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DATE 12/2/00

# APPENDIX 48

# LOADING AND BRACING • PROCEDURES FOR STRATEGIC CONFIGURED LOAD (SCL) ON CONTAINER ROLL IN/OUT PLATFORM (CROP)

# SCL #48 - 105MM HERA M913

**INDEX**



**NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC CROP OUTLOADING PROCEDURES DRAWING 19-48-4905-CA17Q6.**

• **LOADING AND BRACING SPECIFICATIONS SET FORTH WITHIN THIS DRAWING ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLATCAR (T/COFC) RAIL CARRIER SERVICE. THESE SPECIFICATIONS MAY ALSO BE USED FOR LOADS THAT ARE TO BE MOVED BY MOTOR OR WATER CARRIERS.**

## U.S. ARMY MATERIEL COMMAND DRAWING

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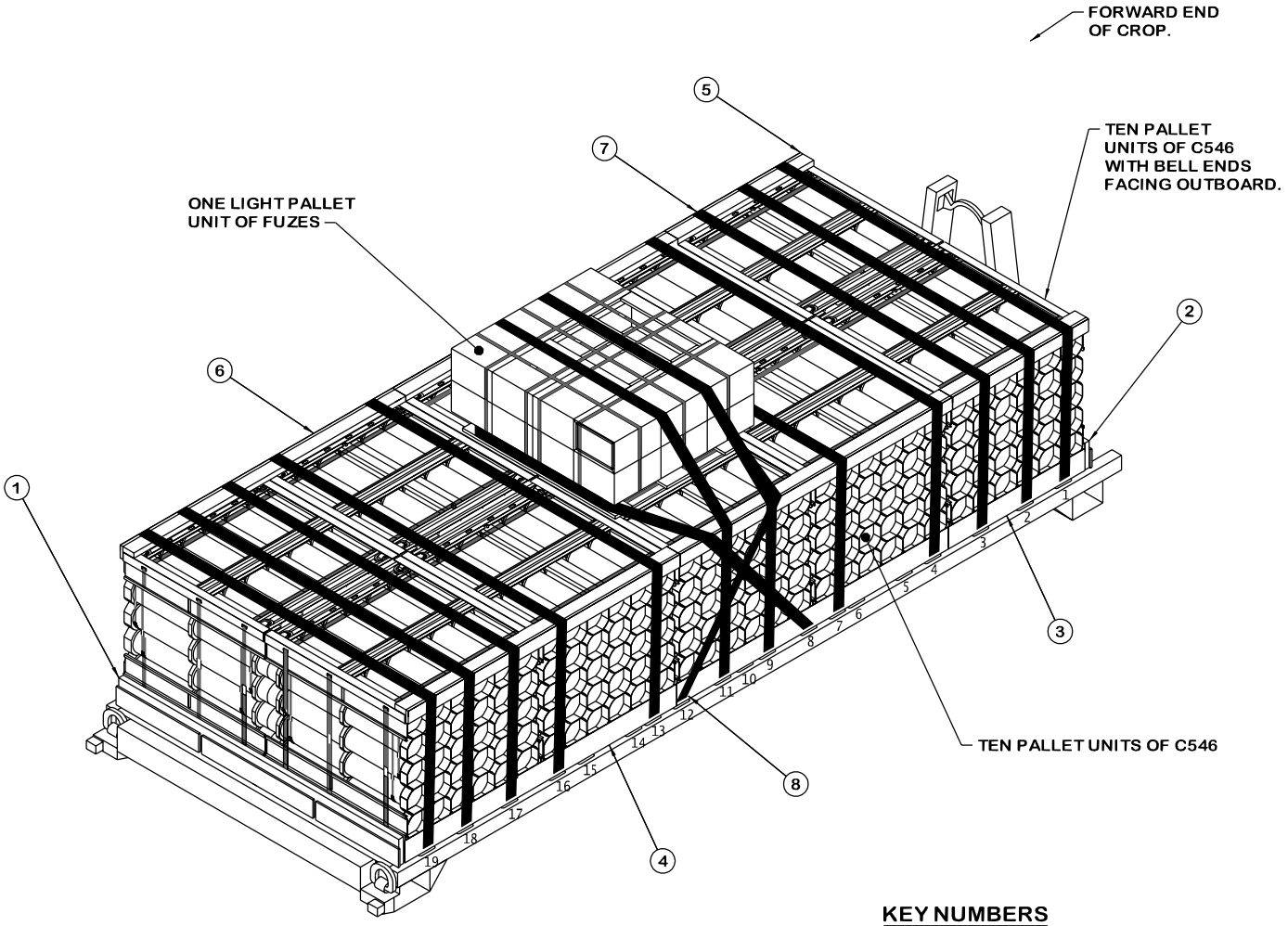
**OCTOBER 2000**

| CLASS | DIVISION | DRAWING | FILE |
|---|---|---|---|
| 19 | 48 | 4905/ 48 | CA17Q6 |

**PROJECT CAP-TV 6/48-00**




## ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

(7) HOLD-DOWN STRAP, 3-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY FOR CROP (12 REQD). INSTALL EACH HOLD-DOWN STRAP TO EXTEND FROM THE DESIGNATED TIEDOWN ANCHOR ON ONE SIDE OF CROP, OVER THE TOP OF THE STRAPPING BOARD ASSEMBLIES AND PALLET UNITS AND BACK DOWN TO THE CORRESPONDING TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. SEE GENERAL NOTE "H" ON PAGE 3.

(8) END RESTRAINT STRAP (2 REQD). INSTALL ONE WEB STRAP ASSEMBLY TO EXTEND FROM THE EIGHTH TIEDOWN ANCHOR ON ONE SIDE OF THE CROP, AROUND THE BASE OF THE LIGHT PALLET UNIT, AND BACK DOWN TO THE EIGHTH TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE CROP. INSTALL ANOTHER WEB STRAP ASSEMBLY TO EXTEND FROM THE TWELFTH TIEDOWN ANCHOR ON ONE SIDE OF THE CROP, AROUND THE BASE OF THE LIGHT PALLET UNIT, AND BACK DOWN TO THE TWELFTH TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. SEE GENERAL NOTE "H" ON PAGE 3.

## KEY NUMBERS

(1) AFT FILLER ASSEMBLY (1 REQD). SEE DETAIL ON PAGE 6. CENTER AGAINST AFT CROP END GATE AND NAIL W/2-12d NAILS THRU THE SLOTS IN THE AFT CROP END GATE INTO THE AFT FILLER ASSEMBLY, LEAVING THE NAIL HEADS PROTRUDING THRU THE SLOTS TO PROVIDE LATERAL RESTRAINT.

(2) FORWARD FILLER, 1" OR 2" X 8" X 7'-4" (AS REQD). LAMINATE EACH PIECE TO THE PREVIOUS PIECE W/8 NAILS OF SUITABLE SIZE. CENTER AGAINST THE FORWARD CROP END GATE AFTER THE PALLET UNITS ARE LOADED, AND NAIL THROUGH THE HOLES IN THE CROP END GATE W/2-12d NAILS INTO THE FORWARD FILLER ASSEMBLY, LEAVING THE NAIL HEADS PROTRUDING THROUGH THE HOLES TO PROVIDE LATERAL AND VERTICAL RESTRAINT.

(3) SIDE BLOCKING ASSEMBLY A (2 REQD). SEE DETAIL ON PAGE 7. INSTALL ONE ON EACH SIDE OF LOAD WITH RETAINER CLEATS RECESSED UNDER THE C546 PALLET UNITS.

(4) SIDE BLOCKING ASSEMBLY B (4 REQD). SEE DETAIL ON PAGE 7. INSTALL TWO ON EACH SIDE OF LOAD WITH RETAINER CLEATS RECESSED UNDER THE C546 PALLET UNITS.

(5) STRAPPING BOARD ASSEMBLY A (2 REQD). SEE THE DETAIL ON PAGE 6. POSITION ON THE TOP EDGES OF THE PALLET UNITS AT THE FRONT OF THE CROP AS SHOWN.

(6) STRAPPING BOARD ASSEMBLY B (4 REQD). SEE THE DETAIL ON PAGE 6. POSITION ON THE TOP EDGES OF THE PALLET UNITS AS SHOWN.

(CONTINUED AT LEFT)

## RECOMMENDED SEQUENTIAL PROCEDURES

1. PREFABRICATE ONE AFT FILLER ASSEMBLY, TWO SIDE BLOCKING ASSEMBLIES "A", FOUR SIDE BLOCKING ASSEMBLIES "B", TWO STRAPPING BOARD ASSEMBLIES "A", FOUR STRAPPING BOARD ASSEMBLIES "B", AND ONE LIGHT PALLET UNIT OF FUZES.
2. POSITION THE AFT FILLER ASSEMBLY, PIECE MARKED ①, TIGHT AGAINST THE AFT CROP END GATE. CENTER THE FILLER ASSEMBLY ON THE GATE.
3. PLACE TWO C546 PALLET UNITS TIGHT AGAINST THE AFT FILLER PIECE, CENTERING THE PALLET UNITS LATERALLY ON THE CROP. NAIL TWO 12d RETAINER NAILS INTO THE AFT FILLER ASSEMBLY AS INSTRUCTED IN KEY NUMBER ①.
4. LOAD THE ADDITIONAL C546 PALLET UNITS TIGHT AGAINST THE PREVIOUS ROW OF C546 PALLET UNITS, CENTERING THE ROWS LATERALLY ON THE CROP UNTIL ALL 10 PALLET UNITS ARE LOADED ON THE CROP.
5. CENTER THE FORWARD FILLER PIECE AGAINST THE FORWARD END GATE. NAIL TWO 12d RETAINER NAILS THROUGH THE HOLES IN THE FORWARD CROP END GATE INTO THE FORWARD FILLER PIECE AS INSTRUCTED IN KEY NUMBER ②.
6. INSTALL THE LIGHT PALLET UNIT OF FUZES ON TOP OF THE THIRD ROW OF C546 PALLET UNITS, AND CENTER LATERALLY AND LONGITUDINALLY ON THE C546 PALLET UNITS.
7. INSTALL THE TWO SIDE BLOCKING ASSEMBLIES "A" AS INSTRUCTED IN KEY NUMBER ③.
8. INSTALL THE FOUR SIDE BLOCKING ASSEMBLIES "B" AS INSTRUCTED IN KEY NUMBER ④.
9. INSTALL THE TWO STRAPPING BOARD ASSEMBLIES "A" AS INSTRUCTED IN KEY NUMBER ⑤.
10. INSTALL THE FOUR STRAPPING BOARD ASSEMBLIES "B" AS INSTRUCTED IN KEY NUMBER ⑥.
11. INSTALL 12 WEB STRAP TIEDOWN ASSEMBLIES AS INSTRUCTED IN KEY NUMBER ⑦.
12. INSTALL TWO WEB STRAP TIEDOWN ASSEMBLIES AROUND THE LIGHT PALLET UNIT AS INSTRUCTED IN KEY NUMBER ⑧.

## GENERAL NOTES

A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC LOADING PROCEDURES DRAWING 19-48-4905-CA17Q6. TO PRODUCE AN APPROVED LOAD, ALL PERTINENT PROCEDURES, SPECIFICATIONS AND CRITERIA SET FORTH WITHIN THE BASIC DRAWING WILL APPLY TO THE PROCEDURES DELINEATED IN THIS APPENDIX. ANY EXCEPTIONS TO THE BASIC PROCEDURES ARE SPECIFIED IN THIS APPENDIX.

B. THE OUTLOADING PROCEDURES DEPICTED IN THIS DRAWING ARE APPLICABLE TO LOADS OF SCL #48. SEE PAGES 4 AND 5 FOR DETAILS OF THE PALLET UNITS. AN M3A1 (HYUNDAI) CROP IS SHOWN AS TYPICAL. OTHER MANUFACTURER'S CROPS CAN BE USED FOR THE LOAD SHOWN ON PAGE 2. THE SEQUENTIAL LOADING PROCEDURES DEPICTED AT LEFT DESCRIBE THE SEQUENCE USED TO LOAD AN M3A1 CROP. FOR AN M3 (SUMMA) CROP, SEQUENTIAL LOADING PROCEDURES 2 THROUGH 5 MUST BE REVERSED. ACTUAL CROP CONFIGURATION WILL DETERMINE WHETHER THE SEQUENTIAL LOADING STARTS AT THE AFT OR THE FORWARD END OF THE CROP.

C. THE LOADING PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR OUTLOADING SIMILAR SCL LOADS WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS SHOWN ON PAGE 4, PROVIDED THE OVERALL PALLET UNIT DIMENSIONS DO NOT VARY FROM WHAT IS DELINEATED HEREIN.

D. LIGHT PALLET UNIT MUST BE CONSTRUCTED IN ACCORDANCE WITH THE GUIDELINES DELINEATED IN THE BASIC UNITIZATION PROCEDURES DRAWING APPLICABLE TO THAT PALLET UNIT.

E. DIMENSIONS, CUBE AND WEIGHT OF THE PALLET UNITS WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE BOXES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.

F. IN ORDER TO FULFILL OPERATIONAL REQUIREMENTS, ALTERNATE NSN/DODIC COMBINATIONS MAY BE SUBSTITUTED FOR SOME OR ALL OF THE NSN/DODIC ITEMS DEPICTED IN THE CHART ON PAGE 4.

G. DIMENSIONS GIVEN FOR DUNNAGE ASSEMBLIES WILL BE FIELD CHECKED PRIOR TO THEIR ASSEMBLY. PALLET UNITS MUST FIT SNUGLY AGAINST THE DUNNAGE ASSEMBLIES. THIS GUIDANCE MUST BE APPLIED PRIOR TO BEGINNING AN OUTLOADING OPERATION. ALSO, DUE TO VARIATION OF PALLET UNIT DIMENSIONS, ADJUSTMENTS MAY BE REQUIRED AS TO THE LOCATION OF CERTAIN PIECES ON DUNNAGE ASSEMBLIES.

H. ALL WEB STRAP TIEDOWN ASSEMBLIES MUST HAVE THE EXCESS LENGTH OF THE STRAP SECURED. ROLL UP AND BUNDLE THE EXCESS LENGTH OF WEB STRAP, SECURING WITH CABLE TIES. SEE THE "STRAP END SECUREMENT" DETAIL AND GENERAL NOTE "K.12" IN THE BASIC PROCEDURE DRAWING 19-48-4905-CA17Q6.

J. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4MM AND ONE POUND EQUALS 0.454 KG.

BILL OF MATERIAL

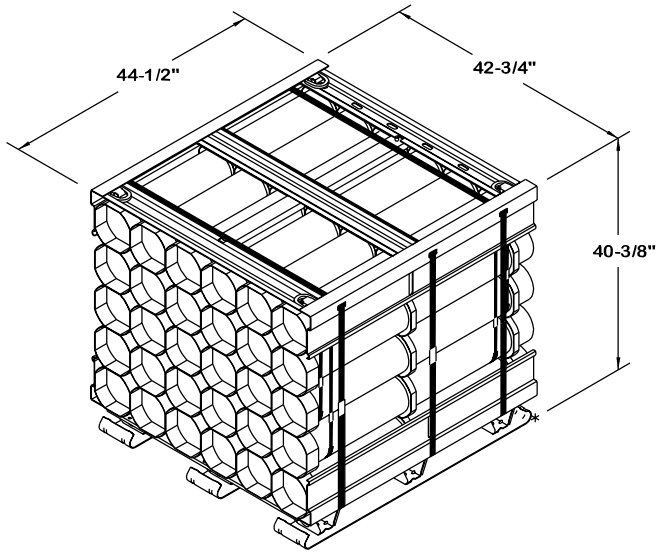
| LUMBER | LINEAR FEET | BOARD FEET |
|---|---|---|
| 1" X 4" | 36 | 12 |
| 2" X 3" | 2 | 1 |
| 2" X 4" | 36 | 24 |
| 2" X 8" | 15 | 20 |
| **NAILS** | **NO. REQD** | **POUNDS** |
| 6d (2") | 66 | 1/2 |
| 10d (3") | 4 | 1/4 |
| 12d (3-1/4") | 4 | 1/4 |
| HARDBOARD, 1/8" - - - 17.71 SQ FT REQD - - - - 8 LBS | | |

## LOAD AS SHOWN

| ITEM | QUANTITY | WEIGHT (APPROX) |
|---|---|---|
| C546 PALLET UNIT | 10 | 22,580 LBS |
| LIGHT PALLET UNIT | 1 | 1,015 LBS |
| DUNNAGE | | 123 LBS |
| CROP | | 3,800 LBS |
| TOTAL WEIGHT | | 27,518 LBS (APPROX) |

# SCL #48 COMPOSITION CHART

| DODIC | NSN | NOMENCLATURE | UNIT DWG | REQD | UNITS REQD | HC |
|---|---|---|---|---|---|---|
| C546 | 1315-01-250-2857 | CARTRIDGE, 105MM HERA M913 | 4231/45 | 300 | 10 PALLETS | 1.2E |
| N290 | 1390-01-283-6532 | FUZE, ARTILLERY ELECTRONIC TIME M767 W/BOOSTER | 4116/156S | 160 | 10 BOXES | 1.2D |
| N340 | 1390-01-132-7481 | FUZE, POINT DETONATING M739A1 | 4116/156 | 80 | 5 BOXES | 1.2D |
| N464 | 1390-01-202-1710 | FUZE, PROXIMITY M732 | 4116/156G | 80 | 5 BOXES | 1.2D |




## C546 PALLET UNIT DETAIL

30 CONTAINERS OF 105MM CARTRIDGES
(1 PER CONTAINER) AT 68 LBS - - - - - - - 2,040 LBS (APPROX)
DUNNAGE - - - - - - - - - - - - - - - - - - 113 LBS
PALLET - - - - - - - - - - - - - - - - - - - 105 LBS

TOTAL WEIGHT - - - - - - - - 2,258 LBS (APPROX)
CUBE - - - - - - - - - - - - 44.5 CU FT (APPROX)



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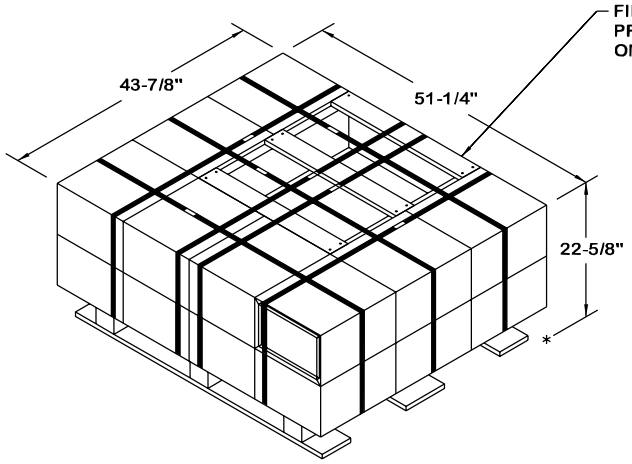



## LIGHT PALLET UNIT

**SEE THE TABLE BELOW FOR ASSEMBLING THE LIGHT PALLET UNIT WITH THE PROPER QUANTITY OF FUZES BY DODIC.**

**NOTE: THE LIGHT PALLET UNIT DEPICTED ABOVE CONTAINS 20 BOXES OF FUZES.**

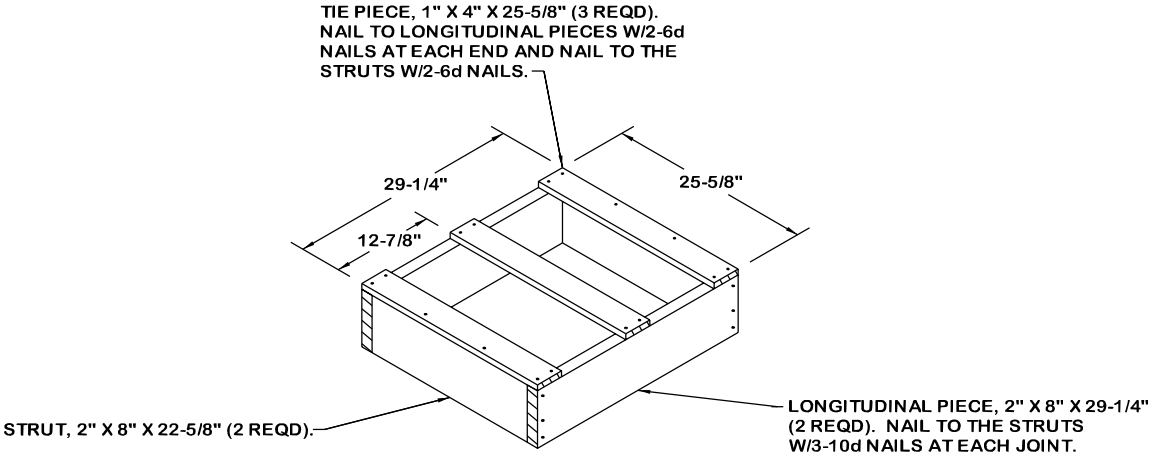
| LIGHT PALLET UNIT QUANTITY OF BOXES BY DODIC | | |
|---|---|---|
| N290 | N340 | N464 |
| 10 | 5 | 5 |

**THE LIGHT PALLET UNIT DEPICTED AT LEFT SHOULD BE CONSTRUCTED IAW THE AMC DRAWING LISTED ON PAGE 4 WITH THE FOLLOWING CHANGES:**

1. **ELIMINATE ONE LAYER OF BOXES (12 BOXES).**
2. **REDUCE THE LOAD STRAP LENGTH TO 12'-6".**
3. **REDUCE THE TIEDOWN STRAP LENGTH TO 11'-3".**
4. **ELIMINATE FOUR BOXES AND REPLACE WITH A FILLER ASSEMBLY.**

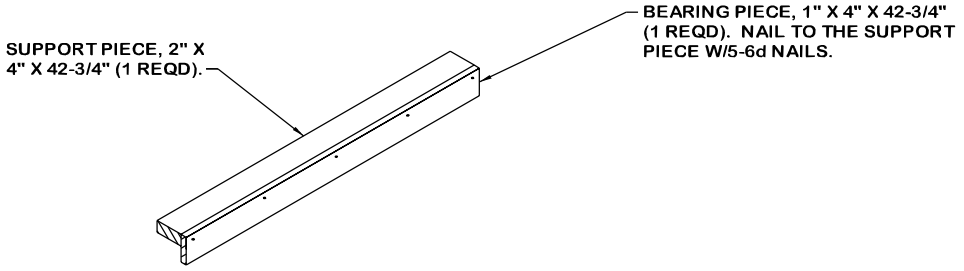
## LIGHT PALLET UNIT

| | |
|---|---|
| 10 BOXES OF N290 FUZES (16 PER BOX) AT 42 LBS | 420 LBS (APPROX) |
| 5 BOXES OF N340 FUZES (16 PER BOX) AT 46 LBS | 230 LBS (APPROX) |
| 5 BOXES OF N464 FUZES (16 PER BOX) AT 50 LBS | 250 LBS (APPROX) |
| DUNNAGE | 35 LBS |
| PALLET | 80 LBS |
| TOTAL WEIGHT | 1,015 LBS (APPROX) |
| CUBE | 29.4 CU FT (APPROX) |



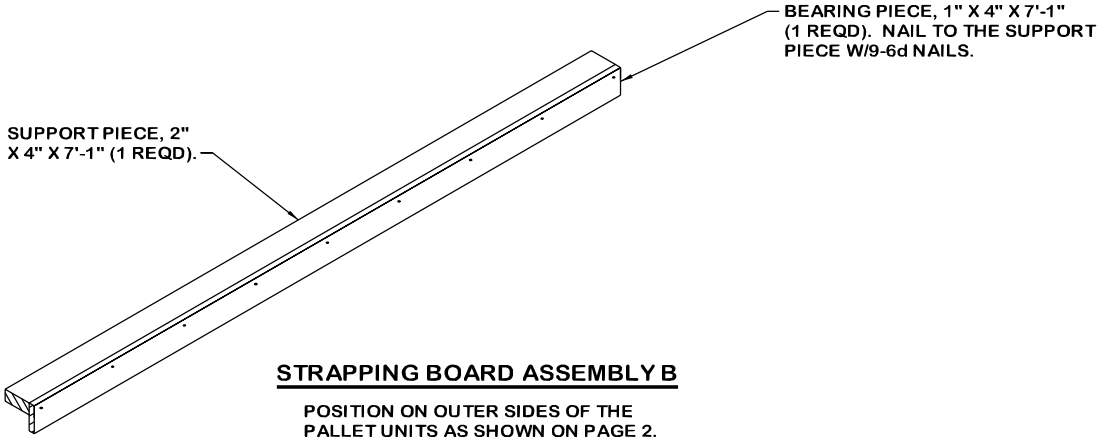

## FILL ASSEMBLY

**THIS FILL ASSEMBLY WILL BE USED TO PROVIDE FILLER SPACE FOR THE FOUR OMITTED BOXES IN CONSTRUCTING THE FUZE LIGHT PALLET UNIT AS DETAILED ABOVE AND AS SHOWN ON TOP OF THE CROP ON PAGE 2.**



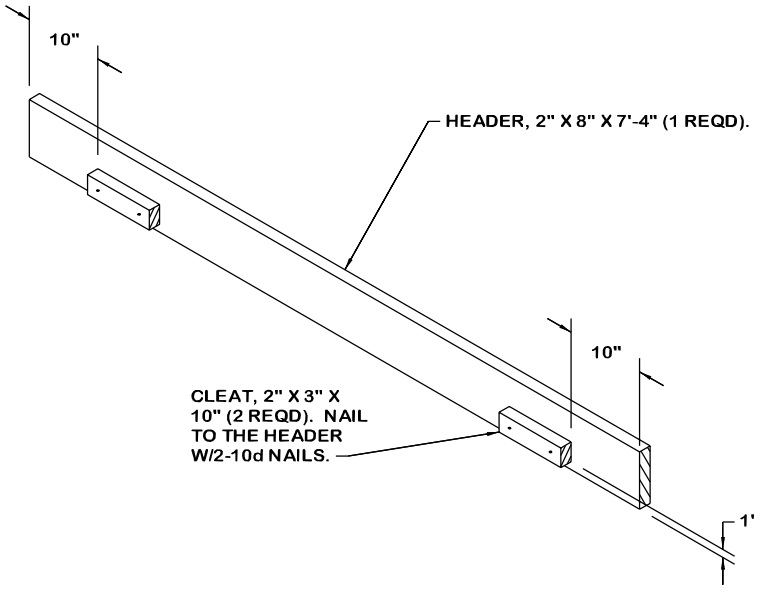

## STRAPPING BOARD ASSEMBLY A

POSITION ON OUTER SIDES OF THE FRONT PALLET UNITS AS SHOWN ON PAGE 2.



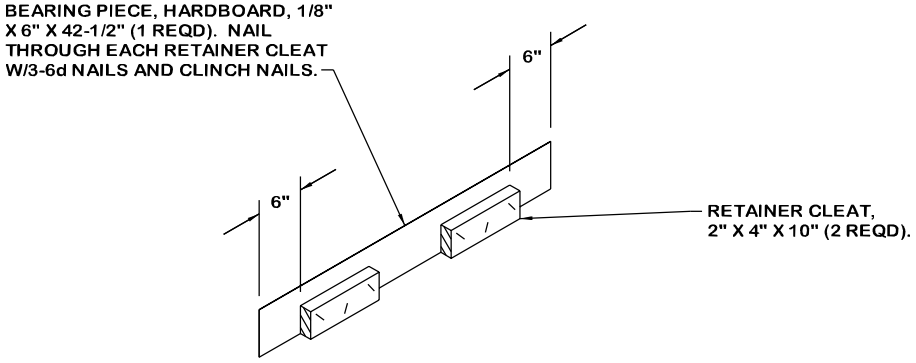

## STRAPPING BOARD ASSEMBLY B

POSITION ON OUTER SIDES OF THE PALLET UNITS AS SHOWN ON PAGE 2.



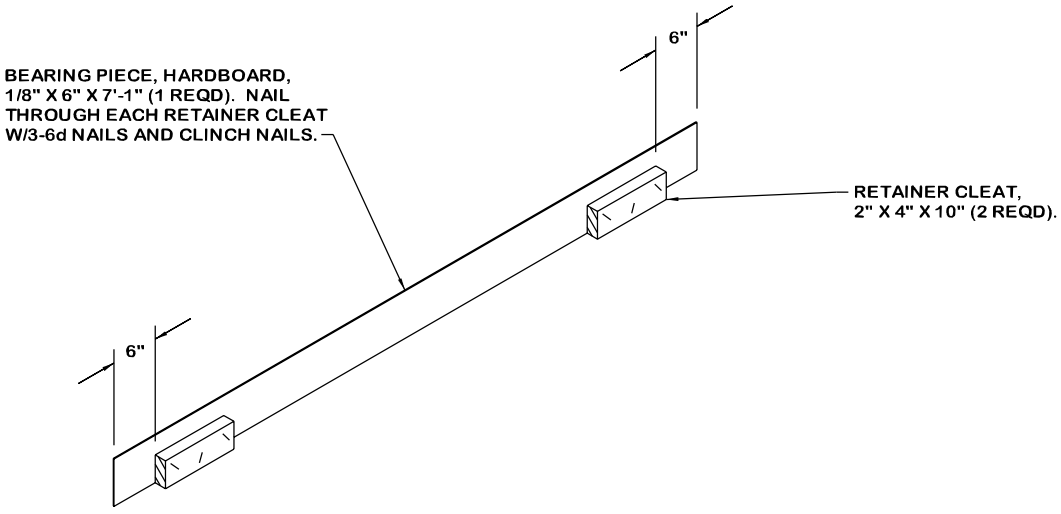

## AFT FILLER ASSEMBLY

THIS ASSEMBLY WILL BE PLACED AT THE REAR OF THE LOAD WITH THE CLEATS RECESSED UNDER THE PALLET UNITS. FIELD CHECK PALLET UNITS TO VERIFY PROPER CLEAT LOCATIONS.




## SIDE BLOCKING ASSEMBLY A

POSITION ASSEMBLY WITH CLEATS
RECESSED UNDER THE PALLET UNITS.




## SIDE BLOCKING ASSEMBLY B

POSITION ASSEMBLY WITH CLEATS
RECESSED UNDER THE PALLET UNITS.