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APPENDIX 16A

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

SCL #16A - 40MM HEDP M430



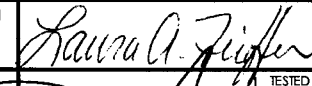
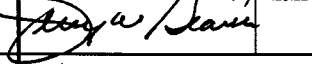
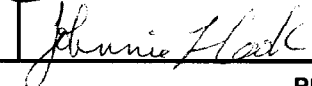
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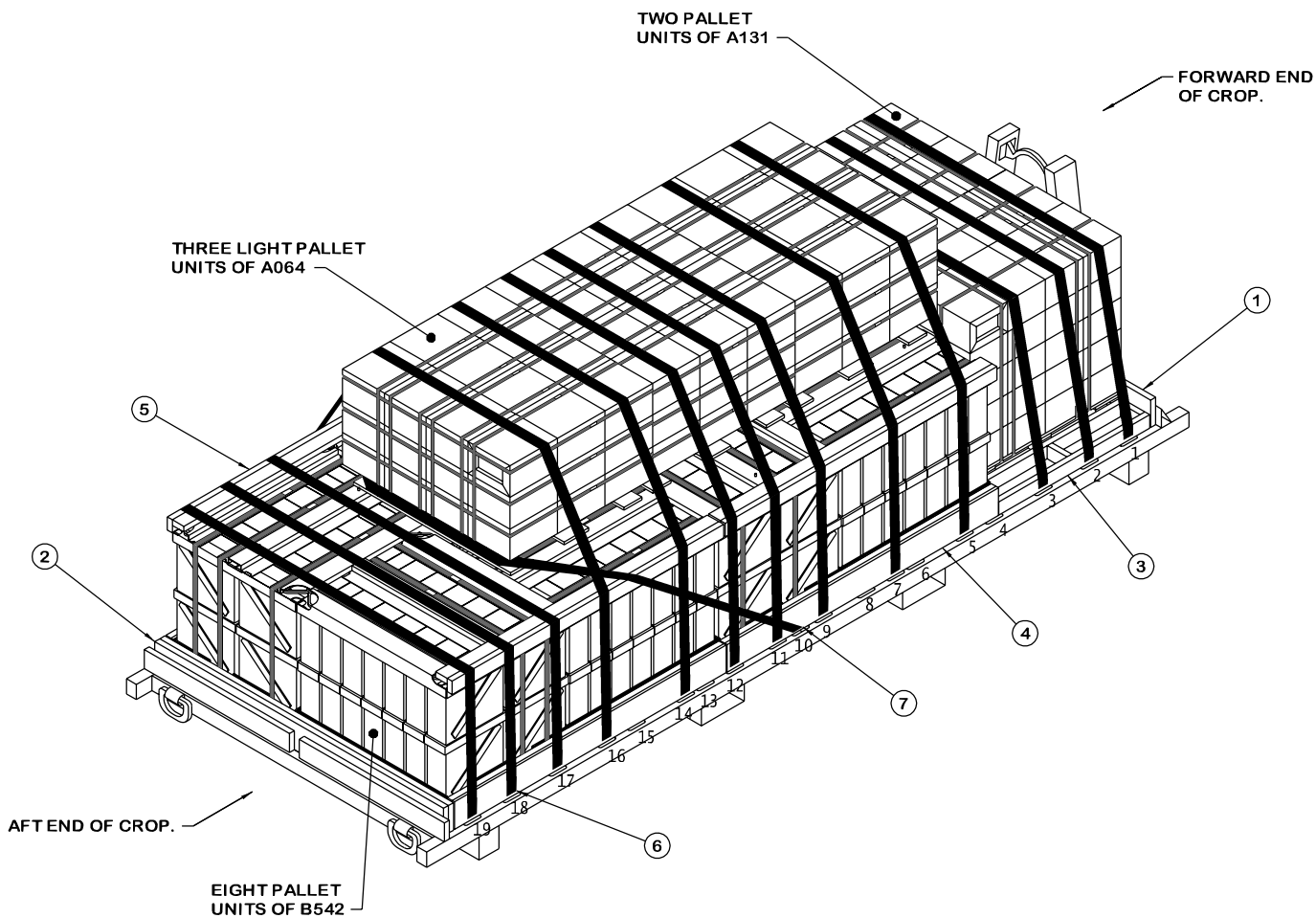
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NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC CROP OUTLOADING PROCEDURES DRAWING 19-48-4905-CA17Q6.

- 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 REV.	WALTER GORDON		DO NOT SCALE			
	TECHNICIAN	BASIC REV.			WEBSITE: HTTP://WWW.DAC.ARMY.MIL			
		DRAFTSMAN	BASIC REV.			NOVEMBER 2000		
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND  U.S. ARMY DEFENSE AMMUNITION CENTER	TRANSPORTATION ENGINEERING DIVISION							
	VALIDATION ENGINEERING DIVISION	 TESTED			CLASS	DIVISION	DRAWING	FILE
	ENGINEERING DIRECTORATE				19	48	4905/ 16A	CA17Q6



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑥ HOLD-DOWN STRAP, 3-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY FOR CROP (13 REQD). INSTALL EACH HOLD-DOWN STRAP TO EXTEND FROM THE DESIGNATED TIEDOWN ANCHOR ON ONE SIDE OF CROP, OVER TOP OF PALLET UNITS, TO CORRESPONDING TIEDOWN ANCHOR ON OPPOSITE SIDE OF CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. SEE GENERAL NOTE "G" ON PAGE 3.
- ⑦ AFT END RESTRAINT STRAP, 3-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY FOR CROP (1 REQD). INSTALL FROM THE TENTH TIEDOWN ANCHOR ON ONE SIDE OF CROP, OVER THE B542 PALLET UNIT, ACROSS THE PALLET POSTS OF THE AFT A064 LIGHT PALLET UNIT AND DOWN TO THE TENTH TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. SEE GENERAL NOTE "G" ON PAGE 3.

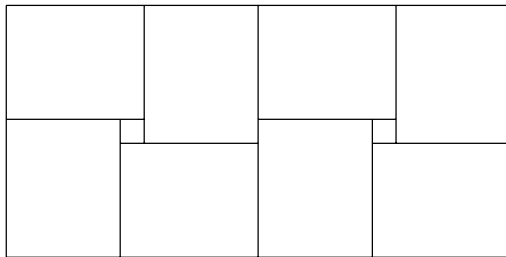
KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 5. CENTER ON THE DECK OF THE CROP AGAINST THE FORWARD END GATE.
- ② AFT FILL PIECE, 1" OR 2" X 8" X 7'-4" (AS REQD). AFTER THE PALLET UNITS ARE LOADED, CENTER ONE PIECE ON THE DECK OF THE CROP AGAINST THE AFT END GATE. ANY REMAINING GAP BETWEEN THE END BLOCKING AND THE CROP END GATE MUST BE FILLED BY LAMINATING ADDITIONAL 1" OR 2" X 8" X 7'-4" PIECES TO THE END BLOCKING W/8 NAILS OF A SUITABLE SIZE. NAIL TWO 12d NAILS THRU UPPER CORNER OF OPENING IN AFT END GATES INTO THE AFT FILL PIECE, WITH NAIL HEADS PROTRUDING AND BENT OVER VERTICAL TUBE OF END GATE TO PROVIDE LATERAL AND VERTICAL RESTRAINT.
- ③ SIDE BLOCKING ASSEMBLY A (2 REQD). SEE THE DETAIL ON PAGE 5. INSTALL ONE ASSEMBLY ON EACH SIDE OF CROP ADJACENT TO THE A131 PALLET UNITS. SEE GENERAL NOTE "H" ON PAGE 3.
- ④ SIDE BLOCKING ASSEMBLY B, 1" X 8" X 6'-10-3/4" AND 2" X 8" X 6'-10-3/4" (4 REQD). LAMINATE THE 1" THICK MATERIAL TO THE 2" THICK MATERIAL W/7-6d NAILS, EVENLY SPACED, TO FORM ONE ASSEMBLY. INSTALL TWO ASSEMBLIES ON EACH SIDE OF CROP ADJACENT TO THE B542 PALLET UNITS. SEE GENERAL NOTE "H" ON PAGE 3.
- ⑤ EDGE BOARD ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 5. INSTALL TWO ASSEMBLIES AT EACH EDGE OF THE B542 PALLET UNITS AS SHOWN.

(CONTINUED AT LEFT)

RECOMMENDED SEQUENTIAL PROCEDURES

1. PREFABRICATE THE FORWARD BLOCKING ASSEMBLY, TWO SIDE BLOCKING ASSEMBLIES "A", FOUR SIDE BLOCKING ASSEMBLIES "B", AND THE FOUR EDGE BOARD ASSEMBLIES.
2. INSTALL THE FORWARD BLOCKING ASSEMBLY AS INSTRUCTED IN KEY NUMBER ①.
3. LOAD TWO PALLET UNITS OF A131. CENTER THE TWO PALLET UNITS ON THE DECK OF THE CROP AND PLACE TIGHTLY AGAINST THE FORWARD BLOCKING ASSEMBLY.
4. LOAD EIGHT PALLET UNITS OF B542. PLACE THE PALLET UNITS IN A CHIMNEY PATTERN CENTERED ON THE DECK OF CROP AND TIGHT AGAINST THE A131 PALLET UNITS. SEE THE DETAIL BELOW.
5. LOAD THREE LIGHT PALLET UNITS OF A064. PLACE THE FORWARD LIGHT PALLET UNIT TIGHT AGAINST THE A131 PALLETS, CENTERED ON THE B542 PALLET UNITS. PLACE THE REMAINING TWO PALLET UNITS IN A ROW TIGHT AGAINST THE FIRST.
6. INSTALL THE AFT FILL PIECE AS INSTRUCTED IN KEY NUMBER ②.
7. INSTALL THE TWO SIDE BLOCKING ASSEMBLIES "A".
8. INSTALL THE FOUR SIDE BLOCKING ASSEMBLIES "B".
9. INSTALL THE FOUR EDGE BOARD ASSEMBLIES.
10. INSTALL 13 3-INCH WEB STRAP TIEDOWN ASSEMBLIES 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.
11. INSTALL THE AFT END RESTRAINT STRAP AS DIRECTED IN KEY NUMBER ⑦.
12. NAIL THROUGH THE HOOK ATTACHMENT SLOT OF A HOLD-DOWN STRAP INTO EACH END OF THE SIDE BLOCKING ASSEMBLIES W/1-10d PARTIALLY DRIVEN NAIL AND BEND OVER SIDE OF HOOK.



B542 CHIMNEY PATTERN

THE DIAGRAM ABOVE DEPICTS A PLAN VIEW OF THE B542 PALLET UNIT CHIMNEY PATTERN.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 8"	28	18
2" X 3" (ACTUAL)	2	1
2" X 4"	74	49
2" X 8"	50	66
NAILS	NO. REQD	POUNDS
6d (2")	14	NIL
10d (3")	78	1-1/4
12d (3-1/4")	2	NIL

GENERAL NOTES

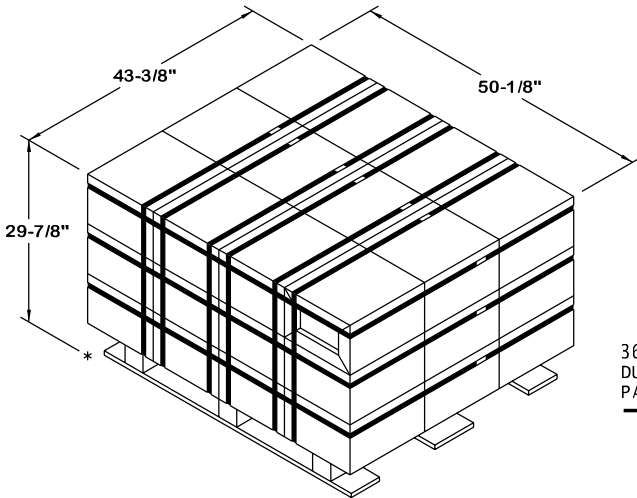
- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC LOADING PROCEDURES DRAWING 19-48-4905-CA17Q6. TO PRODUCE AN APPROVED LOAD, ALL PERTINENT PROCEDURES, SPECIFICATIONS AND CRITERIA SET FORTH WITHIN THE BASIC DRAWING WILL APPLY TO THE PROCEDURES DELINEATED IN THIS APPENDIX. 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 #16A. SEE PAGE 4 FOR DETAILS OF THE PALLET UNITS. 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 6 MUST BE REVERSED, WITH THE HOLD DOWN BLOCKS NAILED TO THE AFT BLOCKING RATHER THAN THE FORWARD BLOCKING. 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 UNIT DIMENSIONS DO NOT VARY FROM WHAT IS DELINEATED HEREIN.
- D. LIGHT PALLET UNITS 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. 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.
- G. 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.
- H. EACH END OF THE SIDE BLOCKING ASSEMBLIES MUST BE SECURED BY NAILING A 10d NAIL THRU A 3" WEBSTRAP HOOK SLOT. SEE "STRAP HOOK DETAIL" AND GENERAL NOTE "G.2" IN THE BASIC PROCEDURES 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.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
A064 LIGHT PALLET UNIT	3	6,534 LBS
A131 PALLET UNIT	2	6,304 LBS
B542 PALLET UNIT	8	15,800 LBS
DUNNAGE		271 LBS
CROP		3,800 LBS
TOTAL WEIGHT		32,709 LBS (APPROX)

SCL #16A COMPOSITION CHART

DODIC	NSN	NOMENCLATURE	UNIT DWG	REQD	UNITS REQD	HC
A064	1305-01-156-7584	CARTRIDGE, 5.56MM M855/M856 BALL/TRACER 4 TO 1	4116/5A	86,400	3 LIGHT PLTS	1.4S
A131	1305-00-892-2150	CARTRIDGE, 7.62MM BALL M80 TRACER M62	4116/7	64,000	2 PALLETS	1.4S
B542	1310-01-319-1541	CARTRIDGE, 40MM HEDP M430 IN PA120 METAL CNTR	4232/21	10,752	8 PALLETS	1.1E



THE LIGHT A064 PALLET UNIT DEPICTED AT LEFT SHOULD BE CONSTRUCTED IAW THE AMC DRAWING LISTED ABOVE WITH THE FOLLOWING CHANGES:

1. ELIMINATE ONE LAYER OF BOXES (12 BOXES).
2. ELIMINATE ONE HORIZONTAL STRAP.
3. REDUCE THE TIEDOWN STRAP LENGTH TO 12'-5".

LIGHT A064 PALLET UNIT DETAIL

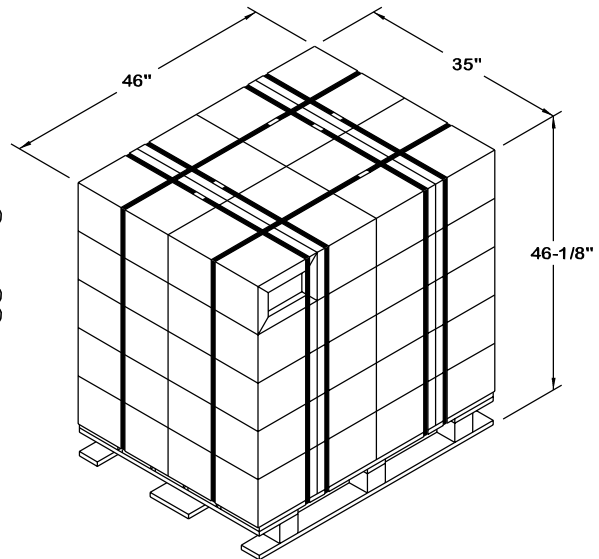
36 BOXES OF 5.56MM CTG (800 PER BOX) AT 58 LBS - - - 2,088 LBS (APPROX)
 DUNNAGE - - - - - 10 LBS
 PALLET - - - - - 80 LBS

TOTAL WEIGHT - - - - - 2,178 LBS (APPROX)
 CUBE - - - - - 39.3 CU FT (APPROX)

A131 PALLET UNIT DETAIL

40 BOXES OF 7.62MM CTG (800 PER BOX) AT 77 LBS - - - 3,080 LBS (APPROX)
 DUNNAGE - - - - - 7 LBS
 PALLET - - - - - 65 LBS

TOTAL WEIGHT - - - - - 3,152 LBS (APPROX)
 CUBE - - - - - 43.0 CU FT (APPROX)



B542 PALLET UNIT DETAIL

42 BOXES OF 40MM CTG (32 PER BOX) AT 42 LBS - - - - 1,764 LBS (APPROX)
 DUNNAGE - - - - - 112 LBS
 PALLET - - - - - 99 LBS

TOTAL WEIGHT - - - - - 1,975 LBS (APPROX)
 CUBE - - - - - 37.6 CU FT (APPROX)

