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DATE 11/09/01

APPENDIX 6

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

SCL #6 - VOLCANO

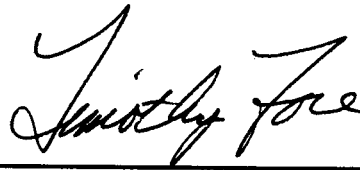
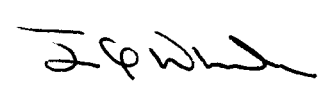
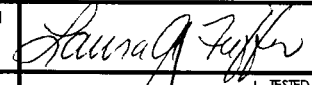
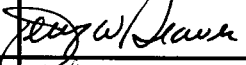
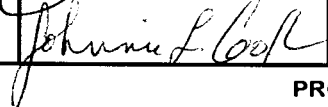
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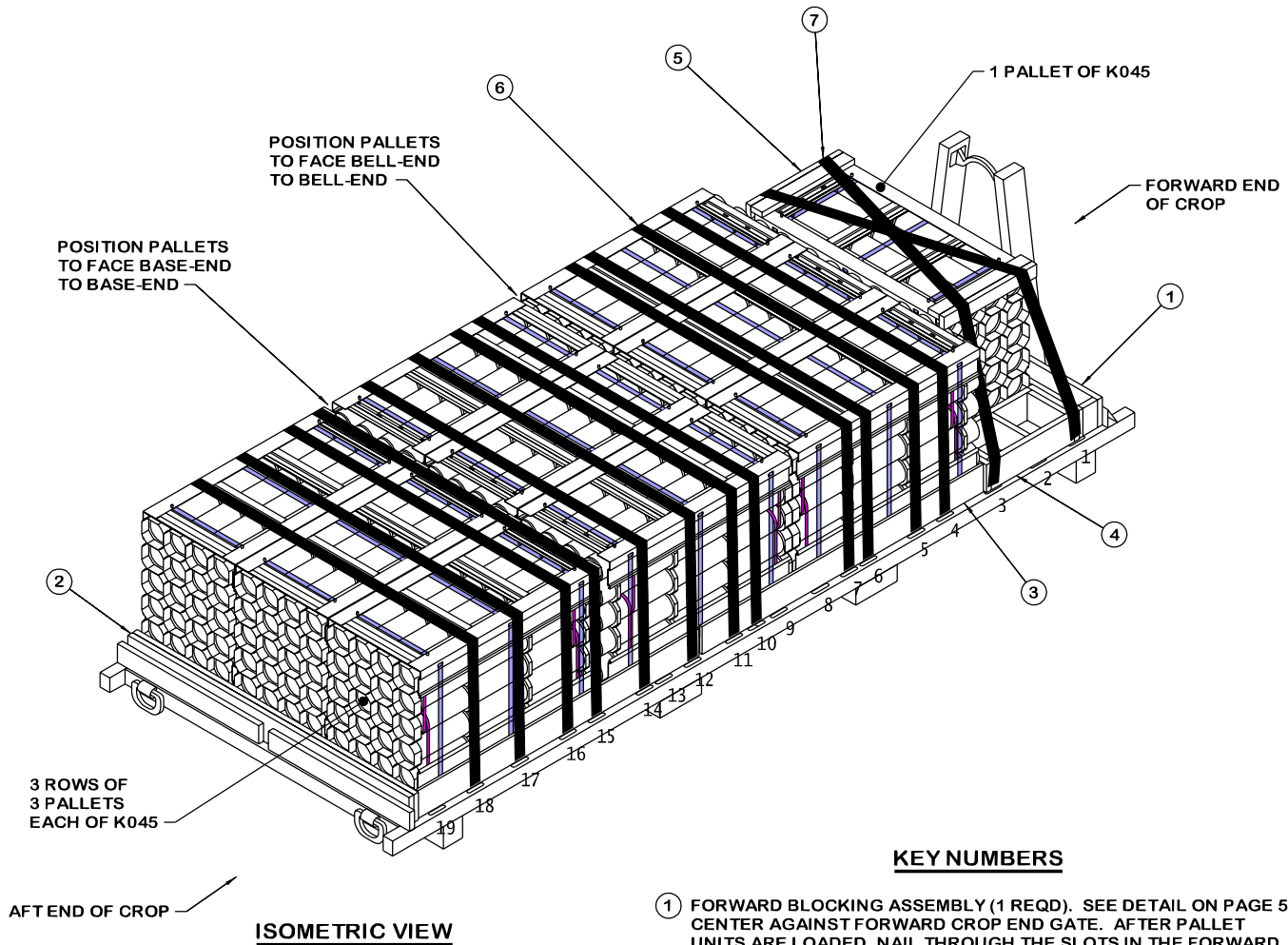
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NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC CROP OUTLOADING PROCEDURES DRAWING 19-48-4905-CA17Q6.

- 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

APPROVED, U.S. ARMY OPERATIONS SUPPORT COMMAND 	ENGINEER	BASIC	RICHARD GARSIDE		DO NOT SCALE			
		REV.						
	TECHNICIAN	BASIC			WEBSITE: HTTP://WWW.DAC.ARMY.MIL			
		REV.			OCTOBER 2000			
DRAFTSMAN	BASIC							
		REV.						
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND 	TRANSPORTATION ENGINEERING DIVISION							
	VALIDATION ENGINEERING DIVISION			TESTED	CLASS	DIVISION	DRAWING	FILE
	ENGINEERING DIRECTORATE				19	48	4905/ 6	CA17Q6
U.S. ARMY DEFENSE AMMUNITION CENTER		PROJECT <u>CAP-TV 6/6-00</u>						



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑥ HOLD-DOWN STRAP, 3-INCH WIDE CROP STRAP (12 REQD). INSTALL EACH STRAP TO EXTEND FROM THE DESIGNATED TIEDOWN ANCHOR ON ONE SIDE OF CROP, OVER THE TOP OF THE PALLET UNITS, 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 "F" ON PAGE 3.
- ⑦ FORWARD END HOLD-DOWN STRAP, 3-INCH WIDE CROP STRAP (2 REQD). INSTALL EACH STRAP TO EXTEND FROM THE FIRST TIEDOWN ANCHOR ON ONE SIDE OF CROP, OVER THE STRAPPING BOARDS AND FORWARD PALLET UNIT, TO THE THIRD TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. SEE GENERAL NOTE "F" ON PAGE 3.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE DETAIL ON PAGE 5. CENTER AGAINST FORWARD CROP END GATE. AFTER PALLET UNITS ARE LOADED, NAIL THROUGH THE SLOTS IN THE FORWARD CROP END GATE INTO THE FORWARD BLOCKING ASSEMBLY W/2-12d NAILS. LEAVE THE NAIL HEADS PROTRUDING THROUGH THE SLOTS TO PROVIDE LATERAL RESTRAINT. LAMINATE TO SPACER ASSEMBLY W/2-12d NAILS ON EACH SIDE OF CROP.
- ② AFT FILLER, 1" OR 2" X 8" X 7'-4" (AS REQD). LAMINATE EACH PIECE TO THE PREVIOUS PIECE W/8 NAILS OF A SUITABLE SIZE (6d NAILS FOR 1" THICK MATERIAL OR 10d NAILS FOR 2" THICK MATERIAL). CENTER AGAINST AFT CROP END GATE AND NAIL THROUGH THE SLOTS IN THE AFT CROP END GATE INTO THE AFT FILLER W/2-12d NAILS. LEAVE THE NAIL HEADS PROTRUDING THROUGH THE SLOTS TO PROVIDE LATERAL AND VERTICAL RESTRAINT.
- ③ SIDE FILL, 1" X 8" X 7'-4" (4 REQD). INSTALL TWO ON EACH SIDE OF THE CROP ADJACENT TO THE K045 PALLET UNITS. AFTER HOLD-DOWN STRAPS ARE INSTALLED, NAIL THROUGH THE STRAP ATTACHMENT SLOTS OF THE HOLD-DOWN STRAPS INTO THE SIDE FILL AT TIEDOWN ANCHOR LOCATIONS 4, 7, 11, 12, 15, AND 18, W/1-10d PARTIALLY DRIVEN NAIL AND BEND OVER SIDE OF HOOK.
- ④ SPACER ASSEMBLY (2 REQD). SEE DETAIL ON PAGE 5. PLACE ONE ON EITHER SIDE OF FORWARD PALLET UNIT IN THE SPACE BETWEEN FORWARD BLOCKING ASSEMBLY AND FORWARD ROW OF K045 PALLET UNITS. AFTER FORWARD END HOLD-DOWN STRAPS ARE INSTALLED, NAIL THROUGH THE STRAP ATTACHMENT SLOTS OF THE FORWARD END HOLD-DOWN STRAPS INTO THE SPACER ASSEMBLY AT TIEDOWN ANCHOR LOCATIONS 1 AND 3, W/1-10d PARTIALLY DRIVEN NAIL AND BEND OVER SIDE OF HOOK.
- ⑤ STRAPPING BOARD ASSEMBLY (2 REQD). SEE DETAIL ON PAGE 6. INSTALL ONE ON EACH SIDE OF THE FORWARD PALLET UNIT.

(CONTINUED AT LEFT)

RECOMMENDED SEQUENTIAL PROCEDURES

1. PREFABRICATE THE AFT FILLER PIECES, FORWARD BLOCKING ASSEMBLY, TWO SPACER ASSEMBLIES, AND TWO STRAPPING BOARD ASSEMBLIES.
2. INSTALL THE FORWARD BLOCKING ASSEMBLY.
3. LOAD ONE PALLET UNIT OF K045, CENTERED LENGTHWISE AGAINST THE FORWARD BLOCKING ASSEMBLY, FOLLOWED BY THREE ROWS OF THREE PALLET UNITS OF K045, CENTERING THE ROWS Laterally ON THE CROP.
4. INSTALL THE AFT FILLER PIECES TO ENSURE A TIGHT FIT BETWEEN PALLET UNITS AND AFT CROP END GATE.
5. INSTALL THE TWO SPACER ASSEMBLIES.
6. INSTALL THE FOUR SIDE FILL PIECES BETWEEN THE K045 PALLET UNITS AND THE TIEDOWN ANCHORS ON THE CROP, CENTERED WITH THE LOAD ON THE CROP.
7. INSTALL THE 12 HOLD-DOWN STRAPS (AS NOTED IN KEY NUMBER ⑥) TO EXTEND FROM A TIEDOWN ANCHOR ON ONE SIDE OF THE CROP, OVER THE TOP OF THE PALLET UNITS, TO THE CORRESPONDING TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE CROP.
8. PLACE THE TWO STRAPPING BOARD ASSEMBLIES ON THE EDGES OF THE FORWARD K045 PALLET UNIT.
9. INSTALL THE TWO FORWARD END HOLD-DOWN STRAPS (AS NOTED IN KEY NUMBER ⑦) TO EXTEND FROM THE FIRST TIEDOWN ANCHOR ON ONE SIDE OF THE CROP, OVER THE STRAPPING BOARDS AND FORWARD PALLET UNIT, TO THE THIRD TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE CROP.
10. NAIL THROUGH THE STRAP ATTACHMENT SLOT OF HOLD-DOWN STRAP HOOKS INTO SPACER ASSEMBLIES AND SIDE FILL PIECES W/1-10d PARTIALLY DRIVEN NAIL AND BEND OVER SIDE OF HOOK, AS NOTED IN KEY NUMBERS ③ AND ④.
11. NAIL TWO 12d NAILS THRU THE HEADER OF THE FORWARD BLOCKING ASSEMBLY INTO BEARING PIECE OF EACH SPACER ASSEMBLY.
12. NAIL TWO 12d RETAINING NAILS THRU THE SLOTS IN THE AFT CROP END GATE INTO THE AFT FILLER, LEAVING THE NAIL HEADS PROTRUDING THRU THE SLOTS TO PROVIDE LATERAL AND VERTICAL RESTRAINT.
13. NAIL THE TWO REMAINING 12d RETAINING NAILS THRU THE SLOTS IN THE FORWARD CROP END GATE INTO THE FORWARD BLOCKING ASSEMBLY, LEAVING THE NAIL HEADS PROTRUDING THRU THE SLOTS TO PROVIDE LATERAL RESTRAINT.

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 #6. SEE PAGE 4 FOR DETAIL OF THE PALLET UNIT. AN M3 (SUMMA) 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 M3 CROP. FOR AN M3A1 (HYUNDAI) CROP, SEQUENTIAL LOADING PROCEDURES 2 THROUGH 4 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. DIMENSIONS, CUBE AND WEIGHT OF THE PALLET UNITS WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE CONTAINERS AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- E. 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.
- F. 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.
- G. 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.

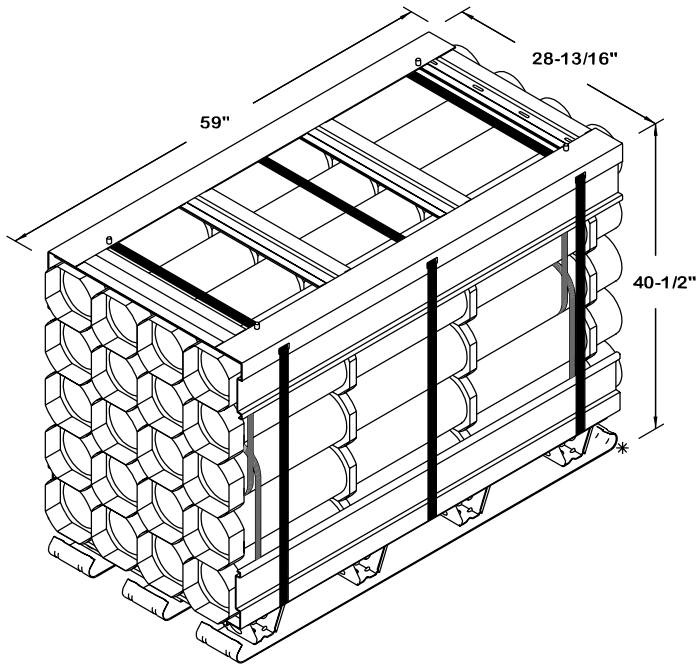
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 8"	30	20
2" X 4"	7	5
2" X 8"	51	68
NAILS	NO. REQD	POUNDS
10d (3")	120	1-3/4
12d (3-1/4")	8	1/4

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
K045 PALLET UNIT	10	19,380 LBS
DUNNAGE		188 LBS
CROP		3,800 LBS
TOTAL WEIGHT		23,368 LBS (APPROX)

SCL #6 COMPOSITION CHART

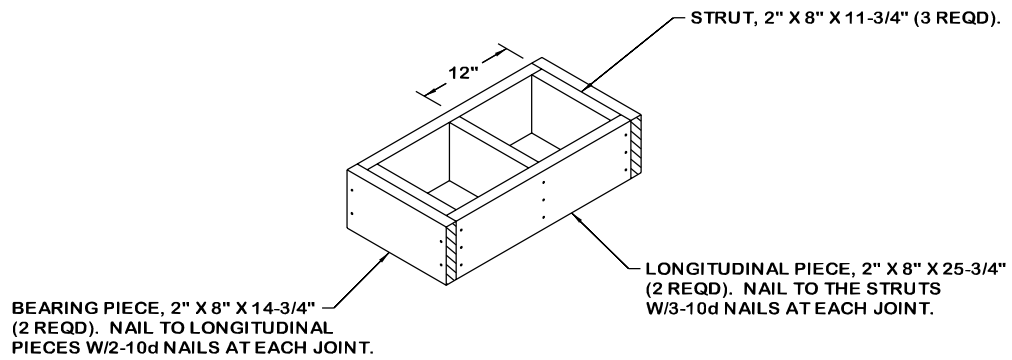
DODIC	NSN	NOMENCLATURE	UNIT DWG	REQD	UNITS REQD	HC
K045	1345-01-233-2029	VOLCANO MINE CANISTER HE M87	4231/81	400	10 PALLETS	1. 1D



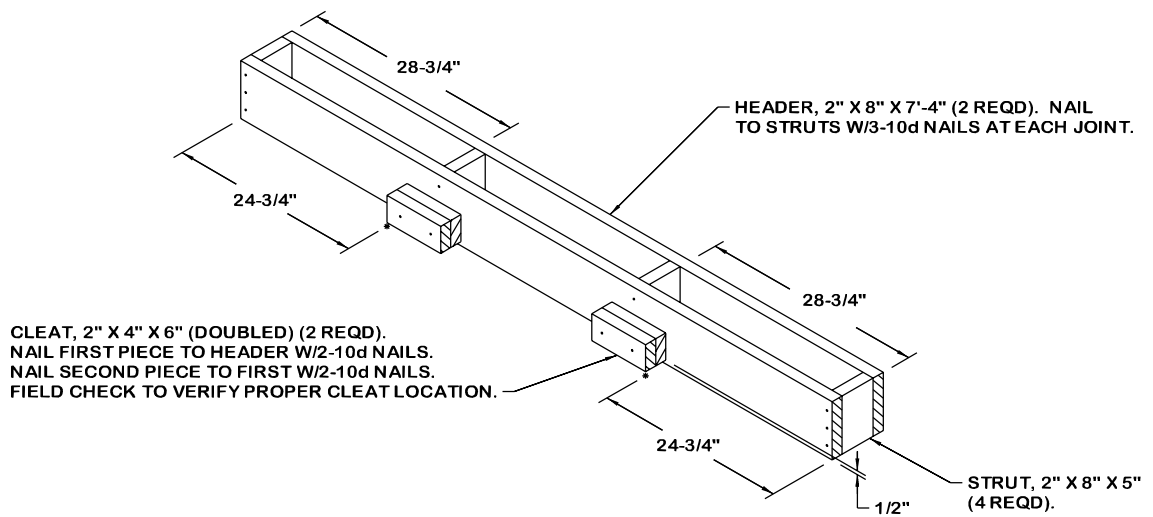
K045 PALLET UNIT DETAIL

20 CNTRS OF VOLCANO MINES (2 PER CNTR) AT 88 LBS - - 1,760 LBS (APPROX)
 DUNNAGE - - - - - 83 LBS
 PALLET - - - - - 95 LBS

TOTAL WEIGHT - - - - - 1,938 LBS (APPROX)
 CUBE - - - - - 39.8 CU FT (APPROX)

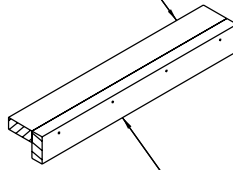


SPACER ASSEMBLY



FORWARD BLOCKING ASSEMBLY

TOP PIECE, 2" X 4" X 29" (1 REQD).



SIDE PIECE, 2" X 4" X 29" (1 REQD).
LAMINATE TO TOP PIECE W/4-10d NAILS.

STRAPPING BOARD ASSEMBLY