED TO SHIP LESS-THAN-TRUCKLOAD, SELECT THE CORRECT LOAD PATTERN FOR THE NUMBER OF UNIT LOADS TO BE SHIPPED FROM TABLE I AND POSITION THE UNIT LOADS ON THE TRAILER ACCORDINGLY.

**NOTE**

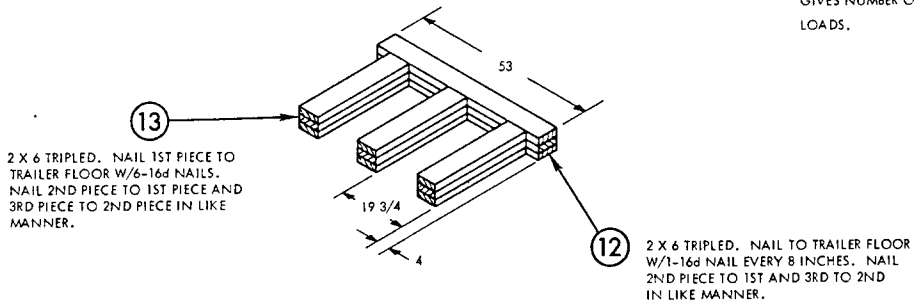
STACKS OF CONTAINERS 3 HIGH REQUIRE 3 HOLD-DOWN STRAPS. ALL OTHERS REQUIRE 2 HOLD-DOWN STRAPS.

2. WHEN LOADING 14 TO 17 UNIT LOADS, BLOCK, BRACE AND TIE DOWN THE LOAD USING THE PRINCIPLES SHOWN ON PAGE 3.
3. WHEN LOADING 13 OR LESS UNIT LOADS, BLOCK, BRACE AND TIE DOWN THE LOAD USING THE PRINCIPLES SHOWN ON PAGE 5. LTL LOADS OF 2, 4, 6, 8, 10, 12 AND 13 UNIT LOADS SHALL BE BLOCKED AT THE REAR OF THE LOAD USING DETAIL B, PAGE 2.
4. THE LTL ON PAGE 5 IS FOR 11 UNIT LOADS AND SHOWS THE CORRECT BLOCKING, BRACING AND TIE DOWNS FOR A LOAD OF THIS QUANTITY.
5. ACTUAL SHIPPING REQUIREMENTS WILL DETERMINE THE NUMBER OF UNIT LOADS TO BE SHIPPED. THE LOAD PATTERN, BLOCKING, BRACING AND TIE DOWNS SHALL BE IN ACCORDANCE WITH THE APPROPRIATE PARTS OF THIS MILITARY STANDARD AND THE GENERAL TRUCKLOADING DOCUMENT, MIL-STD-1320 (NAVY).

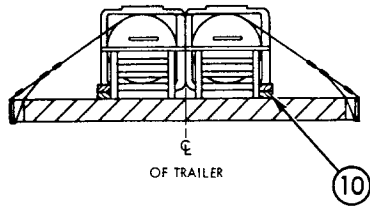
**TABLE I**  
LOAD PATTERN \*

NO. OF UNIT LOADS	FWD →	NO. OF UNIT LOADS	FWD →	NO. OF UNIT LOADS	FWD →
17		11		5	
16		10		4	
15		9		3	
14		8		2	
13		7		1	
12		6			

\* LOAD PATTERN GIVES FLOOR PLAN FOR TRAILER. NUMBER IN BLOCKS GIVES NUMBER OF LAYERS OF UNIT LOADS.



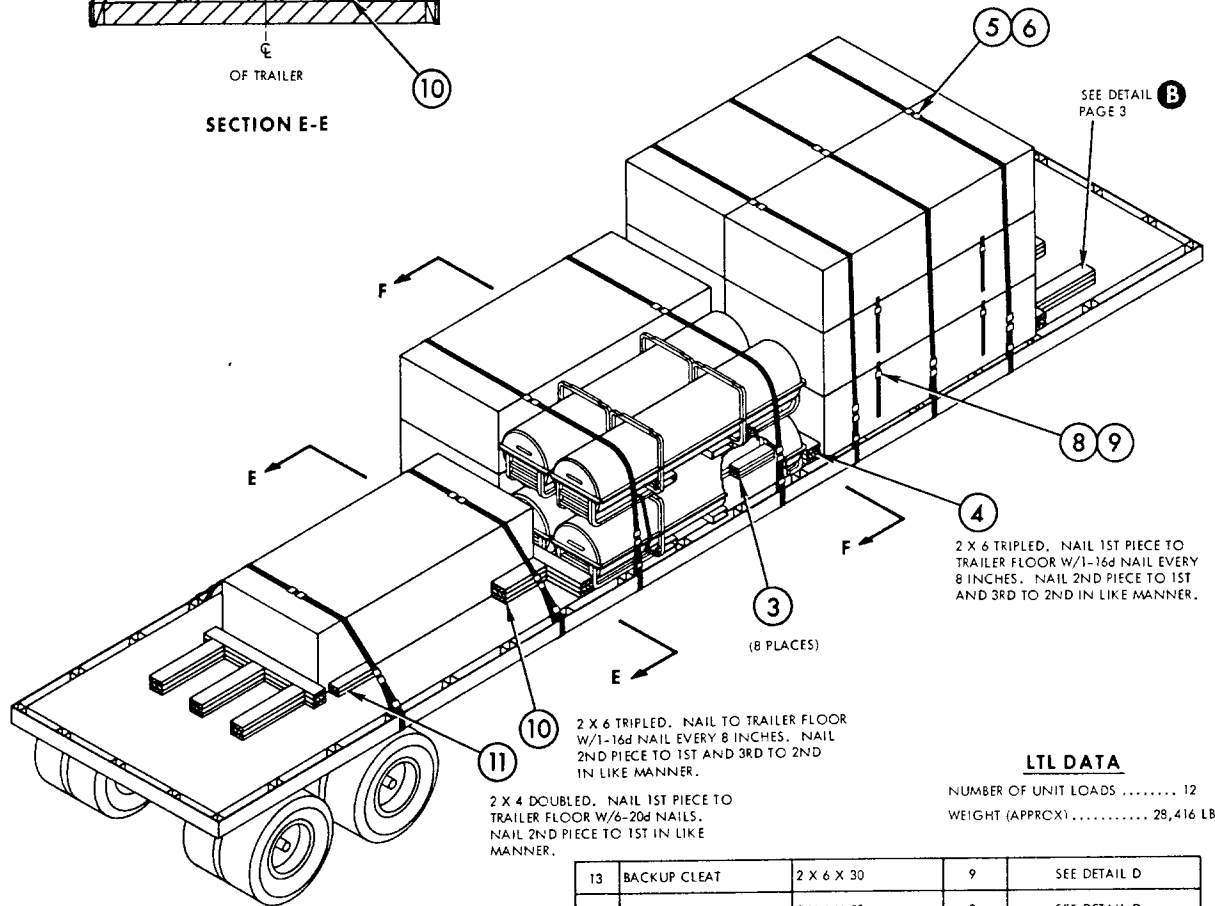
**DETAIL D**  
REAR BLOCKING ASSEMBLY  
(SEE LTL NOTE 3)



SECTION E-E

**NOTE**

UNIT LOAD STRAPS  
OMITTED FOR CLARITY



SEE DETAIL **B**  
PAGE 3

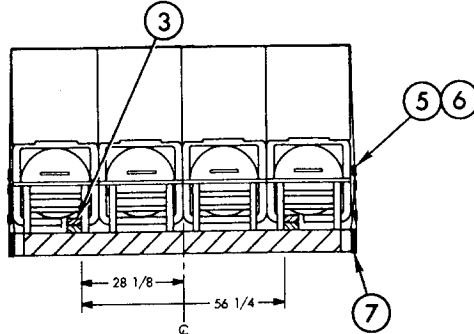
2 X 6 TRIPLED. NAIL 1ST PIECE TO TRAILER FLOOR W/1-16d NAIL EVERY 8 INCHES. NAIL 2ND AND 3RD TO 2ND IN LIKE MANNER.

(8 PLACES)

2 X 6 TRIPLED. NAIL TO TRAILER FLOOR W/1-16d NAIL EVERY 8 INCHES. NAIL 2ND PIECE TO 1ST AND 3RD TO 2ND IN LIKE MANNER.

2 X 4 DOUBLED. NAIL 1ST PIECE TO TRAILER FLOOR W/6-20d NAILS. NAIL 2ND PIECE TO 1ST IN LIKE MANNER.

2 X 4 DOUBLED. NAIL 1ST PIECE TO TRAILER FLOOR W/6-20d NAILS. NAIL 2ND PIECE TO 1ST IN LIKE MANNER.



SECTION F-F

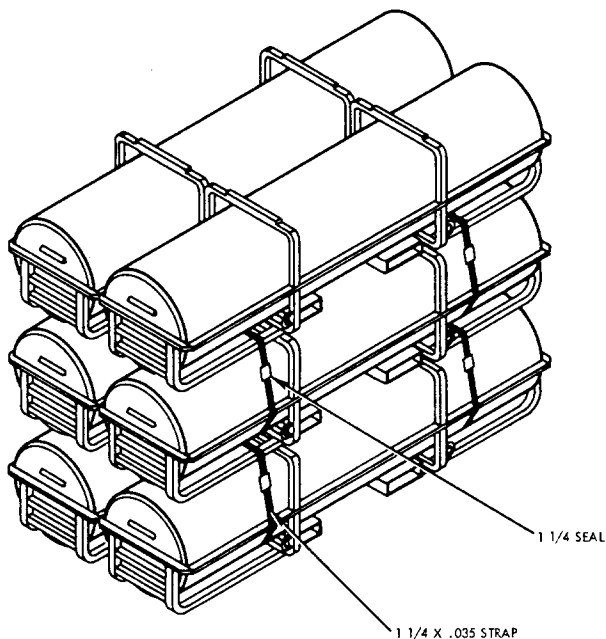
**LTL DATA**

NUMBER OF UNIT LOADS ..... 12  
WEIGHT (APPROX) ..... 28,416 LBS

13	BACKUP CLEAT	2 X 6 X 30	9	SEE DETAIL D		
12	AFT CROSSMEMBERS	2 X 6 X 53	3	SEE DETAIL D		
11	SLEEPER	2 X 4 X 18	4	SEE FIELD NOTE		
10	BACK UP	2 X 6 X 20	6	SEE FIELD NOTE		
9	SEAL	FOR 1 1/4 IN. STRAP	12	-	-	-
8	UNITIZING STRAP	1 1/4 X .035 X 13 FT 0	12	-	-	-
7	PAD (STRAPPING)	2 X .050 X 24	14	-	-	-
6	SEAL	FOR 2 IN. STRAP	56	-	-	-
5	TIE DOWN STRAP	2 X .050 X LENGTH TO SUIT	7	SEE LOAD STRAPPING, PAGE 2		
4	SEPARATOR	2 X 6 X 92	6	SEE FIELD NOTE		
3	SLEEPER	2 X 4 X 18	16	SEE SECTION F-F		
2	CLEAT	2 X 6 X 30	15	SEE DETAIL B, PAGE 3		
1	FWD CROSSMEMBER	2 X 6 X 92	3	SEE DETAIL B, PAGE 3		
PIECE NO.	DESCRIPTION	SIZE	NO. OF PIECES REQ'D	NAIL TO	NUMBER	SIZE
						NAILS

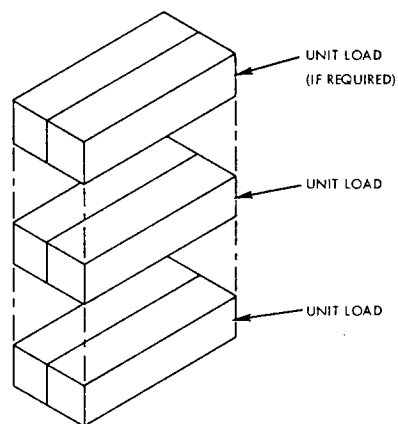
LIST OF MATERIALS & NAILING DATA

## STACKING AND STRAPPING PROCEDURE



DETAIL **G**

**NOTE**  
UNIT LOAD STRAPS  
OMITTED FOR CLARITY



DETAIL **H**

1. USING A FORK LIFT TRUCK, STACK TWO (2) OR THREE (3) UNIT LOADS, AS REQUIRED, TOGETHER AS SHOWN IN DETAILS G & H. BE SURE TO ALIGN THE STACKING FEATURES.
2. THE MIDDLE CONTAINERS ARE STRAPPED TO THE BOTTOM CONTAINERS AND THE TOP CONTAINERS TO THE MIDDLE CONTAINERS USING 1 1/4 X .035 STEEL STRAPPING, TENSIONED AND SEALED WITH DOUBLE CRIMPED SEAL. THE STRAPS PASS OVER THE SKIDS OF THE UPPER CONTAINER AND UNDER THE BODY OF THE LOWER CONTAINER.

**CAUTION**

TENSION STRAPS SUFFICIENT TO INSURE  
INTEGRITY OF STACK. DO NOT OVER TENSION.

**WARNING**

THE STRAPPING TOGETHER OF UNIT LOADS  
TO FORM A UNIT OF CONTAINERS TWO (2) OR  
THREE (3) HIGH IS AUTHORIZED FOR LOADING  
AND UNLOADING OF TRAILERS ONLY. ANY  
MOVEMENT OF THESE LOADS IS LIMITED TO THAT  
NECESSARY TO LOAD OR UNLOAD THE TRAILER.

REVIEW ACTIVITY:  
NAVY - CS, AS

PREPARING ACTIVITY:  
NAVY - CS  
(PROJECT NO. 8140-N312)