

# MILITARY STANDARD

MIL-STD-1320-278

## TRUCKLOADING

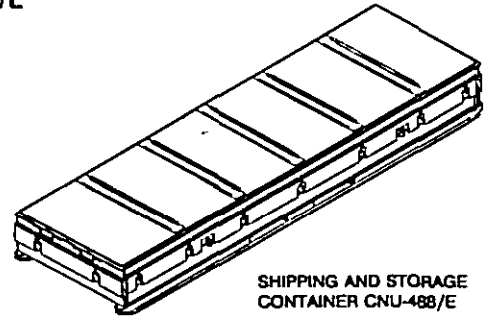
(NAVY)

25 OCTOBER 1993

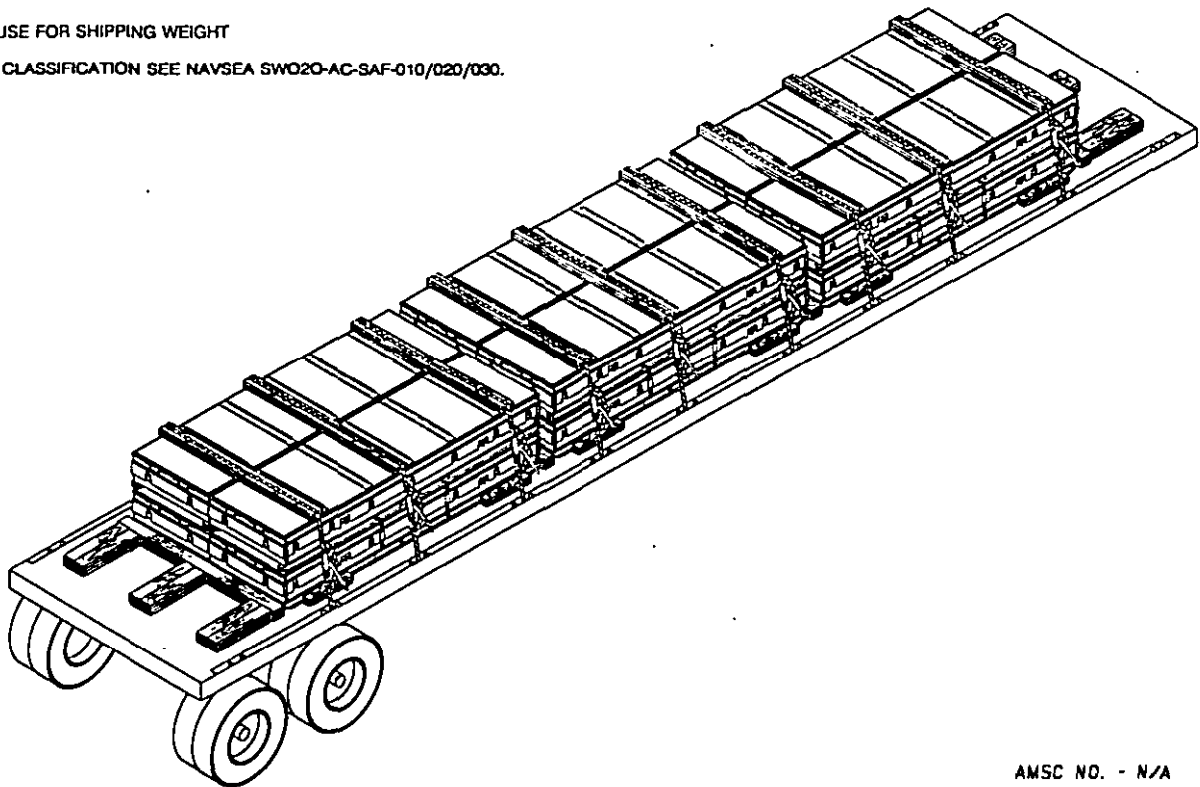
### ACOUSTIC DEVICE COUNTERMEASURE (ADC) IN CONTAINER CNU-488/E

#### CONTAINER DATA

NUMBER OF ITEMS PER CONTAINER ..... 4  
 WEIGHT OF ONE ADC ..... 580 LBS  
 EMPTY WEIGHT OF ONE CONTAINER ..... 544 LBS ♦  
 GROSS WEIGHT OF ONE CONTAINER ..... 2,874 LBS ♦  
 CONTAINER DIMENSIONS:  
 LENGTH ..... 145 1/2  
 WIDTH ..... 42 1/16  
 HEIGHT ..... 18 1/2  
 STACKING HEIGHT ..... 17 3/4  
 CUBE ..... 65.75 CU FT



♦ DO NOT USE FOR SHIPPING WEIGHT  
 FOR HAZARD CLASSIFICATION SEE NAVSEA SWO20-AC-SAF-010/020/030.



AMSC NO. - N/A

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#### NOTES:

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

FSC 8140

REV LTR	REVISION DESCRIPTION	DATE	TDA	SYSCOM
			APPROVAL	

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FOR HIGHWAY SHIPMENT ONLY.

*C. Smith* 93-10-19  
SIGNATURE TDA, WPNSTA EARLE DATE  
*H. Lawrence* 93-10-25  
SIGNATURE BY DIRECTION DATE

ORIGINATOR *[Signature]* 93-10-19  
DATE  
WPNSTA EARLE, NEW JERSEY  
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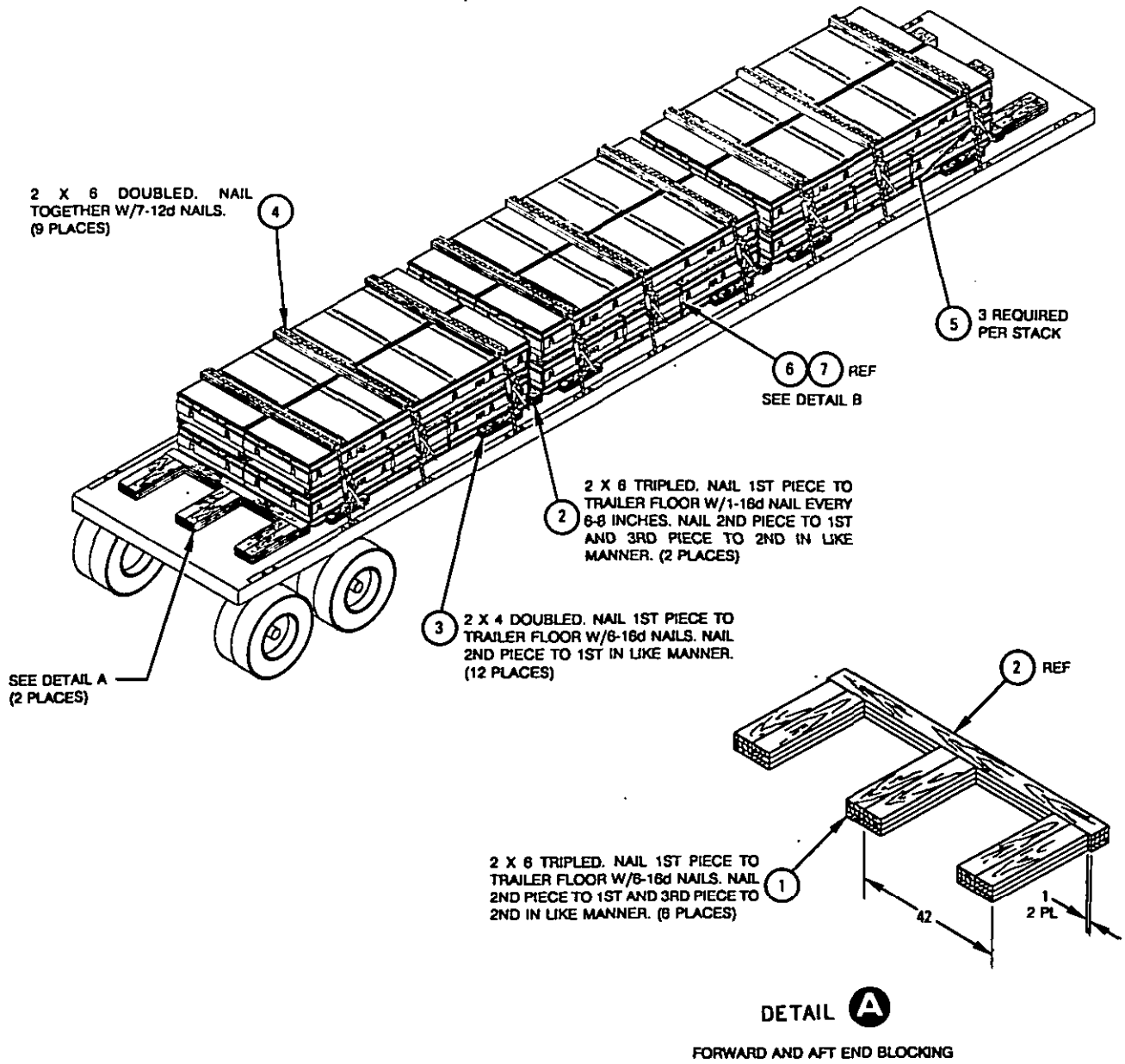
**GENERAL NOTES:**

1. THIS DOCUMENT GIVES DETAILED INSTRUCTIONS FOR TRUCKLOADING THE ACOUSTIC DEVICE COUNTERMEASURE (ADC) IN THE SHIPPING AND STORAGE CONTAINER CNU-488/E.
2. THE PROCEDURES DESCRIBED HEREIN ARE INTENDED FOR FLATBED TRAILERS OR TRUCKS. DO NOT USE TRAILERS OR TRUCKS WITH ALL METAL FLOORS.
3. CHAINS AND STEEL STRAPPING MAY BE USED INTERCHANGEABLY ON A ONE-TO-ONE BASIS FOR TIEDOWNS.
4. STEEL STRAPPING USED AS TIEDOWNS SHALL BE 2 X .050 AND SHALL CONFORM TO AND BE APPLIED AS SPECIFIED IN THE GENERAL TRUCKLOADING DOCUMENT, MIL-STD-1320 (NAVY).
5. CHAINS, FITTINGS, AND LOAD BINDERS SHALL CONFORM TO AND BE APPLIED AS SPECIFIED IN THE GENERAL TRUCKLOADING DOCUMENT, MIL-STD-1320 (NAVY), EXCEPT THAT THE CHAIN/GRAB HOOKS SHALL BE ATTACHED TO THE STAKE POCKETS (NOT AROUND THE RUB RAIL).
6. PROTECTOR BOARDS (DOUBLED 2 X 6'S) SHALL BE USED UNDER THE TIEDOWNS. STEEL STRAPS SHALL BE SECURED TO THE PROTECTOR BOARDS USING 2-INCH STRAPPING STAPLES. WHEN USING CHAIN, THE CHAINS SHALL BE SECURED TO THE PROTECTOR BOARD BY DRIVING A 10d NAIL THROUGH THE CHAIN LINK AND CLINCHING THE NAIL OVER THE CHAIN. FIVE STAPLES/NAIIS SHALL BE USED FOR EACH TIEDOWN.
7. THE MAXIMUM NUMBER OF CONTAINERS THAT CAN BE LOADED ONTO A TRAILER IS AS FOLLOWS.

44 FT AND LONGER TRAILERS .....	12 CONTAINERS
31 THRU 43 FT TRAILERS .....	8 CONTAINERS
19 THRU 30 FT TRAILERS .....	4 CONTAINERS

8. PRIOR TO LOADING THE TRAILER AND DURING PRELOADING INSPECTION REQUIRED BY NAVSEA OP 2165 AND REPORTED ON DD FORM 628, THE CHAINS, FITTINGS, AND LOAD BINDERS SHALL BE INSPECTED FOR STRETCH, GOUGING, BENT LINKS, WEAR, AND ANY OTHER NOTICEABLE DEFECTS. THE INSPECTOR SHALL CONFIRM THAT THE CHAINS, FITTINGS, AND LOAD BINDERS HAVE BEEN INSPECTED AND SHALL SO NOTE IN ITEM NO. 22 OF DD FORM 628. ANY DEFICIENCY SHALL BE CAUSE FOR REJECTION OF A CHAIN OR LOAD BINDER.
9. UNLESS OTHERWISE SPECIFIED, DUNNAGE LUMBER, STEEL STRAPPING, STRAP SEALS, AND NAILS SHALL BE AS SPECIFIED IN THE GENERAL TRUCKLOADING DOCUMENT MIL-STD-1320 (NAVY).
10. 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.
11. AFTER THE BLOCKING, BRACING, AND TIEDOWNS HAVE BEEN INSPECTED, THE LOAD SHALL BE COMPLETELY COVERED WITH FIRE RESISTANT, WATERPROOF TARPULINS. THE TARPULINS MAY BE UNDER THE PROTECTOR BOARDS AND THE TIEDOWNS.
12. AFTER THE TARPULINS ARE IN PLACE, ATTACH THE PROPER EXPLOSIVES PLACARDS TO BOTH SIDES, FRONT, AND BACK OF THE TRAILER, AND ATTACH THE SHIPPING DOCUMENTS TO AN ACCESSIBLE AREA ON THE BACK DECK OF THE TRAILER.
13. FOR GENERAL TRUCKLOADING PROCEDURES REFER TO THE GENERAL TRUCKLOADING DOCUMENT MIL-STD-1320 (NAVY).

FTL 44 FT AND LONGER TRAILERS (FLATBED)



10	SLEEPER, INTERNAL	WOOD	2 X 4 X 36 1/4
9	PROTECTOR BOARD, 1-WIDE STACK	WOOD	2 X 6 X 42
8	CROSSMEMBER, 1-WIDE STACK	WOOD	2 X 6 X 44
7	STRAP SEAL	STEEL	1 1/4" SIZE
6	UNITIZING STRAP	STEEL	1 1/4 X .035 X 11 FT
5	CHAIN & LOADBINDER	STEEL	
4	PROTECTOR BOARD	WOOD	2 X 6 X 84
3	SLEEPER, EXTERNAL	WOOD	2 X 4 X 24
2	CROSSMEMBER	WOOD	2 X 6 X 86
1	BACKUP CLEAT	WOOD	2 X 6 X 30
ITEM	DESCRIPTION	MAT'L/DWG	DIMENSIONS

**LIST OF MATERIALS**

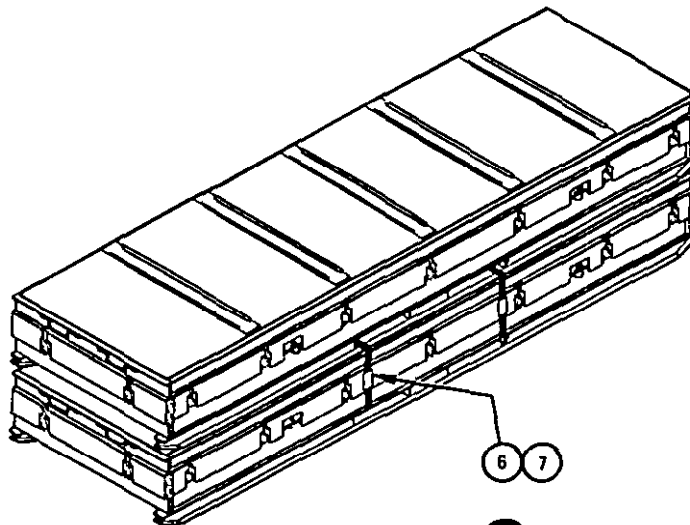
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**MIL-STD-1320-278 (NAVY)****UNITIZING PROCEDURE**

1. USING A FORKLIFT TRUCK, CAREFULLY STACK ONE CNU-488/E CONTAINER ON TOP OF ANOTHER CNU-488/E CONTAINER AS SHOWN IN DETAIL B. BE SURE TO ALIGN THE STACKING FEATURES.
2. THREAD TWO STEEL STRAPS, ITEM 6, THROUGH THE FORK POCKETS OF BOTH CONTAINERS AS SHOWN IN DETAIL B. TENSION AND SECURE EACH STRAP WITH ONE DOUBLE NOTCHED SEAL, ITEM 7.

**DEUNITIZING PROCEDURE**

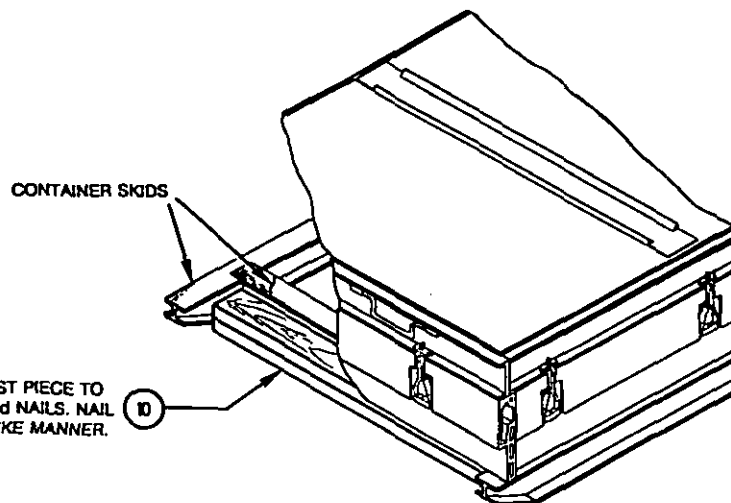
1. CUT AND REMOVE STRAPPING
2. REMOVE TOP CONTAINER.

**NOTE**

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

**DETAIL B****ALTERNATE METHOD FOR SIDE BLOCKING**

1. INTERNAL SLEEPERS, ITEM 10, SHALL BE USED AS SHOWN BELOW WHEN THERE IS INSUFFICIENT NAILING SPACE FOR EXTERNAL SLEEPERS, ITEM 3.
2. INTERNAL SLEEPERS SHALL BE PREPOSITIONED ON THE TRAILER FLOOR AS NECESSARY.



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

**LTL NOTES:**

1. LESS THAN FULL LOAD SHIPMENTS MAY BE ARRANGED ON THE TRAILER IN ANY MANNER USING THE ALLOWABLE STACK CONFIGURATIONS SHOWN BELOW (SEE GENERAL TRUCKLOADING DOCUMENT FOR DEFINITION OF THE WORD "STACK").



4 CONTAINERS



2 CONTAINERS

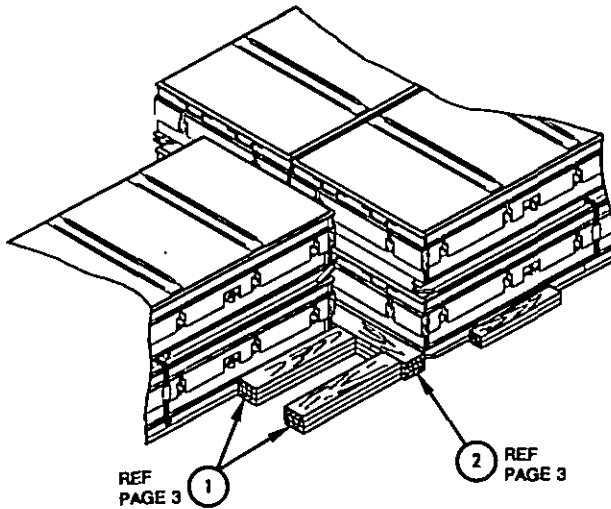


2 CONTAINERS



1 CONTAINER

2. THREE CONTAINERS CANNOT BE LOADED IN A SINGLE STACK.
3. USE THE LTL BLOCKING AND BRACING PRINCIPLES SHOWN IN DETAILS C AND D WHEN NECESSARY.
4. STACKS WITH ONE OR TWO CONTAINERS ONLY REQUIRE TWO TIEDOWNS.



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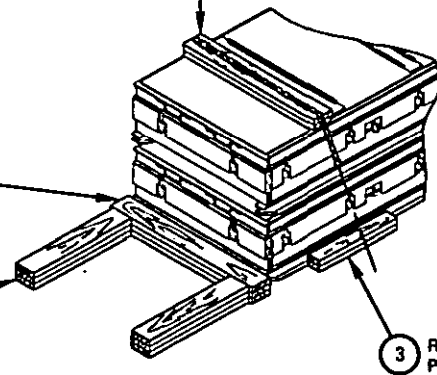
**DETAIL C**

BLOCKING FOR INTERFACE BETWEEN TWO AND ONE-WIDE STACKS

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

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9 2 X 6 DOUBLED. NAIL TOGETHER W/5-12d NAILS.



**DETAIL D**

END AND SIDE BLOCKING AND PROTECTOR BOARDS FOR ONE-WIDE STACK