

MILITARY STANDARD

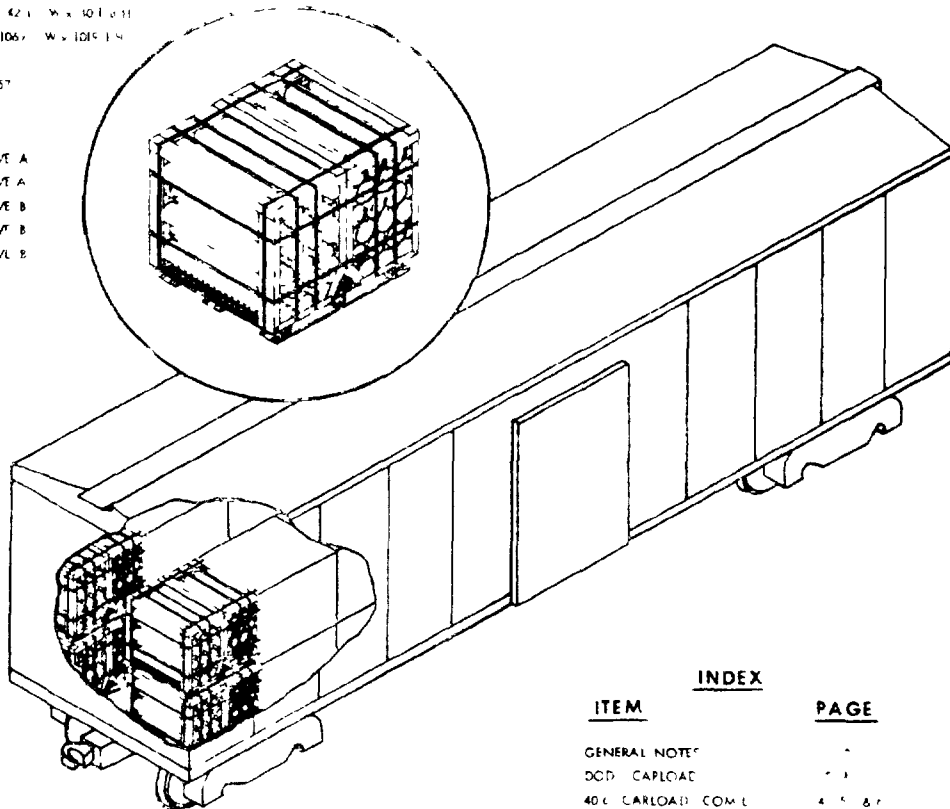
MIL-STD-1325-177
(NAVY)

RAILCAR LOADING OF HAZARDOUS MATERIALS
CARTRIDGE 76MM/62 CAL OR CHARGE, CLEARING 76MM/62 CAL
IN PALLET ADAPTER MK 121 MOD 0
FLEET ISSUE UNIT LOAD

3 JUNE 1975

UNIT LOAD DATA

UNIT LOAD DRAWING 54726J
WEIGHT (APPROX)
CARTRIDGE 1511 LB
685 kg
CLEARING CARPET 949 LBS
430 kg
DIMENSION (INCHES) 40 3/4 L x 42 1/2 W x 10 H (11)
(MM) 1033 L x 1067 W x 254 H
CUBE (CU FT) 44.7
(CU METER) 1.2657
DOT HAZARD CLASSIFICATION
CARTRIDGE TYPE CLASS
HE IP EXPLOSIVE A
HE PD EXPLOSIVE A
BL&F EXPLOSIVE B
TP&F EXPLOSIVE B
CLEARING EXPLOSIVE B



NOTE
1. THE DIMENSIONS SPECIFIED DIMENSIONS ARE IN INCHES
2. FOR CROSS REFERENCE TO ASSOCIATED PALLETTING
TRUCK LOADING AND CONTAINERLOADING MILITARY
STANDARDS REFER TO INDEX TO STANDARD MIL-HDB
75 (NAVY)

ITEM	INDEX	PAGE
GENERAL NOTES		1
DOT CARLOAD		2-3
400 CARLOAD COM L		4-5 & 7
500 CARLOAD COM L		6-7 & 11

FSC B140

AUTHORIZED AND RELEASED
FOR GENERAL USE

APPROVED BY BUREAU OF EXPLOSIVES

K. J. ...
SIGNATURE SUPERVISOR MILITARY & INTERMODEL SERVICES DATE

ORIGINATOR *[Signature]* 28 75
SIGNATURE

NAVAL WEAPONS HANDLING LABORATORY
NAVAL WEAPONS HANDLING LABORATORY

PAGE 1 OF 10

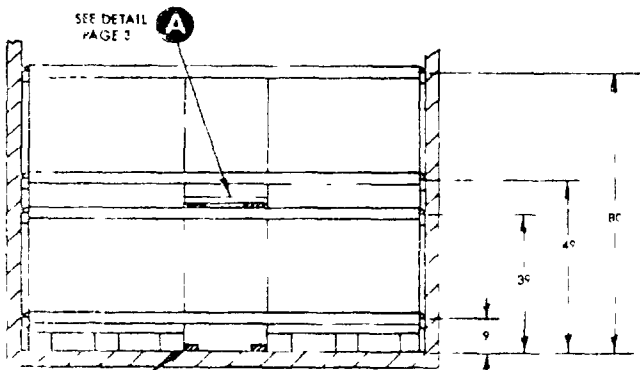
MIL STD-1325-177 (NAVY)

GENERAL NOTES

1. FOR GENERAL INFORMATION CONCERNING DEFECTS, IMPROPER PACKING, REPAIRS, OR THE LOCATION OF EACH PART, SEE THE INSTALLATION OF DUNNAGE FOR THE GENERAL DOCUMENT MIL STD 1325 (NAVY) RELATIVE TO THE DODX BOXCAR MATERIALS. WHEN PLANNING SHIPMENT, OBTAIN THE MINIMUM NUMBER OF CARTRIDGES THE CAPACITY OF THE CARTRIDGE WILL BE 1000 (MIL-STD-1325).
2. LOADING PLAN: MOVE ALL OF DODX UNIT LOADS OFF THE 10 INCHES INSIDE LENGTH OF THE CARTRIDGE TO A 48 INCH RAIL (18 INCH INSIDE WIDTH BETWEEN SIDE RAILS) COMMERCIAL BOXCAR WITH 48 INCHES INSIDE LENGTH OF THE RAIL AND COMMERCIAL BOXCAR WITH 45 INCH INSIDE LENGTH OF THE RAIL.
3. THE LOAD LIMIT OF A CARTRIDGE MUST BE EXCEEDED. NO CARTRIDGE SHALL BE LOADED SO THAT MORE THAN ONE HALF OF THE LOAD IS CARRIED BY ONE SET OF TIRES.
4. IF END WALLS OF CARTRIDGE ARE NOT SQUARE THEY MUST BE SQUARED OFF BEFORE STARTING TO LOAD CARTRIDGE. THE LOAD CONSISTS OF 76 MM/62 CAL CARTRIDGE OR 76 MM/62 CAL CLEARING CHARGE IN PALLET ADAPTER WITH 1600 CARTRIDGES IN ACCORDANCE WITH WS-5476.
5. THE UNIT LOADS ARE HANDLED AND LOADED WITH A SUITABLE FORK LIFT TRUCK UNLESS OTHERWISE SPECIFIED. NAILING SHALL BE IN ACCORDANCE WITH MIL STD 1325 (NAVY).
6. ALL STRAP JOINTS SHALL BE CRIMP TYPE JOINT MADE WITH A CRIMPING TOOL THAT DOES NOT CUT THE SEAL OF STRAP RATHER THAN A TOOL THAT MAKES A NOTCH TYPE JOINT. THE STRAPPING MUST BE IN ACCORDANCE WITH NAVSUP NOTICE 4647 OF 21 APRIL 1951.
10. APPLICABLE MATERIAL SPECIFICATIONS:
 - DUNNAGE LUMBER: FED. SPEC MM 1751
 - NAIL: FED. SPEC 55N100
 - STRAPPING: FED. SPEC QQ-S781 TYPE I HEAVY DUTY CLASS A DRY (UNLUBRICATED)
 - SEAL: FED. SPEC QQ-C781 TYPE III HEAVY DUTY
11. AFTER BLOCKING AND BRACING HAS BEEN INSPECTED ATTACH SHIPPING DOCUMENTS INSIDE THE CARTRIDGE IN AN ACCESSIBLE AREA. CLOSE AND SEAL BOXCAR DOORS AND ATTACH APPLICABLE PLACARDS TO THE OUTSIDE OF CARTRIDGE AS PRESCRIBED IN OP 216 (VOL 1).

50 FT 6 IN. BOXCAR, DODX

1. THE CARLOAD CONSISTS OF 44 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS PROCEDURAL DRAWING. A MIXTURE OF 76 MM/62 CAL CARTRIDGES OR 76 MM/62 CAL CLEARING CHARGES MAY BE LOADED IN THE CARLOAD. THE 1600 CARTRIDGE CLEARING CHARGES ADJUST THE CARLOAD WEIGHT ACCORDINGLY. A DETAILED DESCRIPTION AND OPERATING INSTRUCTIONS FOR THE UTILITY LOADER ARE CONTAINED IN OP 170. TO PREVENT UNUSE OF EQUIPMENT FROM BECOMING MISLOST DURING TRANSIT OF DODX CARTRIDGE SECURE IT AT ANY LOCATION IN THE BOXCAR WHICH WILL NOT INTERFERE WITH UNLOADING.
2. WHEN LESS THAN CARLOAD QUANTITIES ARE REQUIRED TO BE SHIPPED IN DODX BOXCAR THE SAME PROCEDURE AND METHODS OF BLOCKING ARE APPLICABLE. ANY PARTS OF PORTION THEREOF MAY BE USED PROVIDING THE WEIGHT DISTRIBUTION REQUIREMENTS OF THE CARTRIDGE ARE MET WITH. (SEE MIL STD 1325 (NAVY)) EACH CROSSMEMBER SHALL BE SEEN IN SUCH A MANNER THAT IT WILL REMAIN NOT MORE THAN 100 LB FROM UNLOADING.



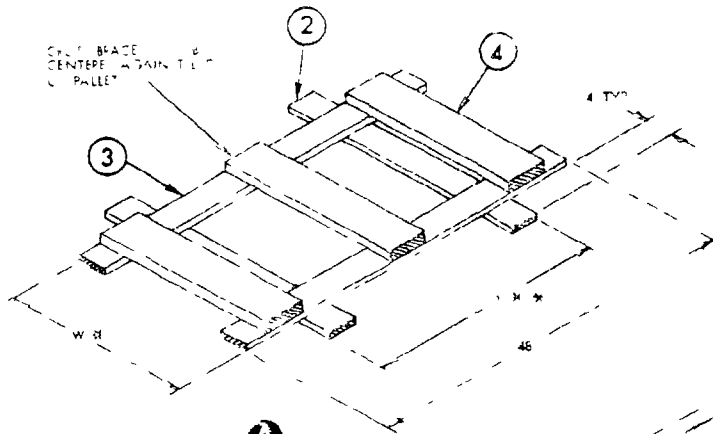
- * W: DISTANCE BETWEEN LEGS OF PALLET ACROSS THE CAR
- ** PIECE J NAILS TO PIECE K WITH 160 NAILS CLINCHED 3 PER JOINT AND TO PIECE L WITH 60 NAILS 1 PER JOINT

SECTION B-B
SHOWING LOCATION OF WALL MEMBERS AND DOORWAY MEMBERS USED FOR CROSSMEMBER

PIECE NO	DESCRIPTION	SIZE	NO OF REQ'D	NAIL TO	PER FOOT NAIL	160 NAIL	60 NAIL
4	CROSS BRACE	2 x 4 x W	3	SEE	-	-	-
-	SWAY BRACE LONGITUDINAL	1 x 4 x 48	2x	4	SEE NOTE	**	-
2	SWAY BRACE SUPPORT	1 x 4 x (W - 48)	2	SEE	-	-	-
1	SLEEPER	2 x 4 x 48	2	SEE	-	-	-

LIST OF MATERIALS AND NAILING DATA

MIL-SID-1325 1/7 (NAVY)

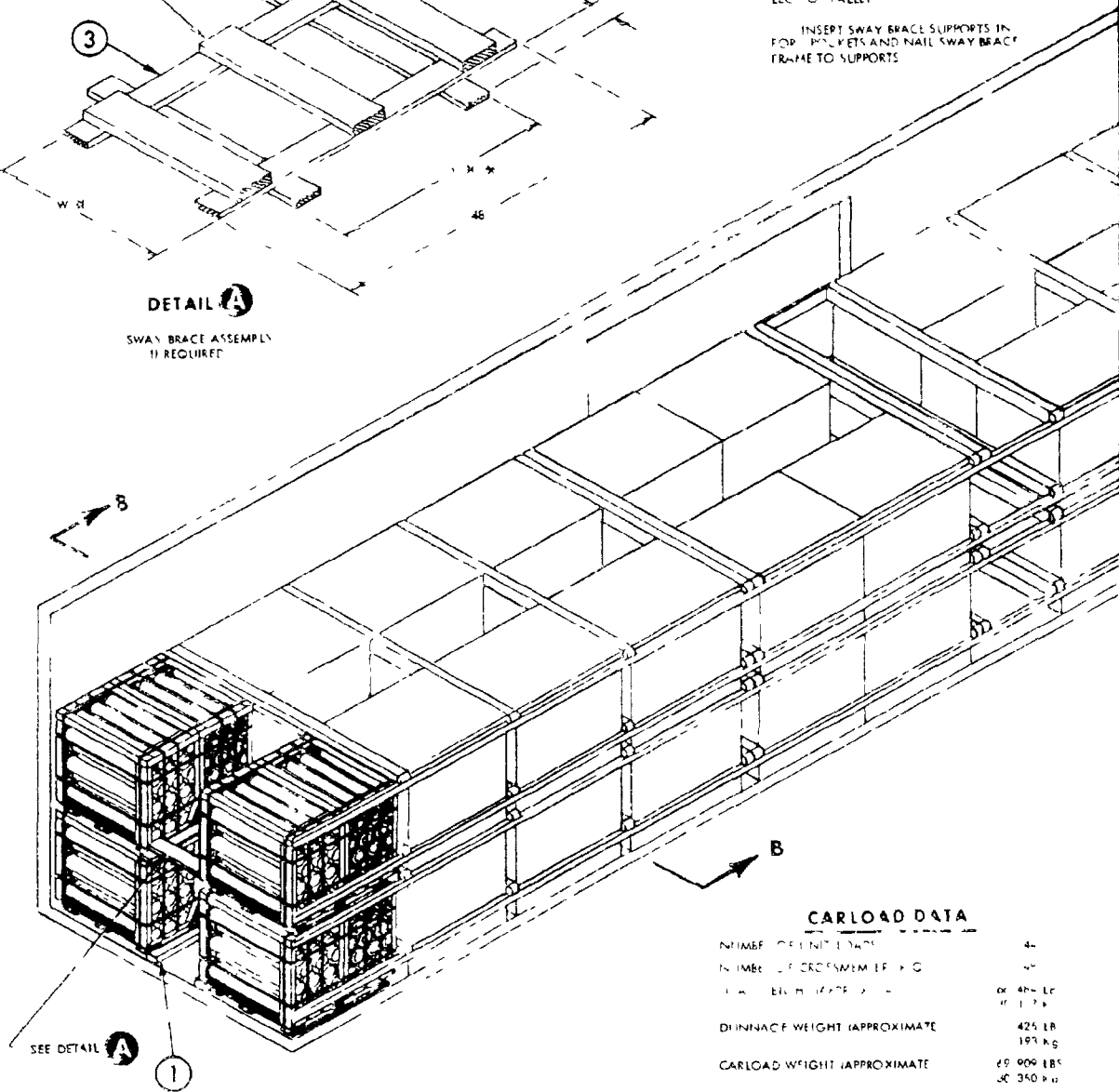


DETAIL A

SWAY BRACE ASSEMBLY
1) REQUIRED

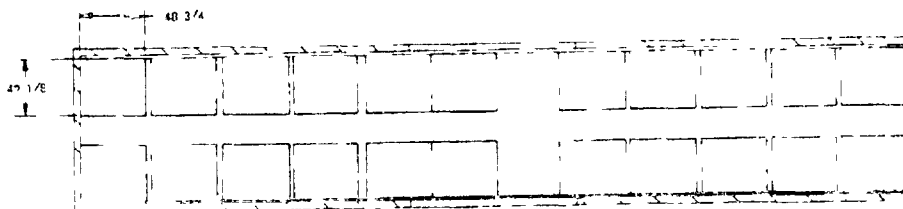
2) TO BE PLACED BETWEEN
PALLET ACROSS THE
DIAGONAL TO BE 1/2 INCH CLEAR
LEFT OF PALLET

INSERT SWAY BRACE SUPPORTS IN
FOR HOLES AND NAIL SWAY BRACE
FRAME TO SUPPORTS



CARLOAD DATA

NUMBER OF UNIT LOADS	4
NUMBER OF CROSSMEMBERS	4
LENGTH OF EACH UNIT LOAD	60 3/4 IN
DIUNNACE WEIGHT (APPROXIMATE)	425 LB 193 KG
CARLOAD WEIGHT (APPROXIMATE)	69 009 LBS 31 350 KG

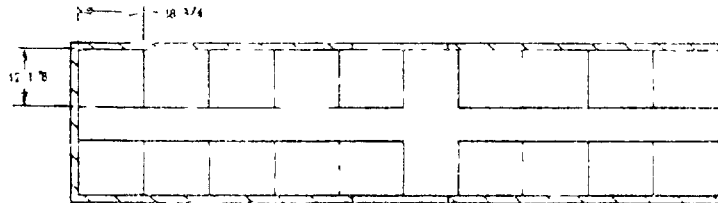


LOADING PLAN

MIL-STD-1325-177 (NAVY)

40 FT. 5 IN. BOXCAR, COMMERCIAL

1. THE CARLOAD CONSISTS OF 30 UNIT LOADS WHICH MUST BE LOADED AND UNLOADED IN ACCORDANCE WITH THE PROCEDURAL DRAWING. ANY MIXTURE OF 3.5 MM CALIBER CARTRIDGE OR 7.62 MM (.30 CAL) CLEARING CHARGES MAY BE LOADED IN THE CARLOAD. WHEN LOADING CLEARING CHARGES, ADJUST THE CARLOAD WEIGHT ACCORDINGLY.
- IF LESS THAN CARLOAD ICE QUANTITIES ARE REQUIRED TO BE SHIPPED IN COMMERCIAL BOXCARS AND A PARTIAL LAYER RESULT, THE PARTIAL LAYER OF LADING SHALL BE BRACED BY MEANS OF END BRACING AND OF PARTIAL LAYER BRACING CONSTRUCTED IN ACCORDANCE WITH VES. 100. SELECT THE TYPE OF BRACE TO COMPLY WITH THE WEIGHT OF THE UNITS TO BE RETAINED. THE CENTER GATE HEIGHT SHOULD BE ADJUSTED AS REQUIRED.
2. THE LOADS AS SHOWN ARE BASED ON CARS WHICH HAVE 6 FT. WIDE DOORWAY OPENINGS AND ARE EQUIPPED WITH CENTRAL SLIDING TIE-BLOCK (REF. TABLE 1010).



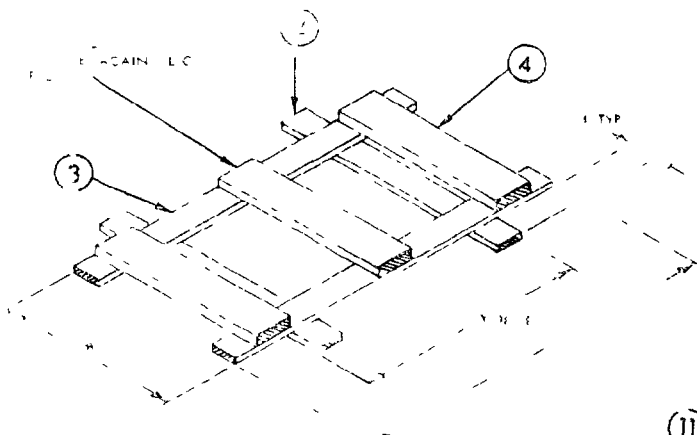
LOADING PLAN

- * USE STAY BRACE ASSEMBLY DETAIL A FOR STEEL FLOOR CAR.
- * A DISTANCE BETWEEN LEGS OF PALLET ACROSS THE CAR.
- * B PIECE 2 NAILS TO PIECE 4 WITH 30D NAIL CLINCHED 1 PER JOINT AND TO PIECE WITH 6D NAIL 1 PER JOINT.
- * C 2 STRUTS DOUBLED AND LAMINATED WITH 10D NAILS MAY BE SUBSTITUTED IN PLACE OF 4 2 5.

10	HORIZONTAL DOORWAY MEMBER	2 x 4 x DOOR WIDTH	8	12	2	10c
1	VERTICAL DOORWAY MEMBER	2 x 3 x 9c	4	DOOR POST	1 PER FOOT	20c
11	STRUT	4 x 4 WEDGE FIT 3/4 X X	1c	c	1 PER JOINT	1c
10	HOLDDOWN CLEAT	2 x 3 x 3c	a	c	1	10c
9	HOLDDOWN CLEAT	2 x 3 x 3c	4	b	1	10-
8	HOLDDOWN SPACER	2 x 4 x CAR WIDTH-1	2	e	1 PER JOINT	10d
7	CENTER GATE STRUT CLEAT	2 x 4 x CAR WIDTH-1	8	a	1 PER JOINT	10d
6	CENTER GATE VERTICAL	2 x 6 x B4	8	SEE 5	—	—
5	CENTER GATE HORIZONTAL	2 x 6 x CAR WIDTH-1	8	e	3 PER JOINT	10c
4	CROSS BRACE	2 x 6 x 3/4 X X	2	SEE 3	—	—
3	STAY BRACE LONGITUDINAL	1 x 4 x 4c	1c	4	SEE NOTE	3/4 X X
2	STAY BRACE SUPPORT	1 x 4 x 3/4 X X	1R	SEE	—	—
1	SLEEPER	2 x 4 x 40 X	1R	CAR FLOOR	2 PER FOOT	10c
PIECE NO.	DESCRIPTION	SIZE	NO. REQ'D	NAIL REQ'D	W/TYPE	PIECE

LIST OF MATERIALS AND NAILING DATA

MIL-STD-1325-177 (NAVY)

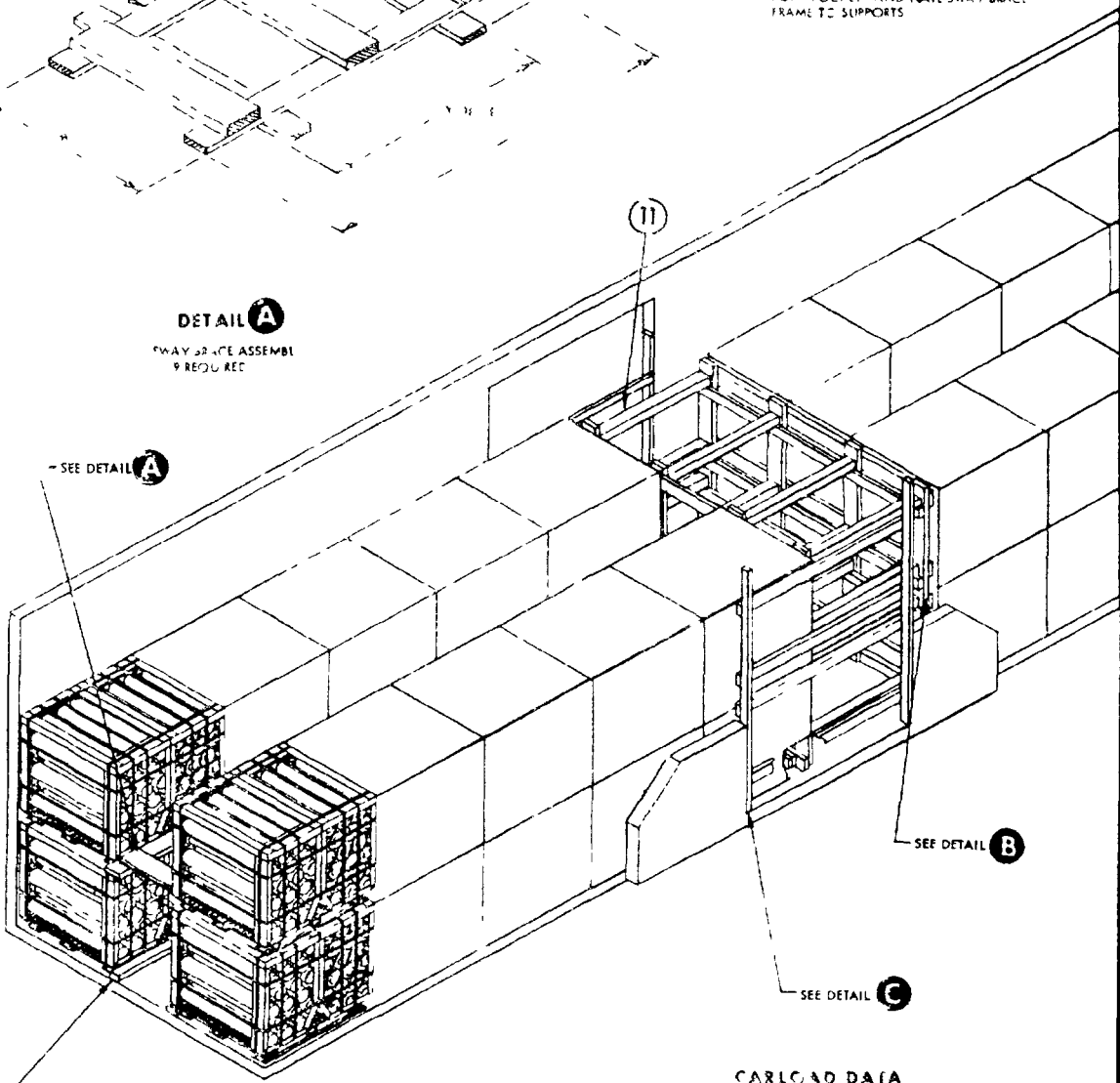


* * * DISTANCE BETWEEN LEGS OF PALLET ACROSS THE CAP
 * * * DISTANCE BETWEEN INSIDE OF OUTER LEGS OF PALLET

* * * INSERT SWAY BRACE SUPPORTS IN POCKET AND NAIL SWAY BRACE FRAME TO SUPPORTS

DETAIL A

SWAY BRACE ASSEMBLY REQUIRED



SEE DETAIL A

SEE DETAIL B

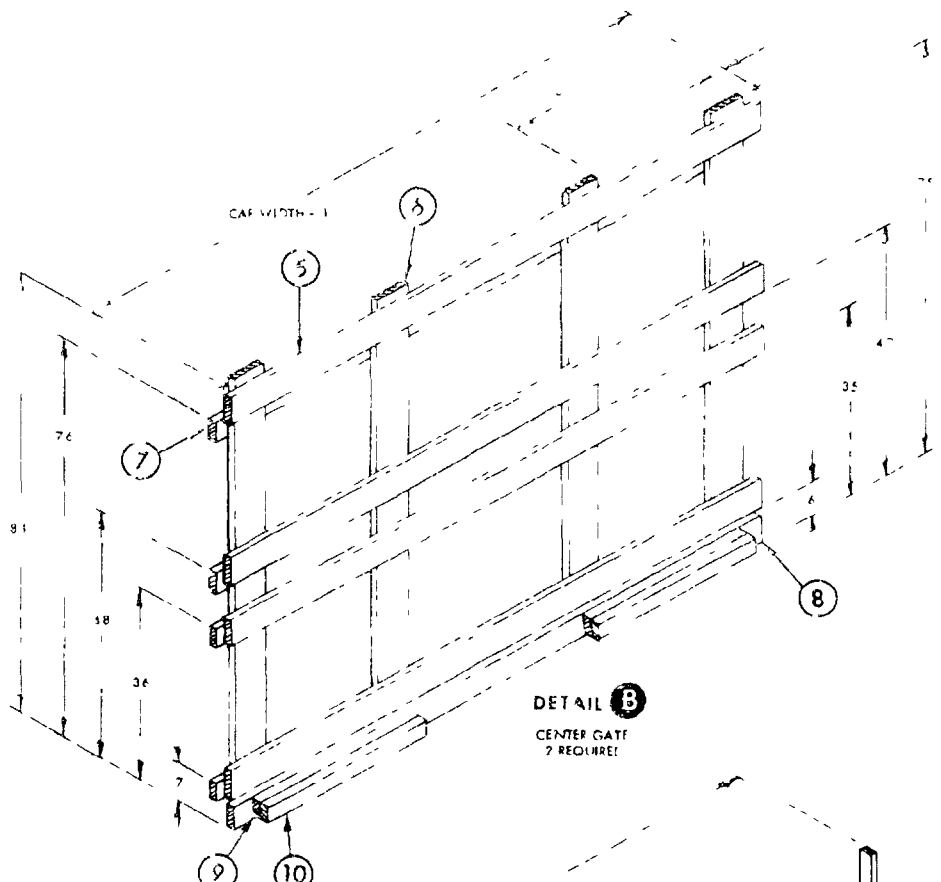
SEE DETAIL C

1 IS SWAY BRACE ASSEMBLY
 DETAIL FOR STEEL FLOOR CAR

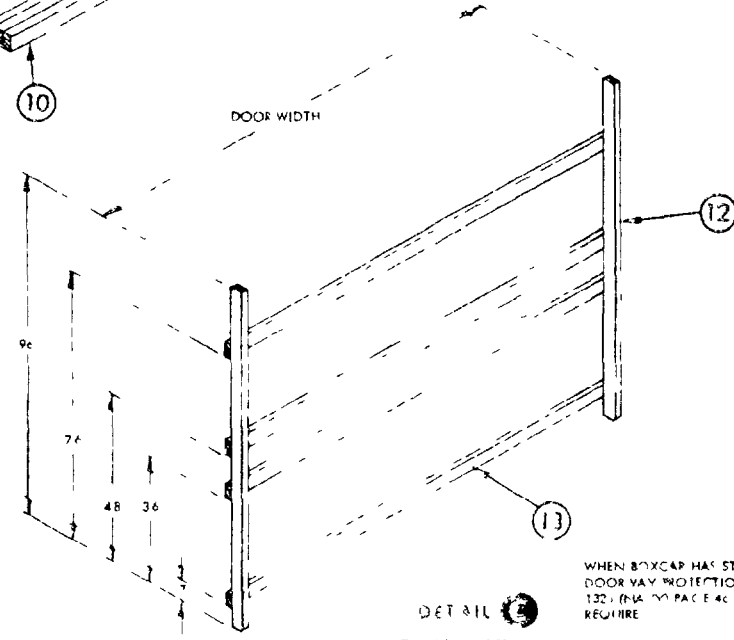
CARLOAD DATA

NUMBER OF UNIT LOADS	36
LOAD WEIGHT (APPROXIMATE)	54,450 LB 24,674 kg
TUNNAGE WEIGHT (APPROXIMATE)	1,320 LB 599 kg
CARLOAD WEIGHT (APPROXIMATE)	55,770 LB 25,273 kg

AMERICAN STANDARD 25-177 (REV. 7/71)



DETAIL B
CENTER GATE
2 REQUIRE



DETAIL C
UPPER JAMB
2 REQUIRE

WHEN BOXCAP HAS STEEL DOOR POSTS
DOOR VAY PROTECTION AS PER MIL STD
132 (IN PLACE 40 FT. 71)
REQUIRE

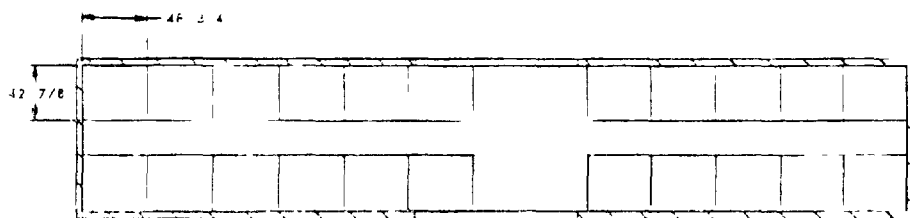
MIL-STD-1325-177 (NAVY)

THIS PAGE INTENTIONALLY LEFT BLANK

MIL-STD-1325-177 (NAVY)

LOADS IN BOXCAR, COMMERCIAL

1. THE CARLOAD CONSISTS OF 44 UNIT LOADS WHICH MUST BE LOADED AND DUMPED IN ACCORDANCE WITH THE PROCEDURAL DRAWING. A MAXIMUM TOTAL OF 76MM (3") CALIBER CARTRIDGES OR 76MM (3") CALIBER CLEARING CHARGES MAY BE LOADED IN THE CARLOAD. WHEN LOADING CLEARING CHARGES ADJUST THE CARLOAD WEIGHT ACCORDINGLY.
2. WHEN LESS THAN CARLOAD QUANTITIES ARE EQUIPPED TO BE SHIPPED IN COMMERCIAL BOXCARS AND A PARTIAL LAYER RESULTS, THE PARTIAL LAYER OF LADING SHALL BE BRACED BY MEANS OF END BRACING AND OR PARTIAL LAYER BRACING CONSTRUCTED IN ACCORDANCE WITH WEL-100. SELECT THE TYPE OF BRACE TO COMPLY WITH THE WEIGHT OF THE UNITS TO BE RETAINED. THE CENTER GATE HEIGHT SHOULD BE ADJUSTED AS REQUIRED.
3. THE LOADS AS SHOWN ARE BASED ON CARS WHICH HAVE 10 FT. WIDE DOORWAY OPENINGS AND ARE EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE APPLICABLE TO BOXCARS EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS OTHER THAN 10 FT. WIDE.
4. THE DEPICTED PROCEDURE AND METHOD OF BLOCKING ARE ALSO APPLICABLE TO BOXCARS EQUIPPED WITH PLUG TYPE DOOR DUNNAGE MATERIAL MUST NOT BE NAILED TO ANY PLUG DOOR, WHETHER MAIN OR AUXILIARY EXCEPT WHEN THE CAR HAS A COMBINATION OF A CONVENTIONAL SLIDING TYPE DOOR AND A PLUG TYPE DOOR. AN ADEQUATE NATING STRIP IS PROVIDED ON THE PLUG TYPE DOOR. STACKS WITH MORE THAN HALF OF THE UNIT LOAD IN THE DOORWAY AREAS MUST BE UNITIZED WITH TWO LATERALLY APPLIED 1/4" STEEL STRAP PER STACK EACH TENSIONED AND SEALED WITH TWO DOUBLE CRIMPED SEALS AND A TOP SWAY BRACE CONSISTING OF A STRAPPING BOARD AND CROSS BRACE (TWO PER STACK) (SEE DETAIL D) MUST BE INSTALLED BETWEEN THE ROWS OF THE DOORWAY STACKS. SECURE EACH STRAP TO STRAPPING BOARD WITH TWO (1) 4" STAPLES. DIMENSIONAL LUMBER DOORWAY PROTECTION PIECES ARE NOT REQUIRED WHEN PLUG DOOR EQUIPPED BOXCARS ARE USED EXCEPT WHEN CAR HAS A COMBINATION OF PLUG DOOR AND CONVENTIONAL SLIDING DOOR. THEN DOORWAY PROTECTION IS REQUIRED FOR THE CONVENTIONAL DOOR. SECURELY CLOSE DOORS AND WIRE TOGETHER WITH A STRONG FLEXIBLE STEEL WIRE INSERTED THROUGH HOLES IN THE DOOR LATCH ASSEMBLY ONE OR MORE TIMES AND THE WIRE ENDS TWISTED TOGETHER.



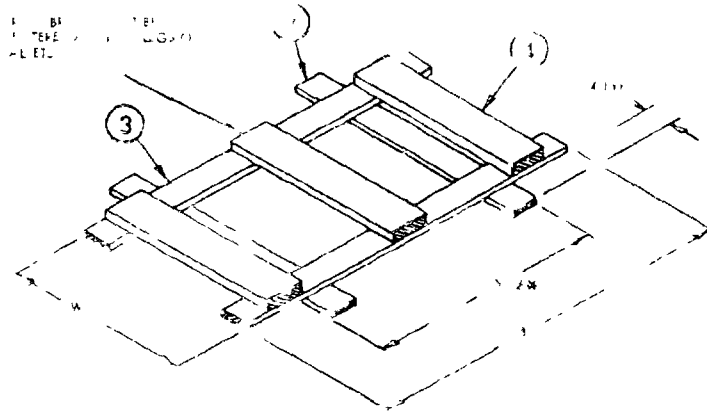
LOADING PLAN

- * USE SWAY BRACE ASSEMBLY DETAIL A FOR STEEL FLOOR CAR
- ** W = DISTANCE BETWEEN LEGS OF PALLET ACROSS THE CAR
- *** PIECE 3 NAILS TO PIECE 4 WITH 10d NAILS CLINCHED 3 PER JOINT AND TO PIECE 7 WITH 6d NAILS 1 PER JOINT
- **** 2 x 6 STRUTS DOUBLE AND LAMINATED WITH 10d NAILS MAY BE SUBSTITUTED IN PLACE OF 4 x 4

NO.	DESCRIPTION	SIZE	NO. PIECES REQUIRED	NAIL TYPE	LUMBER SIZE	SIZE OF NAILS
10	HORIZONTAL DOORWAY MEMBER	4 x 4 x DOOR WIDTH	8	10	PER JOINT	10d
1	VERTICAL DOORWAY MEMBER	4 x 4	4	DOOR POST	PER JOINT	2x
11	STRUT	4 x 4 x XXXX WEDGE FIT	1	c	PER JOINT	10d
10	HOLDDOWN CLEAT	2 x 3 x W	4	6	5	10d
9	HOLDDOWN CLEAT	2 x 3 x 36	4	8		10d
8	HOLDDOWN SPACER	2 x 4 x CAP WIDTH 1	2	c	3 PER JOINT	10d
	CENTER GATE STRUT CLEAT	4 x CAP WIDTH 1	8		3 PER JOINT	10d
7	CENTER GATE VERTICAL	2 x 6 x 84	8	SEE 5	-	-
	CENTER GATE HORIZONTAL	2 x 6 x CAP WIDTH 1	c		PER JOINT	10d
4	CROSSBRACE	2 x 6 x W X W	3	SEE	-	-
1	SWAY BRACE LONGITUDINAL	1 x 4 x 46	2	4	SEE NOTE XXX	-
2	SWAY BRACE (SLIPPER)	1 x 2 x (W-B) x W	2	SEE	-	-
1	SLEEPER	2 x 2 x 48 f	22	CAP FLOOR	7 PER FOOT	10d
PL. 1	DESCRIPTION	SIZE	NO. PIECES REQUIRED	NAIL TYPE	LUMBER SIZE	SIZE OF NAILS

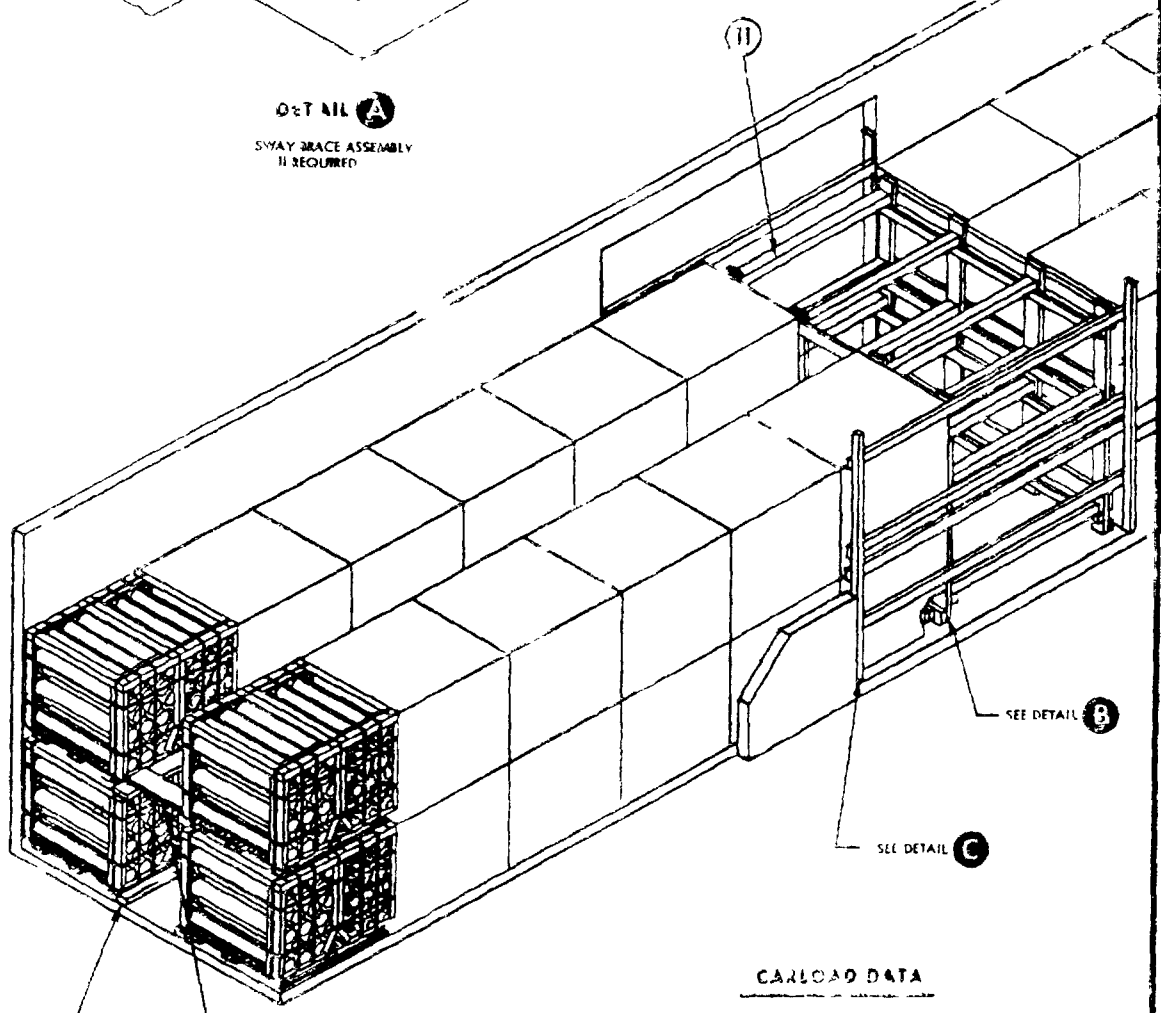
LIST OF MATERIALS AND NAILING DATA

MIL-STD-1325 1/2 (NAT'L)



W DISTANCE BETWEEN LEGS OF PALLETS ACROSS THE CAR
 Y DISTANCE BETWEEN INSIDE OF OUTER LEGS OF PALLET
 X INSERT SWAY BRACE SUPPORTS IN FORK POCKETS AND NAIL SWAY BRACE FRAME TO SUPPORTS

O&T N/A
 SWAY BRACE ASSEMBLY
 IS REQUIRED

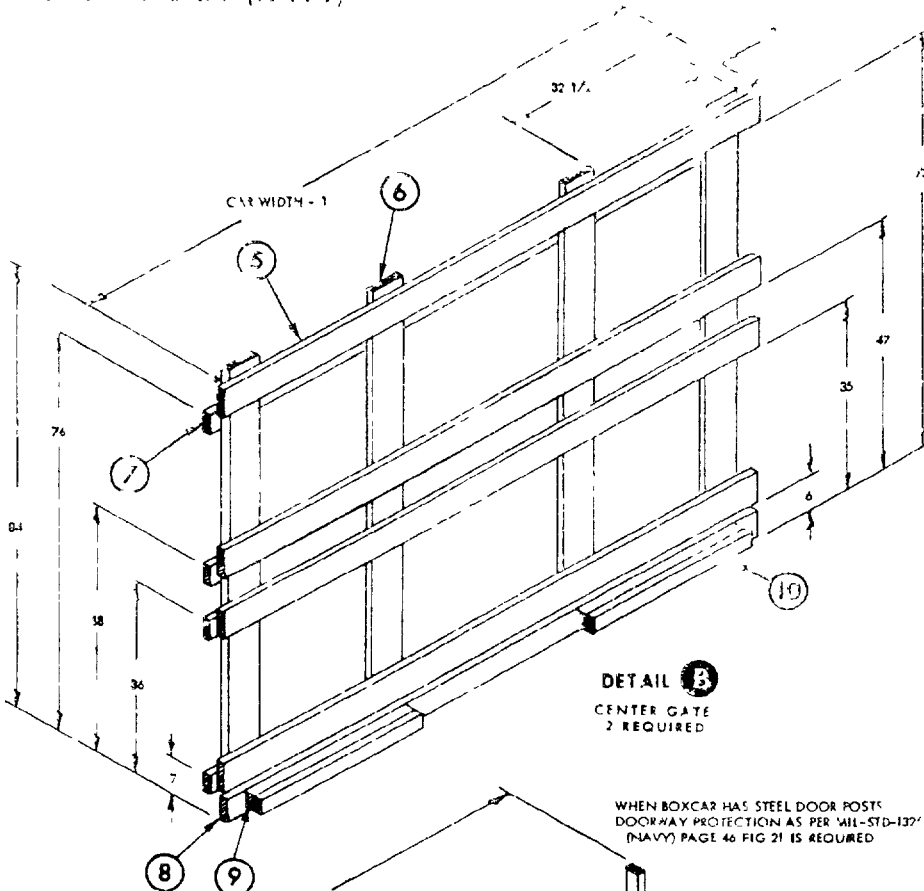


SEE DETAIL A
 USE SWAY BRACE ASSEMBLY DETAIL A FOR STEEL CAR LOADS

CARLOAD DATA

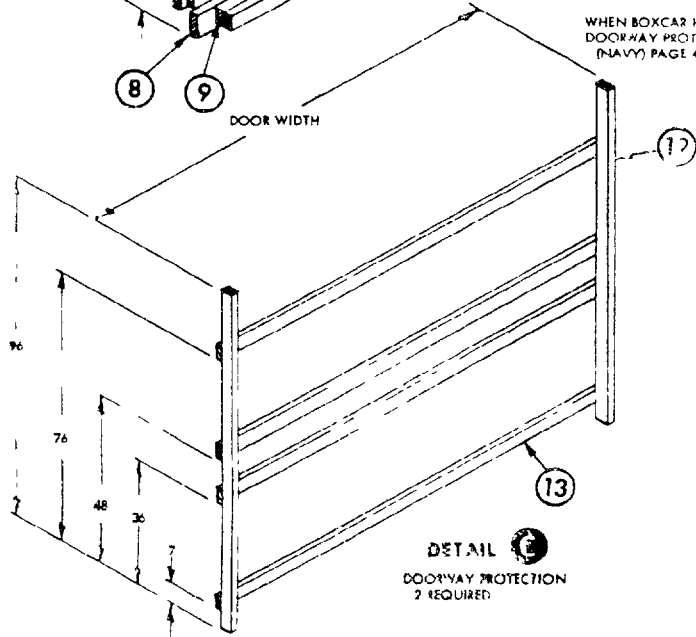
NUMBER OF UNIT LOADS	44
LOAD WEIGHT (APPROXIMATE)	66 484.3 30 157.2
DUNNAGE WEIGHT (APPROXIMATE)	1 322.13 200
CARLOAD WEIGHT (APPROXIMATE)	7 006.43 6 757.3

MIL STD 177 (NAVY)

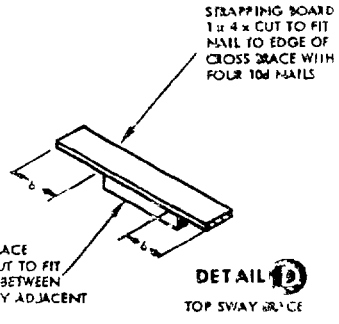


DETAIL B
CENTER GATE
2 REQUIRED

WHEN BOXCAR HAS STEEL DOOR POSTS
DOORWAY PROTECTION AS PER 'MIL-STD-132'
(NAVY) PAGE 46 FIG 21 IS REQUIRED



DETAIL C
DOORWAY PROTECTION
2 REQUIRED



DETAIL D
TOP SWAY BRUCE

REVISIONS
ACTIVITY
7-05

REVISIONS
ACTIVITY
15-05
(PROJECT NO. 8140-1134)

SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 22-R255
<p>INSTRUCTIONS This sheet is to be filled out by personnel either Government or contractor involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.</p>		
SPECIFICATION MIL-STD-1325-177 (NAVY)		
ORGANIZATION		
CITY AND STATE		CONTRACT NUMBER
MATERIAL PROCURED UNDER A <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT		
1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? A. GIVE PARAGRAPH NUMBER AND WORDS:		
B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES		
2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID		
3. IS THE SPECIFICATION RESTRICTIVE? <input type="checkbox"/> YES <input type="checkbox"/> NO (If "yes" in what way?)		
4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers attach to form and place both in an envelope addressed to preparing activity.)		
SUBMITTED BY (Printed or typed name and activity - Optional)		DATE

DD FORM 1428

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED

S/N 0102-014-1801 G-25254

FOLD

POSTAGE AND FEES PAID

OFFICIAL BUSINESS

Commanding Officer
Naval Weapons Station (803) Earle
Naval Weapons Handling Laboratory
Collis Neck, New Jersey 07722