

LOADING AND TIEDOWN PROCEDURES FOR CONVENTIONAL AMMUNITION ITEMS ON THE 463L/INTEX PALLET FOR THE COMANCHE AND KIOWA HELICOPTERS

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DO NOT SCALE

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1.
- B. THE PROCEDURES HEREIN ARE APPLICABLE TO THE SECUREMENT OF CONVENTIONAL AMMUNITION ITEMS ON THE 463L AND/OR INTEX PALLET, FOR TRANSPORT BY CHINOOK (CH-47D) HELICOPTERS, TO SUPPORT THE COMANCHE AND KIOWA HELICOPTER COMBAT OPERATIONS. FOR PALLET DETAILS, SEE PAGES 3 AND 16.
- C. LADING DATA:
- 2.75 INCH ROCKET:
DIMENSIONS: 66" L X 8.5" W X 9.5" H
WEIGHT - -: 160 POUNDS (APPROX)
- STINGER MISSILE:
DIMENSIONS: 67.25" L X 13.125" W X 10.50" H
WEIGHT - -: 74 POUNDS (APPROX)
- HELLFIRE MISSILE:
DIMENSIONS: 76.3" L X 15.5" W X 16" H
WEIGHT - -: 175 POUNDS (APPROX)
- 20MM CARTRIDGE (M548):
DIMENSIONS: 18.6" L X 8.3" W X 14.6" H
WEIGHT - -: 160 POUNDS (APPROX)
- .50 CAL:
DIMENSIONS: 12" L X 6" W X 7-1/2" H
WEIGHT - -: 35 POUNDS (APPROX)
- ARGON BOTTLE:
DIMENSIONS: 39-1/2" L X 7" W X 7" H
WEIGHT - -: 21 POUNDS (APPROX)
- D. WHEN INSTALLING WEB STRAP TIEDOWN ASSEMBLIES, SEE THE RATCHET/RATCHETING DETAILS ON PAGES 14 AND 15.
- E. ADJUSTABLE SCUFF SLEEVES PROVIDED ON WEB STRAP ASSEMBLIES WILL BE LOCATED TO PROVIDE A PAD WHERE STRAPS PASS OVER SHARP EDGES, OR RATCHETS AND HOOKS ON PREVIOUSLY INSTALLED WEB STRAP TIEDOWN ASSEMBLIES. METAL PARTS OF A STRAP ASSEMBLY SHOULD BE LOCATED SO AS TO AVOID CONTACT WITH METAL ON UNIT BASIC LOAD ITEMS. IF CONTACT CANNOT BE AVOIDED, A SUITABLE ANTI-CHAFING MATERIAL AS LISTED UNDER THE MATERIAL SPECIFICATIONS BELOW MUST BE POSITIONED BETWEEN THE METAL PARTS OF A STRAP ASSEMBLY AND THE METAL ON UNIT BASIC LOAD ITEMS, AND IF NECESSARY, TAPED OR TIED IN POSITION.
- F. WHEN ONE WEB STRAP TIEDOWN ASSEMBLY IS NOT LONG ENOUGH TO SPAN THE DISTANCE DEPICTED, TWO ASSEMBLIES MAY BE HOOKED TOGETHER TO GAIN THE NECESSARY LENGTH.
- 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 0.454KG.
- H. IF THE ITEM BEING LOADED HAS A HEAVY END, ALTERNATE THE CONTAINER ENDS IN EACH LAYER AND/OR STACK FOR A MORE EVEN DISTRIBUTION OF LOAD WEIGHT, WHEN POSSIBLE.

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(GENERAL NOTES CONTINUED)

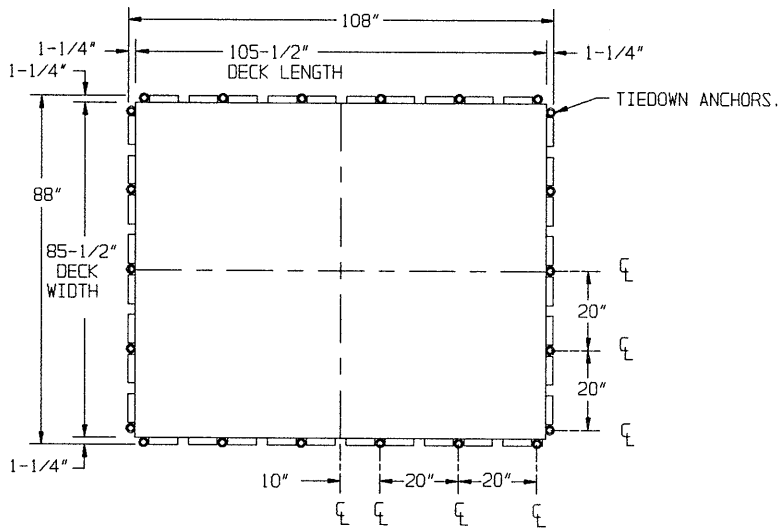
- I. THE MAXIMUM LOAD HEIGHT ABOVE THE PALLET DECK IS 62-1/2".
- J. DO NOT POSITION LOAD BUNDLING STRAPS AT A LOCATION WHERE THEY WILL BE UNDER LOAD HOLD-DOWN STRAPS UNLESS IT CANNOT BE AVOIDED.
- K. WHEN PRE-POSITIONING BUNDLING STRAPS ON THE PALLET DECK, DETERMINE IF THE STRAP RATCHET SHOULD BE LOCATED ON THE SIDE OR TOP OF THE BUNDLE AND MAKE ALLOWANCE FOR THE RATCHETS FINAL LOCATION PRIOR TO LOADING CONTAINERS.
- X. IF THE RATCHET ON THE BUNDLING STRAP IS NOT IN A GOOD LOCATION ON THE SIDE OR TOP OF THE BUNDLE AFTER THE CONTAINERS HAVE BEEN LOADED ON TOP OF THE STRAP, IT CAN BE RE-LOCATED BY PULLING THE STRAP MANUALLY OR WITH A VEHICLE. SECURE THE BOTTOM LAYER OF THE BUNDLE WITH A WEB STRAP, FROM A TIEDOWN ANCHOR ON THE PALLET AROUND THE END OF THE BOTTOM LAYER CONTAINERS TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE PALLET, PRIOR TO PULLING STRAP.
- M. BUNDLES OF CONTAINERS AND/OR LOADS CAN BE RE-POSITIONED ON THE PALLET AFTER LOADING IS COMPLETE BY PUSHING WITH A FORKLIFT OR OTHER VEHICLE. POSITION A PIECE OF LUMBER BETWEEN THE VEHICLE AND THE LOAD TO PREVENT DAMAGE AND MOVE IN SMALL INCREMENTS ONLY.
- N. FOR ADDITIONAL GUIDANCE, SEE THE KEY NUMBERS AND SPECIAL NOTES FOR EACH LOAD.

MATERIAL SPECIFICATIONS

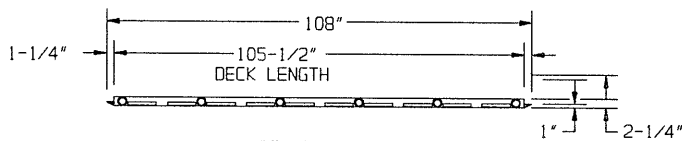
PALLET - - - - - : HCU-6/E 463L, TYPE I; HCU-12/E, TYPE II; MIL-P-27443E.

STRAP - - - - - : WEBBING, UNIVERSAL TIEDOWN, NSN 5340-00-980-9277, PN 10900880; OR NSN 1670-00-725-1437, PN 1376-013. ALTERNATIVE: NSN 5340-01-089-4997, PN 11669588, OR NSN 5340-01-204-3009, PN 9392419.

ANTI-CHAFING MATERIAL - - - - - : CANVAS, BURLAP, TAPE OR ANY OTHER SUITABLE MATERIAL.



TOP VIEW

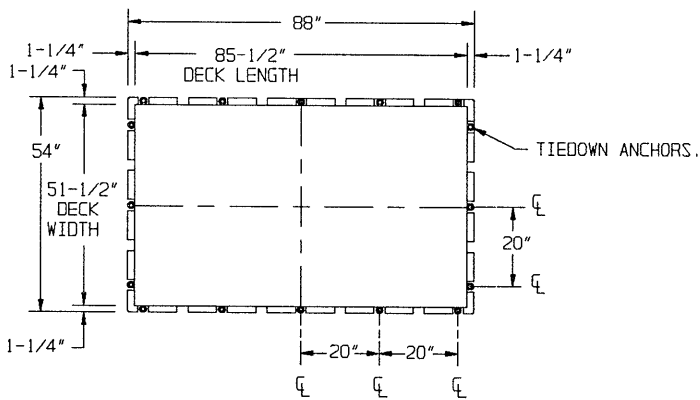


SIDE VIEW

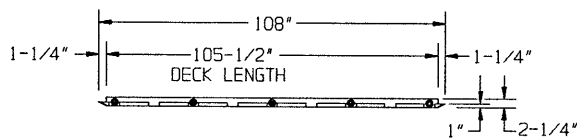
PALLET SPECIFICATIONS

10,000 POUND LOAD CAPACITY.
 22 TIEDOWN ANCHORS: 7,500 POUND LOAD STRENGTH EACH ANCHOR.
 300 POUNDS EMPTY WEIGHT.

HCU-6/E TYPE I PALLET DETAIL



TOP VIEW

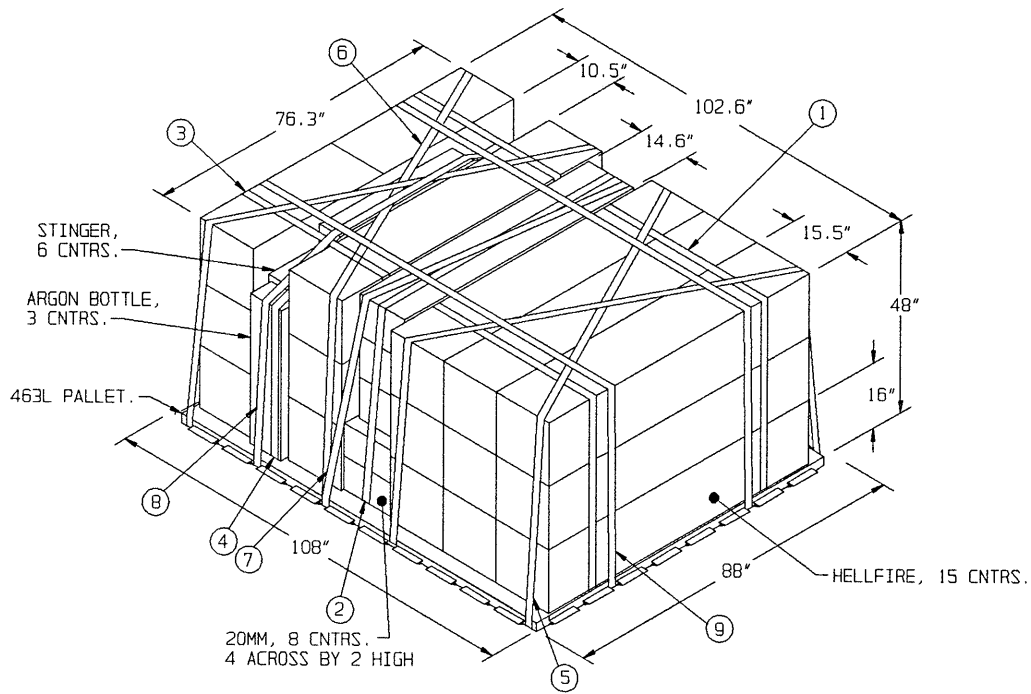


SIDE VIEW

PALLET SPECIFICATIONS

5,000 POUND LOAD CAPACITY.
 16 TIEDOWN ANCHORS: 7,500 POUND LOAD STRENGTH EACH ANCHOR.
 160 POUNDS EMPTY WEIGHT.

HCU-12/E TYPE II PALLET DETAIL



ISOMETRIC VIEW

LOAD HEIGHT INCLUDING PALLET IS 50.25".

(KEY NUMBERS CONTINUED)

KEY NUMBERS

- ⑤ WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP FROM A TIEDOWN ANCHOR ON SIDE OF PALLET DIAGONALLY OVER TOP OF THE NINE HELLFIRE CONTAINER BUNDLE TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE PALLET. POSITION BOTH STRAP RATCHETS ON THE SAME END OF THE BUNDLE. CROSS STRAPS AS SHOWN. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAPS AND THEN RATCHET TIGHT BOTH STRAPS AT THE SAME TIME.
- ⑥ WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP FROM A TIEDOWN ANCHOR ON SIDE OF PALLET DIAGONALLY OVER TOP OF THE SIX HELLFIRE AND THREE STINGER CONTAINER BUNDLE TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE PALLET. CROSS STRAPS AS SHOWN. POSITION BOTH STRAP RATCHETS ON THE SAME SIDE OF THE BUNDLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAPS AND THEN RATCHET TIGHT BOTH STRAPS AT THE SAME TIME.
- ⑦ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF PALLET DIAGONALLY OVER TOP OF THE STACK OF EIGHT 20MM CONTAINERS WITH THREE STINGER CONTAINERS ON TOP TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT.
- ⑧ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF PALLET STRAIGHT OVER TOP OF THE STACK OF THREE STINGER CONTAINERS AND THREE ARGON BOTTLE CONTAINERS TO A TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN A STRAP AND THEN RATCHET TIGHT.
- ⑨ WEB STRAP TIEDOWN ASSEMBLY. (2 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON END OF PALLET OVER TOP OF LOAD TO A TIEDOWN ANCHOR ON OPPOSITE END OF THE PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAPS AND THEN RATCHET TIGHT.

- ① WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP TO ENCIRCLE NINE HELLFIRE CONTAINERS AT THE APPROXIMATE LOCATIONS SHOWN. PRE-POSITION THESE STRAPS ON THE PALLET DECK PRIOR TO LOADING THE CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER THE CONTAINERS. BRING ENDS OF STRAP UP OVER TOP OF CONTAINERS AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAPS AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 1 ON PAGE 5 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO ENCIRCLE EIGHT 20MM CONTAINERS AND THREE STINGER CONTAINERS AT THE CENTER OF THE STACK. PRE-POSITION THIS STRAP ACROSS THE WIDTH OF THE PALLET DECK PRIOR TO LOADING CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER THE CONTAINERS. BRING ENDS OF STRAP UP OVER TOP OF STACK AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 2 ON PAGE 5 AND GENERAL NOTE "J" AND "K" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP TO ENCIRCLE SIX HELLFIRE CONTAINERS AND THREE STINGER CONTAINERS AT THE APPROXIMATE LOCATIONS SHOWN. NOTE THAT THESE STRAPS DO NOT ENCIRCLE THE STACK OF EIGHT 20MM CONTAINERS WITH THREE STINGER CONTAINERS ON TOP. PRE-POSITION THESE STRAPS ON THE PALLET DECK PRIOR TO LOADING CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND THE STRAP SCUFF SLEEVES WILL NOT BE UNDER THE CONTAINERS. BRING ENDS OF STRAP UP OVER TOP OF CONTAINERS AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAPS AND THEN RATCHET TIGHT. SEE SPECIAL NOTES 3, 4, AND 5 ON PAGE 5 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ④ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO ENCIRCLE THREE STINGER CONTAINERS AND THREE ARGON BOTTLE CONTAINERS AT THE CENTER OF THE STACK. PRE-POSITION THIS STRAP ACROSS THE WIDTH OF THE PALLET DECK AND STRAPS MARKED ③ PRIOR TO LOADING CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER THE CONTAINERS. BRING ENDS OF STRAP UP OVER TOP OF STACK AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 4 ON PAGE 5 AND GENERAL NOTES "J" AND "K" ON PAGE 2.

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WARNING

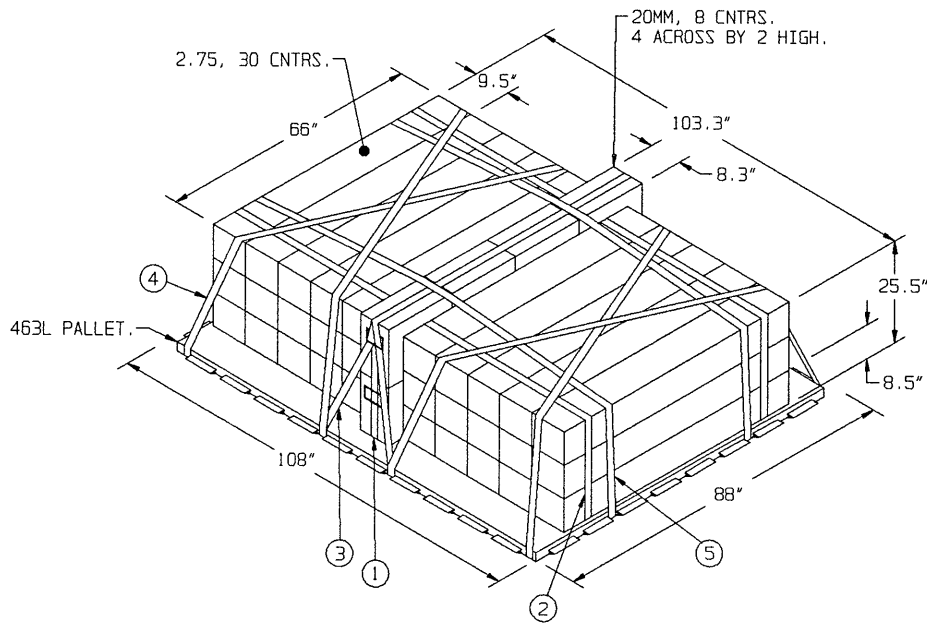
FOR INTERNAL USE ONLY WITH CH-47D HELICOPTERS EQUIPPED WITH HICHS. DO NOT SLING LOAD EXTERNALLY BENEATH ANY AIRCRAFT, INCLUDING CH-47D.

SPECIAL NOTES:

1. STARTING AT ONE END OF PALLET POSITION NINE HELLFIRE CONTAINERS ONE INCH FROM END OF PALLET DECK AND CENTERED ACROSS THE PALLET WIDTH. UNITIZE ALL NINE HELLFIRE CONTAINERS WITH BUNDLING STRAPS MARKED ①. SEE KEY NUMBER ① FOR GUIDANCE.
2. POSITION TWO LAYERS OF FOUR 20MM CONTAINERS EACH ON THE PALLET DECK CENTERED ACROSS THE PALLET WIDTH AND TIGHT AGAINST THE HELLFIRE CONTAINERS. POSITION WITH THE 18.6" DIMENSION ACROSS THE PALLET DECK AND ALTERNATE TOP AND BOTTOM TO PROVIDE BETTER NESTING. POSITION THREE STINGER CONTAINERS ON TOP OF THE 20MM CONTAINERS AND CENTERED ACROSS THE PALLET WIDTH. UNITIZE ALL EIGHT 20MM CONTAINERS AND THE THREE STINGER CONTAINERS WITH BUNDLING STRAP MARKED ②. SEE KEY NUMBER ② FOR GUIDANCE.
3. POSITION ONE STACK OF THREE HELLFIRE CONTAINERS ON THE PALLET DECK, CENTERED ACROSS THE PALLET WIDTH, AND TIGHT AGAINST THE STACK OF 20MM CONTAINERS AND STINGER CONTAINERS. SEE KEY NUMBER ③.
4. POSITION ONE STACK OF THREE STINGER CONTAINERS ON THE PALLET DECK WITH THE 13.1" DIMENSION IN THE VERTICAL POSITION. POSITION ONE ARGON BOTTLE CONTAINER ON TOP OF THE STINGER CONTAINERS CENTERED ACROSS THE PALLET WIDTH AND CENTERED ON THE TOP STINGER CONTAINER. AT EACH END OF THE STACK OF STINGER CONTAINERS, POSITION ONE ARGON BOTTLE CONTAINER IN THE UPRIGHT POSITION AND CENTERED ON THE STACK. UNITIZE ALL THREE STINGER CONTAINERS AND ALL THREE ARGON BOTTLE CONTAINERS WITH BUNDLING STRAP MARKED ④. SEE KEY NUMBERS ③ AND ④ FOR GUIDANCE.
5. POSITION ONE STACK OF THREE HELLFIRE CONTAINERS ON THE PALLET DECK, CENTERED ACROSS THE PALLET WIDTH AND TIGHT AGAINST THE STACK OF STINGER CONTAINERS AND ARGON BOTTLE CONTAINERS. SEE KEY NUMBER ③.
6. A TOTAL OF FOURTEEN WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

PALLET LOAD

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
HELLFIRE - - - - -	15 CNTRS - - - - -	2,625 LBS
STINGER - - - - -	6 CNTRS - - - - -	462 LBS
20MM - - - - -	8 CNTRS - - - - -	1,280 LBS
ARGON BOTTLE - - - - -	3 CNTRS - - - - -	63 LBS
PALLET - - - - -	1 REOD - - - - -	300 LBS
STRAPS - - - - -	14 REOD - - - - -	70 LBS
TOTAL WEIGHT - - - - -		4,782 LBS (APPROX)



ISOMETRIC VIEW

LOAD HEIGHT INCLUDING PALLET IS 31.45".

KEY NUMBERS

- ① WEB STRAP TIEDOWN ASSEMBLY (1 REQD). INSTALL STRAP TO ENCIRCLE EIGHT 20MM CONTAINERS. PRE-POSITION THIS STRAP ACROSS THE WIDTH OF THE PALLET DECK AT THE CENTER OF THE PALLET LENGTH PRIOR TO LOADING CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER THE CONTAINERS. BRING ENDS OF STRAP UP THROUGH THE LIFTING HANDLES ON THE TOP CONTAINER AT EACH END OF THE STACK. (RATCHET MUST BE REMOVED FROM RATCHET END OF STRAP OR FOLLOW DIRECTIONS IN SPECIAL NOTE 1 ON PAGE 7). HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 1 ON PAGE 7 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL EACH STRAP TO ENCIRCLE FIFTEEN 2.75 INCH ROCKET CONTAINERS AT THE APPROXIMATE LOCATIONS SHOWN. PRE-POSITION THESE STRAPS ON THE PALLET DECK PRIOR TO LOADING THE CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER THE CONTAINERS. BRING ENDS OF STRAP UP OVER TOP OF CONTAINERS AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 2 ON PAGE 7 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). INSTALL EACH STRAP FROM A TIEDOWN ANCHOR ON SIDE OF PALLET UP THROUGH LIFTING HANDLE ON TOP 20MM CONTAINER, OVER TOP OF STACK, DOWN THROUGH LIFTING HANDLE ON TOP 20MM CONTAINER, TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF PALLET. POSITION BOTH STRAP RATCHETS ON SAME END OF STACK. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT BOTH STRAPS AT THE SAME TIME.
- ④ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF PALLET DIAGONALLY OVER TOP OF FIFTEEN CONTAINER BUNDLE TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF PALLET. CROSS STRAPS AS SHOWN. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT.
- ⑤ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON END OF PALLET OVER TOP OF LOAD TO A TIEDOWN ANCHOR ON OPPOSITE END OF PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAPS AND THEN RATCHET TIGHT.

WARNING

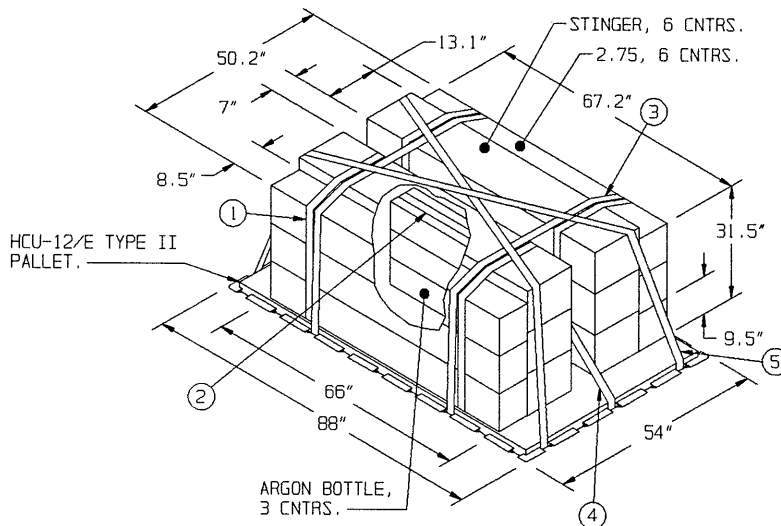
FOR INTERNAL USE ONLY WITH CH-47D HELICOPTERS EQUIPPED WITH HICHS. DO NOT SLING LOAD EXTERNALLY BENEATH ANY AIRCRAFT, INCLUDING CH-47D.

SPECIAL NOTES:

1. STARTING AT THE CENTER OF THE PALLET LENGTH, POSITION FOUR 20MM CONTAINERS ON TOP OF STRAP MARKED ① AND CENTERED ACROSS THE PALLET WIDTH. POSITION A SECOND LAYER OF FOUR 20MM CONTAINERS ON TOP OF THE FIRST LAYER. UNITIZE ALL EIGHT 20MM CONTAINERS WITH BUNDLING STRAP MARKED ①. NOTE: IF RATCHET CANNOT BE REMOVED FROM STRAP, THREAD THE NON-RATCHET END OF STRAP DOWN THROUGH THE HANDLE OF THE END CONTAINER AND PRE-POSITION STRAP ACROSS THE PALLET DECK PRIOR TO LOADING THE CONTAINERS. SEE KEY NUMBER ① FOR GUIDANCE.
2. POSITION THREE LAYERS OF FIVE 2.75 INCH ROCKET CONTAINERS ON THE PALLET DECK, ON TOP OF STRAPS MARKED ②, CENTERED ACROSS THE PALLET WIDTH, AND TIGHT AGAINST THE STACK OF 20MM CONTAINERS. UNITIZE ALL FIFTEEN CONTAINERS WITH BUNDLING STRAPS MARKED ②. SEE KEY NUMBER ② FOR GUIDANCE.
3. A TOTAL OF THIRTEEN WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

PALLET LOAD

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
2.75" - - - - -	30 CNTRS - - - - -	4,800 LBS
20MM - - - - -	8 CNTRS - - - - -	1,280 LBS
PALLET - - - - -	1 REOD - - - - -	300 LBS
STRAPS - - - - -	13 REOD - - - - -	65 LBS
TOTAL WEIGHT - - - - -		6,445 LBS (APPROX)



ISOMETRIC VIEW

LOAD HEIGHT INCLUDING
PALLET IS 33.75\".

KEY NUMBERS

- ① WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL EACH STRAP TO ENCIRCLE THREE STINGER CONTAINERS AND THREE 2.75 INCH ROCKET CONTAINERS AT THE APPROXIMATE LOCATIONS SHOWN. PRE-POSITION THESE STRAPS ON THE PALLET DECK PRIOR TO LOADING CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER CONTAINERS. BRING ENDS OF STRAP UP OVER TOP OF CONTAINERS AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 1 ON PAGE 9 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (1 REQD). INSTALL STRAP TO ENCIRCLE THE STACK OF THREE ARGON BOTTLE CONTAINERS. PRE-POSITION THIS STRAP ACROSS THE LENGTH OF THE PALLET AT THE CENTER OF THE PALLET WIDTH PRIOR TO LOADING CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER CONTAINERS. BRING ENDS OF STRAP UP OVER TOP OF CONTAINERS AND HOOK END OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 2 ON PAGE 9 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF PALLET OVER TOP OF LOAD TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT.
- ④ WEB STRAP TIEDOWN ASSEMBLY (1 REQD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON END OF PALLET OVER TOP OF THE ARGON BOTTLE CONTAINERS TO A TIEDOWN ANCHOR ON THE OPPOSITE END OF THE PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT.
- ⑤ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). INSTALL EACH STRAP TO EXTEND FROM A SIDE TIEDOWN ANCHOR ON END OF PALLET DIAGONALLY OVER TOP OF STINGER CONTAINERS TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF PALLET. CROSS STRAPS AS SHOWN. POSITION STRAPS SCUFF SLEEVES AT SHARP EDGES. POSITION BOTH STRAP RATCHETS AT THE SAME END OF THE LOAD. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT BOTH STRAPS AT THE SAME TIME.

WARNING

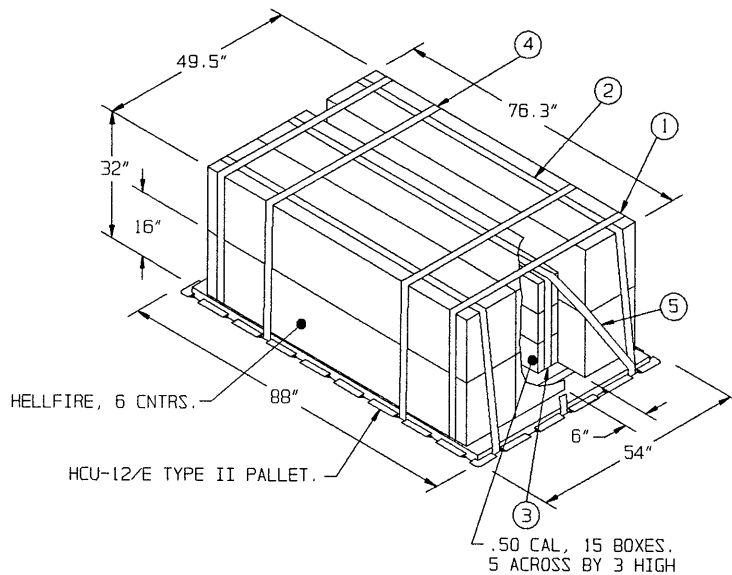
FOR INTERNAL USE ONLY WITH CH-47D HELICOPTERS EQUIPPED WITH HICHS. DO NOT SLING LOAD EXTERNALLY BENEATH ANY AIRCRAFT, INCLUDING CH-47D.

SPECIAL NOTES:

1. STARTING AT ONE SIDE OF THE PALLET STACK, POSITION THREE 2.75 INCH ROCKET CONTAINERS AT THE EDGE OF THE PALLET DECK AND CENTERED ON THE PALLET LENGTH. STACK THREE STINGER CONTAINERS TIGHT AGAINST THE 2.75 CONTAINERS AND CENTERED ON THE PALLET LENGTH. UNITIZE ALL THREE 2.75 CONTAINERS AND THREE STINGER CONTAINERS WITH BUNDLING STRAPS MARKED ①. SEE KEY NUMBER ① FOR GUIDANCE.
2. POSITION A STACK OF THREE ARGON BOTTLE CONTAINERS TIGHT AGAINST THE STINGER CONTAINERS AND CENTERED ON THE PALLET LENGTH. UNITIZE ALL THREE CONTAINERS WITH BUNDLING STRAP MARKED ②. SEE KEY NUMBER ② FOR GUIDANCE.
3. A TOTAL OF TEN WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

PALLET LOAD

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
STINGER - - - - -	6 CNTRS - - - - -	444 LBS
2.75 - - - - -	6 CNTRS - - - - -	960 LBS
ARGON BOTTLE - - - - -	3 CNTRS - - - - -	63 LBS
PALLET - - - - -	1 REOD - - - - -	160 LBS
STRAPS - - - - -	10 REOD - - - - -	50 LBS
TOTAL WEIGHT - - - - -		1,677 LBS (APPROX)



ISOMETRIC VIEW

LOAD HEIGHT INCLUDING
PALLET IS 34.25".

KEY NUMBERS

- ① WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP TO ENCIRCLE SIX HELLFIRE CONTAINERS AT THE APPROXIMATE LOCATIONS SHOWN. PREPOSITION THESE STRAPS ON THE PALLET DECK PRIOR TO LOADING CONTAINERS. THESE STRAPS WILL NOT BE UNDER THE .50 CAL BOXES. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE, AND STRAP SCUFF SLEEVES WILL NOT BE UNDER CONTAINERS. NOTE: DO NOT POSITION THESE STRAPS OVER TOP OF CONTAINERS UNTIL ALL THREE STRAPS MARKED ② ARE INSTALLED AND TIGHTENED THEN BRING ENDS OF STRAP UP OVER TOP OF CONTAINERS AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTES 1 AND 2 ON PAGE 11 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (3 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON END OF PALLET STRAIGHT OVER TOP OF A TWO-HIGH STACK OF HELLFIRE CONTAINERS TO A TIEDOWN ANCHOR ON THE OPPOSITE END OF THE PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. NOTE: THESE STRAPS MUST BE INSTALLED AND TIGHTENED PRIOR TO TIGHTENING STRAPS MARKED ①.
- ③ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO ENCIRCLE ALL FIFTEEN .50 CAL BOXES. PRE-POSITION THIS STRAP ON THE PALLET DECK PRIOR TO LOADING THE .50 CAL BOXES. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER BOXES. BRING ENDS OF STRAP UP OVER TOP OF BOXES AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 2 ON PAGE 11 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ④ WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF PALLET OVER TOP OF LOAD TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT.
- ⑤ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON END OF PALLET DIAGONALLY OVER TOP OF THE STACK OF .50 CAL BOXES TO A CENTER TIEDOWN ANCHOR ON OPPOSITE END OF PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT.

WARNING

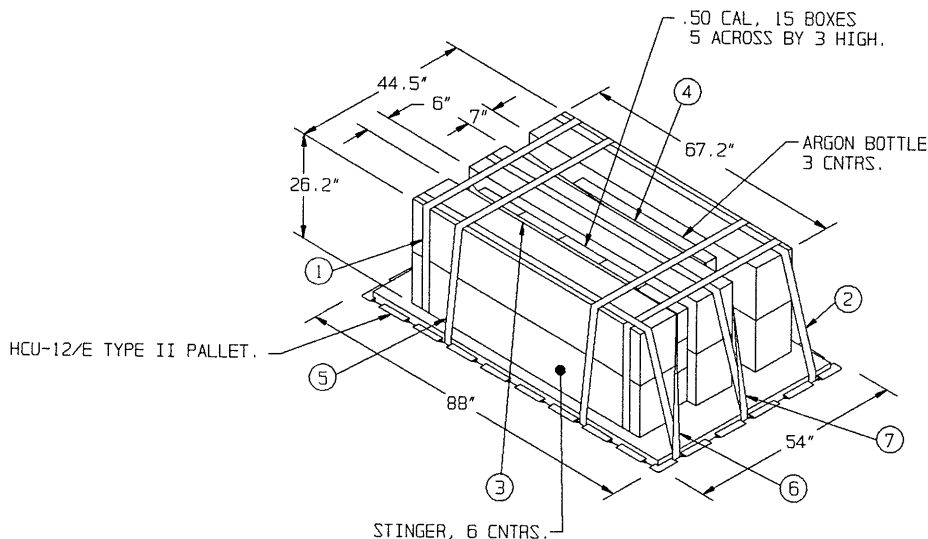
FOR INTERNAL USE ONLY WITH CH-47D
HELICOPTERS EQUIPPED WITH HICHS.
DO NOT SLING LOAD EXTERNALLY BENEATH
ANY AIRCRAFT, INCLUDING CH-47D.

SPECIAL NOTES:

1. STARTING AT ONE SIDE OF THE PALLET, POSITION ONE STACK OF TWO HELLFIRE CONTAINERS 1" FROM THE EDGE OF THE PALLET DECK AND CENTERED ON THE PALLET LENGTH. SEE KEY NUMBERS ① AND ② FOR GUIDANCE.
2. STACK THE .50 CAL BOXES IN THREE LAYERS OF FIVE BOXES EACH WITH THE 12" BOX DIMENSION PARALLEL TO THE PALLET SIDES AND THE 6" DIMENSION ACROSS THE PALLET WIDTH. POSITION THE .50 CAL BOXES TIGHT AGAINST THE TWO HIGH STACK OF HELLFIRE CONTAINERS AND CENTERED ON THE PALLET LENGTH. NOTE THAT THESE BOXES DO NOT GO ON TOP OF STRAPS MARKED ①. UNITIZE ALL FIFTEEN BOXES WITH BUNDLING STRAP MARKED ③. SEE KEY NUMBER ③ FOR GUIDANCE.
3. POSITION TWO STACKS OF TWO HELLFIRE CONTAINERS EACH TIGHT AGAINST THE STACK OF .50 CAL BOXES AND CENTERED ON THE PALLET LENGTH. INSTALL AND TIGHTEN STRAPS MARKED ② THEN POSITION AND TIGHTEN BUNDLING STRAPS MARKED ①. SEE KEY NUMBERS ① AND ② FOR GUIDANCE.
4. A TOTAL OF NINE WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

PALLET LOAD

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
HELLFIRE - - - - -	6 CNTRS - - - - -	1,050 LBS
.50 CAL - - - - -	15 BOXES - - - - -	525 LBS
PALLET - - - - -	1 REOD - - - - -	160 LBS
STRAPS - - - - -	9 REOD - - - - -	45 LBS
TOTAL WEIGHT - - - - -		1,780 LBS (APPROX)



ISOMETRIC VIEW

LOAD HEIGHT INCLUDING PALLET IS 28.5".

(KEY NUMBERS CONTINUED)

- ⑤ WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF PALLET OVER TOP OF LOAD TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT.
- ⑥ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO EXTEND FROM A SIDE TIEDOWN ANCHOR ON END OF PALLET DIAGONALLY OVER TOP OF THE STACK OF .50 CAL BOXES TO A CENTER TIEDOWN ANCHOR ON OPPOSITE END OF PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT.
- ⑦ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO EXTEND FROM A SIDE TIEDOWN ANCHOR ON END OF PALLET DIAGONALLY OVER TOP OF THE STACK OR ARGON BOTTLE CONTAINERS TO A CENTER TIEDOWN ANCHOR ON OPPOSITE END OF PALLET. POSITION STRAP SCUFF SLEEVE AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT.

KEY NUMBERS

- ① WEB STRAP TIEDOWN ASSEMBLY (2 REOD). INSTALL EACH STRAP TO ENCIRCLE SIX STINGER CONTAINERS AT THE APPROXIMATE LOCATIONS SHOWN. PRE-POSITION THESE STRAPS ON THE PALLET DECK PRIOR TO LOADING CONTAINERS. THESE STRAPS WILL NOT BE UNDER THE .50 CAL BOXES OR ARGON BOTTLE CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER CONTAINERS. NOTE: DO NOT POSITION THESE STRAPS OVER TOP OF CONTAINERS UNTIL ALL THREE STRAPS MARKED ② ARE INSTALLED AND TIGHTENED, THEN BRING ENDS OF STRAP UP OVER TOP OF CONTAINERS AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTES 1 AND 2 ON PAGE 13 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (3 REOD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON END OF PALLET STRAIGHT OVER TOP OF A TWO-HIGH STACK OF STINGER CONTAINERS TO A TIEDOWN ANCHOR ON THE OPPOSITE END OF THE PALLET. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. NOTE: THESE STRAPS MUST BE INSTALLED AND TIGHTENED PRIOR TO TIGHTENING STRAPS MARKED ①.
- ③ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO ENCIRCLE ALL FIFTEEN .50 CAL BOXES. PRE-POSITION THIS STRAP ON THE PALLET DECK PRIOR TO LOADING THE .50 CAL BOXES. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF WILL NOT BE UNDER BOXES. BRING ENDS OF STRAP UP OVER TOP OF BOXES AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 2 ON PAGE 13 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ④ WEB STRAP TIEDOWN ASSEMBLY (1 REOD). INSTALL STRAP TO ENCIRCLE THE STACK OF THREE ARGON BOTTLE CONTAINERS. PRE-POSITION THIS STRAP ACROSS THE LENGTH OF THE PALLET PRIOR TO LOADING CONTAINERS. ASSURE THAT THE STRAP LAYS FLAT WITH THE RATCHET HANDLE ON THE BOTTOM SIDE AND STRAP SCUFF SLEEVES WILL NOT BE UNDER CONTAINERS. BRING ENDS OF STRAP UP OVER TOP OF CONTAINERS AND HOOK ENDS OF STRAP TOGETHER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE SPECIAL NOTE 4 ON PAGE 13 AND GENERAL NOTES "J" AND "K" ON PAGE 2.

WARNING

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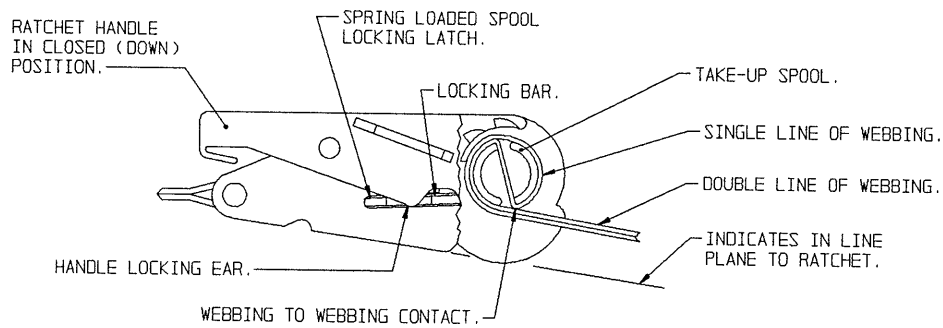
SPECIAL NOTES:

1. STARTING AT ONE SIDE OF THE PALLET, POSITION ONE STACK OF TWO STINGER CONTAINERS 3" FROM THE EDGE OF THE PALLET DECK AND CENTERED ON THE PALLET LENGTH. SEE KEY NUMBERS ① AND ② FOR GUIDANCE.
2. STACK THE .50 CAL BOXES IN THREE LAYERS OF FIVE BOXES EACH, WITH THE 12" DIMENSION PARALLEL TO THE PALLET SIDES AND THE 6" DIMENSION ACROSS THE PALLET WIDTH. POSITION THE .50 CAL BOXES TIGHT AGAINST THE TWO-HIGH STACK OF STINGER CONTAINERS AND CENTERED ON THE PALLET LENGTH. NOTE THAT THESE BOXES DO NOT GO ON TOP OF STRAPS MARKED ①. UNITIZE ALL FIFTEEN BOXES WITH BUNDLING STRAP MARKED ③. SEE KEY NUMBER ③ FOR GUIDANCE.
3. POSITION A STACK OF TWO STINGER CONTAINERS TIGHT AGAINST THE STACK OF .50 CAL BOXES AND CENTERED ON THE PALLET LENGTH. SEE KEY NUMBER ② FOR GUIDANCE.
4. POSITION A STACK OF THREE ARGON BOTTLE CONTAINERS TIGHT AGAINST THE STACK OF STINGER CONTAINERS AND CENTERED ON THE PALLET LENGTH. UNITIZE ALL THREE CONTAINERS WITH BUNDLING STRAP MARKED ④. SEE KEY NUMBER ④ FOR GUIDANCE.
5. POSITION A STACK OF TWO STINGER CONTAINERS TIGHT AGAINST THE STACK OF ARGON BOTTLE CONTAINERS AND CENTERED ON THE PALLET LENGTH. SEE KEY NUMBER ② FOR GUIDANCE.
6. A TOTAL OF ELEVEN WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

PALLET LOAD

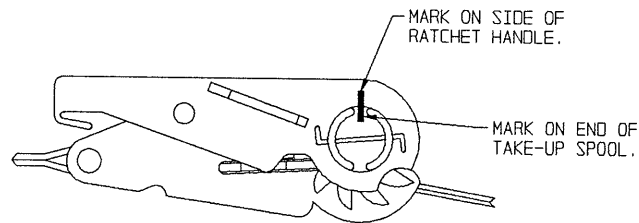
<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
STINGER - - - - -	6 CNTRS - - - - -	444 LBS
.50 CAL - - - - -	15 BOXES - - - - -	525 LBS
ARGON BOTTLE - - - - -	3 CNTRS - - - - -	63 LBS
PALLET - - - - -	1 REOD - - - - -	160 LBS
STRAPS - - - - -	11 REOD - - - - -	55 LBS

TOTAL WEIGHT - - - - - 1,247 LBS (APPROX)



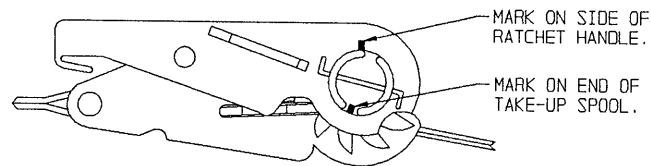
STEP 1

IN THIS VIEW PART OF THE RATCHET HOUSING IS SHOWN BROKEN AWAY TO DEPICT WEBBING-TO-WEBBING CONTACT ON THE TAKE-UP SPOOL OF THE RATCHET. WEBBING-TO-WEBBING CONTACT IS ACHIEVED WHEN THE OPERATOR HOLDS THE DOUBLE LINE OF WEBBING IN AN "IN LINE PLANE TO THE RATCHET" AND IT MAKES CONTACT WITH THE SINGLE LINE OF WEBBING.



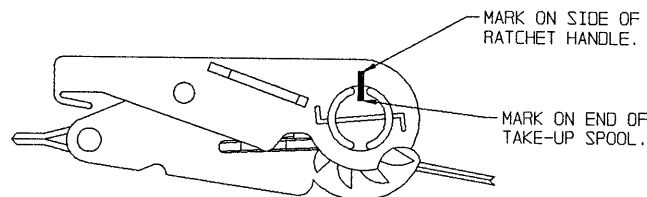
STEP 2

THIS VIEW DEPICTS THE LOCATION OF THE FIXED MARK ON THE RATCHETING HANDLE, WITH ANOTHER MATCHING MARK ON THE TAKE-UP SPOOL, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE.



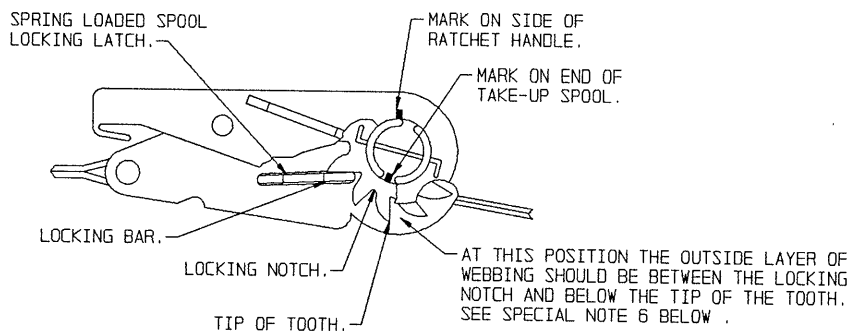
STEP 3

THIS VIEW DEPICTS THE LOCATION OF THE MARK ON THE END OF THE TAKE-UP SPOOL AFTER THE SPOOL HAS BEEN ROTATED ONE-HALF TURN, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE.



STEP 4

THIS VIEW DEPICTS THE LOCATION OF THE MARK ON THE END OF THE TAKE-UP SPOOL AFTER THE SPOOL HAS BEEN ROTATED ONE FULL TURN, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE.



STEP 5

THIS VIEW DEPICTS THE LOCATION OF THE MARK ON THE END OF THE TAKE-UP SPOOL AFTER THE SPOOL HAS BEEN ROTATED ONE AND ONE-HALF TURNS, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE. ALSO IN THIS VIEW, PART OF THE RATCHET HANDLE IS BROKEN AWAY TO SHOW THE LOCKING BAR FULLY SEATED IN THE MATCHING LOCKING NOTCH (SPROCKET GEAR TEETH).

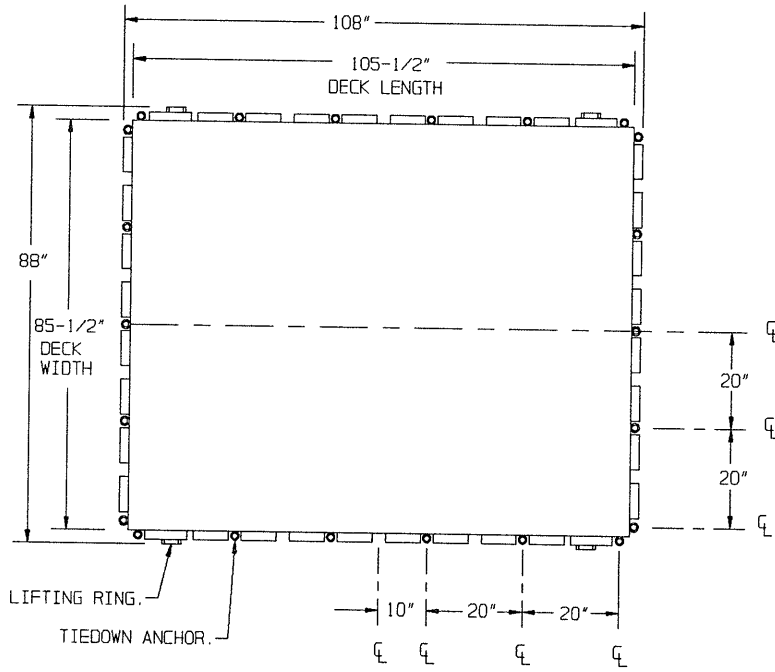
SPECIAL NOTES:

1. WEB STRAP TIEDOWN ASSEMBLIES MUST BE SECURELY HOOKED INTO THE D-RING ANCHORS ON THE 463-L PALLET AND FIRMLY TENSIONED. FIRMLY TENSIONED MEANS, WHEN THE OPERATOR PULLS ON THE RATCHET HANDLE BY HAND, THE RATCHET WILL NOT ADVANCE ANOTHER NOTCH. NO TYPE OF MECHANICAL EXTENSION OR LEVER WILL BE USED. EXERCISE CARE DURING STRAP APPLICATION. AVOID TWISTS IN THE STRAP TO THE EXTENT POSSIBLE (IF TIME PERMITS) BUT ENSURE THERE ARE NO KNOTS IN THE STRAP. ON THE TAKE-UP SPOOL OF THE RATCHET, ENSURE STRAIGHT LAY OF THE STRAP WHEN TENSIONING. AFTER INITIAL WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, BY ROTATING THE TAKE-UP SPOOL UNTIL NO METAL ON THE SPOOL IS SHOWING AND THE STRAP HAS MADE CONTACT WITH ITSELF, THE TENSIONED STRAP MUST FORM AT LEAST 1/2 BUT NOT MORE THAN 1-1/2 WRAPS OF STRAP ON THE TAKE-UP SPOOL OF THE TENSIONING RATCHET. AFTER TENSIONING IS COMPLETED, ENSURE THAT THE SPOOL LOCKING-LATCH IS FULLY SEATED AT BOTH ENDS OF THE SPOOL IN MATCHING LOCKING NOTCHES. TIE BACK THE LOOSE END OF THE STRAP AFTER TENSIONING IS COMPLETED (LOOSE END MAY BE FOLDED AND TAPED OR TIED TO THE TENSION STRAP IF TIME PERMITS).
2. THE REQUIREMENT FOR 1/2 BUT NOT MORE THAN 1-1/2 WRAPS OF STRAP ON THE TAKE-UP SPOOL OF THE TENSIONING RATCHET. AS SPECIFIED IN SPECIAL NOTE 1, ACTUALLY MEANS 1/2 TO 1-1/2 WRAPS OF DOUBLE WEBBING. THE 1/2 TO 1-1/2 WRAPS REQUIRE THAT THE SPOOL MECHANISM BE ROTATED 1/2 TO 1-1/2 TURNS. ALSO THE 1/2 TO 1-1/2 WRAPS (TURNS) ARE TO BE ACCOMPLISHED ONLY AFTER ENOUGH WEBBING HAS BEEN WOUND ONTO THE SPOOL TO ACHIEVE A WEBBING-TO-WEBBING CONFIGURATION, AS SHOWN IN THE "STEP 1" DETAIL ON PAGE 14.
3. ONE METHOD THAT CAN BE USED TO ENSURE THAT THE 1/2 TO 1-1/2 WRAPS ARE WOUND ONTO THE TAKE-UP SPOOL, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, IS TO PLACE A FIXED MARK (PAINT OR SIMILAR MATERIAL) ON THE SIDE OF THE RATCHETING HANDLE, WITH THE HANDLE IN ITS CLOSED (DOWN) POSITION, AND ANOTHER SHORT MATCHING MARK ON THE END OF THE SPOOL, AS SHOWN IN THE "STEP 2" DETAIL ON PAGE 14. AS THE SPOOL IS ROTATED TO TENSION A TIEDOWN STRAP ASSEMBLY, THE NUMBER OF WRAPS (TURNS) CAN BE DETERMINED VISUALLY BY COMPARING THE "MARK" LOCATION ON THE SPOOL TO THE "MARK" LOCATION ON THE RATCHETING HANDLE WITH THE HANDLE IN CLOSED POSITION. SEE THE "STEP 3" AND "STEP 4" DETAILS ON PAGE 14.
4. ANOTHER METHOD THAT CAN BE USED TO ENSURE THAT THE 1/2 TO 1-1/2 WRAPS ARE ACHIEVED, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, IS TO COUNT THE AUDIBLE CLICKS MADE BY THE RATCHET ASSEMBLY AS A WEB STRAP ASSEMBLY IS BEING TENSIONED. THE RATCHET ASSEMBLY ON MOST WEB STRAP ASSEMBLIES HAVE 11 TEETH ON THE GEARLIKE DEVICE ON EACH END OF THE TAKE-UP SPOOL, SOME OTHER STRAP ASSEMBLIES HAVE ONLY 9 TEETH. THEREFORE, AFTER INITIAL WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, ROTATE (TURN) THE SPOOL THROUGH A MINIMUM OF 6 TO A MAXIMUM OF 16 CLICKS (1/2 TO 1-1/2 WRAPS), WHEN THE GEAR HAS 11 TEETH, AND ROTATE (TURN) THE SPOOL THROUGH A MINIMUM OF 5 TO A MAXIMUM OF 13 CLICKS (1/2 TO 1-1/2 WRAPS IF THE GEAR HAS 9 TEETH).

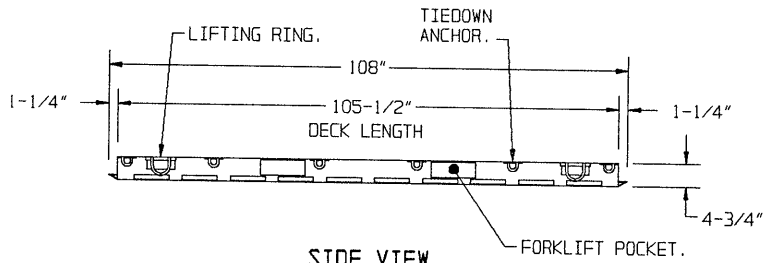
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(SPECIAL NOTES CONTINUED)

5. AFTER A STRAP ASSEMBLY HAS BEEN PROPERLY TENSIONED, CARE MUST BE EXERCISED TO ASSURE THAT THE TAKE-UP SPOOL LOCKING LATCH (SPRING LOADED DEVICE WITH A LOCKING BAR ON EACH SIDE OF THE RATCHET ASSEMBLY) IS FULLY SEATED ON BOTH SIDES IN MATCHING LOCKING NOTCHES, WHICH ARE SIMILAR TO SPROCKET GEAR TEETH, THAT ARE LOCATED ON EACH END OF THE TAKE-UP SPOOL. SEE "STEP 5" DETAIL ABOVE. THE LOCKING LATCH IS "FULLY SEATED" WHEN THE HANDLE WILL CLOSE AND LOCKING GEAR, OR SIMILAR DEVICE ON THE HANDLE, PREVENTS THE ACCIDENTAL WITHDRAWAL OF THE LOCKING LATCH. SEE "STEP 1" DETAIL ON PAGE 14. IF THE FULLY SEATED CONDITION CANNOT BE ACHIEVED, THE STRAP MUST BE RELEASED AND HAND RETENSIONED AS TIGHT AS POSSIBLE TO ACHIEVE THE FULLY SEATED CONDITION.
6. ANOTHER VISUAL METHOD OF DETERMINING WHEN THERE IS 1/2 TO 1-1/2 WRAPS OF WEBBING ON THE TAKE-UP SPOOL, AFTER INITIAL WEBBING-TO-WEBBING CONTACT HAS BEEN MADE, IS TO LOOK AT THE SPOOL. WHEN A TIEDOWN IS COMPLETE, THE STRAP WEBBING ON THE SPOOL OF THE RATCHET SHOULD BE ABOVE THE LOWER CURVE OF THE TEETH OF THE LOCKING NOTCH, AND SHOULD BE BELOW THE TIPS OF THE TEETH OF THE RATCHET AS IDENTIFIED IN "STEP 5" ABOVE. IT SHOULD BE NOTED THAT ANY PROCEDURES THAT ENSURE PROPER TENSIONING ARE ACCEPTABLE AND METHODS ON THE DRAWING ONLY PROVIDE SOME METHODS.



TOP VIEW



SIDE VIEW

PALLET SPECIFICATIONS

- 10,000 POUND LOAD CAPACITY.
- 22 TIEDOWN ANCHORS: 7,500 POUND LOAD STRENGTH EACH ANCHOR.
- 550 POUNDS EMPTY WEIGHT.
- 4-WAY FORKLIFT OPENINGS.
- LIFT/SLING RING EACH CORNER.