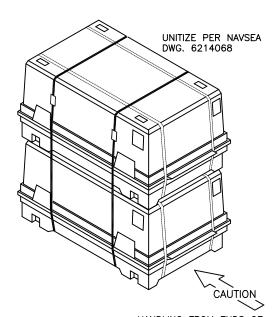
# **TRUCKLOAD**

## GUIDANCE SETS (KMU-556, KMU-557, KMU-558, KMU-559 OR KMU-572 SERIES) IN SHIPPING & STORAGE CONTAINERS, CNU-589A/E OR CNU-589/E

CONTAINER DIMENSIONS:	<u>CNU-589/E</u>	<u>C1</u>	<u>  NU-589A</u>	<u>Έ</u>	
OVERALL DIMENSIONS ( L x W x H )	32.3	31.	2 x 42 x 32 8 4 CU-FT	.4	
CONTAINER DATA  GROSS WEIGHT OF CONTAINER (CNU-589/E)  TARE WEIGHT OF CONTAINER (CNU-589A/E)  TARE WEIGHT OF CONTAINER (CNU-589A/E)	167 LBS 503 LBS	KMU-557 558 LBS 167 LBS 602 LBS 211 LBS	KMU-558 566 LBS 167 LBS 610 LBS 211 LBS	KMU-559 357 LBS 167 LBS 401 LBS 211 LBS	KMU-572 N/A 167 LBS 631 LBS 211 LBS
UNIT LOAD DIMENSIONS:  OVERALL DIMENSIONS ( L x W x H )	. 64.6	65 63	NU-589A/ .2 × 42 × 64 .6 1.7 CU-FT	<del>_</del>	
UNIT LOAD DATA  GROSS WEIGHT OF UNIT LOAD (CNU-589/E)  GROSS WEIGHT OF UNIT LOAD (CNU-589A/E)		<u>KMU-557</u> 1119 LBS 1207 LBS	<u>KMU-558</u> 1135 LBS 1223 LBS	<u>KMU-559</u> 717 LBS 805 LBS	<u>KMU-572</u> N/A 1265 LBS



#### NOTES:

- GROSS WEIGHT IS ESTIMATED ONLY. DO NOT USE FOR SHIPPING WEIGHT.
- 2. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.
- 2. SEE SW020-AC-SAF-010 FOR THE FOLLOWING INFORMATION:
  - A.) CROSS REFERENCE TO ASSOCIATED PALLETIZING, CONTAINER LOADING AND CAR LOADING MILITARY STANDARDS.
  - B.) HAZARD CLASSIFICATION

С	SEE NSWC IND DET EARLE ECP 104059	2011-10-17	S/ MB	S/ RAS
В	SEE NSWC IND DET EARLE ECP 102060	2002-8-6	S/ AVS	S/ KHZ
Α	SEE NSWC IND DET EARLE ECP 102025	2002-5-3	S/ AVS	S/ KHZ
REV.	REVISION DESCRIPTION	DATE	TDA	SYSCOM

HANDLING FROM ENDS OF UNIT LOAD REQUIRES USE OF FORKLIFT EQUIPPED WITH 40" MINIMUM TINE LENGTH.

REV.	REVISION DESCRIPTION				DATE	TDA	SYSCOM			
TECH DATA MANAGEMENT S/ A STANTON 1999-7-8			DISTRIBUTION STATEMENT A APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED							
SYSTEMS ENG. SUPERVISOR S/ G BENDER 1999-7-8			REC	QUIREMENTS	FOR CO	NSTRUCTION O	F THIS LOAD	SHALL CO	NSIST OF	
			THIS DOCUMENT & THE LATEST ISSUE OF MIL-STD-1320 (NAVY)							
S/	S/ K.H. ZIMMS 1999/7/8			THIS LOAD IS AUTHORIZED & RELEASED FOR						
NAVSEASYSCOM ( BY DIRECTION )							HIGHWAY SHIPM		.b TON	
DEPARTMENT OF I NAVAL SEA SYSTEMS ARLINGTON, VA 22:			CAGE CODE 53711		DWG	NO.	6214	089	REV.	$\bigcirc$
		42-5160	SIZE A					PAGE 1	OF	11

### **GENERAL NOTES:**

- 1. THIS DOCUMENT PROVIDES INSTRUCTIONS FOR TRUCKLOADING JDAM GUIDANCE SETS (KMU-556/B, KMU-557/B, KMU-558/B, KMU-559/B OR KMU-572/B) PACKAGED IN THE CNU-589A/E OR CNU-589/E SHIPPING AND STORAGE CONTAINER.
- 2. PROCEDURES FOR LOADING CONTAINERS ONTO BOTH FLATBED AND ENCLOSED VAN TRAILERS ARE PROVIDED.

  - PAGES 4 AND 5: FLATBED TRAILERS 96"-102" WIDE.
     PAGES 7 AND 8: VAN TRAILERS USING INFLATABLE DUNNAGE AND WOOD
     PAGES 9 THRU 11: VAN TRAILERS USING ALL WOOD DUNNAGE
- 3. BECAUSE THIS LOADING PLAN RELIES SIGNIFICANTLY ON WOOD DUNNAGE NAILED TO THE TRAILER FLOOR. THE FLOOR OF THE TRAILER SHALL BE PREDOMINANTLY WOOD.
- 4. LOADED CONTAINERS ARE PERMITTED TO BE STACKED THREE HIGH INTO VAN TRAILERS ONLY. IN ORDER TO ENSURE CONTINUOUS ENGAGEMENT OF THE STACKING FEATURES, STACKED CONTAINERS SHALL BE BANDED TOGETHER WITH STEEL STRAPPING AS SHOWN IN NAVSEA DRAWING 6214068 AND IN DETAIL A ON PAGE 6.
- 5. SEE DETAIL A ON PAGE 6, UNITIZING PROCEDURE, FOR VAN TRAILERS ONLY. WHEN SHIPPING EMPTY CONTAINERS, 3/4 X .031-.035 STRAPPING MAY BE USED IN LIEU OF THE SPECIFIED 1-1/4" STRAPPING.
- 6. LUMBER SHALL CONFORM TO VOLUNTARY PRODUCT STANDARD PS 20-2005 (AMERICAN SOFTWOOD LUMBER STANDARD).
- 7. UNITED NATIONS (UN), INTERNATIONAL PLANT PROTECTION COMMISSION (IPPC) RESTRICTIONS REGARDING SOLID WOOD PACKAGING MATERIAL (WPM): IN ACCORDANCE WITH THE REQUIREMENTS OF INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES (ISPM) 15 "GUIDELINES FOR REGULATING WOOD PACKAGING MATERIAL IN INTERNATIONAL TRADE," THE FOLLOWING COMMERCIAL HEAT TREATMENT PROCESS HAS BEEN APPROVED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) AND IS REQUIRED FOR ALL PROCESS HAS BEEN APPROVED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) AND IS REQUIRED FOR ALL NON-MANUFACTURED WPM. WPM SHALL BE CONSTRUCTED FROM HEAT TREATED (HT TO 56 DEGREES CENTIGRADE FOR 30 MINUTES) LUMBER AND CERTIFIED BY AN ACCREDITED AGENCY RECOGNIZED BY THE ALSC IN ACCORDANCE WITH WOOD PACKAGING MATERIAL POLICY AND WOOD PACKAGING MATERIAL ENFORCEMENT REGULATIONS (HTTP://WWW.ALSC.ORG). EACH PIECE OF WOOD MUST INCLUDE CERTIFICATION MARKINGS IN ACCORDANCE WITH ALSC STANDARDS AND BE PLACED IN AN UNOBSTRUCTED AREA THAT WILL BE READILY VISIBLE TO INSPECTORS. FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS RESTRICTION MAY RESULT IN REFUSAL, DESTRUCTION, OR TREATMENT OF MATERIALS AT THE POINT OF ENTRY, POSSIBLY CAUSING UNACCEPTABLE DELAY IN DELIVERY OF NEEDED PARTS.
- 8. NAILS SHALL CONFORM TO ASTM F1667 DESIGNATION F1667 NL CM S XX B, WHERE "XX" DESIGNATES THE SIZE (I.E., 10d, 16d, 20d, ETC.).
- 9. A STAGGERED NAILING PATTERN WILL BE USED WHEN NAILS ARE DRIVEN INTO FLOOR DUNNAGE. THE NAILING PATTERN WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN TRAILER FLOOR BOARDS. THE NAILING FOR AN UPPER PIECE OF FLOOR DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN NEAR A NAIL IN A LOWER PIECE.
- 10. COMBINATION OF STACKS CONTAINING 1, 2, 4 OR 6 CONTAINERS MAY BE USED FOR LESS THAN FULL LOADS. A STACK CONSISTING OF THREE CONTAINERS (I.E. TWO CONTAINERS POSITIONED NEXT TO A SINGLE CONTAINERS) IS NOT PERMITTED ON BOTH FLATBED AND VAN TRAILERS. A ONE-WIDE AND TWO-HIGH STACK OF CONTAINERS BY ITSELF (I.E. 2 CONTAINERS) IS ALSO NOT PERMITTED ON BOTH FLATBED AND VAN TRAILERS.
- 11. TIFDOWN (FLATBED TRAILERS ONLY):
  - A. THE QUANTITY OF TIEDOWN ASSEMBLIES REQUIRED SHALL BE AS SHOWN IN THE ILLUSTRATIONS. ONLY 4-INCH WEB STRAPS SHALL BE USED FOR TIEDOWN.
  - B. WEB STRAP TIEDOWNS SHALL CONFORM TO AND BE APPLIED AS SPECIFIED IN NAVSEA DRAWING 6214037 AND IN THIS
  - C. DURING PRE-LOADING INSPECTION REQUIRED BY NAVSEA SW020-AG-SAF-010, WEB STRAP ASSEMBLIES SHALL BE INSPECTED FOR DEFECTS. THE INSPECTION PROCEDURE FOR WEB STRAPS SHALL BE AS SPECIFIED IN NAVSEA DRAWING 6214037. THE RESULTS OF THESE INSPECTIONS SHALL BE RECORDED IN ITEM 12-T OF DD FORM 626. ANY DEFICIENCY SHALL BE CAUSE FOR REJECTION OF THE WEB STRAP ASSEMBLY.
- 12. 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.
- 13. THE CONTAINERS SHALL BE COMPLETELY COVERED WITH FIRE RESISTANT WATERPROOF TARPAULINS. THE TARPAULINS MAY BE UNDER THE TIEDOWNS (FLATBEDS TRAILERS ONLY).
- 14. USE OF INFLATABLE VINYL DUNNAGE BAGS (VAN TRAILERS ONLY):
  - VINYL DUNNAGE BAGS ARE AUTHORIZED TO BE USED AS LATERAL RESTRAINT IN LIEU OF THE SWAY BRACES CALLED OUT IN SECTION A-A AND THE 2 X 4 SLEEPERS NAILED TO THE FLOOR AS SHOWN IN SECTION B-B.
  - B. THE VINYL DUNNAGE AIR BAG PART NUMBER HO48X48 (SIZE 48" X 48") MANUFACTURED BY CENTERLOAD SHIPPING TECHNOLOGIES HAS BEEN TESTED AND APPROVED FOR USE BY THE US ARMY DEFENSE AMMUNITION CENTER. SEE THEIR TEST REPORT NO. 05-12 (MAY 2005). OTHER VENDORS' AIR BAGS MAY BE QUALIFIED FOR USE BY SUBMITTING SAMPLES FOR TEST AND EVALUATION TO THE DEFENSE AMMUNITION CENTER, TRANSPORTATION ENGINEERING DIVISION, 1C TREE ROAD, MCALISTER, OK 74501-9053
  - C. VINYL DUNNAGE BAGS SHALL BE POSITIONED AS SHOWN IN THE APPROPRIATE ILLUSTRATIONS.
  - D. INFLATION/DEFLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

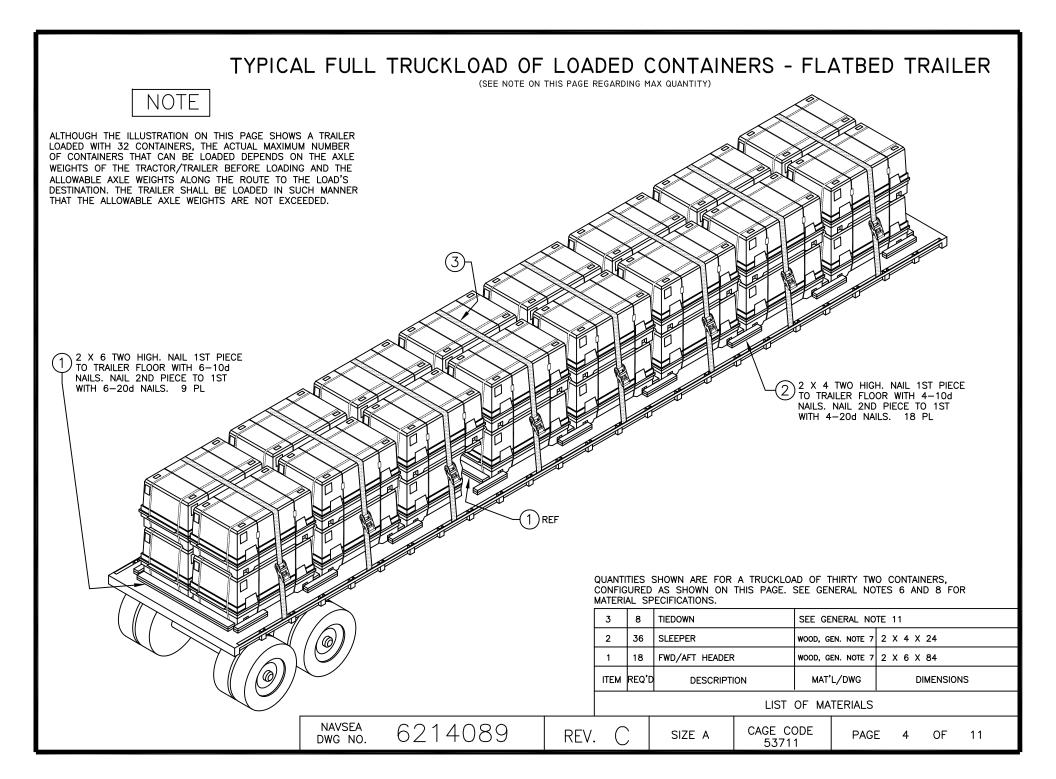
NAVSEA 6214089 CAGE CODE REV. SIZE A PAGE 2 OF 11 DWG NO. 53711

### GENERAL NOTES (CONT'D):

- 15. AFTER THE BLOCKING AND BRACING HAS BEEN INSPECTED, ATTACH THE SHIPPING DOCUMENTS TO AN ACCESSIBLE AREA.
- 16. APPROPRIATE PLACARDS SHALL BE ATTACHED TO THE BOTH SIDES, FRONT, AND REAR OF THE TRACTOR/TRAILER.
- 17. UNLESS OTHERWISE SPECIFIED, ALL MATERIAL SHALL BE AS SPECIFIED IN THE GENERAL TRUCKLOADING DOCUMENT, MIL-STD-1320 (NAVY).

### SHIPPING EMPTY CONTAINERS:

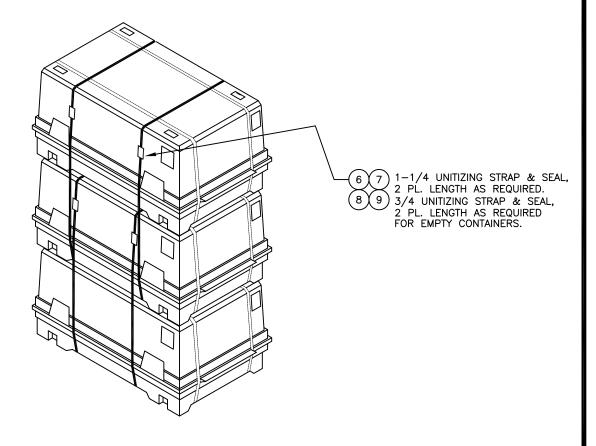
- 1. EMPTY CONTAINERS MAY BE STACKED UP TO THREE HIGH OR IN ACCORDANCE WITH NAVSEA DRAWING 6214495 FOR BOTH FLATBED AND VAN TRAILERS. WHEN SHIPPING EMPTY CONTAINERS, FOLLOW THE SAME ARRANGEMENTS FOR LOADED CONTAINERS AS SHOWN ON PAGES 4 AND 6 FOR FLATBED TRAILERS AND PAGES 7 THRU 9 FOR VAN TRAILERS.
- 2. FLOOR BLOCKING SHALL BE THE SAME AS WHEN SHIPPING LOADED CONTAINERS.
- 3. UNITIZING PROCEDURE SHALL BE AS SHOWN IN NAVSEA DRAWING 6214068 AND IN DETAIL A ON PAGE 6.



# BLOCKING & BRACING - SINGLE WIDE LOAD 3 REF 2 X 6 DOUBLED. NAIL 1ST PIECE TO TRAILER FLOOR WITH 4-10d NAILS. NAIL 2ND PIECE TO 1ST WITH 4-20d NAILS. 2)ref 1)REF 2 X 4 TWO HIGH. NAIL 1ST PIECE TO TRAILER FLOOR WITH 3-10d NAILS. NAIL 2ND PIECE TO 1ST WITH 3-20d NAILS. 4 PL SLEEPER (SINGLE WIDE LOAD) FWD/AFT HEADER (SINGLE WIDE LOAD) AR 2 X 4 X 18 WOOD, GEN. NOTE 7 AR WOOD, GEN. NOTE 7 4 2 X 6 X 36 ITEM REQ'D DESCRIPTION MAT'L/DWG **DIMENSIONS** LIST OF MATERIALS NAVSEA CAGE CODE 53711 6214089 REV. SIZE A **PAGE** 5 OF 11

DWG NO.





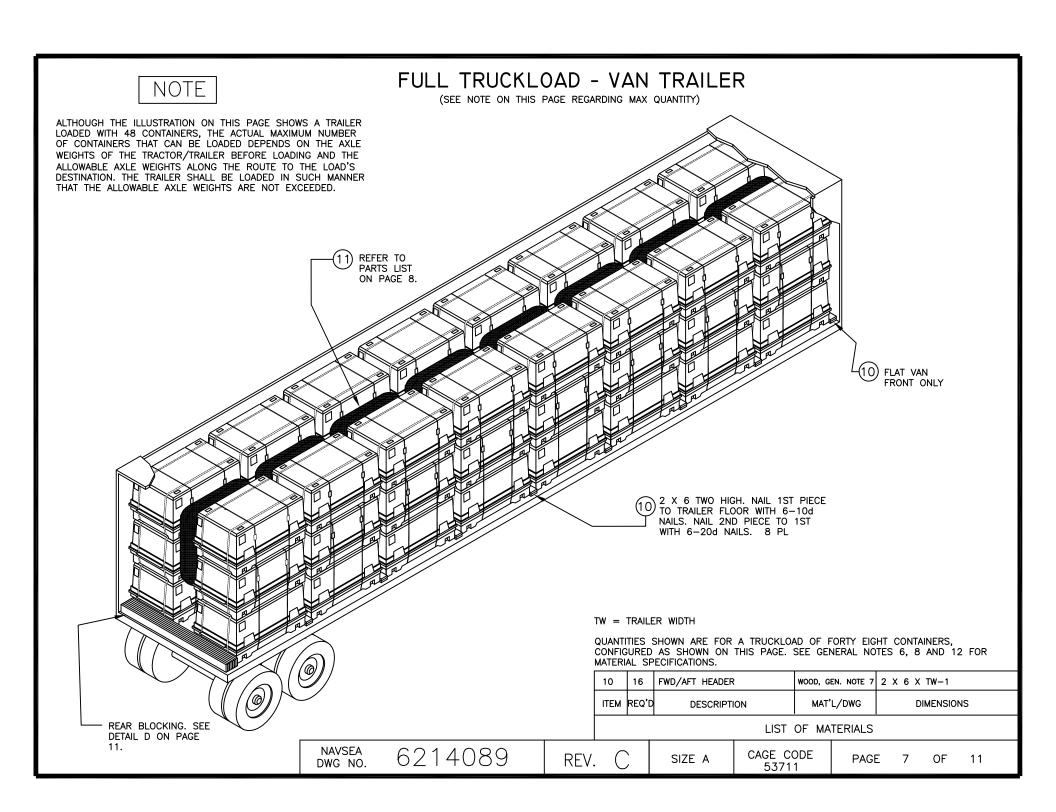
#### **UNITIZING PROCEDURE:**

- 1. THREE-HIGH STACKING OF CONTAINERS IS PERMITTED WHEN LOADING INSIDE VAN TRAILERS
- 2. STACK 2ND CONTAINER ON TOP OF LOWER CONTAINER AND SECURE WITH STEEL STRAPPING, ITEM 1, TENSION AND SECURE EACH STRAP WITH ONE DOUBLE NOTCHED SEAL, ITEM 2, AS SHOWN IN DRAWING 53711-6214068. MAKE SURE THAT THE STACKING FEATURES ARE ALIGNED BEFORE APPLYING THE STRAPPING.
- 3. SECURE 3RD CONTAINER TO 2ND IN LIKE MANNER.
- 4. THE UNITIZING OF CONTAINERS IS AUTHORIZED AS PART OF THE TRUCKLOADING PROCEDURE ONLY. MOVEMENT OF UNITIZED CONTAINERS SHALL BE LIMITED TO THAT NECESSARY TO LOAD AND UNLOAD THE VEHICLE. CONTAINERS SHALL BE DE-UNITIZED (I.E., THE STRAPS REMOVED) AFTER UNLOADING FROM THE VEHICLE.
- 5. UNITIZED CONTAINERS SHALL BE LIFTED USING THE FORKLIFT POCKETS OF THE LOWER CONTAINER ONLY.

QUANTITIES SHOWN FOR ITEMS 6 AND 7 ARE FOR UNITIZING THREE LOADED CONTAINERS. QUANTITIES SHOWN FOR ITEMS 8 AND 9 ARE FOR UNITIZING THREE EMPTY CONTAINERS.

	9	4	SEAL (FOR EMPTY CONTAINERS)	STEEL, GEN. NOTE 5	FOR 3/4" STRAPPING	
	8	4	UNITIZING STRAP (FOR EMPTY CONTAINERS)	STEEL, GEN. NOTE 5	3/4 X .031035	
	7	4	SEAL	STEEL, GEN. NOTE 5	FOR 1-1/4" STRAPPING	
	6	4	UNITIZING STRAP	STEEL, GEN. NOTE 5	1-1/4 X .031035	
	ITEM	REQ'D	DESCRIPTION	MAT'L/DWG	DIMENSIONS	
ſ	LIST OF MATERIALS					

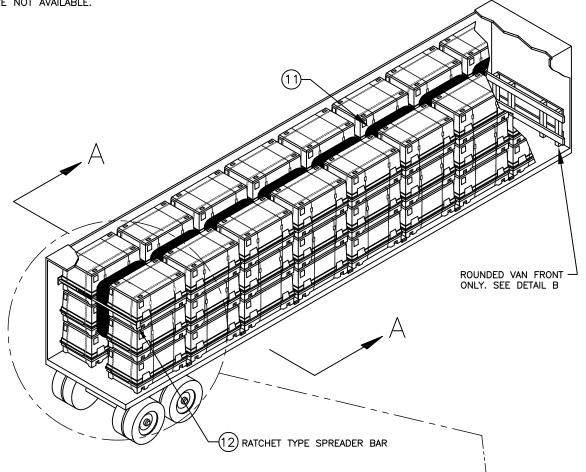
NAVSEA 6214089 REV. C SIZE A CAGE CODE PAGE 6 OF 11
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### FULL TRUCKLOAD - VAN TRAILER

NOTE

THIS DRAWING ILLUSTRATES THE PREFERRED METHOD OF BLOCKING AND BRACING USING INFLATABLE VINYL BAGS. USE ANTI—SWAY BRACES, SHOWN ON PAGES 9 AND 10, ONLY WHEN THESE BAGS ARE NOT AVAILABLE.





SECTION A—A
TYPICAL PLACEMENT OF INFLATABLE BAG



FULL LOADED VAN TRAILER WITH SPREADER BAR

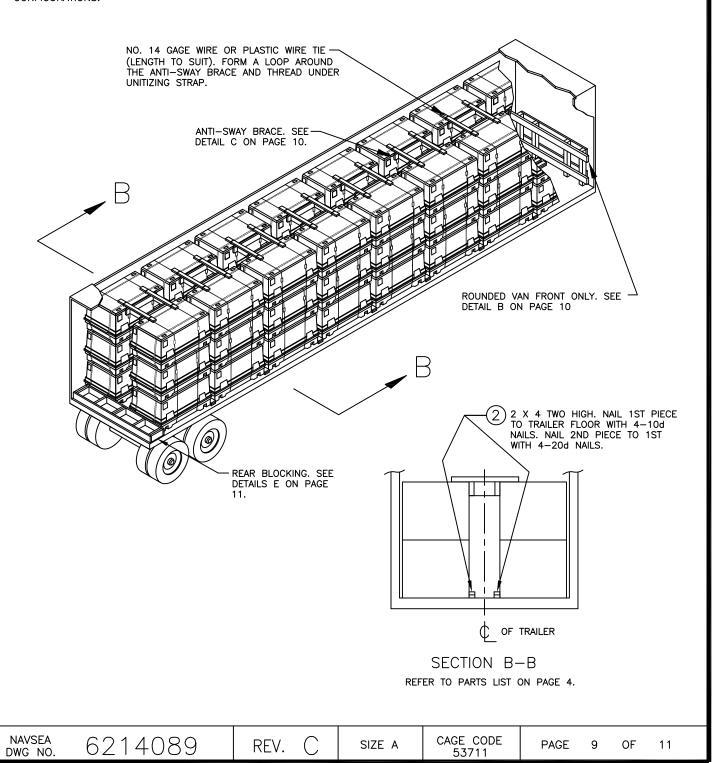
12	AR	SPREADER BAR, RATCHET		ADJUSTABLE			
11	AR	INFLATABLE BAG	VINYL, GEN. NOTE 14	48 X 48			
ITEM	REQ	DESCRIPTION	MAT'L/DWG	DIMENSIONS			
LIST OF MATERIALS							

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### FULL TRUCKLOAD - VAN TRAILER - ALTERNATE METHOD

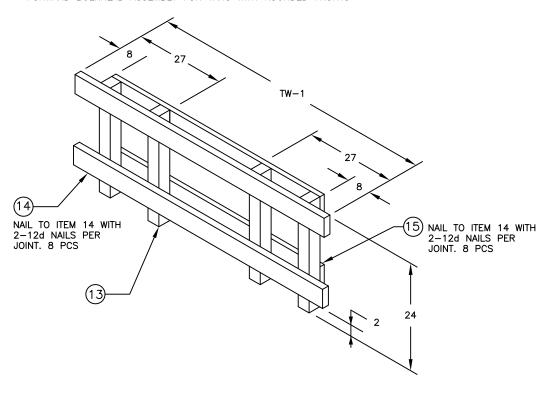
# NOTES

- 1. THIS DRAWING ILLUSTRATES THE ALTERNATE METHOD OF BLOCKING AND BRACING USING ANTI-SWAY BRACES. ANTI-SWAY BRACES SHOULD ONLY BE USED WHEN INFLATABLE BAGS ARE NOT AVAILABLE.
- 2. THIS DRAWING ILLUSTRATES A LOAD WHEN THE DISTANCE BETWEEN THE LANDING AND THE TRAILER DOORS IS BETWEEN 12 AND 36 INCHES. SEE DETAILS ON PAGE 11 FOR THIS AND OTHER CONFIGURATIONS.





FORWARD BULKHEAD ASSEMBLY FOR VANS WITH ROUNDED FRONTS



# DETAIL C

2 X 4 X LENGTH TO SUIT. NAIL TO ITEM 18 WITH 3-10d NAILS AND TO ITEM 16 WITH 2-10d NAILS AT EACH JOINT.

18 SPACE BETWEEN CONTAINERS MINUS 3-1/2 INCHES.

-(16) 2 X 6 X LENGTH TO SUIT. NAIL TO ITEM 18 WITH 2-10d NAILS AT EACH JOINT.

				TW = TRAILER WIDTH		
18	AR	SPACER PIECE	WOOD, GEN. NOTE 7	2 X 6 X AR		
17	AR	SUPPORT PIECE	WOOD, GEN. NOTE 7	2 X 4 X AR		
16	AR	BUFFER PIECE	WOOD, GEN. NOTE 7	2 X 6 X 38		
15	2	SUPPORT, HORIZONTAL	WOOD, GEN. NOTE 7	2 X 6 X TW-16		
14	2	SUPPORT, HORIZONTAL	WOOD, GEN. NOTE 7	2 X 6 X TW-1		
13	4	POST, VERTICAL	WOOD, GEN. NOTE 7	4 X 4 X 24		
ITEM	REQ	DESCRIPTION	MAT'L/DWG	DIMENSIONS		
	LICT OF MATERIALS					

LIST OF MATERIALS

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# $\frac{\mathsf{DETAIL}}{\mathsf{REAR}}\,\,\mathsf{BLOCKING}}\,\mathsf{D}$

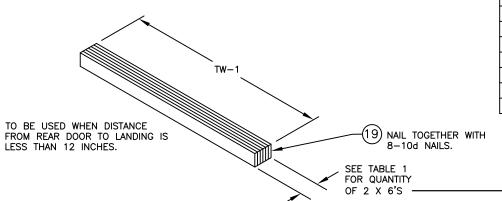
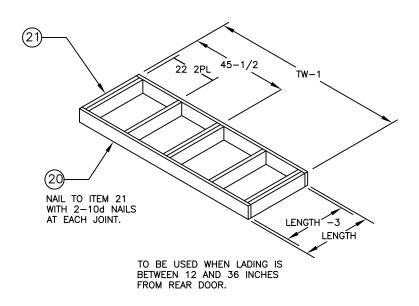


TABLE 1	
DISTANCE (IN.)	QUANTITY
1-1/2 TO 2-7/8	1
3 TO 4-3/8	2
4-1/2 TO 5-7/8	3
6 TO 7-3/8	4
7-1/2 TO 8-7/8	5
9 TO 10-3/8	6
10-1/2 TO 11-7/8	7

## DETAIL E

REAR BLOCKING



TW = TRAILER WIDTH

	21	8	BACKUP CLEAT	WOOD, GEN. NOTE 7	2 X 6 X AR		
	20	2	CROSSMEMBER	WOOD, GEN. NOTE 7	2 X 6 X TW-1		
	19	AR	AFT HEADER	WOOD, GEN. NOTE 7	2 X 6 X TW-1		
	ITEM	REQ	DESCRIPTION	MAT'L/DWG	DIMENSIONS		
ſ	LIST OF MATERIALS						

NAVSEA DWG NO. 6214089

REV. C

SIZE A

CAGE CODE 53711

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