APPROVED BY
BUREAU OF EXPLOSIVES

DATE 12/1/00

APPENDIX 30

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

SCL #30 - COUNTER-MOBILITY/ DEMOLITION

INDEX

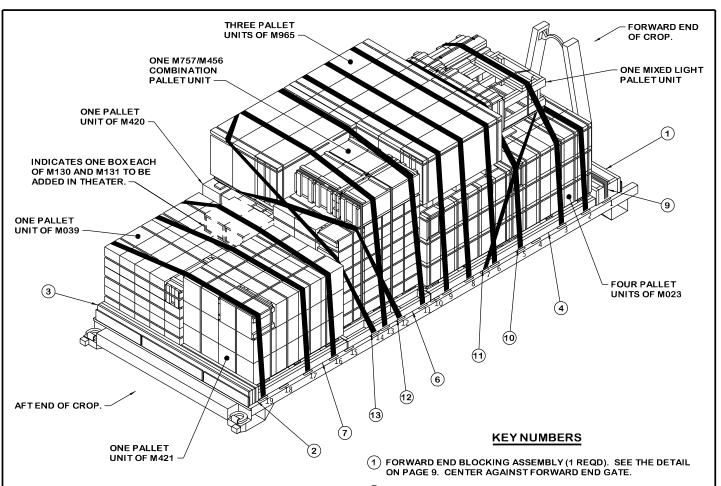
<u>ITEM</u>	PAGE(S)
TYPICAL LOADING PROCEDURES	
SEQUENTIAL LOADING PROCEDURES	
GENERAL NOTES	
PALLET UNIT DETAILS	
DETAILS	9, 10

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

U.S. ARMY MATERIEL COMMAND DRAWING

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APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND	TRANSPORTA ENGINEERII DIVISION	NG	Adura Ci Ahofer				
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1 2/205	ENGINEERII DIVISION	`` <i>[</i>	tinge / Slein			4905/	
U.S. ARMY DEFENSE AMMUNITION CENTER	ENGINEERIN DIRECTOR		the man to Coll	19	48	30	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.



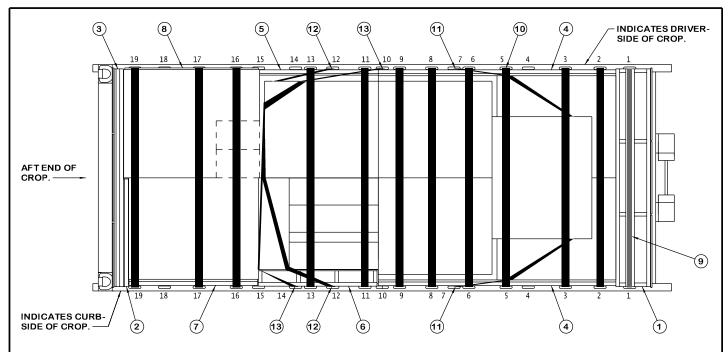
ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- (10) HOLD-DOWN STRAP, 3-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY FOR CROP (11 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 "F" ON PAGE 4.
- 11 FORWARD END RESTRAINT STRAP, 3-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY FOR CROP (1 REQD). INSTALL FROM THE SEVENTH TIEDOWN ANCHOR ON THE CURBSIDE OF CROP, ACROSS THE PALLET POSTS OF THE MIXED LIGHT PALLET UNIT AND DOWN TO THE SEVENTH TIEDOWN ANCHOR ON THE DRIVERSIDE OF CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. SEE GENERAL NOTE "F" ON PAGE 4.
- (2) AFT END RESTRAINT STRAP A, 3-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY FOR CROP (1 REQD). INSTALL FROM THE TWELFTH TIEDOWN ANCHOR ON THE CURBSIDE OF CROP OVER THE TOP AFT EDGE OF THE M757/M456 COMBINATION PALLET UNIT, ACROSS THE AFT PALLET POST OF THE M965 PALLET UNIT AND BACK DOWN TO THE TWELFTH TIEDOWN ANCHOR ON THE DRIVERSIDE OF CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. CAUTION: THE RATCHET MUST BE POSITIONED TO AVOID CONTACT WITH THE CONTAINER WHEN INSERTING CROP INTO CONTAINER. SEE GENERAL NOTE "F" ON PAGE 4.
- (3) AFT END RESTRAINT STRAP B, 3-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY FOR CROP (1 REQD). INSTALL FROM THE FOURTEENTH TIEDOWN ANCHOR ON THE CURBSIDE OF CROP ACROSS THE AFT OF THE M757/M456 COMBINATION PALLET UNIT, ACROSS THE AFT AND TOP OF THE M965 PALLET UNIT AND BACK DOWN TO THE TENTH TIEDOWN ANCHOR ON THE DRIVERSIDE OF CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. CAUTION: THE RATCHET MUST BE POSITIONED TO AVOID CONTACT WITH THE CONTAINER WHEN INSERTING CROP INTO CONTAINER. SEE GENERAL NOTE "F" ON PAGE 4.

- 2 AFT FILLER ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 10. INSTALL TIGHTLY AGAINST THE M421 PALLET UNIT. LAMINATE A SPACER PIECE TO THE ASSEMBLY TO FILL THE VOID BETWEEN AFT FILLER ASSEMBLY "A" AND AFT FILLER ASSEMBLY "B". USE 8" WIDE BY 43-1/2" LONG MATERIAL AND LAMINATE W/4 APPROPRIATELY SIZED NAILS (6d NAILS FOR 1/2" THICK MATERIAL).
- 3 AFT FILLER ASSEMBLY B (1 REQD). SEE THE DETAIL ON PAGE 10. LAMINATE TO AFT FILLER ASSEMBLY "A" W/4-10d NAILS. LAMINATE 8" WIDE BY 7'-4" LONG MATERIAL TO AFT FILLER ASSEMBLY "B" TO FILL THE VOID BETWEEN THE ASSEMBLY AND THE END GATES. LAMINATE EACH PIECE W/7 APPROPRIATELY SIZED NAILS (6d FOR 1" THICK MATERIAL AND 10d FOR 2" THICK MATERIAL). WHEN THE LAMINATIONS ARE COMPLETED, NAIL TWO 12d NAILS THRU THE SLOTS IN THE AFT END GATE INTO THE FILL PIECES, LEAVING THE NAIL HEADS PROTRUDING THRU THE SLOTS TO PROVIDE LATERAL RESTRAINT.
- (4) SIDE BLOCKING ASSEMBLY A (2 REQD). LAMINATE TWO 2" X 4" X 8"-0" PIECES TOGETHER W/7-10d NAILS TO FORM ONE ASSEMBLY. INSTALL ONE ASSEMBLY ON EACH SIDE OF THE CROP ADJACENT TO THE M023 PALLET UNITS.
- (5) SIDE BLOCKING ASSEMBLY B (1 REQD). LAMINATE TWO 2" X 4" X 48" PIECES TOGETHER W/4-10d NAILS. INSTALL ON DRIVERSIDE ADJACENT TO THE M420 PALLET UNIT. SEE THE PLAN VIEW ON PAGE 3.
- 6 SIDE BLOCKING ASSEMBLY C (1 REQD). SEE THE DETAIL ON PAGE 9. INSTALL ON CURBSIDE ADJACENT TO THE M757/M456 COMBINATION PALLET UNIT.
- (7) SIDE BLOCKING ASSEMBLY D (1 REQD). LAMINATE TWO 2" X 4" X 52" PIECES TOGETHER W/4-10d NAILS. INSTALL ON CURBSIDE ADJACENT TO M421 PALLET UNIT.
- (8) SIDE FILL, 2" X 4" X 54" (1 REQD). INSTALL ON DRIVERSIDE ADJA-CENT TO M039 PALLET UNIT. SEE THE PLAN VIEW ON PAGE 3.
- 9 RETAINER STRAP, 2-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY (1 REQD). INSTALL TO EXTEND FROM A TIEDOWN RING ON SIDE OF CROP, OVER TOP OF STRAPPING BOARD OF FORWARD END BLOCKING ASSEMBLY, TO CORRESPONDING TIEDOWN RING ON OPPOSITE SIDE OF CROP. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTE "F" ON PAGE 4.

(CONTINUED AT LEFT)



PLAN VIEW

PALLET UNIT DETAILS HAVE BEEN OMITTED IN THE VIEW ABOVE FOR CLARITY. KEY NUMBERS REFER TO KEY NUMBERS ON PAGE 2.

RECOMMENDED SEQUENTIAL PROCEDURES

- PREFABRICATE AND INSTALL THE FORWARD END BLOCKING AS-SEMBLY, CENTERING AGAINST FORWARD END GATE. PREFABRI-CATE AFT FILLER ASSEMBLIES "A" AND "B" AND SIDE BLOCKING ASSEMBLY "C".
- 2. LOAD FOUR PALLET UNITS OF M023. CENTER ON DECK OF CROP AGAINST FORWARD END BLOCKING ASSEMBLY.
- 3. LOAD ONE PALLET UNIT OF M420 ON DRIVERSIDE OF CROP AND THE M757/M456 COMBINED PALLET UNIT ON THE CURBSIDE OF CROP. ENSURE THAT THE INSIDE EDGE OF THE PALLET UNITS ARE ON THE CENTERLINE OF CROP.
- 4. LOAD ONE PALLET UNIT OF M039 ON DRIVERSIDE OF CROP AND ONE PALLET UNIT OF M421 ON THE CURBSIDE OF CROP. ENSURE THAT THE INSIDE EDGE OF THE PALLET UNITS ARE ON THE CEN-TERLINE OF THE CROP.
- 5. INSTALL AFT FILLER ASSEMBLY "A" AS DIRECTED IN KEY NUMBER (2).
- 6. INSTALL AFT FILLER ASSEMBLY "B" AS DIRECTED IN KEY NUMBER 3.

(CONTINUED AT RIGHT)

BILL OF MATERIAL					
LUMBER	LINEAR FEET	BOARD FEET			
1" X 8" 2" X 3" (ACTUAL) 2" X 4" 2" X 8"	7 2 70 37	5 1 47 49			
NAILS	NO. REQD	POUNDS			
6d (2") 10d (3") 12d (3-1/4")	18 99 2	NIL 1-1/2 NIL			
PLYWOOD, 1/2" 2.19 SQ FT REQD 5.27 LBS 2" WEB STRAP TIEDOWN ASSEMBLY 1 REOD 5 LBS					

(SEQUENTIAL PROCEDURES CONTINUED)

- 7. LOAD THREE M965 PALLET UNITS. THE AFT DRIVERSIDE M965 AND THE CURBSIDE M965 PALLET UNITS SHOULD BE TIGHT AGAINST THE M757/M456 COMBINATION PALLET UNIT, WITH THE INSIDE EDGES OF THE M965 PALLET UNITS ON THE CENTERLINE OF THE CROP. THE REMAINING M965 PALLET UNIT SHOULD BE TIGHT AGAINST THE FIRST TWO M965 PALLET UNITS.
- 8. LOAD THE MIXED LIGHT PALLET UNIT. CENTER ON THE M023 PALLET UNITS AND PLACE TIGHTLY AGAINST THE M965 PALLET UNITS.
- 9. INSTALL SIDE BLOCKING ASSEMBLIES "A" AND "B" AS DIRECTED IN KEY NUMBERS (4) AND (5).
- 10. INSTALL SIDE BLOCKING ASSEMBLIES "C" AND "D" AS DIRECTED IN KEY NUMBERS $\mbox{\^{e}}$ AND $\mbox{\^{e}}$.
- 11. INSTALL THE SIDE FILL AS DIRECTED IN KEY NUMBER (8).
- 12. INSTALL THE RETAINER STRAP ON THE FORWARD BLOCKING ASSEMBLY. REFER TO KEY NUMBER $(\!9\!)$
- 13. INSTALL 11 HOLD-DOWN STRAPS. REFER TO KEY NUMBER (10).
- 14. INSTALL THE FORWARD END RESTRAINT STRAP AS DIRECTED IN KEY NUMBER (1).
- 15. INSTALL AFT END RESTRAINT STRAPS "A" AND "B" AS DIRECTED IN KEY NUMBERS (2) AND (3).
- 16. SECURE THE SIDE BLOCKING ASSEMBLIES AND THE SIDE FILL. SEE GENERAL NOTE "G" ON PAGE 4.

LOAD AS SHOWN

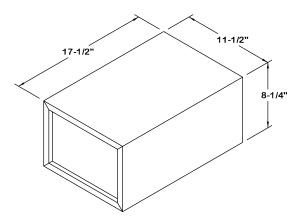
ITEM	QUANTITY	WEIGHT (APPROX)
COMBO M757/M456 PALLET UNI M023 PALLET UNIT M039 PALLET UNIT	4	10,520 LBS
M420 PALLET UNIT M421 PALLET UNIT	1 1	749 LBS 1,647 LBS
M965 PALLET UNIT MIXED LIGHT PALLET UNIT DUNNAGE	1	
CROP		3, 800 LBS

TOTAL WEIGHT - - - - - - 23, 160 LBS (APPROX)

SCL #30 COMPOSITION CHART UNITS REQD DODTC NSN NOMENCI ATURE UNIT DWG REOD HC м023 1375-00-724-7040 CHARGE, DEMOLITION BLOCK M112 COMP C-4 4116/120A 6480 4 PALLETS 1.1D м039 1375-00-028-5145 4116/120N 30 CHARGE, DEMOLITION 40 LB CRATERING 1 PALLET 1.1D M130 1375-01-316-1229 BLASTING CAP, M6 ELECTRIC IN IMPRVD PACKAGING 4116/121Q 40 1 BOX 1.4B M131[●] 1375-01-315-1335 BLASTING CAP, M7 NON-ELECTRIC IN IMPRVD PACKAGING 4116/121Q 40 1 BOX 1.4B м241 1375-00-028-5171 DESTRUCTOR, EXPLOSIVE UNIVERSAL M10 4116/122 50 1 ROX 1.1n M420 1375-01-023-7994 CHARGE, DEMOLITION M2A4 1 PALLET 4116/120H 32 1.1D M421 1375-00-088-6691 CHARGE, DEMOLITION SHAPED M3A1 4116/120D 24 1 PALLET 1.1D M456 1375-00-180-9356 9000 CORD. DETONATING FLEXIBLE 4116/127B 3 BOXES 1.1D м670 1375-00-028-5246 FUSE, BLASTING TIME M700 4116/130C 4000 1 BOX 1.4s M757 1375-00-926-3985 CHARGE ASSEMBLY, DEMOLITION M183 4116/120G 1 PALLET 72 1.1D M766 1375-00-691-1671 IGNITER, TIME BLASTING FUSE M60 4116/131 600 2 BOXES 1.4s м965 1375-00-148-7159 DEMOLITION KIT, CRATERING M180 4116/136 9 3 PALLETS 1.1E

(GENERAL NOTES CONTINUED)

- J. INSTALL EACH TIEDOWN STRAP ON THE MIXED LIGHT PALLET UNIT TO PASS UNDER THE TOP DECK BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN ON PAGE 8. TIEDOWN STRAPS MUST BE TEN-SIONED AND SEALED PRIOR TO APPLICATION OF LOAD STRAPS.
- K. 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.



M130/M131 BOX UNIT DETAIL

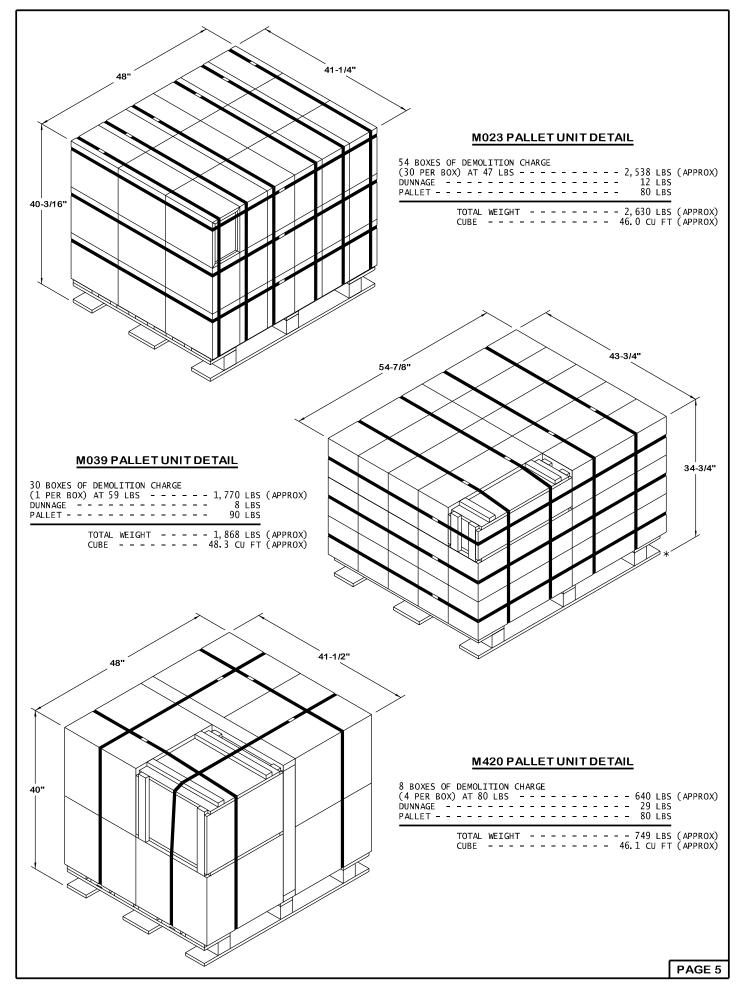
GROSS WEIGHT - - - - - - - 32 LBS (APPROX)
CUBE - - - - - - - 0.96 CUBIC FEET (APPROX)

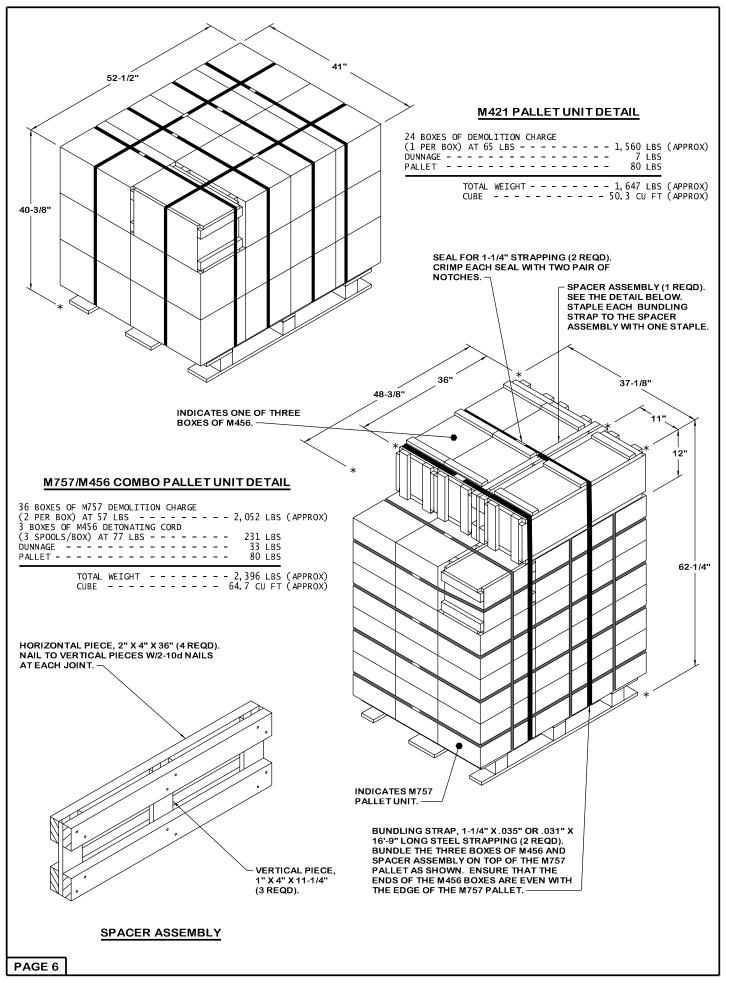
GENERAL NOTES

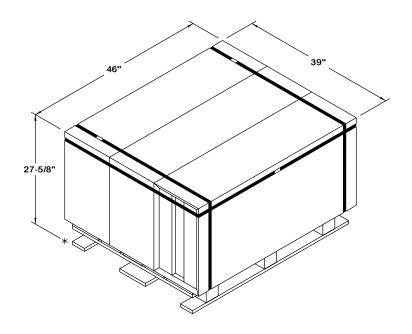
- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC LOADING PROCEDURES DRAWING 19-48-4905-CA17Q6. TO PRODUCE AN APPROVED LOAD, ALL PERTINENT PROCEDURES, SPECIFICATIONS AND CRITERIA SET FORTH WITHIN THE BASIC DRAWING WILL APPLY TO THE PROCEDURES DELINEATED IN THIS APPENDIX. 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 #30. SEE PAGES 5 THRU 8 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 ON PAGE 3 DESCRIBE THE SEQUENCE USED TO LOAD AN M3A1 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 ABOVE, PROVIDED THE OVERALL 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 BOXES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNIT-
- 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. EACH END OF THE SIDE BLOCKING ASSEMBLIES AND SIDE FILL 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 PROCEDURE DRAWING 19-48-4905-CA17Q6.
- H. THE LOAD STRAPS FOR THE MIXED LIGHT PALLET UNIT MAY BE THREADED THROUGH THE STRAP SLOTS OF A PALLET OR PREPOSITIONED ON THE PALLET DECK PRIOR TO PLACING BOXES ON THE PALLET. LOAD STRAPS WILL NOT BE APPLIED UNTIL THE TIEDOWN STRAPS HAVE BEEN TENSIONED AND SEALED.

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[•]ADD M130 AND M131 IN THEATER

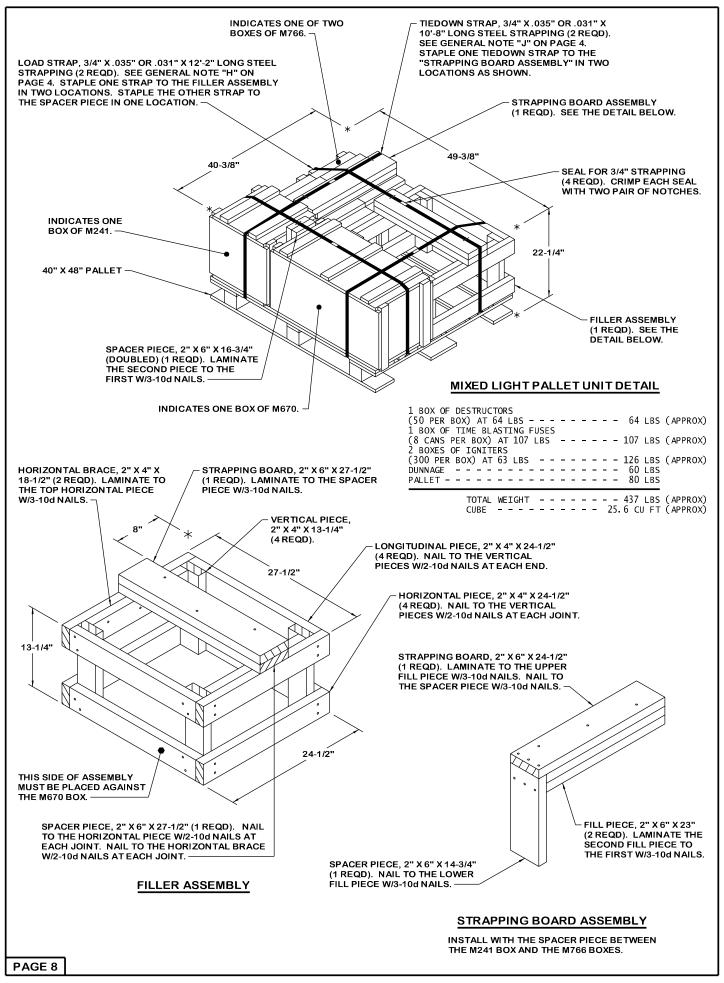


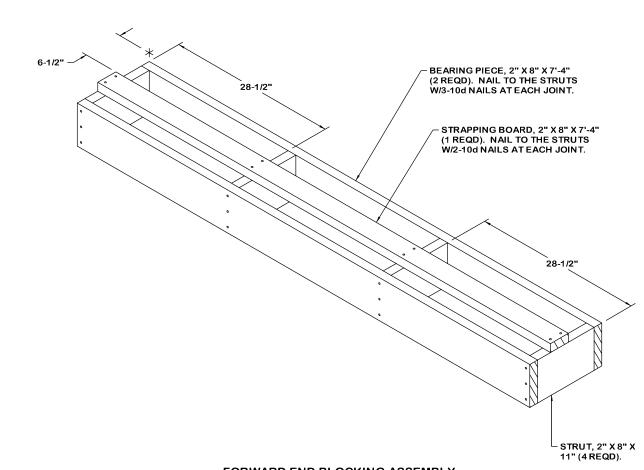




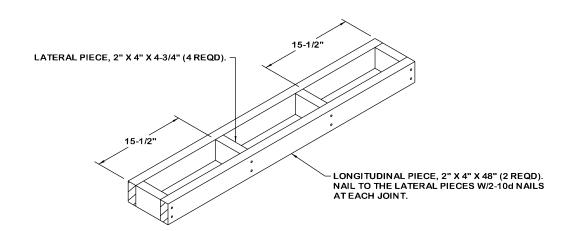
M965 PALLET UNIT DETAIL

3 BOXES OF DEMOLITION KITS (1 PER BOX) AT 147 LBS
TOTAL WEIGHT 509 LBS (APPROX)





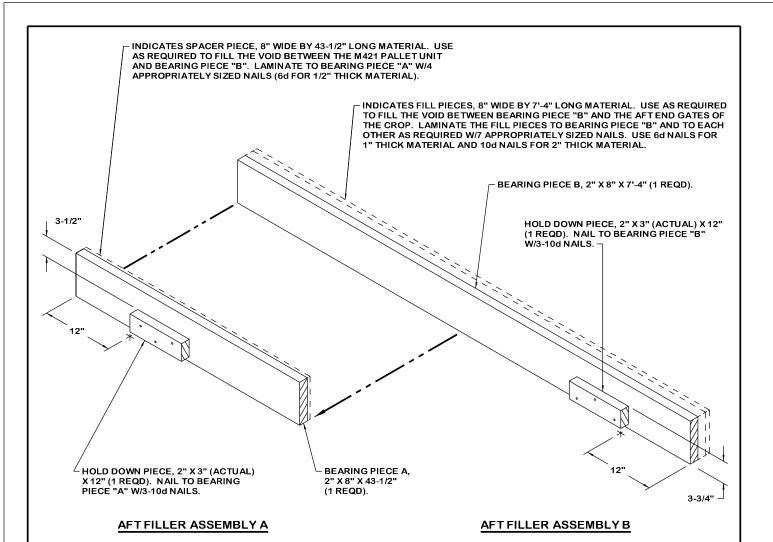
FORWARD END BLOCKING ASSEMBLY



SIDE BLOCKING ASSEMBLY C

DETAILS

PAGE 9



AFT FILLER ASSEMBLIES

THE AFT FILLER ASSEMBLIES HAVE BEEN ROTATED 180° FOR CLARITY. INSTALL WITH THE HOLD DOWN PIECES TOWARDS THE LADING. SEE THE SPECIAL NOTE BELOW.

SPECIAL NOTE: DO NOT PREFABRICATE A SINGLE AFT FILLER ASSEMBLY BY LAMINATING AFT FILLER ASSEMBLIES "A" AND "B" TOGETHER. ALSO, DO NOT LAMINATE THE SPACER AND FILL PIECES TO THE BEARING PIECES UNTIL TIME OF INSTALLATION.

PAGE 10 DETAILS