

UNIT LOAD FOR UNDERWAY REPLENISHMENT

BOMB, GENERAL PURPOSE: 1000 LB SIZE
 MK 83 SERIES AND BLU-110 SERIES ON
 PALLET, BOMB, LOADING AND STORAGE,
 MHU-187 A/E (ADL1454AS200)

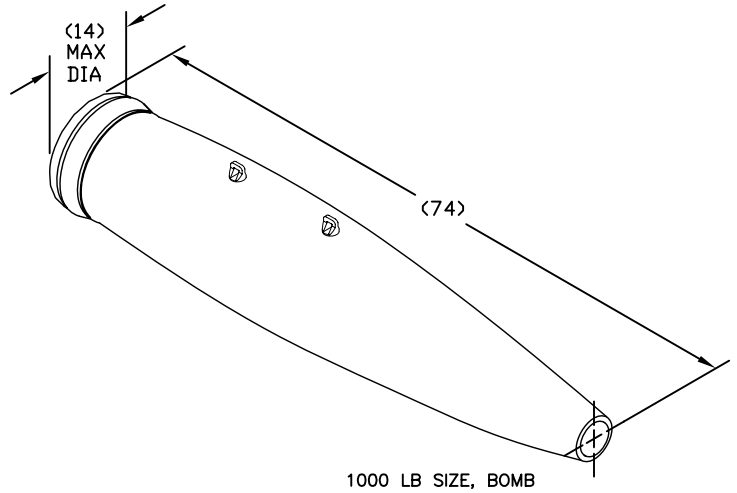
UNIT LOAD DATA

NUMBER OF BOMBS PER UNIT LOAD..... 3
 GROSS WEIGHT OF ONE BOMB (APPROX.)..... 991 LBS
 WEIGHT OF BOTTOM FRAME..... 140 LBS
 WEIGHT OF TOP FRAME..... 48 LBS
 WEIGHT OF STEEL STRAPPING..... 8 LBS
 GROSS WEIGHT OF UNIT LOAD (APPROX.)..... 3,169 LBS Δ
 CUBE..... 41.4 CU-FT

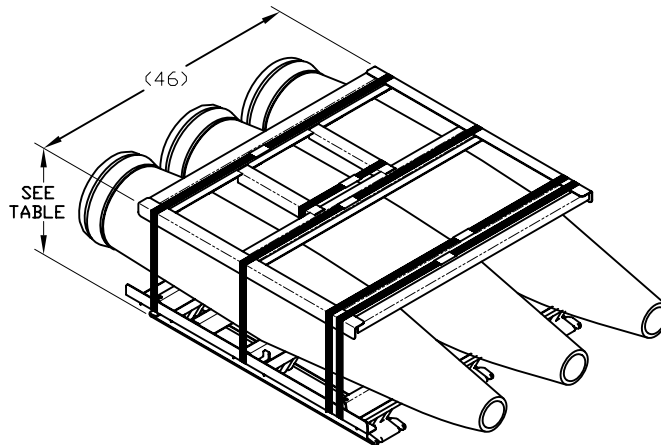
Δ DO NOT USE FOR SHIPPING WEIGHT.

WARNING

DO NOT MIX THERMALLY PROTECTED (TP) AND,
 NON-THERMALLY PROTECTED (NTP) BOMBS
 IN THE SAME UNIT LOAD.



OVERALL HEIGHT	
NTP BOMB	21.00
TP BOMB	21.50



NOTE

IF USING THE MHU-187/E BOMB
 PALLET (ADL 1454AS100), REFER
 TO DRAWING 53711-7516303 FOR
 PALLETIZING PROCEDURES.

NOTES:

- UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.
- SEE SW020-AC-SAF-010 FOR THE FOLLOWING INFORMATION:
 - CROSS REFERENCE TO ASSOCIATED TRUCK LOADING, CONTAINER LOADING & CAR LOADING MILITARY STANDARDS.
 - HAZARD CLASSIFICATION.
- DO NOT STACK MORE THAN 9 UNIT LOADS HIGH IN STORAGE.
- FOR UNIT LOAD QUALIFICATION, SEE PHST CENTER TEST REPORT 06067.

REV.	REVISION DESCRIPTION	DATE	TDA	SYSCOM
A	SEE NWSC IHD DET EARLE ECP I08005	2008/2/29	S/CSC	S/RS
-	ORIGINAL ISSUE, SUPERSEDES MIL-STD-1323-393	2004/9/30	S/JM	S/RS
TECH DATA MANAGEMENT SUPERVISOR		IR/JN S/JM	2004-09-30	DISTRIBUTION STATEMENT A APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED REQUIREMENTS FOR CONSTRUCTION OF THIS UNIT LOAD SHALL CONSIST OF THIS DOCUMENT & THE LATEST ISSUE OF MIL-STD-1323 (NAVY) THIS LOAD IS AUTHORIZED & RELEASED FOR DEPOT HANDLING & STORAGE & FOR SHIPMENT BY COMMON CARRIER
SYSTEMS ENG. SUPERVISOR		S/ KT / DLR	2004-09-27	
S/ R. SMITH		2004-09-30		
NAVSEASYSKOM (BY DIRECTION)				
DEPARTMENT OF THE NAVY NAVAL SEA SYSTEMS COMMAND ARLINGTON, VA 22242-5160		CAGE CODE 53711	DWG NO. 7516321	
		SIZE A	REV. A	

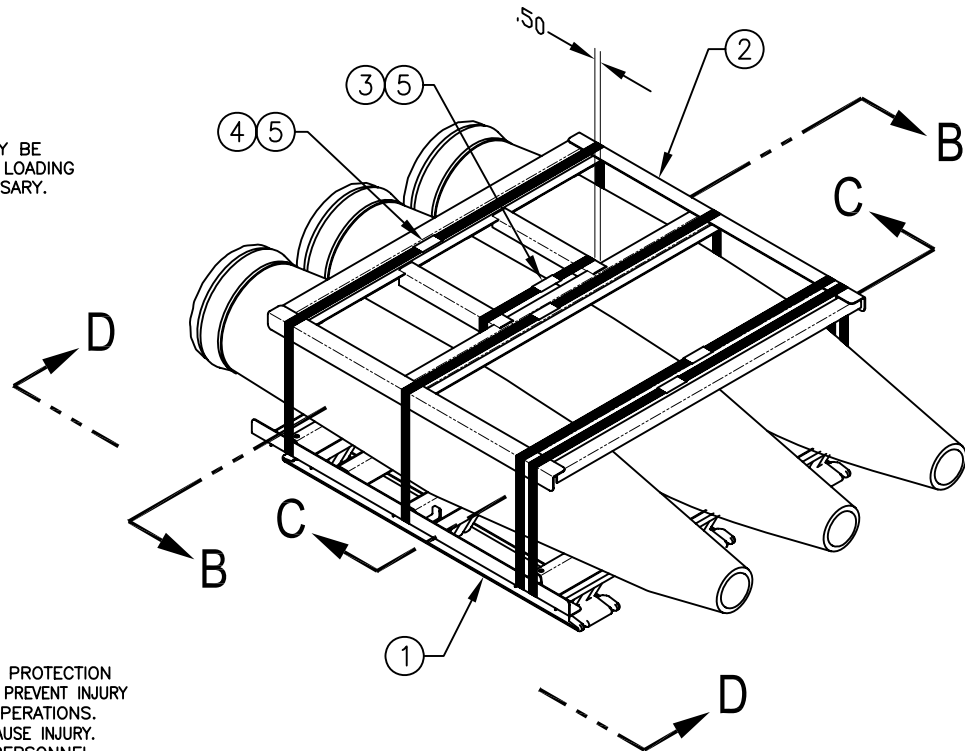
PALLETIZING PROCEDURE

- A. PLACE TOP AND BOTTOM FRAMES, ITEMS 1 & 2, IN WORK AREA. LOOK AT THE ILLUSTRATIONS ON PAGE 3 AND VERIFY THAT THE FRAMES ARE IN FACT THE MHE-187A/E BOMB PALLET. IF THEY ARE THE MHU-187/E ASSEMBLY, REFER TO DWG 53711-7516303 FOR PALLETIZING PROCEDURES. ALSO NOTE THE STAMPINGS INDICATING THE FWD AND AFT ENDS OF THE FRAMES. IF STAMPINGS ARE NOT LEGIBLE USE PAGE 3 TO ASSIST WITH PALLET ORIENTATION.
- B. MAKE SURE THE BOMB SUSPENSION LUGS ARE SCREWED ALL THE WAY IN AND THEN TURN THEM SO THEY ARE ORIENTED AS SHOWN IN VIEW A ON PAGE 4. IF A BOMB IS MISSING ONE OR BOTH SUSPENSION LUGS, THEN IT SHALL NOT BE PALLETIZED.
- C. USING A ROLL STAND/TABLE OR OTHER SUITABLE EQUIPMENT, ROTATE BOMBS SO THAT WHEN PLACED ON PALLET, THE SUSPENSION LUGS WILL BE ORIENTED AS SHOWN IN SECTION C-C ON PAGE 5.
- D. STARTING WITH THE CENTER LOCATION, PLACE EACH BOMB ON BOTTOM FRAME. MAKE SURE THAT THE FORWARD END OF THE BOMBS FACE THE FORWARD END OF THE PALLET. MAKE SURE THE LUGS ARE STRADDLING THE TWO SADDLE MEMBERS AS SHOWN IN VIEW D-D ON PAGE 5. AFTER LOADING EACH BOMB VERIFY THAT THE SUSPENSION LUGS ARE WITHIN 1/2-INCH OF TOUCHING THE STOP ANGLES (SEE SECTION C-C ON PAGE 5). ROTATE BOMBS AS NECESSARY TO ENSURE PROPER LUG ORIENTATION.
- E. PLACE TOP FRAME, ITEM 2, OVER THE BOMBS, MAKING SURE THAT THE FORWARD END OF THE FRAME IS FACING THE FORWARD ENDS OF THE BOMBS. LOCATE THE TOP FRAME SUCH THAT ITS SADDLES ARE DIRECTLY ABOVE THE CORRESPONDING SADDLES OF THE LOWER FRAME.
- F. THREAD BOMB STRAP, ITEM 3, UNDER BOTH INTERMEDIATE ANGLES OF BOTTOM FRAME AND OVER THE CENTER ANGLES OF THE TOP FRAME AS SHOWN IN THE ILLUSTRATION ON PAGE 3 AND IN SECTION B-B ON PAGE 5. TENSION AND SECURE WITH ONE DOUBLE NOTCHED SEAL, ITEM 5.
- G. POSITION LATERAL STRAPS, ITEM 4, THROUGH THE VERTICAL SUPPORTS AND OVER THE TOP FRAME AT THE LOCATIONS SHOWN IN VIEW D-D ON PAGE 5. TENSION AND SECURE EACH STRAP WITH ONE DOUBLE NOTCHED SEAL, ITEM 5. THE MIDDLE LATERAL STRAP SHALL BE TENSIONED/SEALED FIRST, THEN THE THREE FWD/AFT LATERAL STRAPS.

MARKING: IN ADDITION TO ANY SPECIAL MARKING REQUIRED BY CONTRACT OR ORDER, THE UNIT LOAD SHALL BE MARKED IN ACCORDANCE WITH THE INSTRUCTIONS ON PAGE 10.

NOTE

BOMB STRAP, ITEM 3, MAY BE PRE-POSITIONED BEFORE LOADING BOMBS IF DEEMED NECESSARY.



WARNING

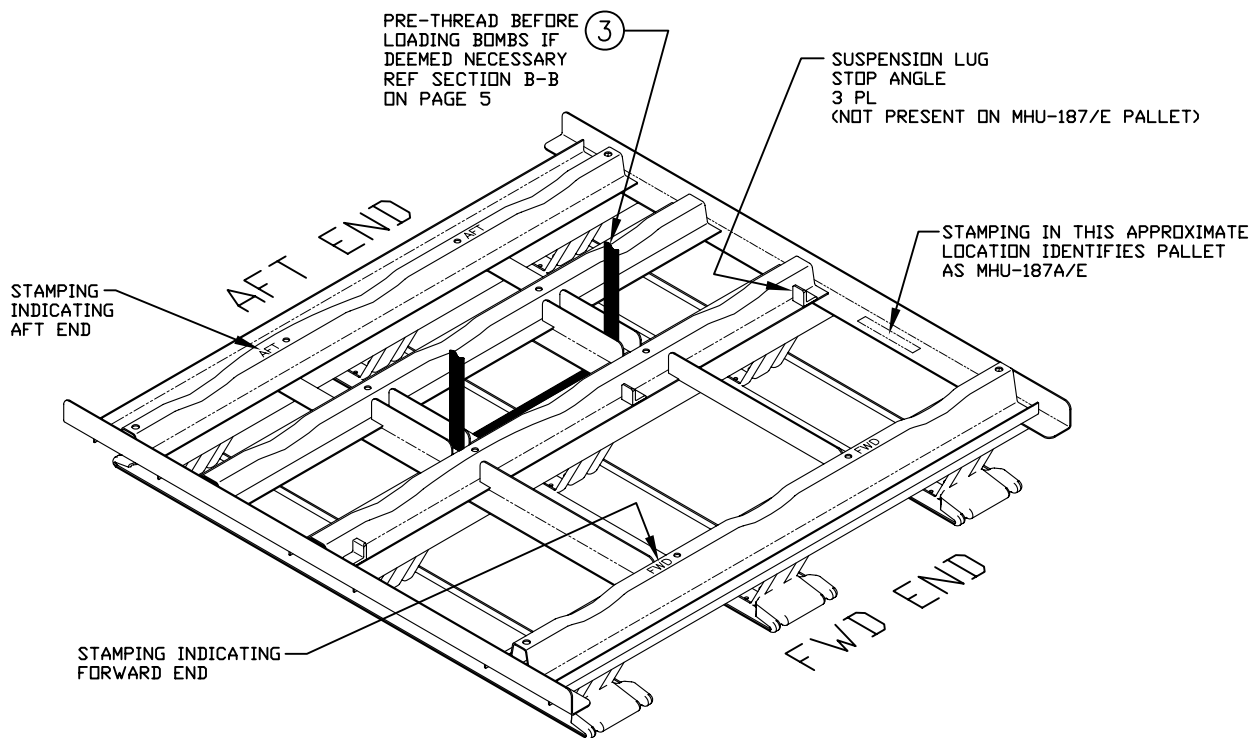
WEAR LEATHER GLOVES AND EYE PROTECTION (WITH SIDE SHIELDS) OR GOGGLES TO PREVENT INJURY WHEN PERFORMING STRAPPING OPERATIONS. RAPIDLY UNCOILING STRAPPING MAY CAUSE INJURY. DIRECT STRAPPING AWAY FROM PERSONNEL WHEN CUTTING STRAPPING UNDER TENSION.

DEPALLETIZING PROCEDURE

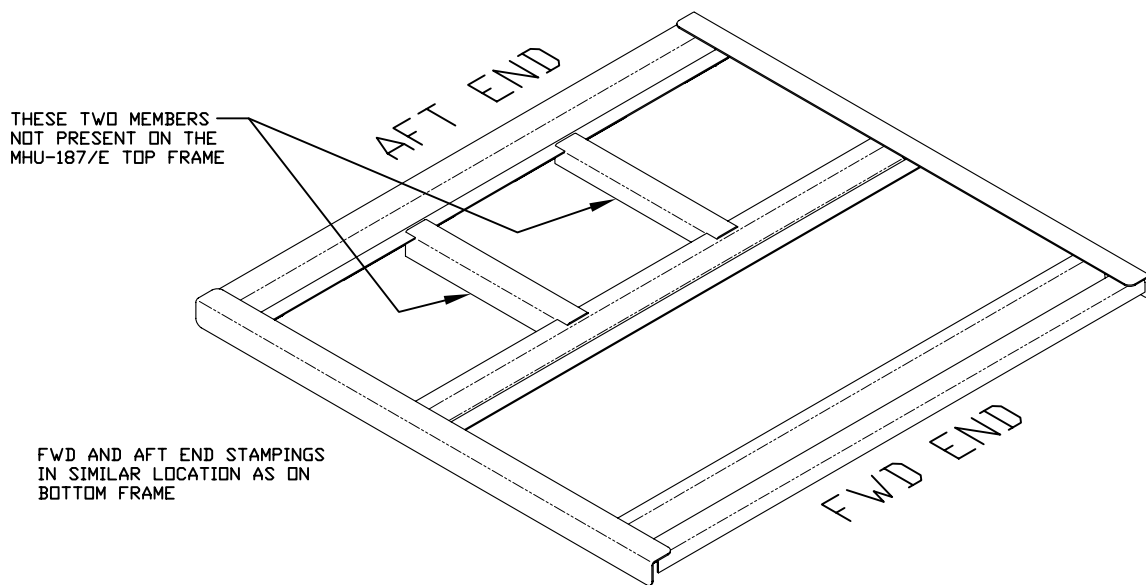
- A. CUT AND REMOVE ALL STRAPPING.
- B. REMOVE TOP FRAME.
- C. ROTATE BOMBS SO THAT LUGS ARE ON TOP.
- D. REMOVE BOMBS.
- E. INTERLOCK THE TOP & BOTTOM FRAMES USING PINS AT THE AFT END AND HOLES AT THE FORWARD END. STACK LIKE ASSEMBLIES AND SECURE TOGETHER FOR STORAGE/STOWAGE.

5	5	SEAL	STEEL, SEE MATERIAL NOTE 2 PAGE 4	FOR 1 1/4" STRAPPING
4	4	STRAPPING, LATERAL	STEEL, SEE MATERIAL NOTE 1 PAGE 4	1 1/4" X .031 (OR .035) X 13 FT.
1	3	STRAPPING, BOMB	STEEL, SEE MATERIAL NOTE 1 PAGE 4	1 1/4" X .031 (OR .035) X 7 FT.
1	2	FRAME, TOP	1454AS202	46.00 X 42.00 X 2.60
1	1	FRAME, BOTTOM	1454AS201	46.75 X 46.00 X 6.25
REQ'D	ITEM	DESCRIPTION	MAT'L/DWG	DIMENSIONS

LIST OF MATERIALS



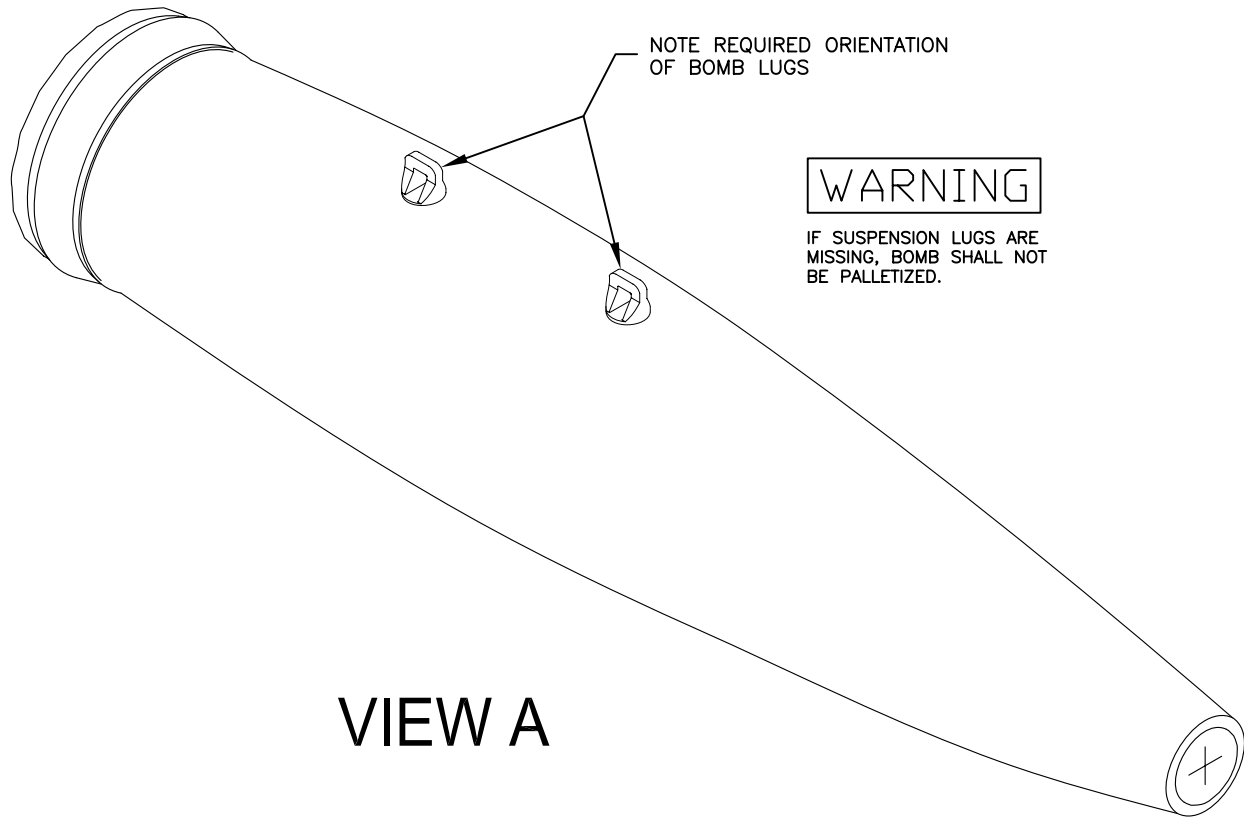
MHU-187A/E BOTTOM FRAME

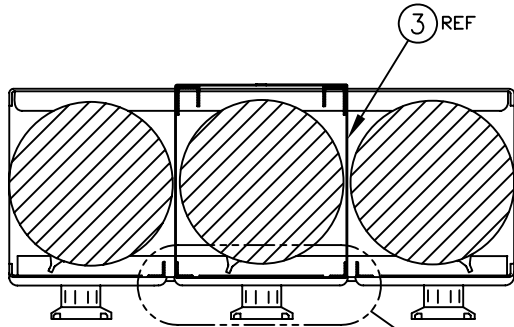


MHU-187A/E TOP FRAME

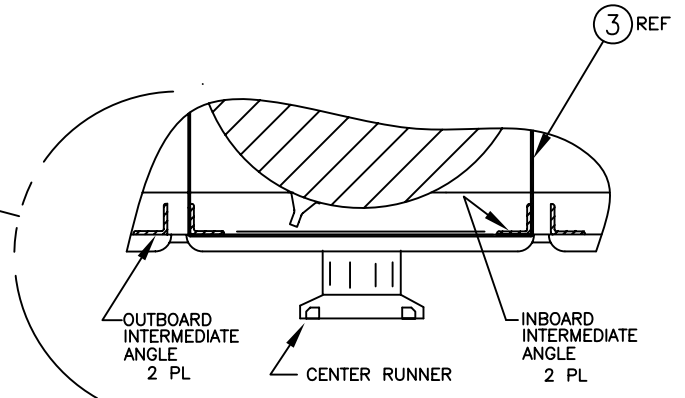
MATERIAL NOTES

1. STRAPPING SHALL CONFORM TO ASTM D3953, FLAT, TYPE 1, HEAVY DUTY, FINISH B, GRADE 2.
2. SEALS SHALL CONFORM TO ASTM D3953, CLASS H, FINISH B, GRADE 2, STYLE I, II OR IV.
3. PLYWOOD SHALL CONFORM TO CID A-A-55057, TYPE A OR B.
4. NAILS SHALL CONFORM TO ASTM F1667 DESIGNATION F1667 NL CM S-XX B, WHERE "XX" DESIGNATES THE SIZE (I.E., 8d, 10d, ETC.).
5. WOOD PACKAGING MATERIALS: ALL NON-MANUFACTURED WOOD (INCLUDING HARD WOOD) USED IN PACKAGING OR UNITIZATION SHALL BE HEAT TREATED TO A CORE TEMPERATURE OF 56 DEGREES CELSIUS (133°F) FOR A MINIMUM OF 30 MINUTES. THE BOX, WOOD PACKAGING, AND PALLET MANUFACTURERS SHALL BE AFFILIATED WITH AN INSPECTION AGENCY ACCREDITED BY THE BOARD OF REVIEW OF THE AMERICAN LUMBER STANDARD COMMITTEE. AN INTERNATIONAL CERTIFICATION AUTHORITY RECOGNIZED BY THE U.S. DEPARTMENT OF AGRICULTURE MUST ACCREDIT AN INTERNATIONAL SOURCE OF WOOD. EACH BOX SHALL BE MARKED TO SHOW THE CONFORMANCE TO THE INTERNATIONAL PLANT PROTECTION CONVENTION STANDARD. BOXES AND ANY WOOD USED AS INNER PACKAGING MADE OF NON-MANUFACTURED WOOD SHALL BE HEAT-TREATED. THE QUALITY MARK SHALL BE PLACED ON BOTH ENDS OF THE OUTER PACKAGING (BETWEEN THE ENCLOSURE CLEATS OR BATTENS IF APPLICABLE). QUALITY MARKS FOR PALLETS SHALL BE PLACED ON TWO OPPOSITE END POSTS. QUALITY MARKS FOR WOOD UNITIZATION COMPONENTS SHALL BE PLACED ON TWO OPPOSITE SIDES. FOREIGN MANUFACTURERS SHALL HAVE THE HEAT TREATMENT OF NON-MANUFACTURED WOOD PRODUCTS VERIFIED IN ACCORDANCE WITH THEIR NATIONAL PLANT PROTECTION ORGANIZATION'S COMPLIANCE PROGRAM.

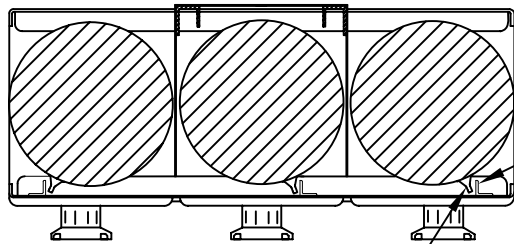




SECTION B-B
(LOOKING FWD)

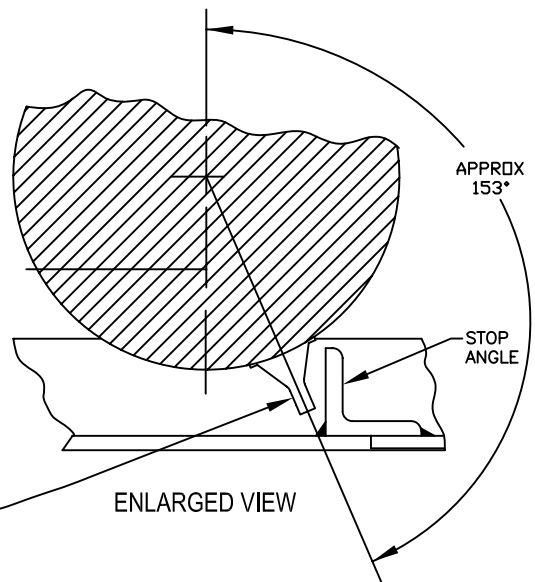


ENLARGED VIEW

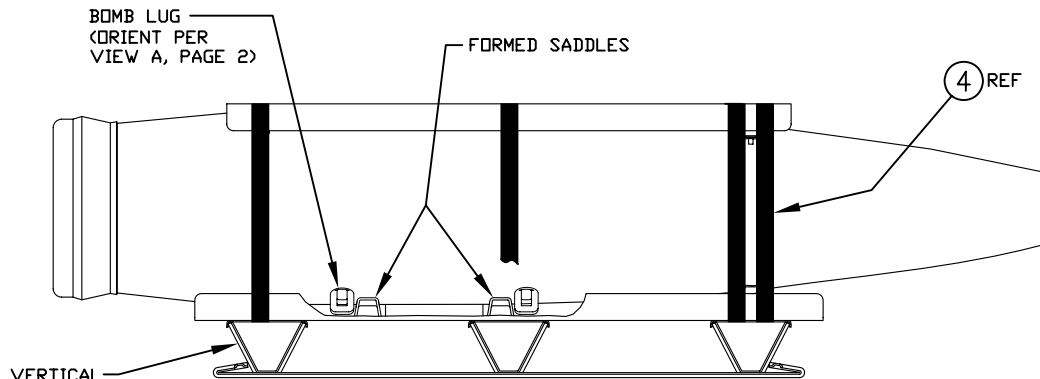


SECTION C-C
(LOOKING AFT)

STOP ANGLE



ENLARGED VIEW



VIEW D-D

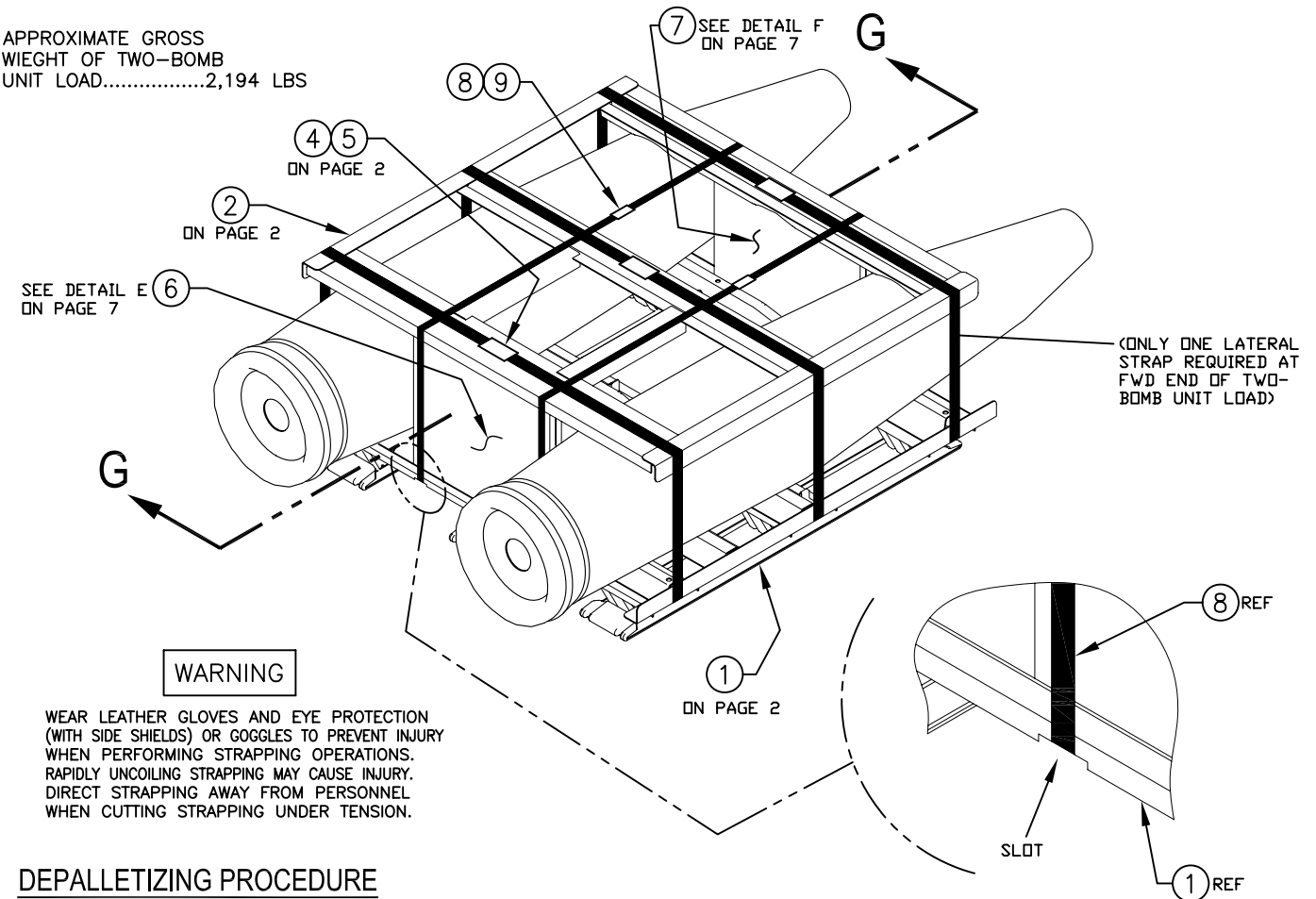
(STOP ANGLES OMITTED FROM VIEW FOR CLARITY)

PALLETIZING PROCEDURE - TWO BOMBS

- A. PLACE TOP AND BOTTOM FRAMES, ITEMS 1 & 2, IN WORK AREA. LOOK AT THE ILLUSTRATIONS ON PAGE 3 AND VERIFY THAT THE FRAMES ARE IN FACT THE MHE-187A/E BOMB PALLET. IF THEY ARE THE MHU-187/E ASSEMBLY, REFER TO DWG 53711-7516303 FOR PALLETIZING PROCEDURES. ALSO NOTE THE STAMPINGS INDICATING THE FWD AND AFT ENDS OF THE FRAMES. IF STAMPINGS ARE NOT LEGIBLE USE PAGE 3 TO ASSIST WITH PALLET ORIENTATION.
- B. MAKE SURE THE BOMB SUSPENSION LUGS ARE SCREWED ALL THE WAY IN AND THEN TURN THEM SO THEY ARE ORIENTED AS SHOWN IN VIEW A ON PAGE 4. IF A BOMB IS MISSING ONE OR BOTH SUSPENSION LUGS, THEN IT SHALL NOT BE PALLETIZED.
- C. USING A ROLL STAND/TABLE OR OTHER SUITABLE EQUIPMENT, ROTATE BOMBS SO THAT WHEN PLACED ON PALLET, THE SUSPENSION LUGS WILL BE ORIENTED AS SHOWN IN SECTION C-C ON PAGE 5.
- D. PLACE EACH BOMB IN THE OUTER POSITIONS OF THE BOTTOM FRAME. MAKE SURE THAT THE FORWARD END OF THE BOMBS FACE THE FORWARD END OF THE PALLET. MAKE SURE THE LUGS ARE STRADDLING THE TWO SADDLE MEMBERS AS SHOWN IN VIEW D-D ON PAGE 5. AFTER LOADING EACH BOMB VERIFY THAT THE SUSPENSION LUGS ARE WITHIN 1/2-INCH OF TOUCHING THE STOP ANGLES (SEE SECTION C-C ON PAGE 5). ROTATE BOMBS AS NECESSARY TO ENSURE PROPER LUG ORIENTATION.
- E. FABRICATE FWD AND AFT WOOD SPACER ASSEMBLIES AS SHOWN IN DETAILS E AND F ON PAGE 7.
- F. PLACE UPPER FRAME, ITEM 2, ON TOP OF BOMBS WITH WOOD SPACERS, ITEMS 6 & 7, CAPTURED AS SHOWN IN SECTION G-G ON PAGE 7.
- G. THREAD LONGITUDINAL STRAPS, ITEM 8, UNDER BOTTOM FRAME AND OVER TOP FRAME AS SHOWN. STRAPS SHALL BE LOCATED IN THE SLOTS IN THE LOWER FRAME AS SHOWN. IF SLOTS ARE NOT PRESENT, LOCATE STRAPS ONE INCH TO THE INSIDE OF EACH BOMB AT THE AFT END OF THE PALLET. TENSION AND SECURE EACH STRAP WITH ONE DOUBLE NOTCHED SEAL, ITEM 9.
- H. THREAD LATERAL STRAPS, ITEM 4, THROUGH THE VERTICAL SUPPORTS OF PALLET BASE (SEE SECTION G-G ON PAGE 7) AND OVER TOP FRAME AS SHOWN. TENSION AND SECURE EACH STRAP WITH ONE DOUBLE NOTCHED SEAL, ITEM 5.

MARKING: IN ADDITION TO ANY SPECIAL MARKING REQUIRED BY CONTRACT OR ORDER, THE UNIT LOAD SHALL BE MARKED IN ACCORDANCE WITH THE INSTRUCTION ON PAGE 10.

APPROXIMATE GROSS WEIGHT OF TWO-BOMB UNIT LOAD.....2,194 LBS



WARNING

WEAR LEATHER GLOVES AND EYE PROTECTION (WITH SIDE SHIELDS) OR GOGGLES TO PREVENT INJURY WHEN PERFORMING STRAPPING OPERATIONS. RAPIDLY UNCOILING STRAPPING MAY CAUSE INJURY. DIRECT STRAPPING AWAY FROM PERSONNEL WHEN CUTTING STRAPPING UNDER TENSION.

DEPALLETIZING PROCEDURE

- A. CUT AND REMOVE ALL STRAPPING.
- B. REMOVE TOP FRAME.
- C. REMOVE WOOD SPACER ASSEMBLIES.
- D. ROTATE BOMBS SO THAT LUGS ARE ON TOP.
- E. REMOVE BOMBS.
- F. INTERLOCK THE TOP & BOTTOM FRAMES USING PINS AT THE AFT END AND HOLES AT THE FORWARD END. STACK LIKE ASSEMBLIES AND SECURE TOGETHER FOR STORAGE/STOWAGE.

2	9	SEAL	STEEL, SEE MATERIAL NOTE 2 PAGE 4	FOR 3/4-INCH STRAPPING
2	8	STRAPPING, LONGIT.	STEEL, SEE MATERIAL NOTE 1 PAGE 4	3/4 X .031 (OR .035) X 12 FT.
2	7	SPACER BOARD, FWD	PLYWOOD, SEE MATERIAL NOTES 3 & 5 PAGE 4	3/4 X 19.00 W X 16.50 H
2	6	SPACER BOARD, AFT	PLYWOOD, SEE MATERIAL NOTES 3 & 5 PAGE 4	3/4 X 17.50 W X 16.50 H
REQ'D	ITEM	DESCRIPTION	MAT'L/DWG	DIMENSIONS

LIST OF MATERIALS

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DWG NO.

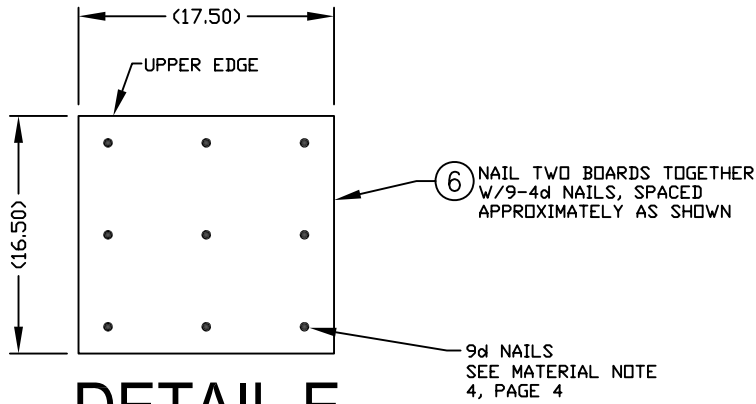
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REV. A

SIZE A

CAGE CODE
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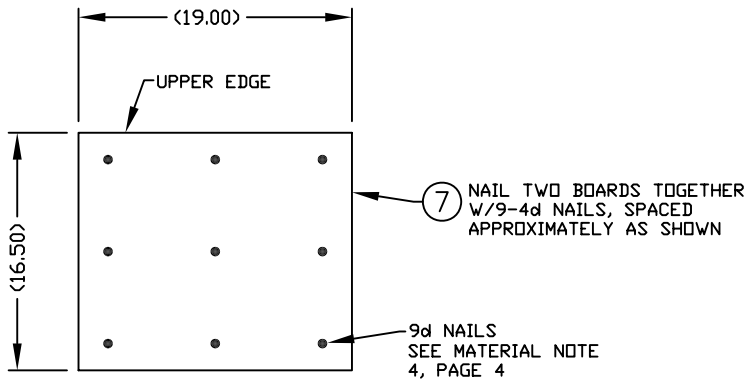
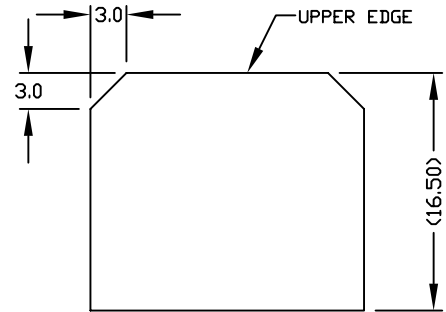
PAGE 6 OF 10



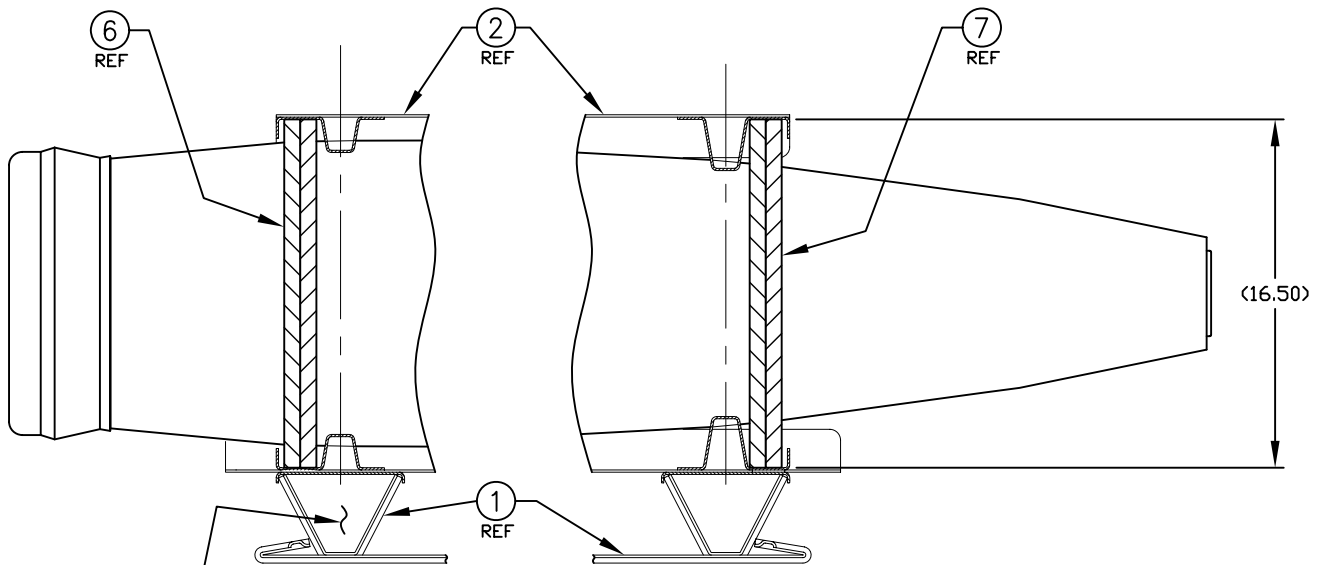
DETAIL E
(AFT SPACER)

NOTE

SOME BOMB PALLETS HAVE NOTCHES CUT THROUGH THE TOP FRAME THAT WILL INTERFERE WITH PROPER PLACEMENT OF THE WOOD SPACER ASSEMBLIES. TO ELIMINATE THIS INTERFERENCE, THE UPPER CORNERS OF BOTH FWD AND AFT SPACER ASSEMBLIES MAY BE CHAMFERED AS SHOWN BELOW.



DETAIL F
(FWD SPACER)



FEED LATERAL STRAPS, ITEM 4, THROUGH THIS OPENING. 3 PL SEE NOTE H PAGE 6

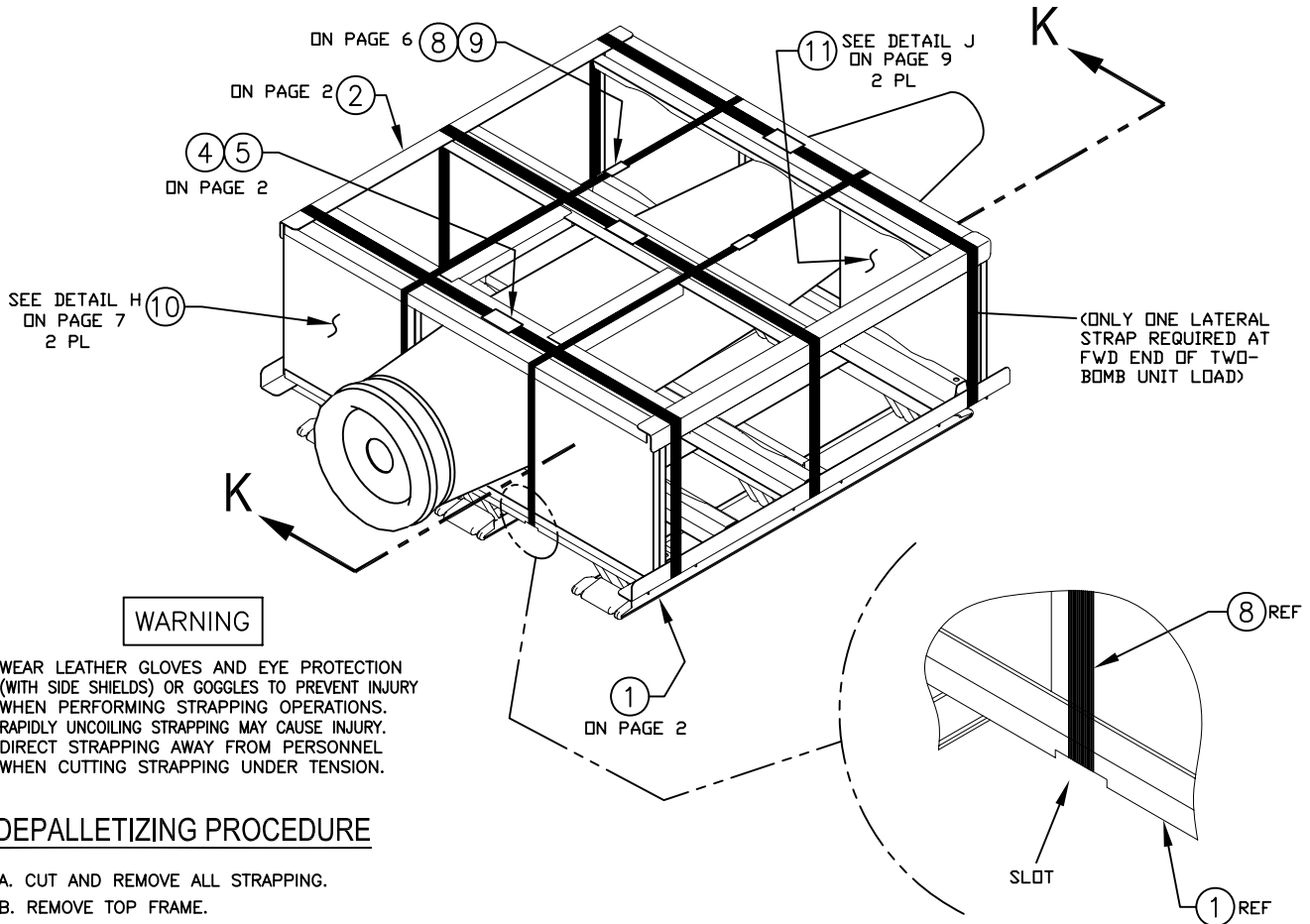
SECTION G-G
STRAPPING OMITTED FROM VIEW FOR CLARITY

PALLETIZING PROCEDURE - ONE BOMB

- A. PLACE TOP AND BOTTOM FRAMES, ITEMS 1 & 2, IN WORK AREA. LOOK AT THE ILLUSTRATIONS ON PAGE 3 AND VERIFY THAT THE FRAMES ARE IN FACT THE MHE-187A/E BOMB PALLET. IF THEY ARE THE MHU-187/E ASSEMBLY, REFER TO DWG 53711-7516303 FOR PALLETIZING PROCEDURES. ALSO NOTE THE STAMPINGS INDICATING THE FWD AND AFT ENDS OF THE FRAMES. IF STAMPINGS ARE NOT LEGIBLE USE PAGE 3 TO ASSIST WITH PALLET ORIENTATION.
- B. MAKE SURE THE BOMB SUSPENSION LUGS ARE SCREWED ALL THE WAY IN AND THEN TURN THEM SO THEY ARE ORIENTED AS SHOWN IN VIEW A ON PAGE 4. IF A BOMB IS MISSING ONE OR BOTH SUSPENSION LUGS, THEN IT SHALL NOT BE PALLETIZED.
- C. USING A ROLL STAND/TABLE OR OTHER SUITABLE EQUIPMENT, ROTATE BOMB SO THAT WHEN PLACED ON PALLET, ITS SUSPENSION LUGS WILL BE ORIENTED AS SHOWN IN SECTION C-C ON PAGE 5.
- D. PLACE BOMB IN THE CENTER POSITION OF THE BOTTOM FRAME. MAKE SURE THAT THE FORWARD END OF THE BOMB FACES THE FORWARD END OF THE PALLET. MAKE SURE THE LUGS ARE STRADDLING THE TWO SADDLE MEMBERS AS SHOWN IN VIEW D-D ON PAGE 5. AFTER LOADING BOMB VERIFY THAT THE SUSPENSION LUGS ARE WITHIN 1/2-INCH OF TOUCHING THE STOP ANGLES (SEE SECTION C-C ON PAGE 5). ROTATE BOMB AS NECESSARY TO ENSURE PROPER LUG ORIENTATION.
- E. FABRICATE FWD AND AFT WOOD SPACER ASSEMBLIES AS SHOWN IN DETAILS H AND J ON PAGE 9.
- F. PLACE UPPER FRAME, ITEM 2, ON TOP OF BOMB WITH WOOD SPACERS, ITEMS 10 & 11, CAPTURED AS SHOWN IN SECTION K-K ON PAGE 9.
- G. THREAD LONGITUDINAL STRAPS, ITEM 8, UNDER BOTTOM FRAME AND OVER TOP FRAME AS SHOWN. STRAPS SHALL BE LOCATED IN THE SLOTS IN THE LOWER FRAME AS SHOWN. IF SLOTS ARE NOT PRESENT, LOCATE STRAPS ONE INCH TO THE INSIDE OF EACH BOMB AT THE AFT END OF THE PALLET. TENSION AND SECURE EACH STRAP WITH ONE DOUBLE NOTCHED SEAL, ITEM 9.
- H. THREAD LATERAL STRAPS, ITEM 4, THROUGH THE VERTICAL SUPPORTS OF PALLET BASE (SEE SECTION K-K ON PAGE 9) AND OVER TOP FRAME AS SHOWN. TENSION AND SECURE EACH STRAP WITH ONE DOUBLE NOTCHED SEAL, ITEM 5.

MARKING: IN ADDITION TO ANY SPECIAL MARKING REQUIRED BY CONTRACT OR ORDER, THE UNIT LOAD SHALL BE MARKED IN ACCORDANCE WITH THE INSTRUCTIONS ON PAGE 10.

APPROXIMATE GROSS WEIGHT
OF ONE-BOMB UNIT LOAD.....1,212 LBS



4	11	SPACER BOARD, FWD	PLYWOOD, SEE MATERIAL NOTES 3 & 5 PAGE 4	3/4 X 16.75 W X 16.00 H
4	10	SPACER BOARD, AFT	PLYWOOD, SEE MATERIAL NOTES 3 & 5 PAGE 4	3/4 X 15.50 W X 16.00 H
REQ'D	ITEM	DESCRIPTION	MAT'L/DWG	DIMENSIONS

LIST OF MATERIALS

NAVSEA
DWG NO.

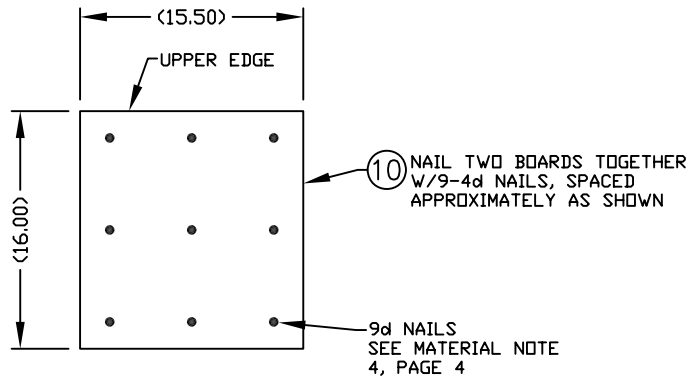
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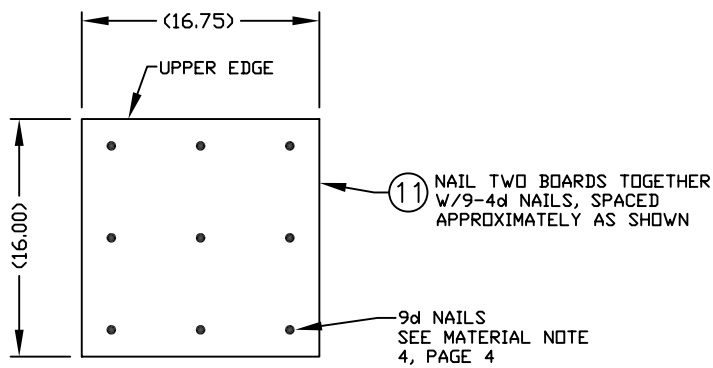
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CAGE CODE
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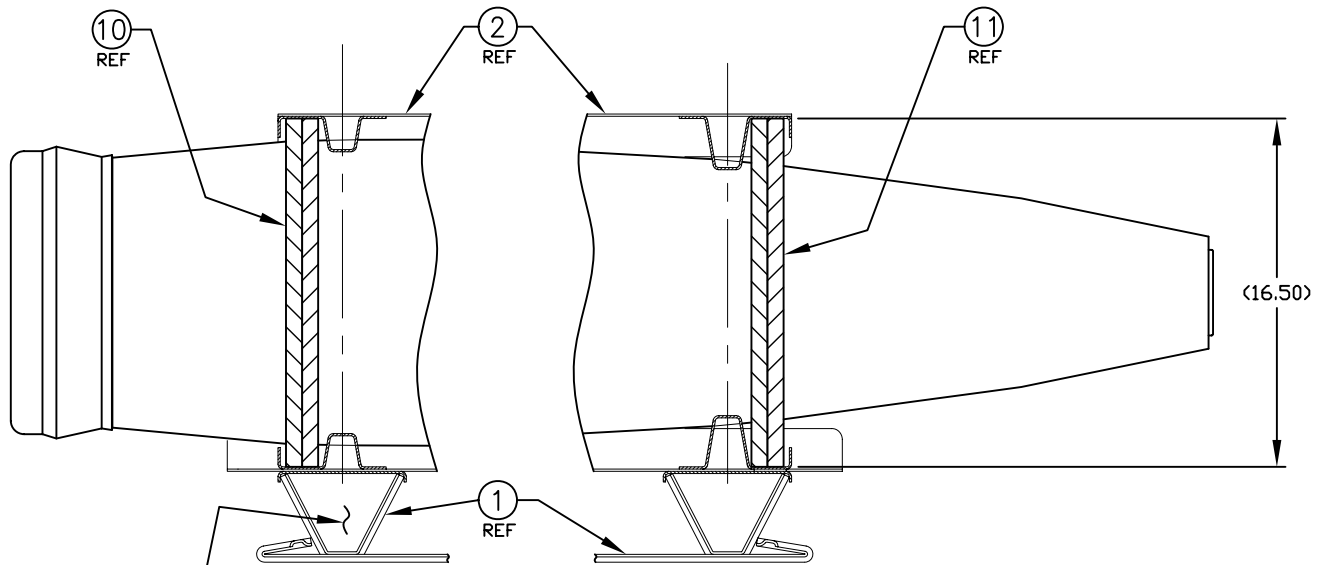
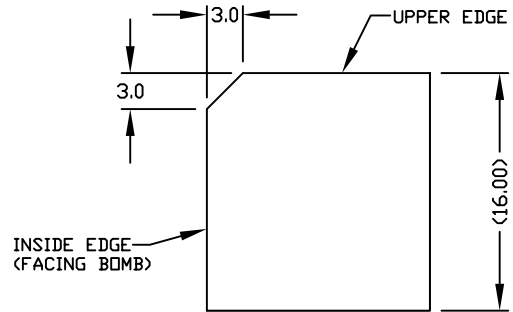
DETAIL H
(AFT SPACER)



DETAIL J
(FWD SPACER)

NOTE

SOME BOMB PALLETS HAVE NOTCHES CUT THROUGH THE TOP FRAME THAT WILL INTERFERE WITH PROPER PLACEMENT OF THE WOOD SPACER ASSEMBLIES. TO ELIMINATE THIS INTERFERENCE, THE UPPER INSIDE CORNERS OF BOTH FWD AND AFT SPACER ASSEMBLIES MAY BE CHAMFERED AS SHOWN BELOW.



FEED LATERAL STRAPS, ITEM 4, THROUGH THIS OPENING. 3 PL SEE NOTE H PAGE 8

SECTION K-K

STRAPPING OMITTED FROM VIEW FOR CLARITY

MARKING INSTRUCTIONS:

1. IN ADDITION TO ANY SPECIAL MARKING REQUIRED BY CONTRACT OR PURCHASE ORDER, THE UNIT LOAD SHALL BE MARKED IN ACCORDANCE WITH 28620-ACV00561 AND THE FOLLOWING NOTES.
2. THE UNIT LOAD MARKING AND UNIT LOAD LINEAR AND 2D BAR CODES SHALL BE APPLIED TO WATERPROOF TAG(S) THAT ARE ATTACHED TO THE UNIT LOAD AT DIAGONALLY OPPOSITE ENDS OF THE UNIT LOAD ON THE TOP FRAME OF THE ADAPTER. THE UNIT LOAD MARKING AND LINEAR BAR CODE LABELS SHALL BE APPLIED TO ONE SIDE OF THE TAG. THE 2D BAR CODE LABEL SHALL BE APPLIED TO THE OPPOSITE SIDE OF THE TAG. WATERPROOF PAPER, METAL, CLOTH OR PLASTIC TAGS SHALL BE USED. THE TAGS SHALL BE ATTACHED BY CORROSION-RESISTANT WIRE OR PLASTIC TIES.
3. LINEAR BAR CODE LABELS:
 - A. IN ADDITION TO 2D BAR CODE LABELS OF ACV00561, APPLY NIIN AND LOT NUMBER LINEAR BAR CODE LABELS AS FOLLOWS:
 - 1) NIIN BAR CODE LABEL: THE NINE-DIGIT NATIONAL ITEM IDENTIFICATION NUMBER (NIIN), OWNERSHIP CODE AND AMMUNITION CONDITION CODE SHALL BE ENCODED AS A SINGLE "MESSAGE". THE NIIN SHALL BE ENCODED WITHOUT THE DASHES. A SPACE (ENCODED) SHALL BE PLACED BETWEEN THE NIIN AND THE OWNERSHIP CODE AND BETWEEN THE OWNERSHIP CODE AND AMMUNITION CONDITION CODE.
 - a) OWNERSHIP CODE: THE OWNERSHIP CODE SHALL BE AS FOLLOWS:
 1. FOR ARMY-OWNED AMMUNITION- "1".
 2. FOR MARINE CORPS-OWNED AMMUNITION- "4".
 3. FOR NAVY OWNED-AMMUNITION- "5".
 4. FOR AIR FORCE-OWNED AMMUNITION- "6".
 5. FOR COAST GUARD-OWNED AMMUNITION- "7".
 - b) AMMUNITION CONDITION CODE: THE AMMUNITION CONDITION CODE (C/C) SHALL BE "A" FOR NEW PRODUCTION ASSETS.
 - 2) LOT/SERIAL NUMBER BAR CODE LABEL: THE LOT NUMBER, SERIAL NUMBER, SHELF-LIFE EXPIRATION DATE AND QUANTITY SHALL BE ENCODED ON THE SAME "MESSAGE". A SLASH (ENCODED) SHALL BE PLACED BETWEEN THE LOT NUMBER AND THE SERIAL NUMBER, WHEN BOTH LOT AND SERIAL NUMBERS ARE ASSIGNED. THE SHELF-LIFE EXPIRATION DATE IS A 4 DIGIT DATA ELEMENT REPRESENTING THE MONTH (01 THROUGH 12) AND LAST TWO DIGITS OF THE YEAR. THE SHELF-LIFE SHALL BE ENCODED BETWEEN THE SERIAL NUMBER AND THE QUANTITY, IF A SHELF-LIFE IS ASSIGNED. A SPACE (ENCODED) SHALL BE PLACED BETWEEN THE SERIAL NUMBER AND THE SHELF-LIFE DATE AND BETWEEN THE SHELF-LIFE DATE AND THE QUANTITY.
 - B. LINEAR BAR CODE REQUIREMENTS:
 - 1) LABELS SHALL MEET THE REQUIREMENTS FOR GRADE A, STYLE 2, COMPOSITION B, LABELS AS SPECIFIED IN MIL-PRF-61002. THE PERFORMANCE REQUIREMENTS FOR SOLVENT AND DETERGENT RESISTANCE ARE NOT REQUIRED. THE LABEL SHOULD BE THE PRESSURE SENSITIVE ADHESIVE TYPE. ADDITIONAL PERFORMANCE REQUIREMENTS THAT MUST BE MET ARE AS FOLLOWS:
 - a) THE LABEL MATERIAL WILL BE MINIMUM OF 6.8 MIL THICK (7 MIL NOMINAL). MATERIAL WILL PROVIDE A MINIMUM OF 42 LBS/1-INCH WIDE TENSILE STRENGTH AT BREAK WHEN TESTED IAW ASTM D882. MATERIAL WILL PROVIDE A MINIMUM OF 6600 GRAMS (66 NEWTONS) OF PUNCTURE PROPAGATION AND TEAR RESISTANCE WHEN TESTED IAW ASTM D2582.
 - b) EACH LABEL SHALL BE NO GREATER THAN 4 INCHES BY 4 INCHES SQUARE. NEW PRODUCTION SHALL HAVE LABELS OF MINIMUM SIZE WITH MINIMUM AMOUNT OF WHITE SPACE. FORMAT IS NOT MANDATED BUT THE INFORMATION SHOULD BE GROUPED BY NSN OR PART NUMBER AND THEN BY SERIAL NUMBER FOR EACH LOT NUMBER IF APPLICABLE.
 - 2) THE BAR CODE SYMBOLOGY AND HUMAN READABLE INFORMATION (HRI) THAT ARE TO BE APPLIED SHOULD BE THE STANDARD DOD SYMBOLOGY AS DESCRIBED IN ANSI/AIM BC1 (UNIFORM SYMBOLOGY SPECIFICATION CODE 39). THE ANSI/AIM BC1 IS A DOCUMENT PUBLISHED BY AIM USA AND MAY BE OBTAINED DIRECTLY FROM AIM USA BY WRITING TO 634 ALPHA DRIVE, PITTSBURGH PA 15328-2802 OR CALL (412) 963-8588. THE HRI SHALL BE AN EXACT INTERPRETATION OF THE DATA ENCODED IN THE BAR CODE AND SHOULD NOT CONTAIN ANY SPACES OR DASHES, THE PREFERRED LOCATION FOR THE HRI IS BELOW THE BAR CODE MARKINGS.
 - 3) BAR CODE RESTRICTIONS:
 - a) DENSITY OF THE BAR CODE SHALL BE 9.4 CHARACTERS PER INCH UNLESS OTHERWISE SPECIFIED.
 - b) HEIGHT OF BAR CODE SHALL BE 0.25 INCH OR GREATER. THE HEIGHT OF THE BARS MAY EXTEND TO THE EDGE OF THE LABEL.
 - c) DISTANCE BETWEEN THE BAR CODE AND THE HRI WILL BE BETWEEN 0.003 AND 0.010 INCH. THE PREFERRED DISTANCE IS 0.003.
 - d) HEIGHT OF THE HRI SHALL BE BETWEEN 0.09 AND 0.15 INCH. THE PREFERRED HEIGHT IS 0.09.