

MLRS

LOADING, TIEDOWN, AND UNLOADING PROCEDURES FOR THE ROCKET POD/CONTAINER (RP/C) FOR THE MULTIPLE LAUNCH ROCKET SYSTEM IN/ON TACTICAL VEHICLES

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U.S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U.S. ARMY MISSILE COMMAND 	DRAFTSMAN B. LEONARD	TECHNICIAN	ENGINEER J. SIMONS
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND 	VALIDATION ENGINEERING DIVISION 	TRANSPORTATION ENGINEERING DIVISION 	LOGISTICS ENGINEERING OFFICE
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SEE THE REVISION LISTING ON PAGE 3		DRAWING	FILE
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DO NOT SCALE

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1.
- B. THIS DRAWING COVERS PROCEDURES APPLICABLE TO THE TRANSPORT OF THE ROCKET/POD CONTAINERS (RP/C) FOR MULTIPLE LAUNCH ROCKET SYSTEM (MLRS), IN/ON TACTICAL TYPE VEHICLES. IF OTHER TYPES OF CARGO ITEMS ARE TRANSPORTED WITH THAT SHOWN, THE TOTAL LOAD MUST BE COMPATIBLE AND THE ADDED ITEMS MUST BE SECURED WITH WEB STRAP ASSEMBLIES, AS REQUIRED TO PREVENT DISPLACEMENT DURING TRANSPORTATION. SEE CONTAINER DETAIL ON PAGE 3.
- C. DEPICTED PROCEDURES APPLY TO THE VEHICLES DESIGNATED HEREIN, EQUIPPED WITH TIEDOWN FITTINGS OR MODIFIED TO INCLUDE THE UNIVERSALLY APPLICABLE "TIEDOWN KIT" WHICH CONSISTS OF THE TIEDOWN FITTINGS OR ANCHOR DEVICES FOR INSTALLATION IN/ON CARGO BEDS, SIDE WALLS, AND/OR END WALLS, FOR USE WITH WEB STRAP TIEDOWN ASSEMBLIES. SEE PAGE 32 FOR GUIDANCE.
- D. WEB STRAP TIEDOWN ASSEMBLIES MUST BE SECURELY HOOKED INTO ANCHORING DEVICES ON THE TRANSPORTING VEHICLE 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 ENDS OF THE STRAP AFTER TENSIONING IS COMPLETED (LOOSE ENDS MAY BE FOLDED AND TAPED OR TIED TO THE TENSIONING STRAP IF TIME PERMITS). FOR ADDITIONAL GUIDANCE, SEE "RATCHET/RATCHETING DETAILS" ON PAGES 30 AND 31.
- 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 THE CARGO. 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 CARGO AND, IF NECESSARY, TAPED OR TIED IN POSITION.
- F. ONLY THE CARGO BODIES OR BEDS OF THE TACTICAL VEHICLES HAVE BEEN SHOWN, TO PREVENT DISTRACTION FROM THE DELINEATED LOADING AND TIEDOWN PROCEDURES, AND ARE SHOWN IN OUTLINE FORM WITH STRUCTURAL PORTIONS OMITTED AS NECESSARY TO IMPROVE CLARITY OF THE DEPICTED PROCEDURES. LIKEWISE, AND FOR THE SAME REASON, PORTIONS OF LOADS HAVE BEEN OMITTED FROM SOME VIEWS.

(GENERAL NOTES CONTINUED AT RIGHT)

(GENERAL NOTES CONTINUED)

- G. WHENEVER POSSIBLE, A LOAD SHOULD BE CENTERED LATERALLY IN/ON CARRYING VEHICLE TO PROVIDE FOR EQUAL ANGLE HOLD DOWN BY THE SECURING WEB STRAP ASSEMBLIES. WHENEVER POSSIBLE, LADING SHOULD BE CENTERED LONGITUDINALLY (IN/ON THE CARRYING VEHICLE) BETWEEN THE SELECTED TIEDOWN FITTINGS TO BE USED. HOWEVER, DUE TO LADING WEIGHT, LADING LENGTH, LADING CONFIGURATION, AND/OR LOCATION AND QUANTITY OF TIEDOWN ANCHORS WITHIN THE CARRYING VEHICLE, IT MAY BE NECESSARY TO LOCATE THE LADING LONGITUDINALLY IN/ON A VEHICLE AS SHOWN WITHIN THIS DRAWING TO PROVIDE FOR PROPER TIEDOWN AND TO ACHIEVE A MAXIMUM LOAD.
- H. IF COMPATIBLE, OTHER ASSOCIATED CARGO MAY BE LOADED WITHIN THE AVAILABLE SPACE REMAINING IN/ON A LOADED VEHICLE, PROVIDING IT IS SECURED WITH WEB STRAP ASSEMBLIES SUFFICIENTLY TO PREVENT SIGNIFICANT MOVEMENT AND/OR LOSS DURING TRANSPORT.
- J. WHEN ONE WEB STRAP ASSEMBLY IS NOT LONG ENOUGH TO SPAN THE DISTANCE DEPICTED, TWO ASSEMBLIES MAY BE HOOKED TOGETHER TO GAIN THE NECESSARY LENGTH.
- K. IF THE SIDE RACKS FOR THE SEMITRAILER ARE TO BE TRANSPORTED ON THE LOADED TRAILER, THEY WILL BE STACKED ON THE TRAILER AND SECURED WITH A SUFFICIENT QUANTITY OF WEB STRAP TIEDOWN ASSEMBLIES TO PREVENT LOSS DURING TRANSPORT.
- L. ITEM LOCATION AND QUANTITIES OF THE DESIGNATED ITEM MAY BE VARIED TO SATISFY OPERATIONAL REQUIREMENTS, PROVIDED LOADING AND TIEDOWN PRINCIPLES SPECIFIED HEREIN ARE RETAINED AND A VEHICLE IS NOT OVERLOADED. CAUTION: CONTAINERS MUST NOT BE STACKED MORE THAN ONE HIGH ON THE 11-TON M989 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER (HEMAT), DUE TO TRAILER STABILITY. IT IS PERMISSIBLE, HOWEVER, TO STACK CONTAINERS TWO-HIGH ON THE M989A1 HEMAT. SEE PAGES 20, 23 AND 24.
- M. WHEN POSSIBLE, ALL OF THE HOLD-DOWN WEB STRAP ASSEMBLIES SHOULD BE POSITIONED WITH THE STRAP RATCHETS LOCATED ON THE SAME SIDE OF THE LOAD. THIS METHOD WILL AID IN REDUCING THE TIME REQUIRED TO LOAD AND UNLOAD A VEHICLE, AND ALSO HELP REDUCE SLIDING AND/OR TWISTING THE CONTAINERS OFF CENTER WHEN STRAPS ARE BEING RATCHETED TIGHT.
- N. THE LOADS ON PAGES 6, 7, AND 8 SHOW A "SPACER ASSEMBLY" POSITIONED BETWEEN LATERALLY ADJACENT CONTAINERS. THE SPACER ASSEMBLY IS REQUIRED TO PROVIDE A SPACE BETWEEN THE CONTAINERS FOR THE LIFT/TIEDOWN FITTING BRACKET, WHICH PROJECTS 3/4" OUT FROM SIDE OF CONTAINER. NOTE: THE "SPACER ASSEMBLY" MAY BE OMITTED IF THE CONTAINERS ARE OFF-SET SO THE LIFT/TIEDOWN FITTING BRACKETS ARE NOT LATERALLY ADJACENT TO EACH OTHER.
- O. THE LOADING AND TIEDOWN PROCEDURES FOR THE M977/M985 10-TON TRUCK, THE M989 11-TON TRAILER, AND THE M989A1 11-TON TRAILER, AS SHOWN ON PAGES 13 THRU 22 ARE SPECIFICALLY APPLICABLE TO WEAPON SUPPORT/RESUPPLY OPERATIONS. PROCEDURES, AS SPECIFIED FOR THESE VEHICLES, DEPEND ON THE USE OF "SHOE" TYPE RESTRAINING DEVICES TO SPECIFICALLY ENHANCE OPERATIONS. ALTHOUGH THE PROCEDURES SPECIFIED ARE SPECIFICALLY APPLICABLE TO WEAPON SUPPORT/RESUPPLY OPERATIONS, THEY CAN ALSO BE USED WITHIN OTHER SEGMENTS OF MLRS RP/C MOVEMENTS IF THESE SPECIFIC RESTRAINING DEVICES ARE INSTALLED. NOTE: IF THESE VEHICLES ARE NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES, USE THE PROCEDURES SHOWN ON PAGES 6 THROUGH 12 FOR LOADING ONE THROUGH FOUR CONTAINERS.
- P. CAUTION: EXTRA CARE MUST BE TAKEN BY THE VEHICLE OPERATOR (DRIVER) WHEN MOVING A LOADED VEHICLE AND A LOAD UNIT (STACK) ON THE VEHICLE CONTAINS THREE MLRS PODS, AS SHOWN ON PAGES 9, 17, AND 23. A 3-POD LOAD UNIT CAUSES THE TRANSPORTING VEHICLE TO BE HEAVIER ON ONE SIDE AND THUSLY, MORE UNSTABLE REGARDING VEHICLE TIP OVER. THE REQUIRED EXTRA CARE IS ESPECIALLY APPLICABLE TO THE LOADS DELINEATED ON PAGES 17 AND 23.
- Q. THE TIEDOWN METHODS WITHIN THIS DRAWING SHOW TWO HOOKS TO BE CONNECTED TO ONE TIEDOWN EYE. THIS IS AUTHORIZED AS SPECIFIED HEREIN AND MEETS THE INTENT OF THE REQUIREMENTS CITED IN TB 9-230-260-30.
- R. 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.
- S. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE SPECIAL NOTES SECTION ON EACH PAGE DEPICTING LOADING AND TIEDOWN PROCEDURES.

MATERIAL SPECIFICATIONS *

STRAP - - - - - : WEBBING, UNIVERSAL TIEDOWN, NSN 5340-01-204-3009, PN9392419, OR NSN 5340-01-089-4997, PN11669588, OR NSN 1670-00-725-1437, PN1376-013, OR NSN 5340-00-980-9277, PN10900880.

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

LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.

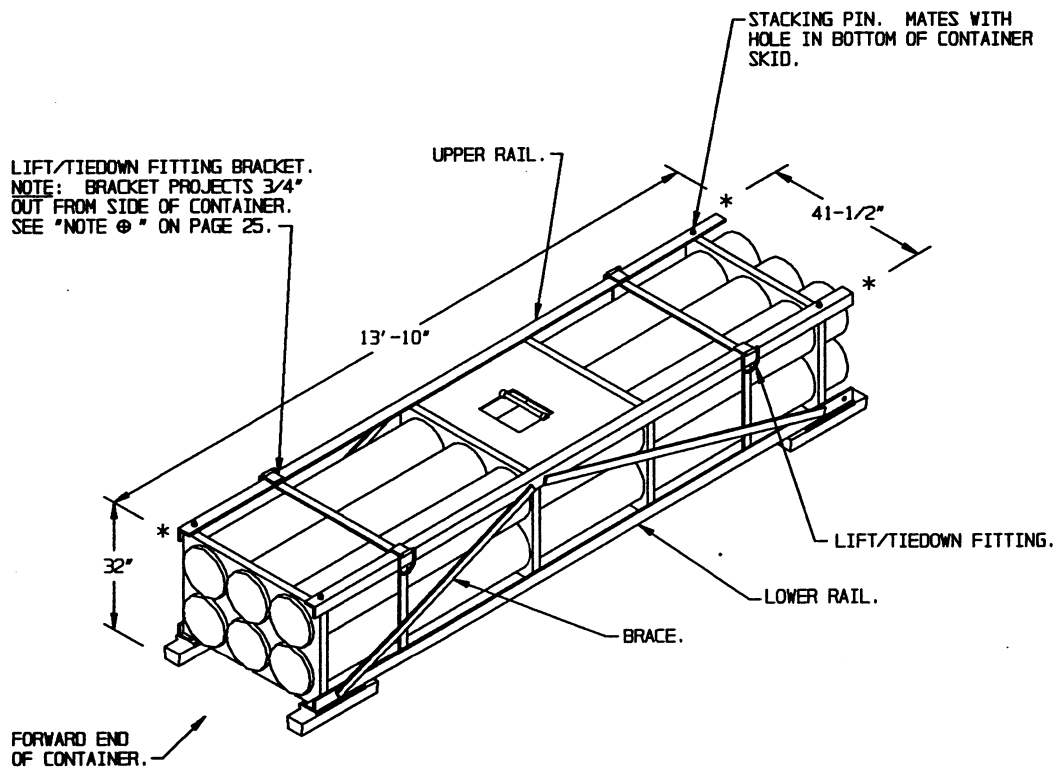
NAILS - - - - - : FED SPEC FF-N-105; COMMON.

*SEE PAGE 14 FOR ADDITIONAL SPECIFICATIONS APPLICABLE TO THE SPECIAL CARGO SECUREMENT KIT.

REVISIONS

REVISION NO. 2, DATED APRIL 1995,
CONSISTS OF:

1. ADDING SPECIAL TIEDOWN PROCEDURES FOR THE 11-TON M989A1 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER.
2. DELETING TWO-HIGH LOADS ON THE OLDER TYPE 11-TON M989 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER.
3. ADDING "METHOD II" TIEDOWN PROCEDURES FOR EIGHT CONTAINERS ON THE M871 SEMITRAILER.
4. UPDATING DRAWING FORMAT.



ROCKET POD/CONTAINER (RP/C)
(WEIGHT: 5,078 POUNDS)

MLRS STACKING AND HANDLING PROCEDURAL GUIDANCE

1. RP/C STACKING FOR OUTLOADING PURPOSES.
 - A. THE UPPER RP/C SHOULD BE PLACED AS CLOSELY AS POSSIBLE IN VERTICAL ALIGNMENT WITH THE LOWER RP/C.
 - B. WHEN STACKING THESE RP/C'S CARE MUST BE EXERCISED TO INSURE THAT THE INTERLOCKING HOLES IN THE BOTTOM OF THE SKIDS ALIGN CORRECTLY WITH THE INTERLOCKING PINS ON THE TOP OF THE LOWER RP/C FRAME. THIS WILL PRECLUDE DAMAGE TO THE SKIDS AND INSURE PROPER FUNCTIONING OF THE INTERLOCKS.

LOAD GUIDANCE NOTES

1. PRIOR TO LOADING AND/OR UNLOADING, SET BRAKES ON TACTICAL VEHICLE AND DROP TAILGATE. IF LOADING AND/OR UNLOADING TRUCK OR TRAILER, REMOVE SIDE RACKS FROM SEMITRAILERS, AND CANVAS COVER AND BOWS FROM TRUCK OR TRAILER.
2. PRIOR TO LOADING A TACTICAL VEHICLE, SELECT THE QUANTITY IF ITEMS TO BE LOADED. CAUTION: DO NOT EXCEED THE OFF-HIGHWAY WEIGHT LIMIT OF THE VEHICLE. SELECT A LOCATION AGAINST AN END WALL OR ANYWHERE WITHIN THE LENGTH OF THE CARGO BED THAT WILL PROVIDE AN ADEQUATE QUANTITY OF TIEDOWN ANCHORS TO SECURE THE LOAD USING THE TIEDOWN PROCEDURES SHOWN WITHIN THIS DOCUMENT.
3. AFTER ALL LOADING PROCEDURES ARE COMPLETE, CHECK ALL WEB STRAP TIEDOWN ASSEMBLIES FOR MAXIMUM TIGHTNESS AND RATCHET TIGHTER, IF REQUIRED, PRIOR TO FOLDING UP AND SECURING THE LOOSE ENDS OF STRAP. SEE GENERAL NOTE "D" ON PAGE 2.
4. WHEN TWO STRAPS ARE TO BE ATTACHED TO THE SAME TIEDOWN ANCHOR, ATTACH THE RATCHET END OF ONE STRAP AND THE NON-RATCHET END OF THE SECOND STRAP TO THE TIEDOWN ANCHOR, PRIOR TO RATCHETING STRAPS TIGHT.
5. IF THE WEB STRAP TIEDOWN ASSEMBLIES BEING USED DO NOT HAVE SWIVEL HOOKS ON EACH END, ASSURE THAT ALL TWISTS ARE OUT OF STRAP PRIOR TO ATTACHING HOOKS TO TIEDOWN ANCHORS.
6. THE M871 SEMITRAILER IS EQUIPPED WITH THREE DIFFERENT TYPES OF TIEDOWN FITTINGS. TYPE I IS A REMOVABLE TIEDOWN FITTING THAT HAS ONE RING AND IS POSITIONED BY REACHING UNDER THE FLOOR OF THE TRAILER, INSERTING IT UP THROUGH THE HOLE AND ROTATING IT INTO POSITION (NOTE THAT THIS REMOVABLE TIEDOWN FITTING IS ALSO USED ON THE M872 SEMITRAILER). THERE ARE TEN LOCATIONS FOR THESE TIEDOWN FITTINGS ON EACH SIDE OF THE M871 SEMITRAILER. TYPE II IS A REMOVABLE TIEDOWN FITTING THAT HAS TWO RINGS AND IS POSITIONED BY DEPRESSING A SPRING LOCK LEVER AND INSERTING IT INTO A 1-3/4" DIAMETER HOLE FROM THE TOP. ASSURE THAT THE TIEDOWN FITTING IS FIRMLY SEATED AND ROTATED SO THE SPRING LOCK LEVER IS POINTING AWAY FROM THE DIRECTION OF PULL ON THE ATTACHED WEB STRAP TIEDOWN ASSEMBLY. THERE ARE TEN LOCATIONS FOR THESE TIEDOWN FITTINGS ON EACH SIDE OF THE M871 SEMITRAILER. TYPE III IS A FIXED TIEDOWN FITTING THAT HAS ONE RING AND IS RECESSED INTO THE FLOOR. THERE ARE FIVE OF THESE TIEDOWN FITTINGS ON EACH SIDE OF THE M871 SEMITRAILER. TYPE I TIEDOWN FITTINGS MAY BE USED, IF AVAILABLE, WHEN THERE IS AN INSUFFICIENT QUANTITY OF TYPE II TIEDOWN FITTINGS TO SECURE THE LOAD. SEE "TIEDOWN ANCHOR DETAILS" ON PAGE 32.
7. THE M872 SEMITRAILER IS EQUIPPED WITH TWO DIFFERENT TYPES OF TIEDOWN FITTINGS. TYPE I IS A REMOVABLE TIEDOWN FITTING THAT HAS ONE RING AND IS POSITIONED BY REACHING UNDER THE FLOOR OF THE TRAILER, INSERTING THE TIEDOWN FITTING UP THROUGH THE HOLE AND ROTATING IT INTO POSITION (NOTE THAT THIS REMOVABLE TIEDOWN FITTING MAY ALSO BE USED ON THE M871 SEMITRAILER). THERE ARE TWENTY-EIGHT LOCATIONS FOR THESE TIEDOWN FITTINGS ON EACH SIDE OF THE M872 SEMITRAILER. HOWEVER, THE QUANTITY AND LOCATION MAY VARY ON SOME M872 SEMITRAILERS. THE SECOND TYPE OF TIEDOWN FITTING IS THE "TEE-HOOK". THIS IS A REMOVABLE TIEDOWN FITTING EQUIPPED WITH ONE ELONGATED RING AND IS POSITIONED BY INSERTING IT INTO ONE OF THE ELONGATED SLOTTED HOLES WHICH ARE AT A 45° ANGLE TO THE SIDE OF THE TRAILER. THERE ARE FIVE LOCATIONS FOR THESE TIEDOWN FITTINGS ON EACH SIDE OF THE M872 SEMITRAILER. HOWEVER, THE QUANTITY AND LOCATION MAY VARY ON SOME M872 SEMITRAILERS. ASSURE THAT THE TIEDOWN FITTING IS FIRMLY SEATED AND ROTATED APPROXIMATELY 45° TO ENGAGED POSITION BEFORE ATTACHING THE WEB STRAP TIEDOWN ASSEMBLY. SEE "TIEDOWN ANCHOR DETAILS" ON PAGE 32.
8. ASSURE THAT ALL UNITIZING STRAPS ARE IN VERTICAL ALIGNMENT.
9. PRIOR TO LOADING THE VEHICLE, DETERMINE THE QUANTITY OF CONTAINERS TO BE LOADED IN/ON THE VEHICLE. SELECT THE BEST METHOD FROM THE METHODS SHOWN WITHIN THIS DRAWING. NOTE: A COMBINATION OF THE METHODS SHOWN WITHIN THIS DRAWING MAY BE USED ON/IN THE SAME TACTICAL VEHICLE.
10. THE CONTAINERS MAY BE POSITIONED WITH THE FORWARD END POINTING TO THE FORWARD OR AFT END OF THE VEHICLE. HOWEVER, ALL THE CONTAINERS IN A STACK OF TWO THROUGH FOUR MUST BE POINTING IN THE SAME DIRECTION.

TYPICAL TACTICAL VEHICLES AND MAXIMUM LOAD PER VEHICLE (SEE "NOTE Ⓞ" BELOW)

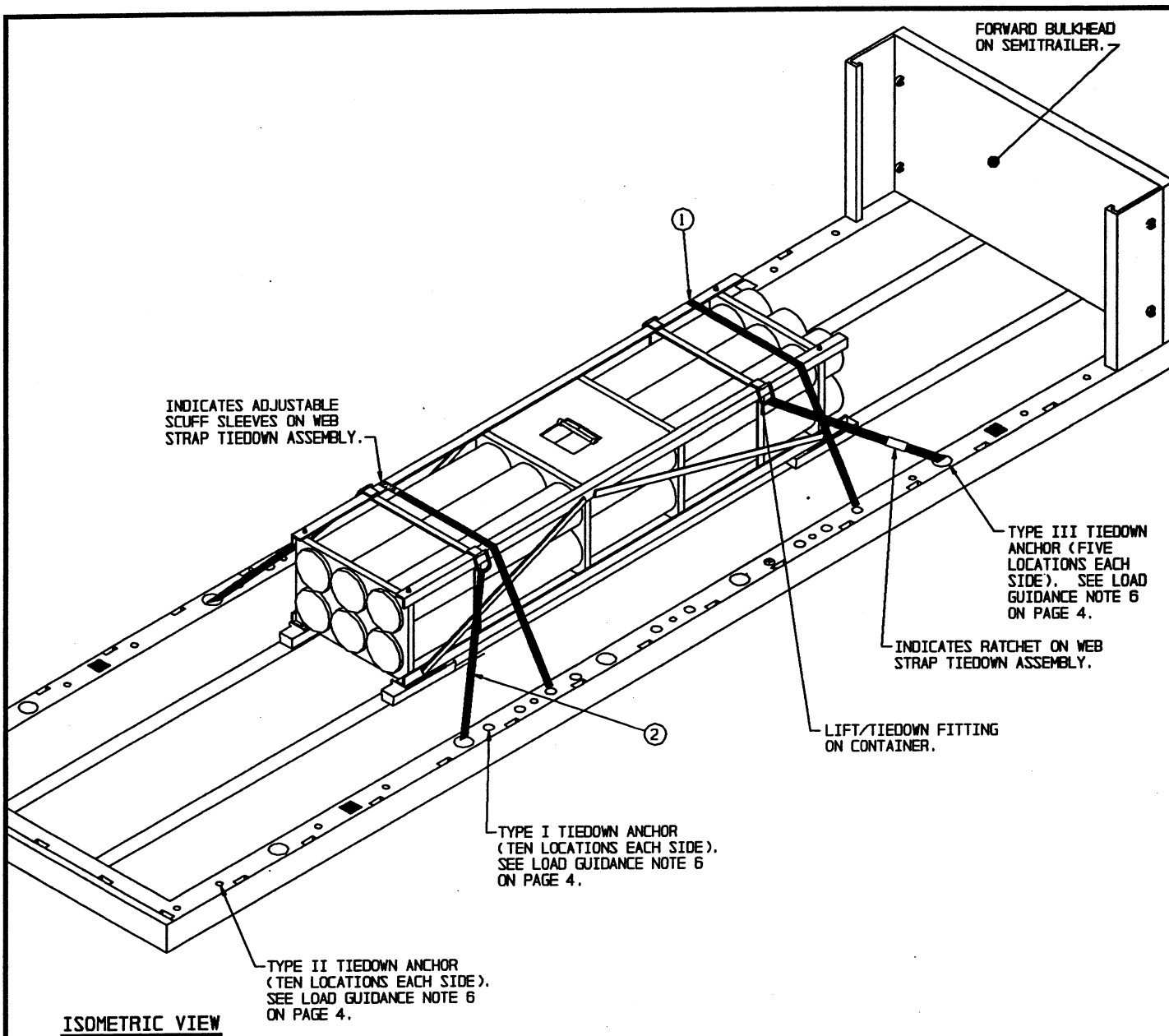
TYPICAL TACTICAL VEHICLE AND/OR TRAILER BEING LOADED (SEE "NOTE Ⓞ" BELOW)	MAX NUMBER OF CONTAINERS IN LOAD, PER VEHICLE OFF-ROAD WEIGHT LIMIT, OR SIZE	SEE THE LOAD OR COMBINATIONS OF LOADS SHOWN ON PAGE (S)
2-1/2-TON M34 CARGO TRUCK	ONE CONTAINER (WEIGHT LIMIT)	PAGE 6
2-1/2-TON M35 CARGO TRUCK	ONE CONTAINER (WEIGHT LIMIT)	PAGE 6
2-1/2-TON M36/M36C CARGO TRUCK	ONE CONTAINER (WEIGHT LIMIT)	PAGE 6
2-1/2-TON M135 CARGO TRUCK	ONE CONTAINER (WEIGHT LIMIT)	PAGE 6
5-TON M54 CARGO TRUCK	TWO CONTAINERS (WEIGHT LIMIT)	PAGE 8
5-TON M55 CARGO TRUCK	TWO CONTAINERS (WEIGHT LIMIT)	PAGE 8
5-TON M813 CARGO TRUCK	TWO CONTAINERS (WEIGHT LIMIT)	PAGE 8
5-TON M939 CARGO TRUCK	TWO CONTAINERS (WEIGHT LIMIT)	PAGE 8
8-TON M520 CARGO TRUCK	TWO CONTAINERS (SIZE OF VEHICLE)	PAGE 7
10-TON M977-M985 HEMTT	FOUR CONTAINERS (WEIGHT LIMIT)	PAGES 10, 12 AND 18
11-TON M989 HEMAT	TWO CONTAINERS (STABILITY)	PAGES 8 AND 20
11-TON M989A1 HEMAT	FOUR CONTAINERS (WEIGHT LIMIT)	PAGES 10, 12 AND 24
12-TON M127 SEMITRAILER	FIVE CONTAINERS (WEIGHT LIMIT)	PAGES 6, 8, 9 AND 10
22-1/2-TON M871 SEMITRAILER	EIGHT CONTAINERS (WEIGHT LIMIT)	PAGES 10 AND 12
34-TON M872 SEMITRAILER	EIGHT CONTAINERS (SIZE OF VEHICLE)	PAGES 10 AND 12

NOTE Ⓞ :

THE TACTICAL VEHICLES LISTED IN THE CHART ABOVE AND/OR AS SHOWN WITHIN THIS DRAWING WERE SELECTED AS TYPICAL ONLY. OTHER TYPES OF VEHICLES MAY BE USED IN LIEU OF THOSE SHOWN, AS LONG AS THEY COMPLY WITH GENERAL NOTE "C" ON PAGE 2. SEE THE "LOAD PLANNING GUIDANCE FOR ONE THROUGH EIGHT CONTAINERS" CHART ON PAGE 5 FOR LOADING AND TIEDOWN PROCEDURES ON THE 10-TON M977/M985 HEMTT, 11-TON M989 HEMAT, AND M989A1 HEMAT, SEE PAGES 15 THROUGH 24.

LOAD PLANNING GUIDANCE FOR ONE THROUGH EIGHT CONTAINERS *

QUANTITY OF CONTAINERS AND WEIGHT	SEE LOAD SHOWN ON PAGE (S) OR USE THE ALTERNATIVE METHOD LISTED IN COLUMN AT RIGHT.	ALTERNATIVE METHOD OF LOADING THE QUANTITY OF CONTAINERS LISTED IN THE FIRST COLUMN OF THIS CHART.
1 (5,078 LBS)	6, 15, 19 AND 21	NONE
2 (10,156 LBS)	7, 8, 16, 20 AND 22	TWO CONTAINERS MAY BE POSITIONED END-TO-END AND EACH CONTAINER SECURED AS SHOWN FOR THE ONE CONTAINER LOAD ON PAGE 6.
3 (15,234 LBS)	9, 17, AND 23	TWO CONTAINERS MAY BE POSITIONED SIDE-BY-SIDE AND SECURED AS SHOWN IN THE TWO CONTAINER LOAD ON PAGE 8 AND ONE CONTAINER MAY BE POSITIONED AND SECURED AS SHOWN IN THE ONE CONTAINER LOAD ON PAGE 6.
4 (20,312 LBS)	10, 12, 18, AND 24	TWO CONTAINERS MAY BE POSITIONED SIDE-BY-SIDE AND END-TO-END AND EACH GROUP OF TWO CONTAINERS SECURED AS SHOWN IN THE TWO CONTAINER LOAD ON PAGE 8.
5 (23,390 LBS)	NO LOAD SHOWN FOR FIVE CONTAINERS.	<p>TWO CONTAINERS MAY BE POSITIONED SIDE-BY-SIDE AND SECURED AS SHOWN IN THE TWO CONTAINER LOAD ON PAGE 8, AND THREE CONTAINER MAY BE POSITIONED AND SECURED AS SHOWN IN THE THREE CONTAINER LOAD ON PAGE 9.</p> <hr/> <p>FOUR CONTAINERS MAY BE POSITIONED AND SECURED AS SHOWN IN THE EIGHT CONTAINER LOAD ON PAGE 10, AND ONE CONTAINER MAY BE POSITIONED AND SECURED AS SHOWN FOR THE ONE CONTAINER LOAD SHOWN ON PAGE 6.</p>
6 (30,468 LBS)	NO LOAD SHOWN FOR SIX CONTAINERS.	<p>FOUR CONTAINERS MAY BE POSITIONED AND SECURED AS SHOWN IN THE EIGHT CONTAINER LOAD ON PAGE 10 AND TWO CONTAINERS MAY BE POSITIONED AND SECURED AS SHOWN IN THE TWO CONTAINER LOAD ON PAGE 8.</p> <hr/> <p>TWO GROUPS OF THREE CONTAINERS EACH MAY BE POSITIONED AND SECURED AS SHOWN IN THE THREE CONTAINER LOAD ON PAGE 9.</p>
7 (35,546 LBS)	NO LOAD SHOWN FOR SEVEN CONTAINERS.	FOUR CONTAINERS MAY BE POSITIONED AND SECURED AS SHOWN IN THE EIGHT CONTAINER LOAD ON PAGE 10, AND THREE CONTAINERS MAY BE POSITIONED AND SECURED AS SHOWN IN THE THREE CONTAINER LOAD ON PAGE 9.
8 (40,624 LBS)	10 AND 12	NONE

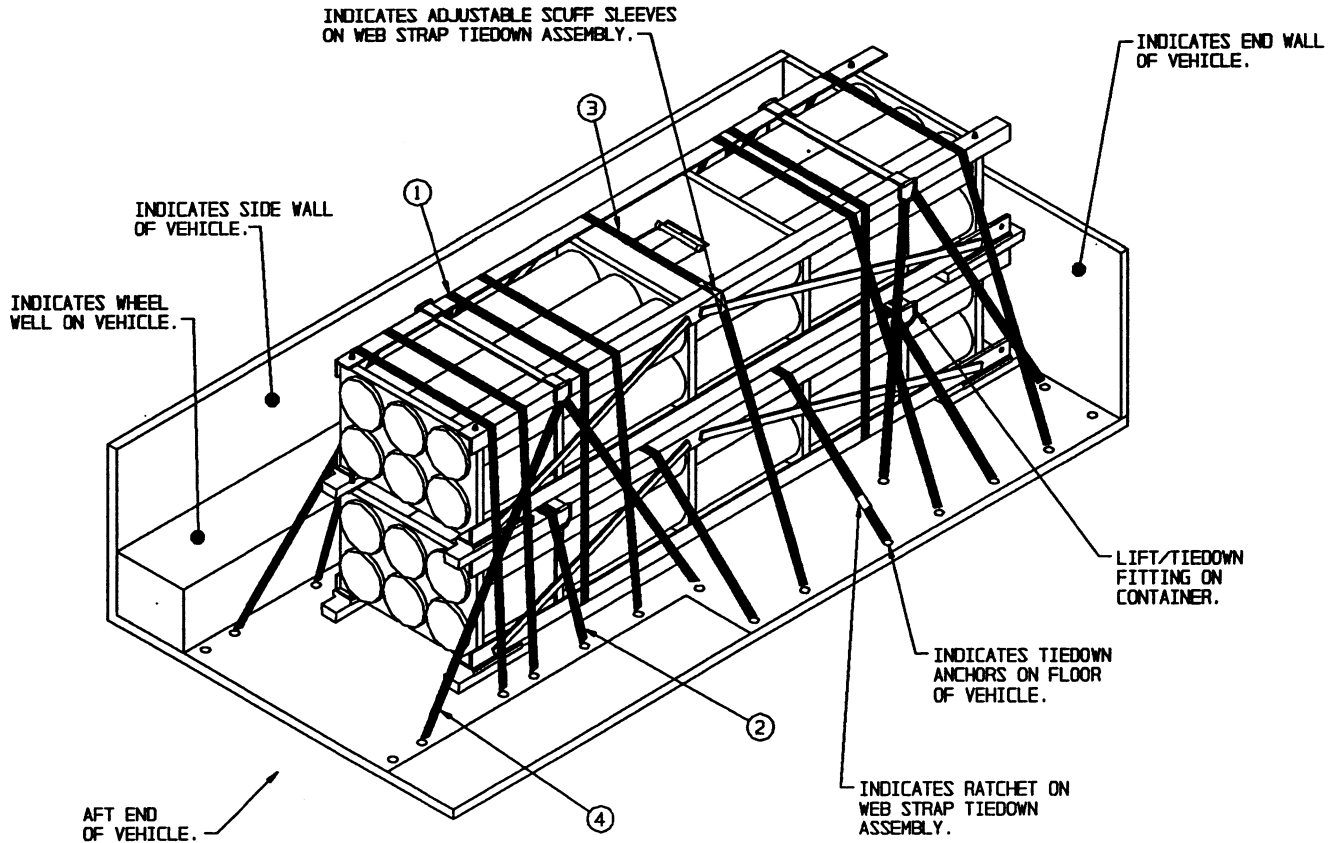


SPECIAL NOTES:

1. A TYPICAL LOAD OF ONE CONTAINER IS SHOWN ON A 22-1/2-TON M871 SEMITRAILER, HAVING DIMENSIONS OF 354" LONG BY 96" WIDE.
2. THE SEMITRAILER SHOWN WAS SELECTED AS TYPICAL ONLY. TRAILERS AND/OR VEHICLES OF OTHER DIMENSIONS WHICH HAVE A SUFFICIENT QUANTITY OF TIEDOWN ANCHORS, LOCATED ON THE SIDEWALL OR ON THE FLOOR, MAY BE USED TO TRANSPORT THE LOAD SHOWN.
3. IF DESIRED, THE CONTAINER MAY BE POSITIONED AGAINST THE FORWARD BULKHEAD ON THE SEMITRAILER OR AGAINST THE FORWARD END WALL OF A VEHICLE, AS SHOWN IN THE LOAD ON PAGE 7.
4. A TOTAL OF SIX WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

KEY NUMBERS

- ① WEB STRAP TIEDOWN ASSEMBLY (2 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE, OVER TOP OF CONTAINER TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF VEHICLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE TO A LIFT/TIEDOWN FITTING ON CONTAINER AT APPROXIMATE ANGLE SHOWN. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.



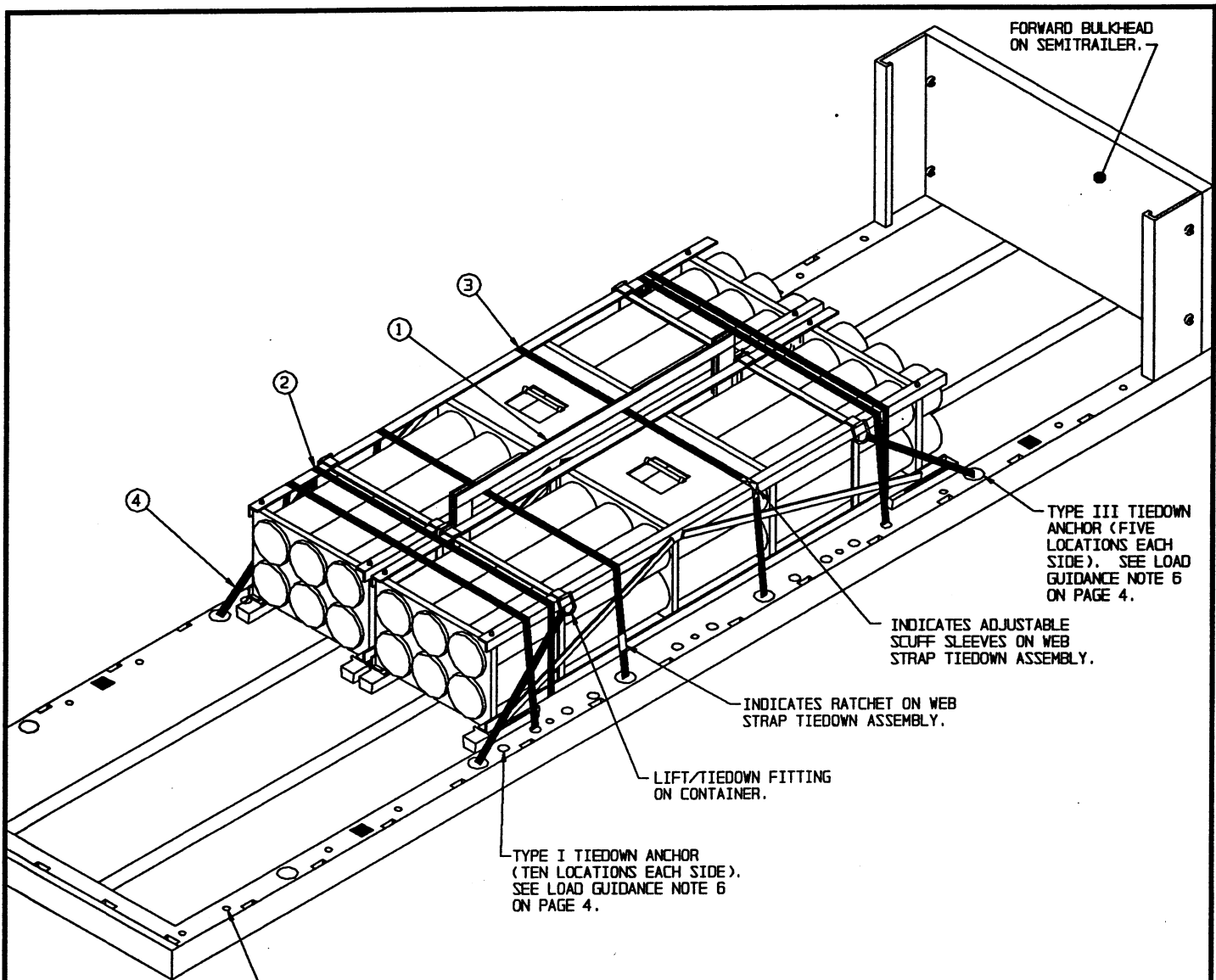
ISOMETRIC VIEW

SPECIAL NOTES:

1. A LOAD OF TWO CONTAINERS IS SHOWN IN AN 8-TON M520 CARGO TRUCK, HAVING INSIDE DIMENSIONS OF 196" LONG BY 98-1/2" WIDE (59" WIDE BETWEEN THE WHEEL WELLS).
2. THE TIEDOWN METHOD SHOWN ABOVE IS ONLY FOR USE IN THE M520 CARGO TRUCK. MORE WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED TO SECURE THE LOAD IN THIS TRUCK BECAUSE THE TIEDOWN ANCHORS LOCATED ON THE FLOOR MUST NOT EXCEED A 2,000 POUND PULL.
3. IF ONLY ONE CONTAINER IS BEING LOADED POSITION FIVE WEB STRAP TIEDOWN ASSEMBLIES MARKED ② OVER TOP OF CONTAINER, AND TWO WEB STRAP TIEDOWN ASSEMBLIES MARKED ④ AT EACH END. STRAPS MARKED ④ SHOULD BE POSITIONED AT AN ANGLE FROM THE LIFT/TIEDOWN FITTING ON THE CONTAINER TO A VEHICLE TIEDOWN ANCHOR LOCATED NEAR THE FLOOR, TOWARD THE NEAR END WALL OF THE VEHICLE.
4. A TOTAL OF 20 WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD AS SHOWN ABOVE.

KEY NUMBERS

- ① WEB STRAP TIEDOWN ASSEMBLY (2 REQD). INSTALL EACH STRAP TO ENCIRCLE BOTH CONTAINERS AT LOCATIONS SHOWN. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE, OVER TOP OF BOTTOM CONTAINER, TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF VEHICLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTES "D", "E" AND "M" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLIES (6 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE, OVER TOP OF LOAD, TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF VEHICLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ④ WEB STRAP TIEDOWN ASSEMBLY (8 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON THE FLOOR OF THE VEHICLE TO A LIFT/TIEDOWN FITTING ON THE TOP CONTAINER AT THE APPROXIMATE ANGLE SHOWN. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTE "D" ON PAGE 2.



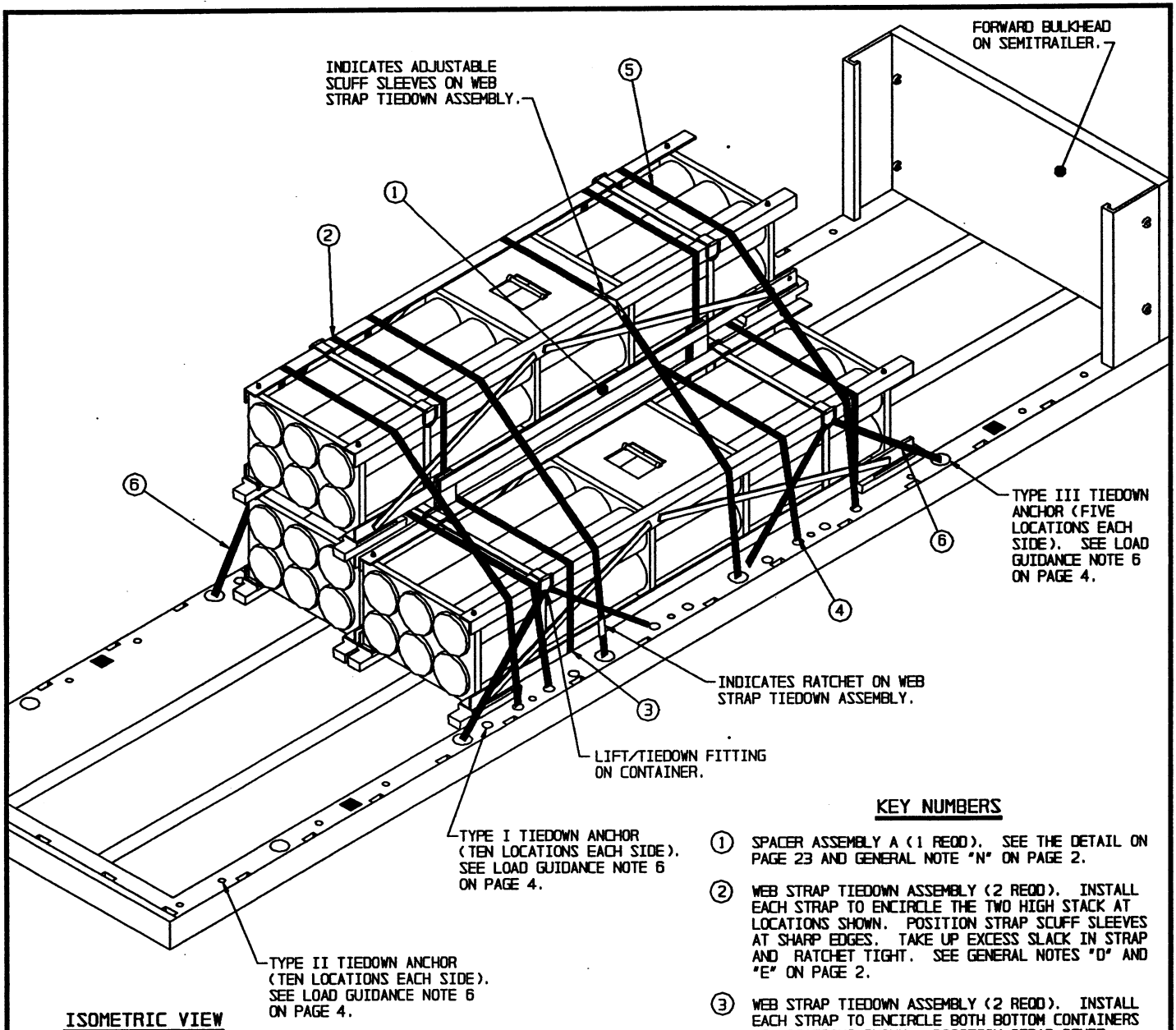
ISOMETRIC VIEW

KEY NUMBERS

- ① SPACER ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 23 AND GENERAL NOTE "N" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (2 REQD). INSTALL EACH STRAP TO ENCIRCLE BOTH CONTAINERS AT LOCATIONS SHOWN. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE, OVER TOP OF CONTAINER, TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF VEHICLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTES "D", "E" AND "M" ON PAGE 2.
- ④ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON THE FLOOR OF THE VEHICLE TO A LIFT/TIEDOWN FITTING ON THE CONTAINER AT THE APPROXIMATE ANGLE SHOWN. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTE "D" ON PAGE 2.

SPECIAL NOTES:

- 1. A TYPICAL LOAD OF TWO CONTAINERS IS SHOWN ON A 22-1/2-TON M871 SEMITRAILER, HAVING DIMENSIONS OF 354" LONG BY 96" WIDE.
- 2. THE SEMITRAILER SHOWN WAS SELECTED AS TYPICAL ONLY. TRAILERS AND/OR VEHICLES OF OTHER DIMENSIONS WHICH HAVE A SUFFICIENT QUANTITY OF TIEDOWN ANCHORS, LOCATED ON THE SIDEWALL OR ON THE FLOOR, MAY BE USED TO TRANSPORT THE LOAD SHOWN.
- 3. FOR AN ALTERNATIVE METHOD OF LOADING TWO CONTAINERS, SEE THE "LOAD PLANNING GUIDANCE FOR ONE THROUGH EIGHT CONTAINERS" CHART, ON PAGE 5.
- 4. A TOTAL OF TEN WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.



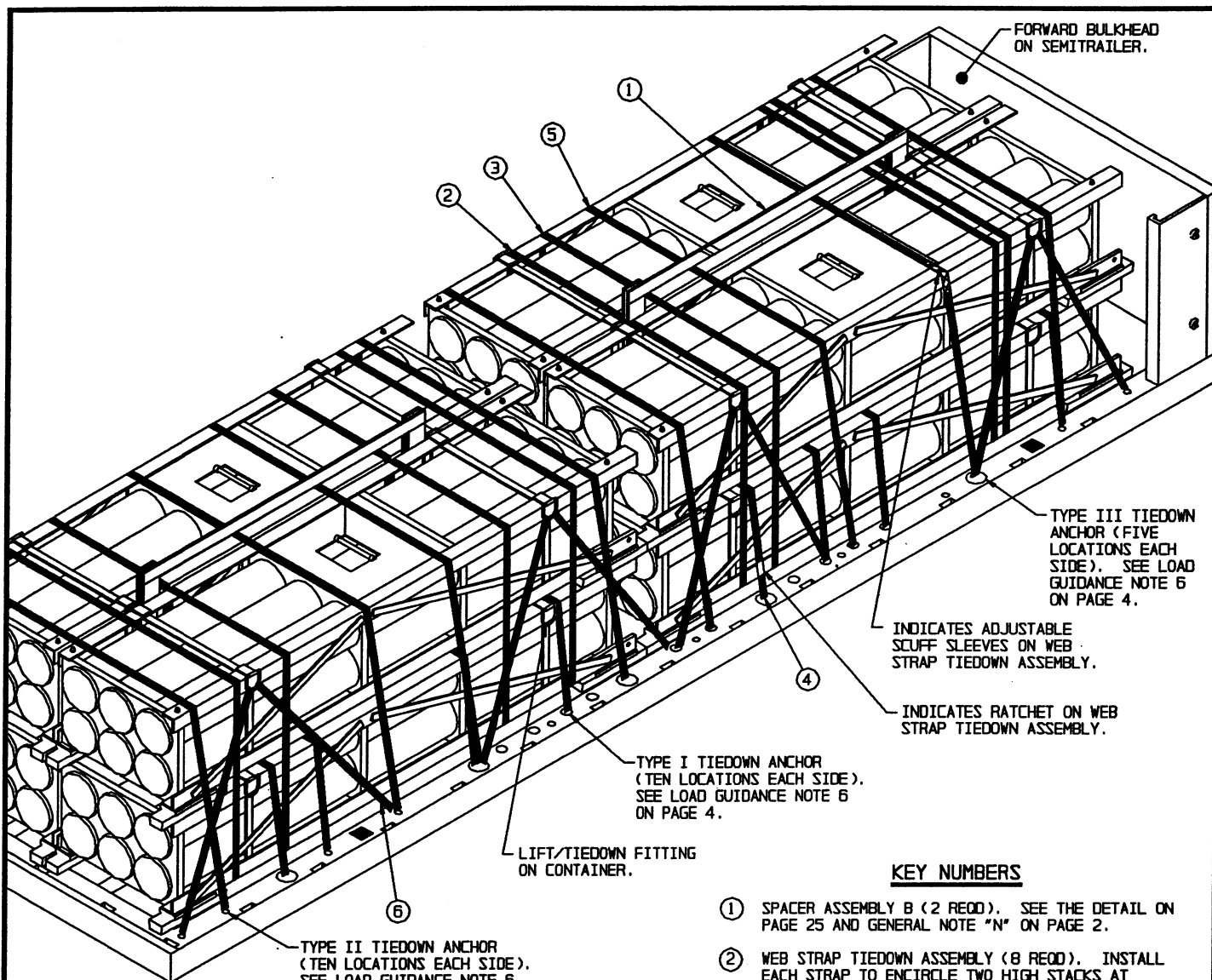
ISOMETRIC VIEW

KEY NUMBERS

- ① SPACER ASSEMBLY A (1 RECD). SEE THE DETAIL ON PAGE 23 AND GENERAL NOTE "N" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (2 RECD). INSTALL EACH STRAP TO ENCIRCLE THE TWO HIGH STACK AT LOCATIONS SHOWN. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (2 RECD). INSTALL EACH STRAP TO ENCIRCLE BOTH BOTTOM CONTAINERS AT LOCATIONS SHOWN. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ④ WEB STRAP TIEDOWN ASSEMBLY (4 RECD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE, OVER TOP OF BOTTOM CONTAINERS, TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF VEHICLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D", "E" AND "M" ON PAGE 2.
- ⑤ WEB STRAP TIEDOWN ASSEMBLY (4 RECD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE, OVER TOP OF LOAD, TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF VEHICLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D", "E" AND "M" ON PAGE 2.
- ⑥ WEB STRAP TIEDOWN ASSEMBLY (8 RECD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON THE FLOOR OF THE VEHICLE TO A LIFT/TIEDOWN FITTING ON THE CONTAINER AT THE APPROXIMATE ANGLE SHOWN. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. THESE STRAPS ARE ATTACHED TO THE LIFT/TIEDOWN FITTINGS ON THE TOP CONTAINER IN THE TWO HIGH STACK. SEE GENERAL NOTE "D" ON PAGE 2.

SPECIAL NOTES:

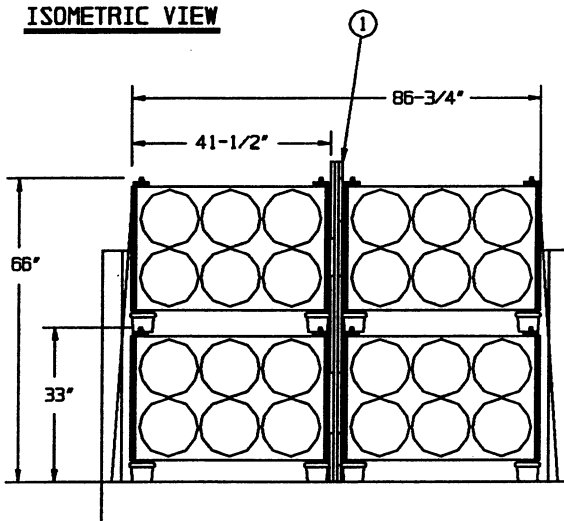
- 1. A TYPICAL LOAD OF THREE CONTAINERS IS SHOWN ON A 22-1/2-TON MB71 SEMITRAILER, HAVING DIMENSIONS OF 354" LONG BY 96" WIDE.
- 2. THE SEMITRAILER SHOWN WAS SELECTED AS TYPICAL ONLY. TRAILERS AND/OR VEHICLES OF OTHER DIMENSIONS WHICH HAVE A SUFFICIENT QUANTITY OF TIEDOWN ANCHORS, LOCATED ON THE SIDEWALL OR ON THE FLOOR, MAY BE USED TO TRANSPORT THE LOAD SHOWN.
- 3. FOR AN ALTERNATIVE METHOD OF LOADING THREE CONTAINERS, SEE THE "LOAD PLANNING GUIDANCE FOR ONE THROUGH EIGHT CONTAINERS" CHART, ON PAGE 5.
- 4. A TOTAL OF EIGHTEEN WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.



KEY NUMBERS

- ① SPACER ASSEMBLY B (2 REQD). SEE THE DETAIL ON PAGE 25 AND GENERAL NOTE "N" ON PAGE 2.
- ② WEB STRAP TIEDOWN ASSEMBLY (8 REQD). INSTALL EACH STRAP TO ENCIRCLE TWO HIGH STACKS AT LOCATIONS SHOWN. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). EACH ASSEMBLY WILL CONSIST OF TWO STRAPS HOOKED TOGETHER. INSTALL EACH ASSEMBLY TO ENCIRCLE ALL FOUR CONTAINERS AT LOCATIONS SHOWN. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ④ WEB STRAP TIEDOWN ASSEMBLY (8 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE, OVER TOP OF BOTTOM CONTAINERS, TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF VEHICLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D", "E" AND "M" ON PAGE 2.
- ⑤ WEB STRAP TIEDOWN ASSEMBLY (8 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE, OVER TOP OF LOAD, TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF VEHICLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D", "E" AND "M" ON PAGE 2.
- ⑥ WEB STRAP TIEDOWN ASSEMBLY (16 REQD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON THE FLOOR OF THE VEHICLE TO A LIFT/TIEDOWN FITTING ON THE TOP CONTAINER AT THE APPROXIMATE ANGLE SHOWN. TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTE "D" ON PAGE 2.

ISOMETRIC VIEW



REAR VIEW

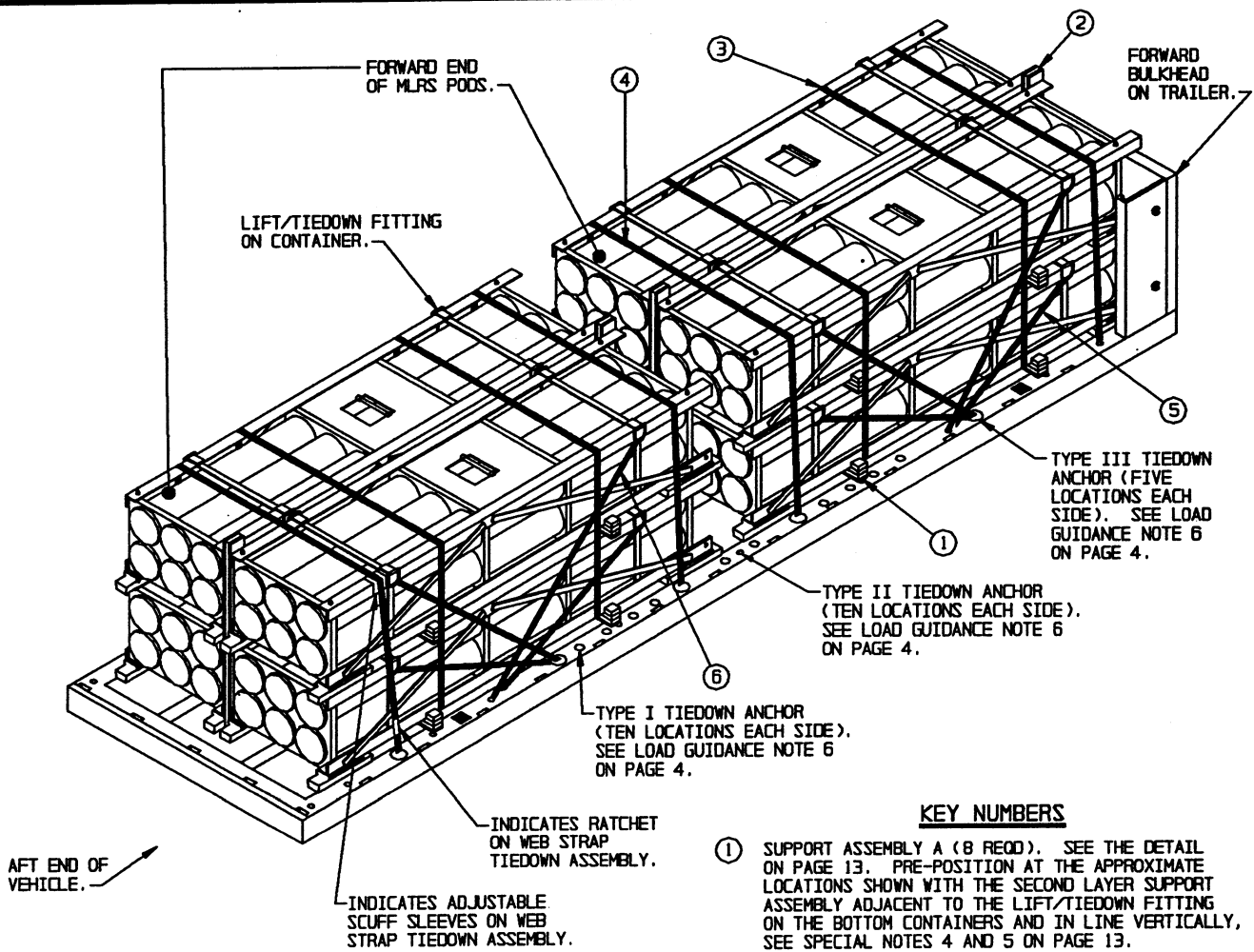
KEY NUMBERS ②, ③, ④, AND ⑤ HAVE BEEN OMITTED FOR CLARITY.

SPECIAL NOTES: (PAGE 10)

1. A TYPICAL LOAD OF EIGHT CONTAINERS IS SHOWN ON A 22-1/2-TON M871 SEMITRAILER, HAVING DIMENSIONS OF 354" LONG BY 96" WIDE.
2. THE SEMITRAILER SHOWN WAS SELECTED AS TYPICAL ONLY. TRAILERS OF OTHER DIMENSIONS WHICH HAVE A SUFFICIENT QUANTITY OF TIEDOWN ANCHORS LOCATED ON THE FLOOR MAY BE USED TO TRANSPORT THE LOAD SHOWN.
3. THE EIGHT CONTAINER LOAD SHOWN ON PAGE 10 IS APPLICABLE TO TRAILERS HAVING A MINIMUM LENGTH OF 28'-0" AND CAPABLE OF TRANSPORTING A LOAD WEIGHT OF AT LEAST 20-1/2 TONS.
4. FOR AN ALTERNATIVE METHOD OF LOADING EIGHT CONTAINERS ON AN M871 AND/OR AN M872 SEMITRAILER, AND SECURING THE LOAD WITH 28 WEB STRAP TIEDOWN ASSEMBLIES IN LIEU OF 48, SEE THE PROCEDURES SHOWN ON PAGES 12 AND 13.
5. THE PROCEDURES SHOWN ON PAGES 12 AND 13 MAY ALSO BE USED FOR SECURING FOUR CONTAINERS ON A TACTICAL VEHICLE.
6. A TOTAL OF 48 WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ON PAGE 10.

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER	8	40,624 LBS



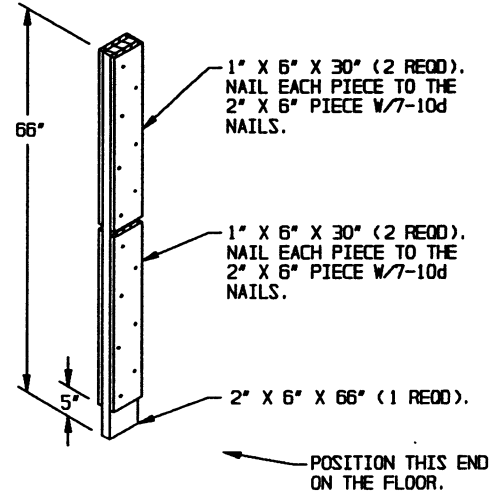
ISOMETRIC VIEW

KEY NUMBERS

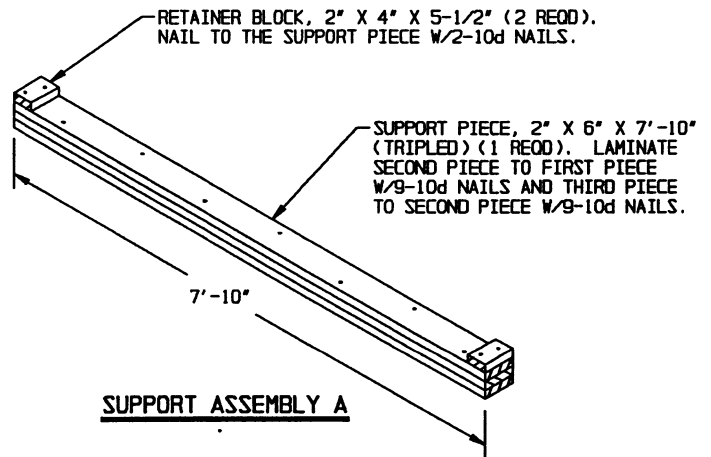
- ① SUPPORT ASSEMBLY A (8 RECD). SEE THE DETAIL ON PAGE 13. PRE-POSITION AT THE APPROXIMATE LOCATIONS SHOWN WITH THE SECOND LAYER SUPPORT ASSEMBLY ADJACENT TO THE LIFT/TIEDOWN FITTING ON THE BOTTOM CONTAINERS AND IN LINE VERTICALLY, SEE SPECIAL NOTES 4 AND 5 ON PAGE 13.
- ② SPACER ASSEMBLY C (4 RECD). SEE THE DETAIL ON PAGE 13. POSITION ONE ASSEMBLY AS NEAR TO EACH END AS POSSIBLE AND WIRE TIE IN PLACE AT TOP AND BOTTOM OF ASSEMBLY. SEE SPECIAL NOTE 6 ON PAGE 13.
- ③ WEB STRAP TIEDOWN ASSEMBLY (4 RECD). EACH ASSEMBLY WILL CONSIST OF TWO STRAPS HOOKED TOGETHER TO ENCIRCLE ALL FOUR CONTAINERS AT THE APPROXIMATE LOCATIONS SHOWN, ADJACENT TO THE SUPPORT ASSEMBLIES. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. NOTE: ASSURE THAT THE SUPPORT ASSEMBLIES A AND SPACER ASSEMBLIES C ARE IN POSITION PRIOR TO RATCHETING STRAPS TIGHT. SEE GENERAL NOTES "D", "E" AND "J" ON PAGE 2.
- ④ WEB STRAP TIEDOWN ASSEMBLY (4 RECD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE, OVER TOP OF LOAD AT APPROXIMATE LOCATIONS SHOWN, TO A TIEDOWN ANCHOR ON OPPOSITE SIDE OF VEHICLE. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ⑤ WEB STRAP TIEDOWN ASSEMBLY (8 RECD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE UP TO A LIFT/TIEDOWN FITTING ON THE BOTTOM CONTAINER AT THE APPROXIMATE ANGLE SHOWN. HOOK THE NON-RATCHET END OF STRAP TO THE VEHICLE TIEDOWN ANCHOR TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ⑥ WEB STRAP TIEDOWN ASSEMBLY (8 RECD). INSTALL EACH STRAP TO EXTEND FROM A TIEDOWN ANCHOR ON SIDE OF VEHICLE UP TO A LIFT/TIEDOWN FITTING ON THE TOP CONTAINER AT THE APPROXIMATE ANGLE SHOWN. HOOK THE NON-RATCHET END OF STRAP TO THE VEHICLE TIEDOWN ANCHOR TAKE UP EXCESS SLACK IN STRAP AND THEN RATCHET TIGHT. SEE GENERAL NOTE "D" AND "E" ON PAGE 2.

SPECIAL NOTES:

1. A MAXIMUM LOAD OF EIGHT CONTAINERS IS SHOWN LOADED ON A 22-1/2-TON M871 SEMITRAILER HAVING DIMENSIONS OF 96" WIDE BY 354" LONG.
2. THE VEHICLE SHOWN WAS SELECTED AS TYPICAL ONLY AND VEHICLES OF OTHER DIMENSIONS WHICH HAVE A SUFFICIENT QUANTITY OF TIEDOWN ANCHORS LOCATED ON THE FLOOR, MAY BE USED TO TRANSPORT THE LOAD SHOWN.
3. POSITION TWO STACKS OF FOUR CONTAINERS EACH AT A LOCATION THAT WILL ALLOW STRAPS MARKED ④ TO BE POSITIONED AT THE APPROXIMATE LOCATIONS SHOWN. NOTE THAT THE AFT END OF THE CONTAINERS ARE POINTING TOWARD THE FORWARD END OF THE VEHICLE. ASSURE THAT THE STACKING PINS ON THE BOTTOM CONTAINERS ARE MATED TO THE HOLES IN THE SKIDS OF THE TOP CONTAINER.
4. POSITION THE SUPPORT ASSEMBLY A AND THE SPACER ASSEMBLY C AS LOADING PROGRESSES.
5. THE SUPPORT ASSEMBLY A PIECES ARE REQUIRED TO PREVENT THE SKIDS FROM DEFORMING AND TO PROVIDE STABILITY FOR THE CONTAINERS DURING TRANSPORT. PRE-POSITION ON VEHICLE FLOOR AND/OR ON TOP OF A CONTAINER AS LOADING PROGRESSES.
6. THE SPACER ASSEMBLY A PIECES ARE REQUIRED TO PREVENT CONTACT OF THE LIFT/TIEDOWN FITTINGS ON LATERALLY ADJACENT CONTAINERS. PRE-POSITION THESE PIECES AT THE LOCATIONS SHOWN AS LOADING PROGRESSES.
7. IF THE LOAD IS BEING TRANSPORTED ON AN M872 SEMITRAILER SEE NOTE 7 ON PAGE 4. NOTE THAT THE MAXIMUM LOAD ON THE M872 SEMITRAILER CONSISTS OF 8 CONTAINERS, DUE TO CONTAINER LENGTH.
8. A TOTAL OF 28 WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.



SPACER ASSEMBLY C



LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER	8	31,744 LBS
DUNNAGE		611 LBS
TOTAL WEIGHT		32,355 LBS (APPROX)

**LOADING PROCEDURES FOR THE HEMTT
AND HEMAT ONLY (PAGES 15 THROUGH 24)**

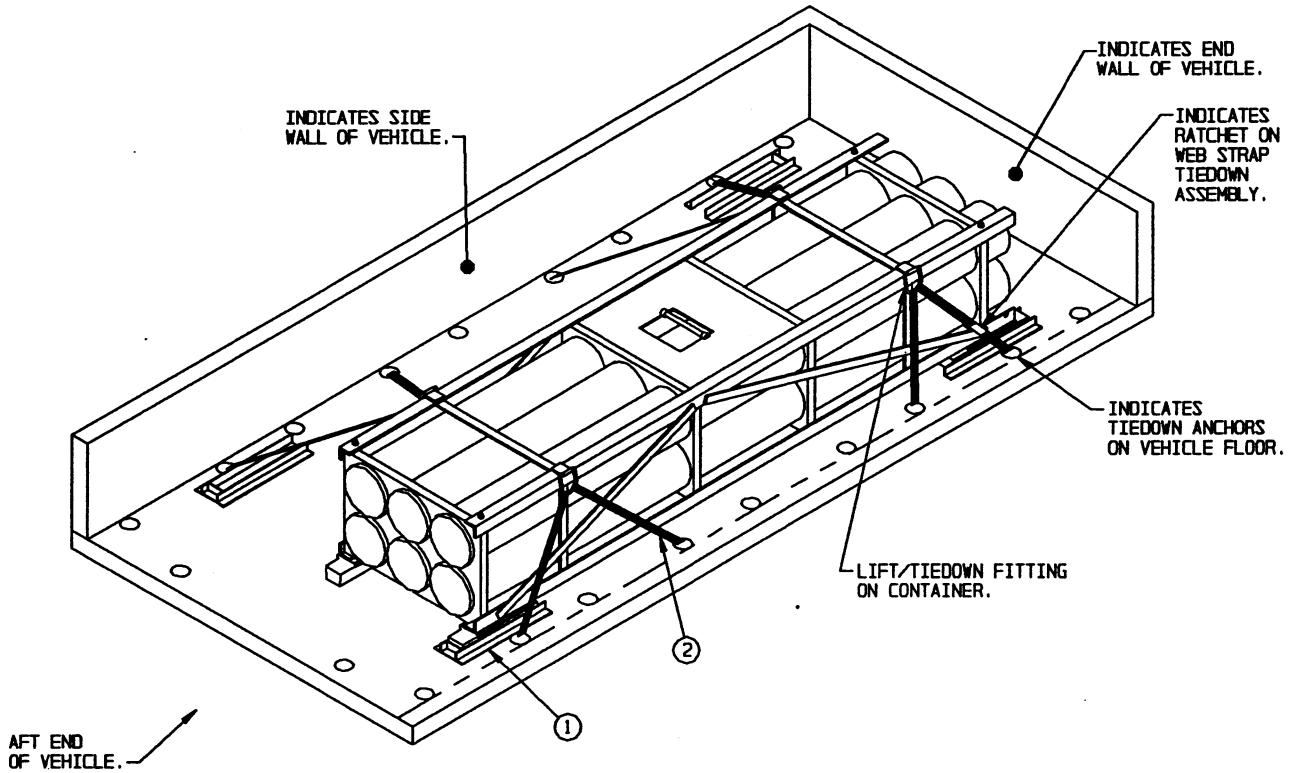
1. THE LOADS SHOWN ON PAGES 15 THROUGH 18 DEPICT THE 10-TON M977/M985 HEAVY EXPANDED MOBILITY TACTICAL TRUCK (HEMTT) HAVING INSIDE DIMENSIONS OF 216-3/8" LONG BY 90-3/4" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS DETAILED ON PAGES 26 AND 27.
2. THE LOADS SHOWN ON PAGES 19 AND 20 DEPICT THE OLDER TYPE 11-TON M989 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER (HEMAT) HAVING INSIDE DIMENSIONS OF 206" LONG BY 92-9/16" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS DETAILED ON PAGES 26 AND 28. CAUTION: THIS IS THE OLDER TYPE TRAILER AND CONTAINERS MUST NOT BE POSITIONED TOO HIGH DUE TO THE STABILITY OF THE TRAILER.
3. THE LOADS SHOWN ON PAGES 21 THROUGH 24 DEPICT THE NEWER TYPE 11-TON M989A1 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER (HEMAT) HAVING INSIDE DIMENSIONS OF 175" LONG BY 92" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS DETAILED ON PAGES 26 AND 27.
4. THE "SHOE" WILL BE BOLTED TO THE CARGO FLOOR WITH SIX HEXAGON SOCKET BUTTON HEAD CAP SCREWS. IF THE "SHOES" ARE REMOVED FROM THE CARGO BED, THE CAP SCREWS MUST BE PLACED IN THE HOLES OF THE CARGO BED SO AS TO SEAL THE HOLES.
5. PRIOR TO LOADING TWO CONTAINERS SIDE-BY-SIDE ON A VEHICLE, THE CONTAINER LIFTING RINGS LOCATED AT THE CENTER OF THE LOAD, TO WHICH THE WEB STRAP TIEDOWN ASSEMBLIES WILL BE ATTACHED, MUST BE POSITIONED ON TOP OF THE CONTAINER OR HELD IN A HORIZONTAL POSITION WHILE THE CONTAINERS ARE BEING POSITIONED AGAINST EACH OTHER. SEE THE LOADS ON PAGES 16, 17, 18, 19, 20, 22, 23 AND 24.
6. FOR THE TIEDOWN PROCEDURES DELINEATED ON PAGES 15 THROUGH 24 INSTALLATION OF THE "SHOE" TYPE RESTRAINING DEVICES HAVE BEEN SPECIFIED AS A REQUIREMENT. HOWEVER, IN ALL LIKELIHOOD THEY WILL BE ALREADY INSTALLED ON THE VEHICLES WHEN THEY ARE RECEIVED FOR LOADING.
7. IF THE 10-TON M977/985 HEMTT, THE 11-TON M989 HEMAT, OR THE 11-TON M989A1 HEMAT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGES 6 THROUGH 11 FOR LOADING AND TIEDOWN OF ONE THROUGH FOUR CONTAINERS.

MATERIAL SPECIFICATIONS (PAGES 15 THROUGH 24 ONLY)

- STEEL, STRUCTURAL --: ASTM A501, STEEL STRUCTURAL TUBING;
AND ASTM A570, STEEL, STRIP,
HOT-ROLLED, GRADE 36 (MINIMUM).
- CAPSCREW - - - - -: CAPSCREW, HEXAGON SOCKET, BUTTON
HEAD, UNC-2A, FED SPEC FF-S-86,
TYPE VIII.
- NUT - - - - -: HEXAGON FLANGE NUT, SELF LOCKING-
PREVAILING TORQUE TYPE, FSC 5310,
PART NO. 91030A036.

FABRICATION NOTES: (APPLICABLE TO SPECIAL "CARGO TIEDOWN KIT")

1. FABRICATION TOLERANCES \pm 1/16
2. REMOVE BURRS, SHARP EDGES, AND SHARP CORNERS.
3. REMOVE LOOSE SCALE AND RUST BY WIRE BRUSHING.
4. PRIME AND PAINT WITH ONE COAT OF PRIMER AND A FINISH COAT TO MATCH THAT OF THE VEHICLE.



ISOMETRIC VIEW

SPECIAL NOTES:

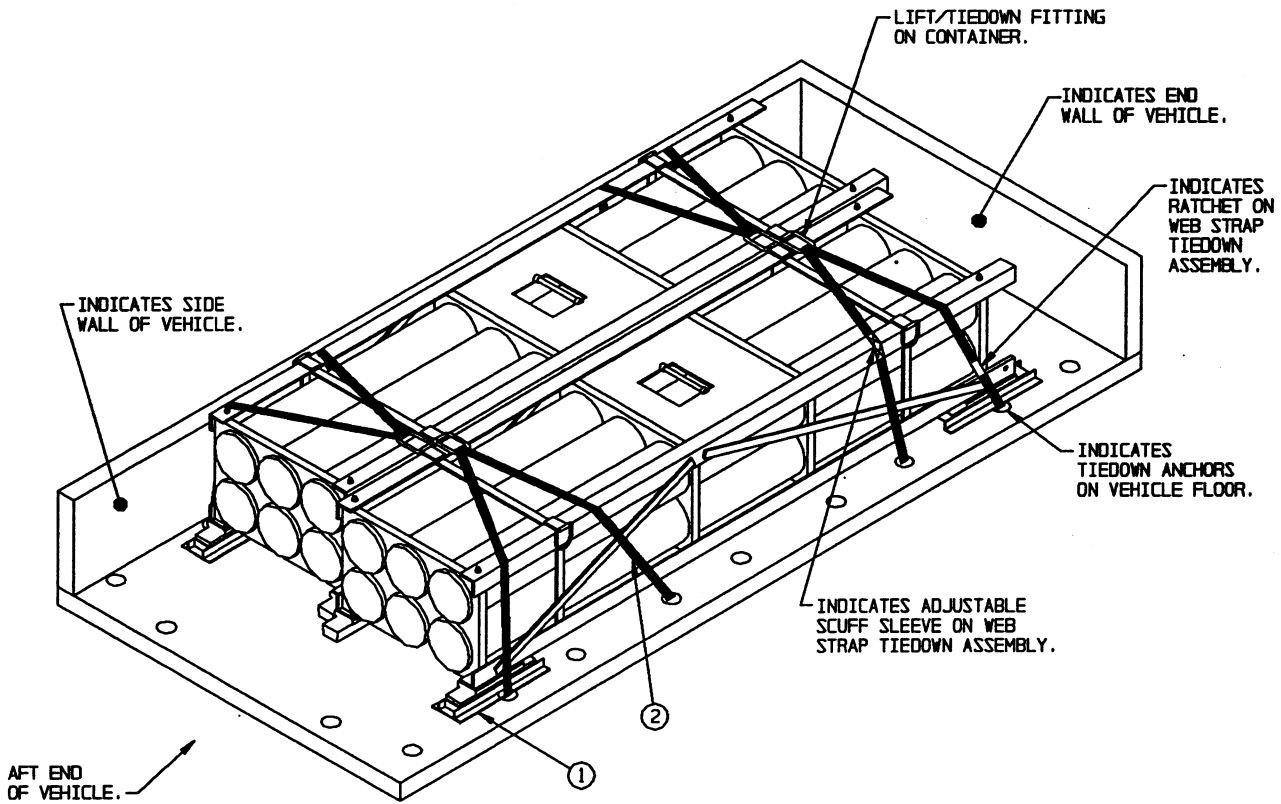
1. A LOAD OF ONE CONTAINER IS SHOWN IN A 10-TON M977/M985 HEAVY EXPANDED MOBILITY TACTICAL TRUCK, HAVING INSIDE DIMENSIONS OF 216-3/8" LONG BY 90-3/4" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES, AS SHOWN ON PAGE 26.
2. IF THE 10-TON M977/M985 HEMTT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 6 FOR LOADING AND TIEDOWN OF ONE CONTAINER.
3. A TOTAL OF FOUR WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

KEY NUMBERS

- ① SHOE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 26. PRE-POSITION EACH SHOE ASSEMBLY AS SHOWN IN THE "PLAN VIEW OF 10-TON M977/M985 HEMTT" DETAIL ON PAGE 27. SEE LOADING PROCEDURES NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE SECOND TIEDOWN ANCHOR FROM THE AFT AND FORWARD END OF THE CARGO DECK, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD TO A LIFT/TIEDOWN FITTING ON THE CONTAINER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK DOWN AND ATTACH THE FORWARD STRAP HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE FORWARD END OF THE CARGO DECK AND ATTACH THE AFT STRAP HOOK TO THE FOURTH TIEDOWN ANCHOR FROM THE AFT END OF THE CARGO DECK. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER	----- 1 -----	5,078 LBS



ISOMETRIC VIEW

SPECIAL NOTES:

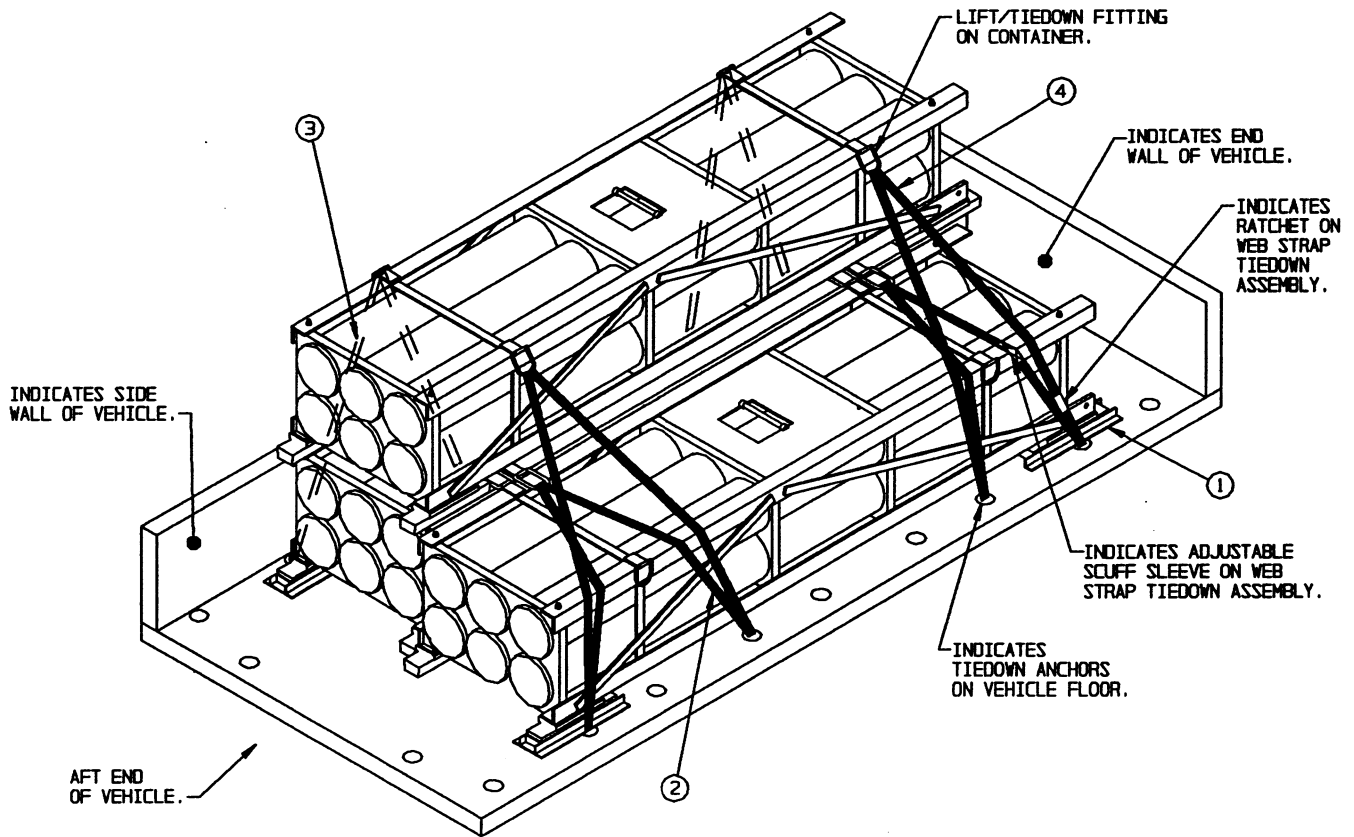
1. A LOAD OF TWO CONTAINERS IS SHOWN IN A 10-TON M977/M985 HEAVY EXPANDED MOBILITY TACTICAL TRUCK, HAVING INSIDE DIMENSIONS OF 216-3/8" LONG BY 90-3/4" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS SHOWN ON PAGE 26.
2. IF THE 10-TON M977/M985 HEMTT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 8 FOR LOADING AND TIEDOWN OF TWO CONTAINERS.
3. WHEN POSITIONING CONTAINERS ON VEHICLES ASSURE THAT LIFTING RINGS ON CONTAINERS ARE OFF-SET LONGITUDINALLY AND RESTING ON TOP OF ADJACENT CONTAINER.
4. A TOTAL OF FOUR WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

KEY NUMBERS

- ① SHOE ASSEMBLY (4 REQ.). SEE THE DETAIL ON PAGE 26. PRE-POSITION EACH SHOE ASSEMBLY AS SHOWN IN THE "PLAN VIEW OF 10-TON M977/M985 HEMTT" DETAIL ON PAGE 27. SEE LOADING PROCEDURES NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQ.). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE SECOND TIEDOWN ANCHOR FROM THE AFT END OF THE CARGO DECK, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD AND OVER THE TOP OF THE NEAR CONTAINER TO A LIFT/TIEDOWN FITTING ON THE OPPOSITE CONTAINER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK OVER TOP OF NEAR CONTAINER AND BACK DOWN AND ATTACH THE FORWARD STRAP HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE FORWARD END OF THE CARGO DECK AND ATTACH THE AFT STRAP HOOK TO THE FOURTH TIEDOWN ANCHOR FROM THE AFT END OF THE CARGO DECK. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E", ON PAGE 2.

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER	----- 2 -----	10,156 LBS



ISOMETRIC VIEW

SPECIAL NOTES:

1. A LOAD OF THREE CONTAINERS IS SHOWN IN A 10-TON M977/M985 HEAVY EXPANDED MOBILITY TACTICAL TRUCK, HAVING INSIDE DIMENSIONS OF 216-3/8" LONG BY 90-3/4" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES, AS SHOWN ON PAGE 26.
2. IF THE 10-TON M977/M985 HEMTT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 9 FOR LOADING AND TIEDOWN OF THREE CONTAINERS.
3. WHEN POSITIONING CONTAINERS ON VEHICLES ASSURE THAT LIFTING RINGS ON CONTAINERS ARE OFF-SET LONGITUDINALLY AND RESTING ON TOP OF ADJACENT CONTAINER.
4. A TOTAL OF EIGHT WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

(KEY NUMBERS CONTINUED)

- ④ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE SECOND TIEDOWN ANCHOR FROM THE AFT AND FORWARD END OF THE CARGO DECK, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD OVER TOP OF NEAR CONTAINER TO THE LIFT/TIEDOWN FITTING ON THE TOP CONTAINER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK ACROSS TOP OF NEAR CONTAINER, BACK DOWN AND ATTACH THE FORWARD STRAP HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE FORWARD END OF THE CARGO DECK AND ATTACH THE AFT STRAP HOOK TO THE FOURTH TIEDOWN ANCHOR FROM THE AFT END OF THE CARGO DECK. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E". ON PAGE 2.

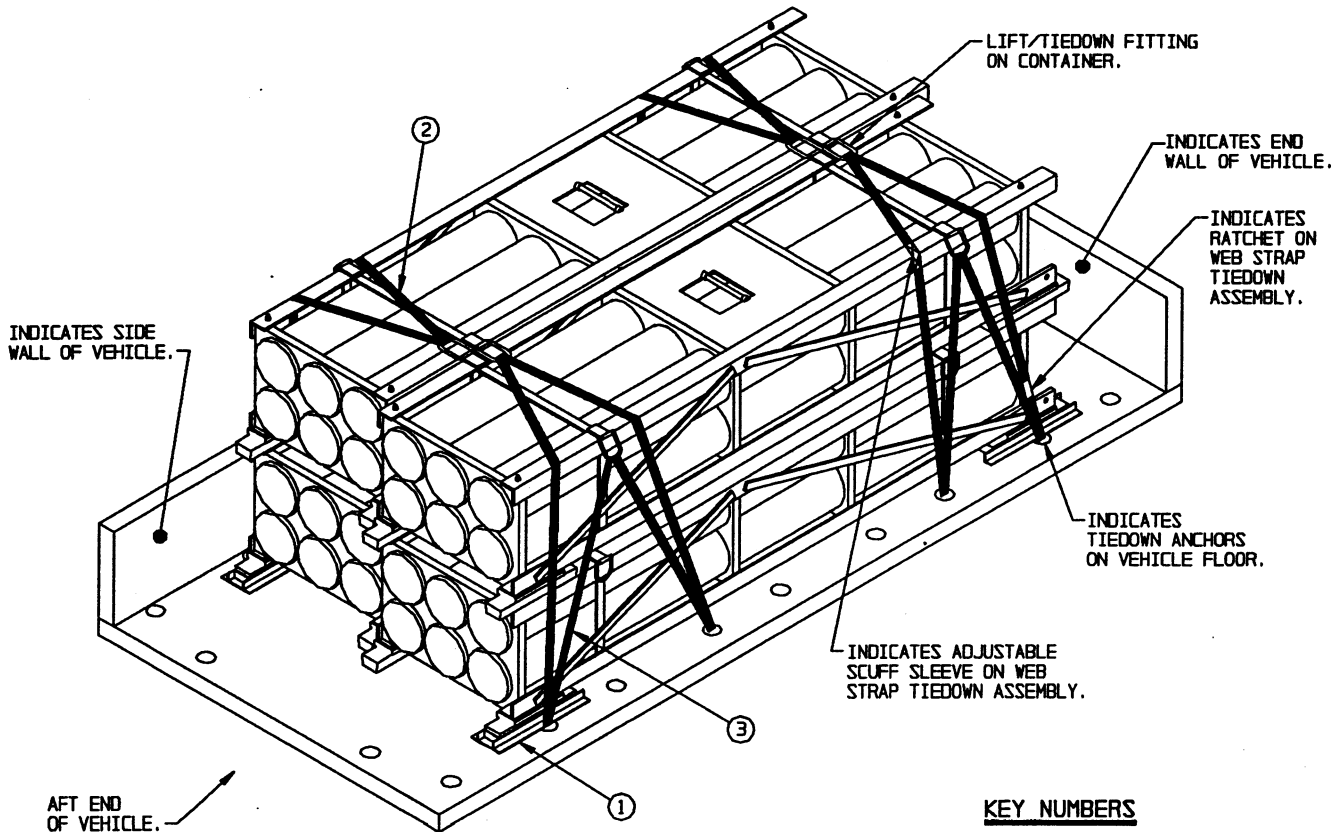
KEY NUMBERS

- ① SHOE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 26 PRE-POSITION EACH SHOE ASSEMBLY AS SHOWN IN THE "PLAN VIEW OF 10-TON M977/M985 HEMTT" DETAIL ON PAGE 27. SEE LOADING PROCEDURES NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE SECOND TIEDOWN ANCHOR FROM THE AFT AND FORWARD END OF THE CARGO DECK, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD AND OVER THE TOP OF THE NEAR CONTAINER TO A LIFT/TIEDOWN FITTING ON THE OPPOSITE CONTAINER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK OVER TOP OF NEAR CONTAINER AND BACK DOWN AND ATTACH THE FORWARD STRAP HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE FORWARD END OF THE CARGO DECK AND ATTACH THE AFT STRAP HOOK TO THE FOURTH TIEDOWN ANCHOR FROM THE AFT END OF THE CARGO DECK. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E". ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE SECOND TIEDOWN ANCHOR FROM THE AFT AND FORWARD END OF THE CARGO DECK, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD TO THE LIFT/TIEDOWN FITTING ON THE TOP CONTAINER THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK DOWN AND ATTACH THE FORWARD STRAP HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE FORWARD END OF THE CARGO DECK AND ATTACH THE AFT STRAP HOOK TO THE FOURTH TIEDOWN ANCHOR FROM THE AFT END OF THE CARGO DECK. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E". ON PAGE 2.

(CONTINUED AT LEFT)

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER	3	15,234 LBS



ISOMETRIC VIEW

KEY NUMBERS

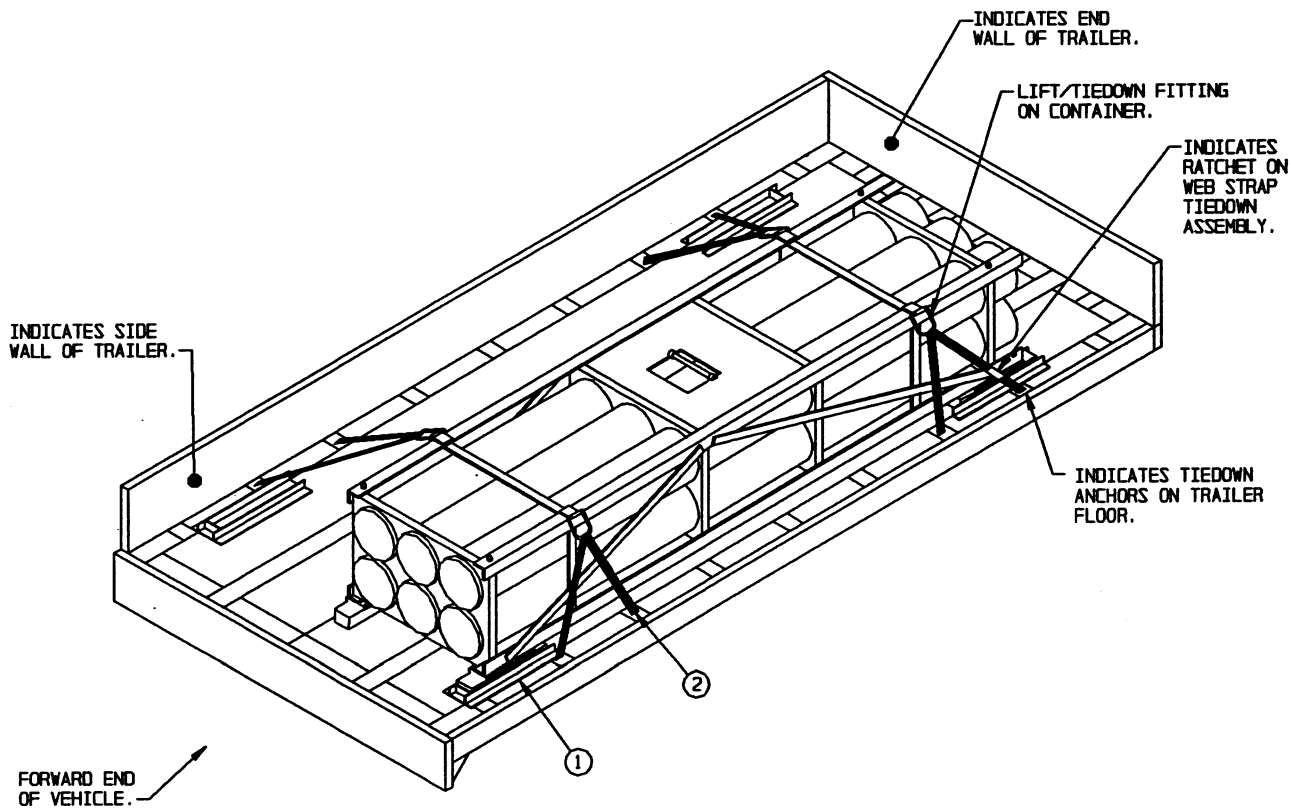
- ① SHOE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 26 PRE-POSITION EACH SHOE ASSEMBLY AS SHOWN IN THE "PLAN VIEW OF 10-TON M977/M985 HEMTT" DETAIL ON PAGE 27. SEE LOADING PROCEDURES NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE SECOND TIEDOWN ANCHOR FROM THE AFT AND FORWARD END OF THE CARGO DECK, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD AND OVER THE TOP OF THE NEAR SIDE CONTAINER TO A LIFT/TIEDOWN FITTING ON THE CONTAINER THAT IS LOCATED ON THE OPPOSITE SIDE OF THE LOAD, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK OVER TOP OF NEAR SIDE CONTAINER, BACK DOWN AND ATTACH THE FORWARD STRAP HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE FORWARD END OF THE CARGO DECK AND ATTACH THE AFT STRAP HOOK TO THE FOURTH TIEDOWN ANCHOR FROM THE AFT END OF THE CARGO DECK. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE SECOND TIEDOWN ANCHOR FROM THE AFT AND FORWARD END OF THE CARGO DECK, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD TO A LIFT/TIEDOWN FITTING ON THE UPPER NEAR-SIDE CONTAINER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK DOWN AND ATTACH THE FORWARD STRAP HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE FORWARD END OF THE CARGO DECK AND ATTACH THE AFT STRAP HOOK TO THE FOURTH TIEDOWN ANCHOR FROM THE AFT END OF THE CARGO DECK. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.

SPECIAL NOTES:

- 1. A MAXIMUM LOAD OF FOUR CONTAINERS IS SHOWN IN A 10-TON M977/M985 HEAVY EXPANDED MOBILITY TACTICAL TRUCK, HAVING INSIDE DIMENSIONS OF 216-3/8" LONG BY 90-3/4" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS SHOWN ON PAGE 26.
- 2. IF THE 10-TON M977/M985 HEMTT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 10 FOR LOADING AND TIEDOWN OF FOUR CONTAINERS.
- 3. WHEN POSITIONING CONTAINERS ON VEHICLES ASSURE THAT LIFTING RINGS ON CONTAINERS ARE OFF-SET LONGITUDINALLY AND RESTING ON TOP OF ADJACENT CONTAINER.
- 4. A TOTAL OF EIGHT WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER	4	20,312 LBS



ISOMETRIC VIEW

SPECIAL NOTES:

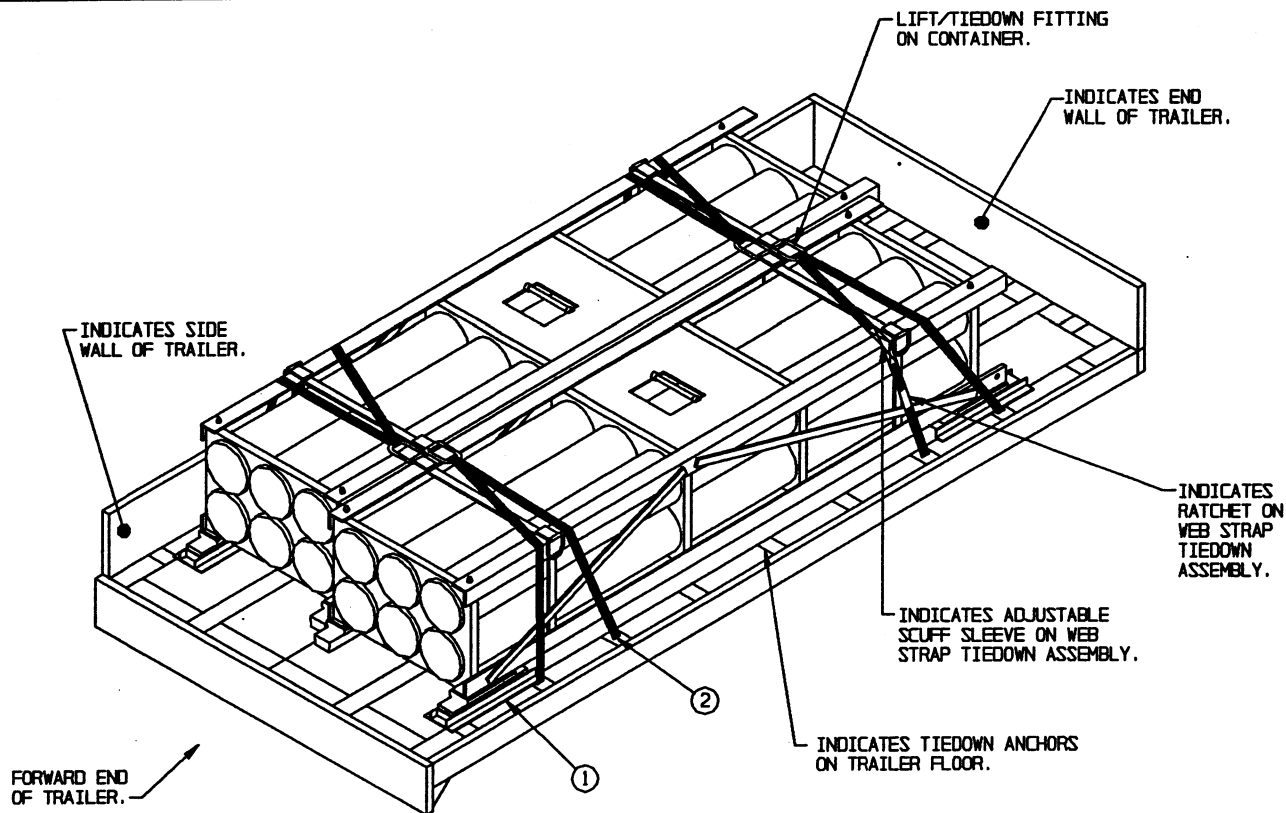
1. A LOAD OF ONE CONTAINER IS SHOWN IN AN 11-TON M989 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER, HAVING INSIDE DIMENSIONS OF 206" LONG BY 92-9/16" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS SHOWN ON PAGE 26.
2. **CAUTION:** CONTAINERS **MUST NOT** BE POSITIONED TWO HIGH ON THIS TYPE TRAILER DUE TO THE STABILITY OF THE TRAILER.
3. IF THE 11-TON M989 HEMAT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 6 FOR LOADING AND TIEDOWN OF ONE CONTAINER.
4. A TOTAL OF FOUR WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

KEY NUMBERS

- ① SHOE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 26. PRE-POSITION EACH SHOE ASSEMBLY AS SHOWN IN THE "PLAN VIEW OF 11-TON M989 HEMAT" DETAIL ON PAGE 28. SEE LOADING PROCEDURE NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE SECOND TIEDOWN ANCHOR FROM END OF TRAILER, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD TO A LIFT/TIEDOWN FITTING ON THE CONTAINER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK DOWN AND ATTACH THE HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE END OF TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES, TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER	1	5,078 LBS



ISOMETRIC VIEW

SPECIAL NOTES:

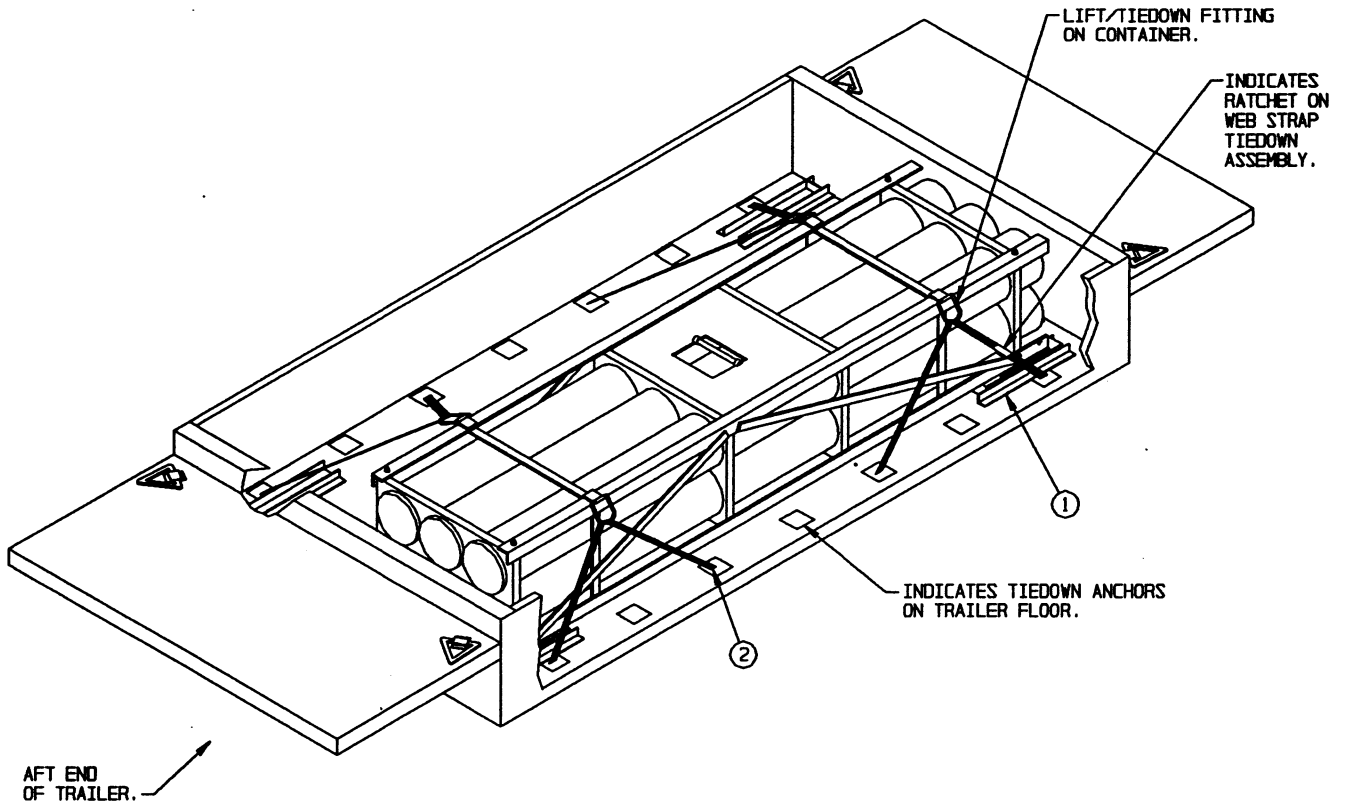
1. A LOAD OF TWO CONTAINERS IS SHOWN IN AN 11-TON M989 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER, HAVING INSIDE DIMENSIONS OF 206" LONG BY 92-9/16" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS SHOWN ON PAGE 26.
2. CAUTION: CONTAINERS MUST NOT BE POSITIONED TWO HIGH ON THIS TYPE TRAILER DUE TO THE STABILITY OF THE TRAILER.
3. IF THE 11-TON M989 HEMAT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 8 FOR LOADING AND TIEDOWN OF TWO CONTAINERS.
4. WHEN POSITIONING CONTAINERS ON VEHICLES ASSURE THAT LIFTING RINGS ON CONTAINERS ARE OFF-SET LONGITUDINALLY AND RESTING ON TOP OF ADJACENT CONTAINER.
5. A TOTAL OF FOUR WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

KEY NUMBERS

- ① SHOE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 26. PRE-POSITION EACH SHOE ASSEMBLY AS SHOWN IN THE "PLAN VIEW OF 11-TON M989 HEMAT" DETAIL ON PAGE 28. SEE LOADING PROCEDURES NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE SECOND TIEDOWN ANCHOR FROM END OF TRAILER. THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD AND OVER THE TOP OF THE NEAR-SIDE CONTAINER TO A LIFT/TIEDOWN FITTING ON THE CONTAINER THAT IS LOCATED ON THE OPPOSITE SIDE OF THE TRUCK, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK DOWN AND ATTACH THE HOOK TO THE THIRD TIEDOWN ANCHOR FROM END OF TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER	2	10,156 LBS



ISOMETRIC VIEW

SPECIAL NOTES:

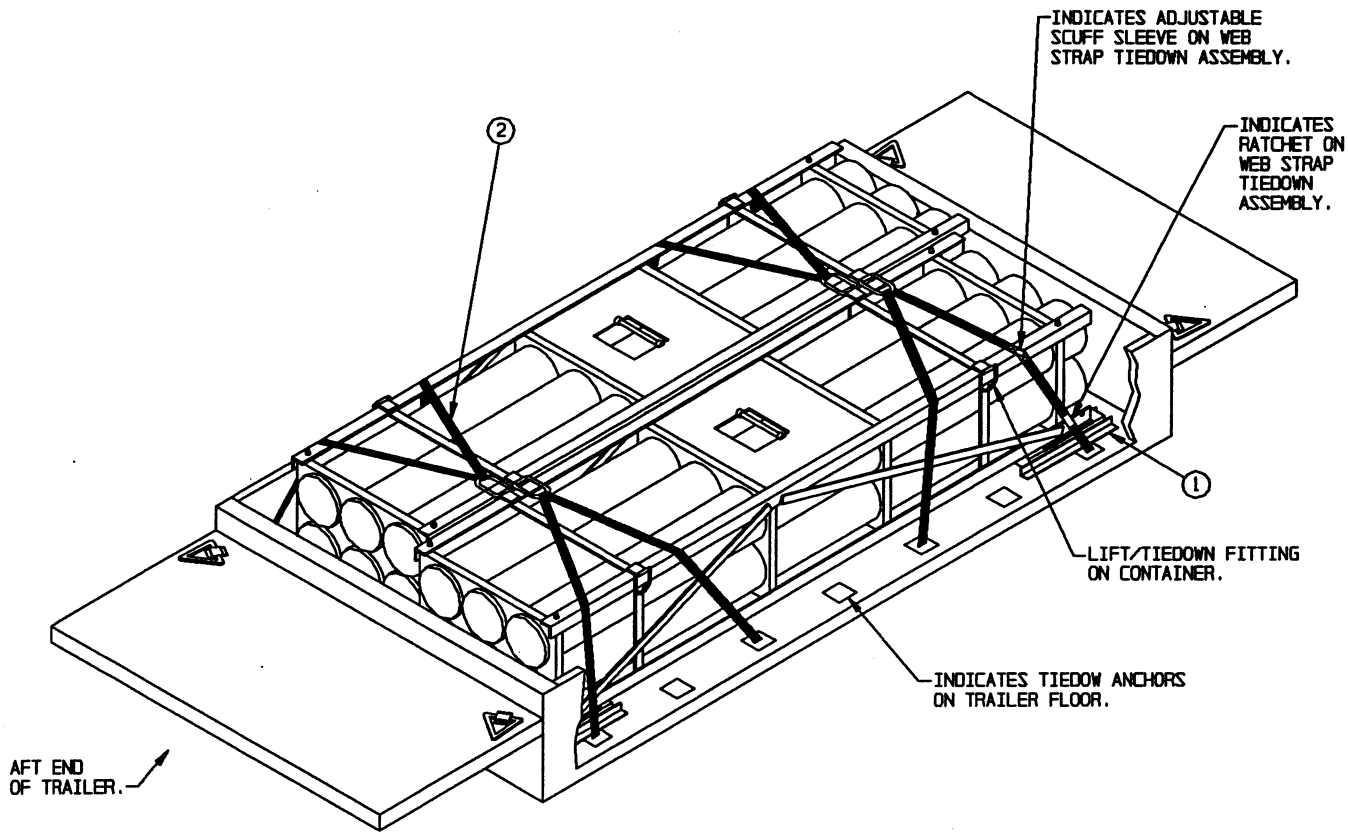
1. A LOAD OF ONE CONTAINER IS SHOWN IN AN 11-TON M989A1 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER HAVING INSIDE DIMENSIONS OF 175" LONG BY 92" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS SHOWN ON PAGE 26.
2. IF THE 11-TON M989A1 HEMAT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 6 FOR LOADING AND TIEDOWN OF ONE CONTAINER.
3. A TOTAL OF FOUR WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

KEY NUMBERS

- ① SHOE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 26. PRE-POSITION EACH SHOE AS SHOWN IN THE "PLAN VIEW OF 11-TON M989A1 HEMAT" DETAIL ON PAGE 27. SEE LOADING PROCEDURES NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE FIRST TIEDOWN ANCHOR FROM END OF TRAILER, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD TO A LIFT/TIEDOWN FITTING ON THE CONTAINER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK DOWN AND ATTACH THE HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE END OF TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER	1	5,078 LBS



ISOMETRIC VIEW

SPECIAL NOTES:

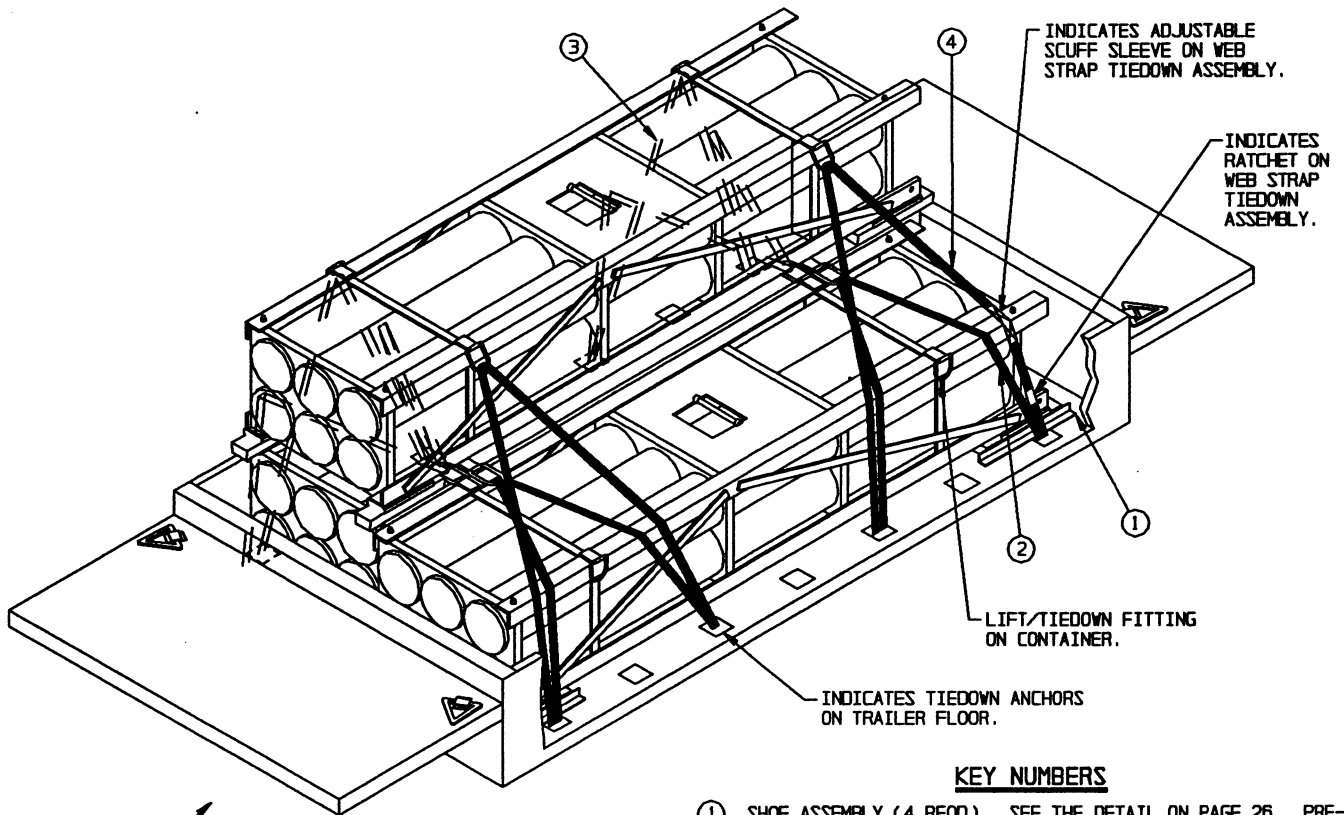
1. A LOAD OF TWO CONTAINERS IS SHOWN IN AN 11-TON M989A1 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER HAVING INSIDE DIMENSIONS OF 175" LONG BY 92" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS SHOWN ON PAGE 26.
2. IF THE 11-TON M989A1 HEMAT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 8 FOR LOADING AND TIEDOWN OF TWO CONTAINERS.
3. WHEN POSITIONING CONTAINERS ON VEHICLES ASSURE THAT LIFTING RINGS ON CONTAINERS ARE OFF-SET LONGITUDINALLY AND RESTING ON TOP OF ADJACENT CONTAINER.
4. A TOTAL OF FOUR WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

KEY NUMBERS

- ① SHOE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 26. PRE-POSITION EACH SHOE AS SHOWN IN THE "PLAN VIEW OF 11-TON M989A1 HEMAT" DETAIL ON PAGE 27. SEE LOADING PROCEDURES NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE FIRST TIEDOWN ANCHOR FROM END OF TRAILER, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD AND OVER THE TOP OF THE NEAR-SIDE CONTAINER TO A LIFT/TIEDOWN FITTING ON THE CONTAINER THAT IS LOCATED ON THE OPPOSITE SIDE OF THE TRUCK, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK OVER THE TOP OF THE NEAR-SIDE CONTAINER, AND DOWN THE SIDE OF THAT CONTAINER AND ATTACH THE HOOK TO THE THIRD TIEDOWN ANCHOR FROM THE END OF TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER	2	10,156 LBS



ISOMETRIC VIEW

AFT END OF TRAILER.

KEY NUMBERS

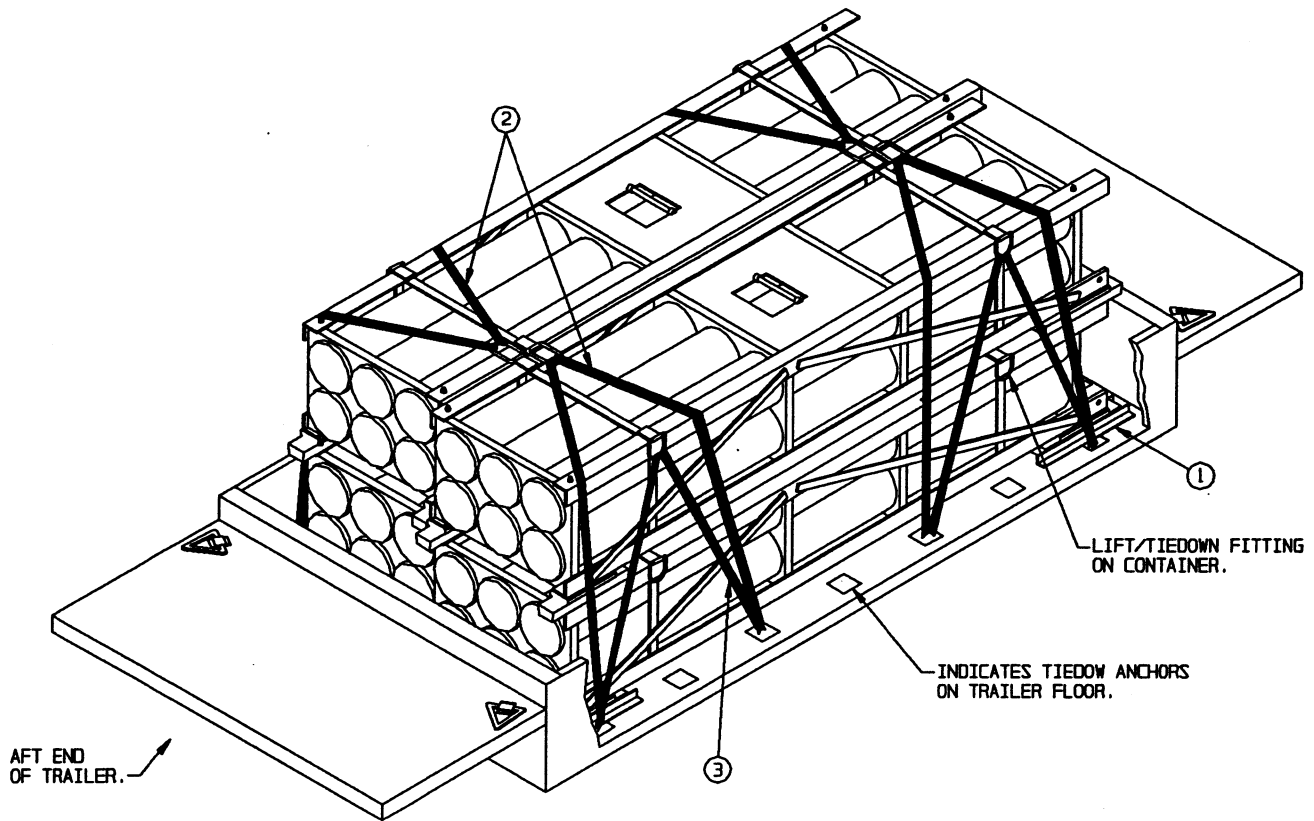
- ① SHOE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 26. PRE-POSITION EACH SHOE ASSEMBLY AS SHOWN IN THE "PLAN VIEW OF 11-TON M989A1 HEMAT" DETAIL ON PAGE 27. SEE LOADING PROCEDURES NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE FIRST TIEDOWN ANCHOR FROM THE END OF THE TRAILER, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD AND OVER THE TOP OF THE NEAR-SIDE BOTTOM CONTAINER TO A LIFT/TIEDOWN FITTING ON THE CONTAINER THAT IS LOCATED ON THE OPPOSITE SIDE OF THE TRUCK, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK OVER THE TOP OF THE NEAR-SIDE BOTTOM CONTAINER, AND DOWN THE SIDE OF THAT CONTAINER AND ATTACH HOOK TO THE THIRD TIEDOWN ANCHOR FROM END OF TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE FIRST TIEDOWN ANCHOR FROM THE END OF TRAILER, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD TO A LIFT/TIEDOWN FITTING ON THE UPPER CONTAINER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK DOWN AND ATTACH THE HOOK TO THE THIRD TIEDOWN ANCHOR FROM END OF TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.
- ④ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE THIRD TIEDOWN ANCHOR FROM THE END OF THE TRAILER, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD AND OVER THE TOP OF THE NEAR SIDE CONTAINER TO A LIFT/TIEDOWN FITTING ON THE TOP CONTAINER ON THE OPPOSITE SIDE OF THE TRAILER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK OVER THE TOP OF THE NEAR-SIDE CONTAINER, AND DOWN THE SIDE OF THAT CONTAINER AND ATTACH HOOK TO THE FIRST TIEDOWN ANCHOR FROM END OF TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES. TAKE UP EXCESS SLACK IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTES "D" AND "E" ON PAGE 2.

SPECIAL NOTES:

- 1. A LOAD OF THREE CONTAINERS IS SHOWN IN AN 11-TON M989A1 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER HAVING INSIDE DIMENSIONS OF 175" LONG BY 92" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS SHOWN ON PAGE 26.
- 2. IF THE 11-TON M989A1 HEMAT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 9 FOR LOADING AND TIEDOWN OF THREE CONTAINERS.
- 3. WHEN POSITIONING CONTAINERS ON VEHICLES ASSURE THAT LIFTING RINGS ON CONTAINERS ARE OFF-SET LONGITUDINALLY AND RESTING ON TOP OF ADJACENT CONTAINER.
- 4. A TOTAL OF EIGHT WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN ABOVE.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER	3	15,234 LBS



ISOMETRIC VIEW

SPECIAL NOTES:

1. A MAXIMUM LOAD OF FOUR CONTAINERS IS SHOWN IN AN 11-TON M989A1 HEAVY EXPANDED MOBILITY AMMUNITION TRAILER, HAVING DIMENSIONS OF 175" LONG BY 92" WIDE, EQUIPPED WITH "SHOE" TYPE RESTRAINING DEVICES AS SHOWN ON PAGE 26.
2. IF THE 11-TON M989A1 HEMAT IS NOT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES USE THE PROCEDURES SHOWN ON PAGE 10 FOR LOADING AND TIEDOWN OF FOUR CONTAINERS.
3. WHEN POSITIONING CONTAINERS ON VEHICLES ASSURE THAT LIFTING RINGS ON THE TOP CONTAINERS ARE OFF-SET LONGITUDINALLY AND RESTING ON TOP OF ADJACENT CONTAINER.
4. A TOTAL OF EIGHT WEB STRAP TIEDOWN ASSEMBLIES ARE REQUIRED FOR THE LOAD SHOWN.

KEY NUMBERS

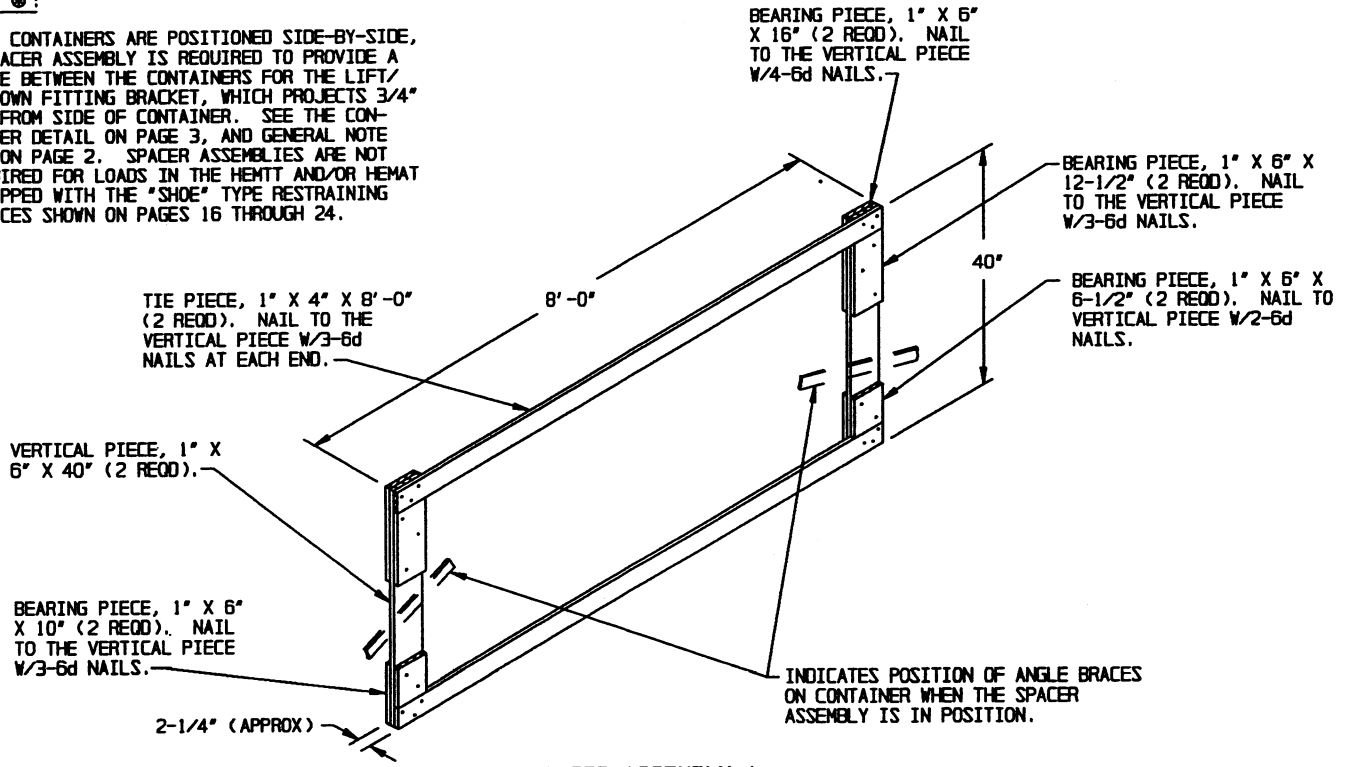
- ① SHOE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 26. PRE-POSITION EACH SHOE ASSEMBLY AS SHOWN IN THE "PLAN VIEW OF 11-TON M989A1 HEMAT" DETAIL ON PAGE 27. SEE LOADING PROCEDURES NOTE 7 ON PAGE 14.
- ② WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE FIRST TIEDOWN FITTING FROM END OF TRAILER, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD AND OVER THE TOP OF THE NEAR-SIDE CONTAINER TO A LIFT/TIEDOWN FITTING ON THE CONTAINER THAT IS LOCATED ON THE OPPOSITE SIDE OF THE LOAD, THROUGH THE LIFTING FROM THE BOTTOM UP, BACK OVER THE TOP OF THE NEAR-SIDE CONTAINER, AND DOWN THE SIDE OF THAT CONTAINER AND ATTACH HOOK TO THE THIRD TIEDOWN ANCHOR FROM END OF TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES, TAKE UP EXCESS IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTE "D" AND "E" ON PAGE 2.
- ③ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). HOOK THE END OF THE STRAP THAT HAS THE RATCHET TO THE THIRD TIEDOWN FITTING FROM END OF TRAILER, THEN THE HOOK ON THE LONG END OF THE STRAP ASSEMBLY IS PASSED UPWARD TO A LIFT/TIEDOWN FITTING ON THE UPPER NEAR-SIDE CONTAINER, THROUGH THE LIFTING RING FROM THE BOTTOM UP, BACK DOWN AND ATTACH THE HOOK TO THE FIRST TIEDOWN FITTING FROM END OF TRAILER. POSITION STRAP SCUFF SLEEVES AT SHARP EDGES, TAKE UP EXCESS IN STRAP AND RATCHET TIGHT. SEE GENERAL NOTE "D" AND "E", AND "Q" ON PAGE 2.

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER	4	20,312 LBS

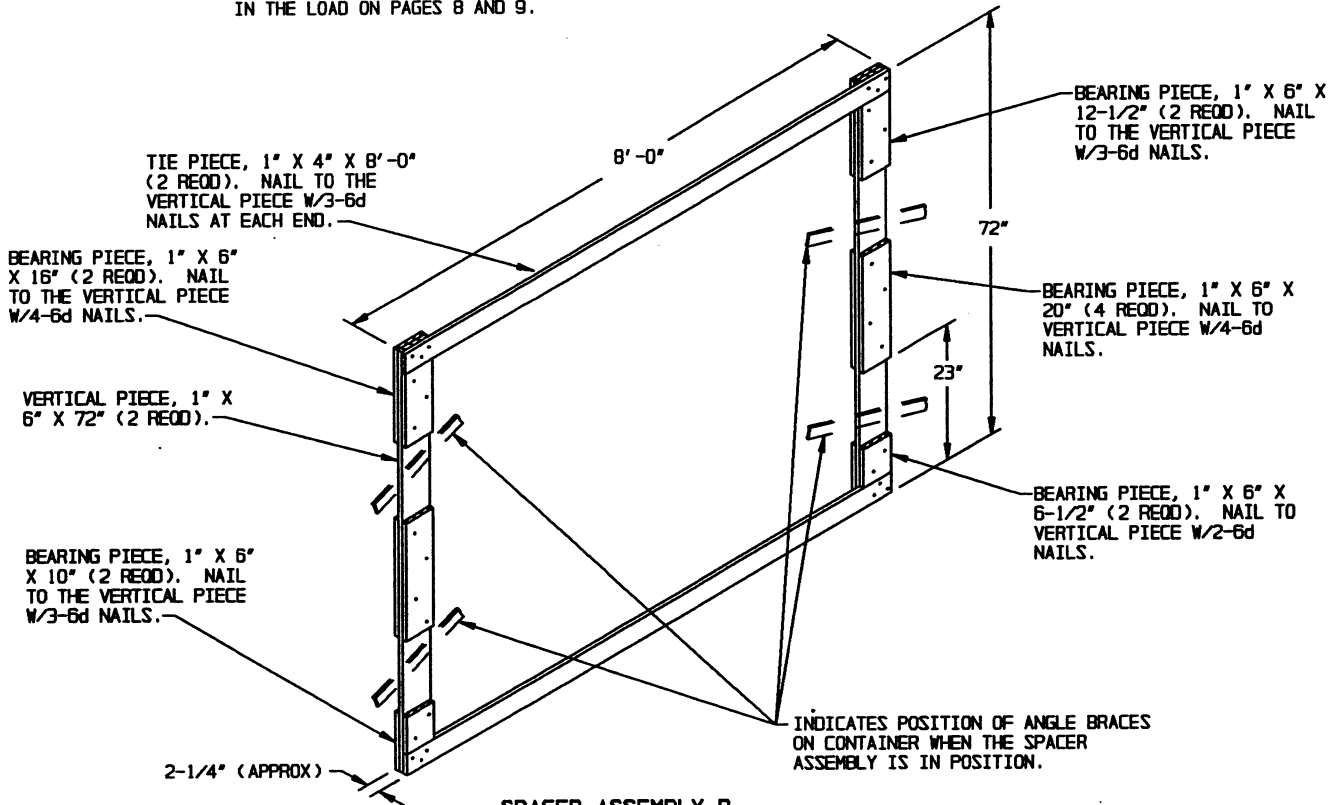
NOTE ☉:

WHEN CONTAINERS ARE POSITIONED SIDE-BY-SIDE, A SPACER ASSEMBLY IS REQUIRED TO PROVIDE A SPACE BETWEEN THE CONTAINERS FOR THE LIFT/TIEDOWN FITTING BRACKET, WHICH PROJECTS 3/4" OUT FROM SIDE OF CONTAINER. SEE THE CONTAINER DETAIL ON PAGE 3, AND GENERAL NOTE "N" ON PAGE 2. SPACER ASSEMBLIES ARE NOT REQUIRED FOR LOADS IN THE HEMTT AND/OR HEMAT EQUIPPED WITH THE "SHOE" TYPE RESTRAINING DEVICES SHOWN ON PAGES 16 THROUGH 24.



SPACER ASSEMBLY A

THIS ASSEMBLY IS FOR USE BETWEEN ONE CONTAINER HIGH LOADS. WHEN FABRICATING THIS ASSEMBLY FIELD CHECK DIMENSIONS TO ASSURE THAT THE ANGLE BRACES ON THE CONTAINERS WILL FIT AS SHOWN ABOVE AND THE BEARING PIECES ON THE SPACER ASSEMBLY WILL CONTACT THE LOWER AND UPPER RAILS ON THE CONTAINER. SEE THE CONTAINER DETAIL ON PAGE 3 AND "NOTE ☉" ON THIS PAGE. THIS ASSEMBLY IS USED IN THE LOAD ON PAGES 8 AND 9.

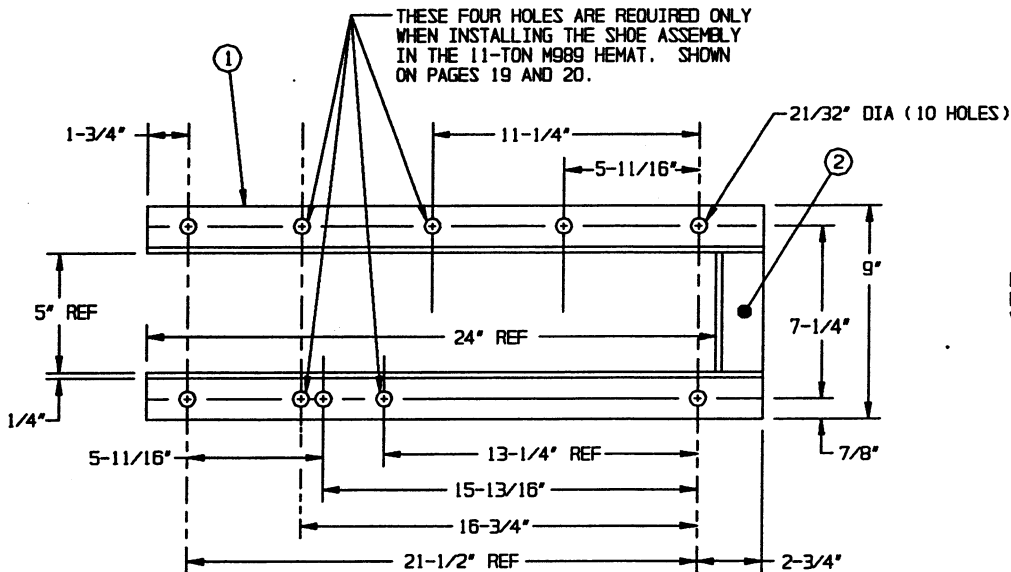


SPACER ASSEMBLY B

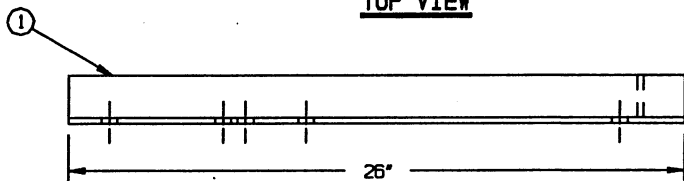
THIS ASSEMBLY IS FOR USE IN BETWEEN TWO CONTAINER HIGH LOADS. WHEN FABRICATING THIS ASSEMBLY FIELD CHECK DIMENSIONS TO ASSURE THAT THE ANGLE BRACES ON THE CONTAINERS WILL FIT AS SHOWN ABOVE AND THE BEARING PIECES ON THE SPACER ASSEMBLY WILL CONTACT THE LOWER AND UPPER RAILS ON THE CONTAINER. SEE THE CONTAINER DETAIL ON PAGE 3 AND "NOTE ☉" ON THIS PAGE. THIS ASSEMBLY IS USED IN THE LOAD SHOWN ON PAGE 10.

DETAILS

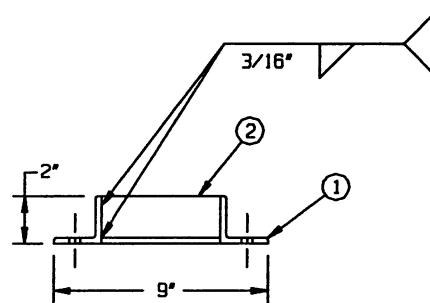
THESE FOUR HOLES ARE REQUIRED ONLY WHEN INSTALLING THE SHOE ASSEMBLY IN THE 11-TON M989 HEMAT. SHOWN ON PAGES 19 AND 20.



TOP VIEW

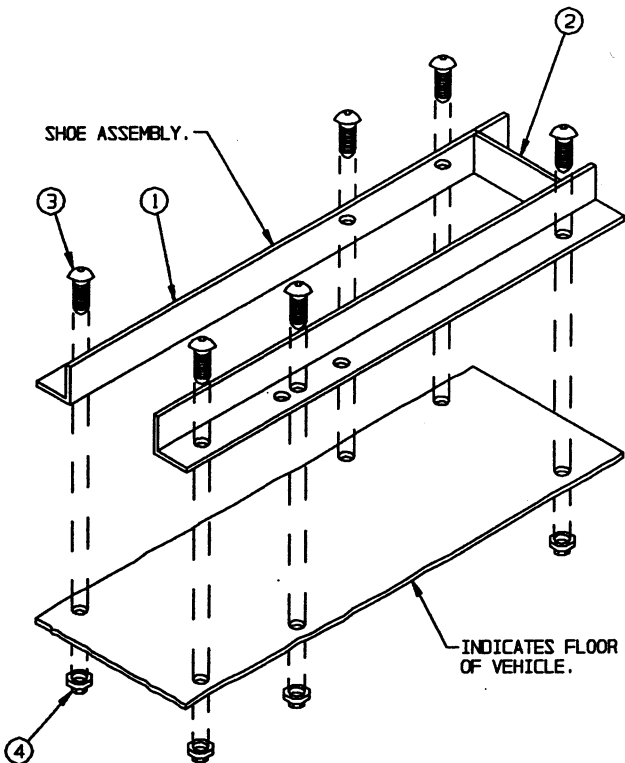


SIDE VIEW



END VIEW

SHOE ASSEMBLY
FOUR REQUIRED PER VEHICLE. FOR LOCATION OF "SHOES" SEE THE PLAN VIEWS ON PAGES 27 AND 28.



TYPICAL SHOE ASSEMBLY INSTALLATION

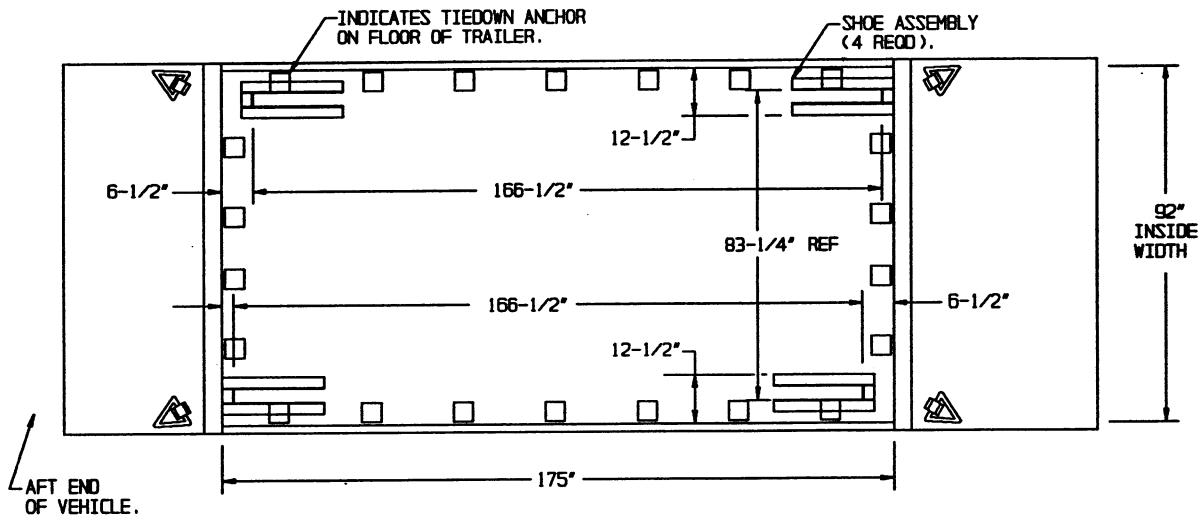
THE VIEW ABOVE DEPICT THE INSTALLATION OF A SHOE ASSEMBLY IN THE 10-TON M977/M985 HEMTT. SEE THE "PLAN VIEW OF 10-TON M977/M985 HEMTT" ON PAGE 27.

BILL OF MATERIAL FOR (SEE "NOTE 3") ONE SHOE ASSEMBLY BELOW

KEY NO.	NOMENCLATURE	QTY RECD
1	SIDE, STEEL, ANGLE, 2" X 2" X 1/4", 26" LONG, A36	2
2	END, STEEL, ANGLE, 2" X 2" X 1/4", 5" LONG, A36	1
3	SCREW, CAP, BUTTON HEAD, 5/8-11 UNC-2A (SEE "NOTE 2" BELOW).	6
4	FLANGE NUT, HEXAGON, SELF-LOCKING, 5/8-11 UNC-2A	6

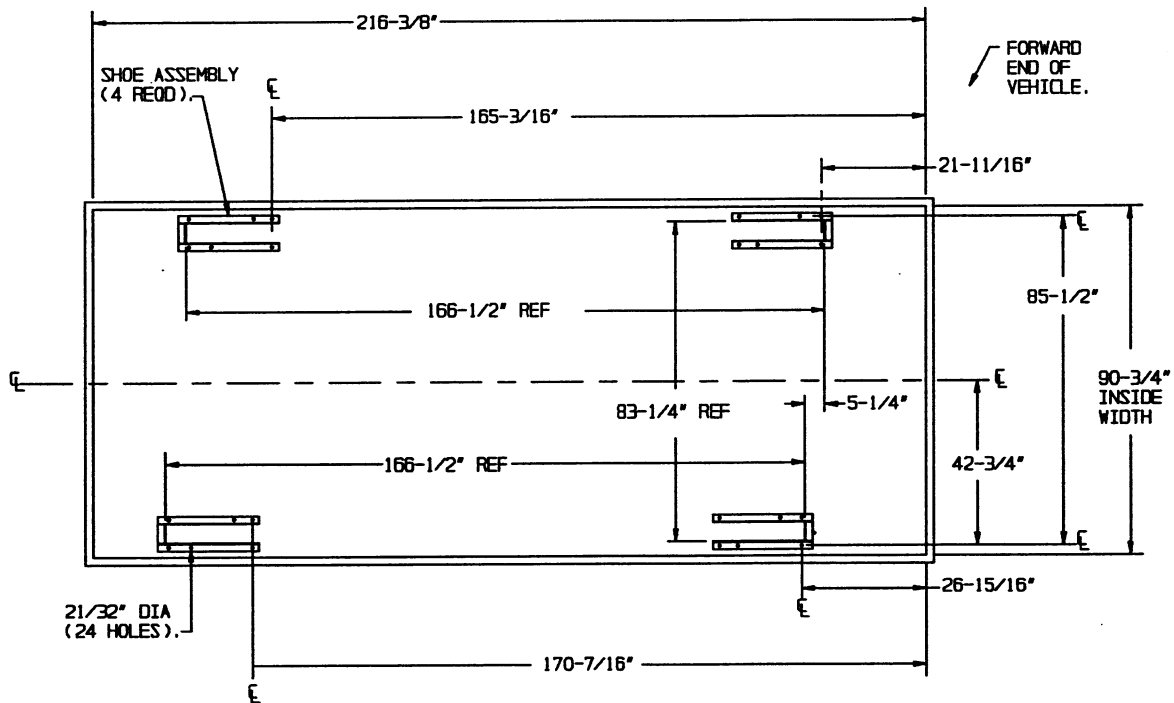
NOTES:

1. THE "SHOE ASSEMBLY" SHOWN ON THIS PAGE MUST BE FABRICATED AND INSTALLED BY THE USER IN THE 10-TON M977/M985 HEMTT, THE 11-TON M989 HEMAT, AND THE 11-TON M989A1 HEMAT.
2. WHEN POSITIONING THE "SHOE" IN THE 10-TON M977/M985 HEMTT, ALL SIX CAP SCREWS WILL BE 2" LONG. WHEN POSITIONING THE "SHOE" IN THE 11-TON M989 HEMAT, THE THREE CAP SCREWS THAT PASS THROUGH THE WOODEN PORTION OF THE TRAILER FLOOR MUST BE 3" LONG AND THE REMAINING THREE CAP SCREWS WILL BE 2" LONG.
3. WHEN "SHOES" ARE POSITIONED IN THE 11-TON M989 HEMAT, REINFORCEMENT PLATES ARE REQUIRED, SEE THE "REINFORCEMENT PLATE" DETAIL ON PAGE 29 AND THE "PLAN VIEW OF TRAILER BED" DETAIL ON PAGE 28.



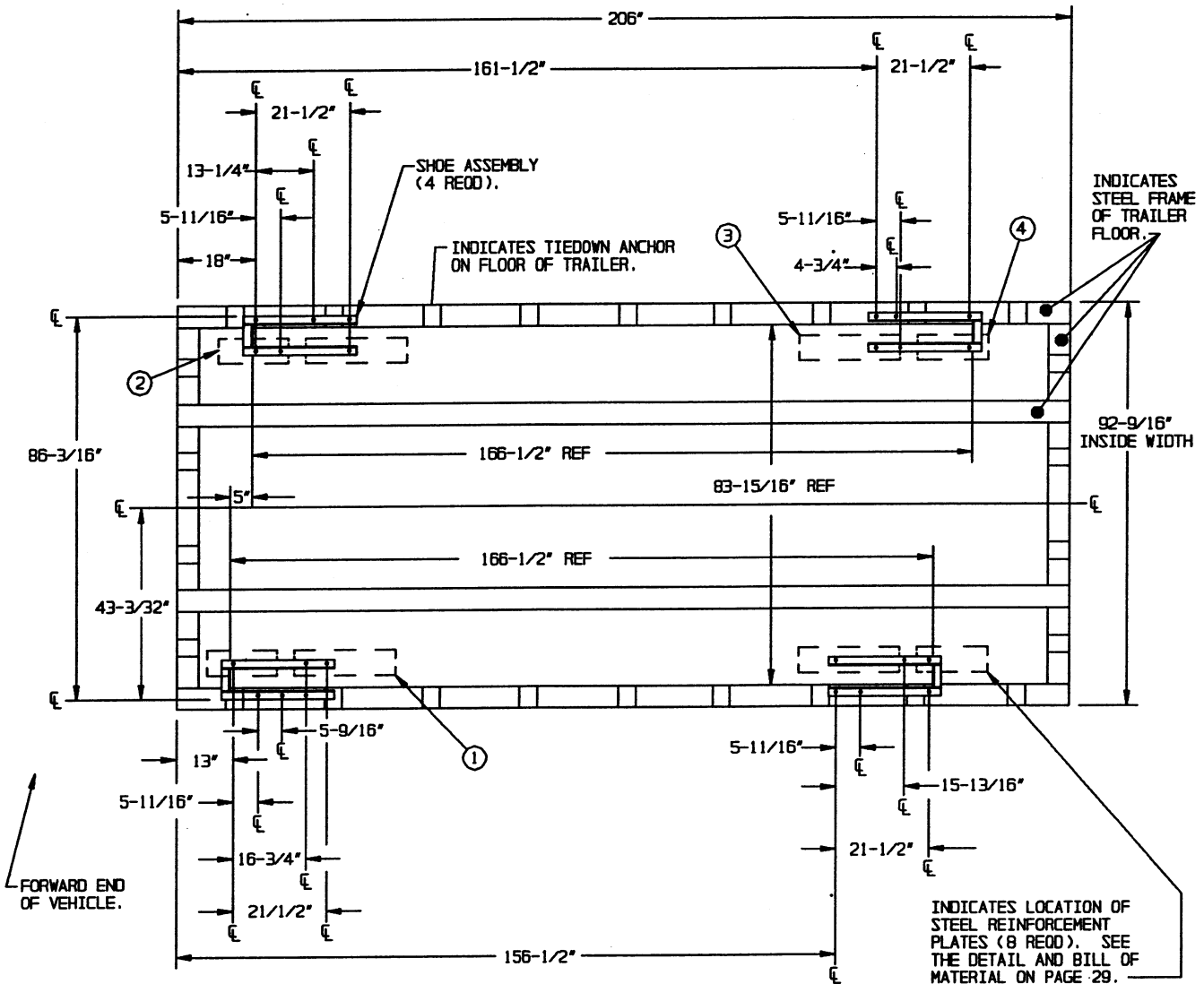
PLAN VIEW OF 11-TON M989A1 HEMAT

THE PLAN VIEW ABOVE DEPICTS THE LOCATIONS OF THE FLOOR SHOE ASSEMBLIES IN THE 11-TON M989A1 TRAILER. SEE THE "SHOE ASSEMBLY" DETAIL ON PAGE 26. POSITION EACH SHOE ASSEMBLY IN THE TRAILER AT THE LOCATIONS SHOWN, AND USING THE HOLES IN THE SHOE ASSEMBLY AS A GUIDE, DRILL TWENTY-FOUR 21/32" DIAMETER HOLES THROUGH THE FLOOR OF THE TRAILER. PRIOR TO INSTALLING THE SHOE ASSEMBLIES ASSURE THAT THE RING IN THE TIEDOWN ANCHOR AT EACH SHOE LOCATION IS IN THE "UP" POSITION. SEE "NOTE ■" ON PAGE 28.



PLAN VIEW OF 10-TON M977/M985 HEMTT

THE PLAN VIEW ABOVE DEPICTS THE LOCATIONS OF THE FLOOR SHOE ASSEMBLIES IN THE 10-TON M977/M985 TRUCK. SEE THE "SHOE ASSEMBLY" DETAIL ON PAGE 26. POSITION EACH SHOE ASSEMBLY IN THE TRUCK AT THE LOCATIONS SHOWN ABOVE, AND USING THE HOLES IN THE SHOE ASSEMBLY AS A GUIDE, DRILL TWENTY-FOUR 21/32" DIAMETER HOLES THROUGH THE FLOOR ON THE TRUCK. SEE "NOTE ■" ON PAGE 28.



PLAN VIEW OF 11-TON M989 HEMAT

THE PLAN VIEW ABOVE DEPICTS THE LOCATIONS OF THE FOUR SHOE ASSEMBLIES IN THE 11-TON M989 TRAILER. SEE THE "SHOE ASSEMBLY" DETAIL ON PAGE 26. POSITION EACH SHOE ASSEMBLY IN THE TRAILER AT THE LOCATIONS SHOWN, AND USING THE HOLES IN THE SHOE ASSEMBLY AS A GUIDE, DRILL TWENTY-FOUR 21-32" DIAMETER HOLES THROUGH THE FLOOR OF THE TRAILER. PRIOR TO INSTALLING THE SHOE ASSEMBLIES ASSURE THAT THE RING IN THE TIEDOWN ANCHOR AT EACH SHOE LOCATION IS IN THE "UP" POSITION. SEE "NOTE ■" BELOW.

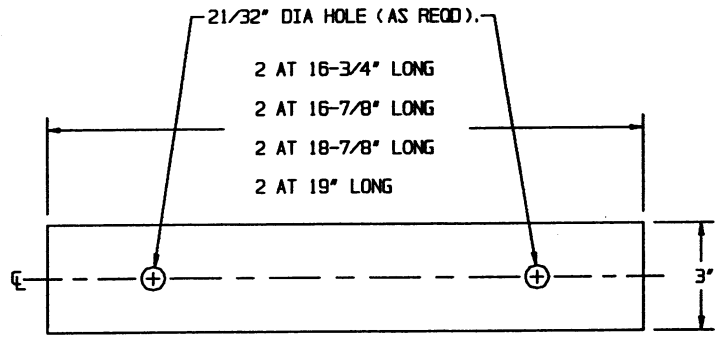
NOTE: ■

THE 83-1/4" REFERENCE DIMENSION ON THE M977/M985 HEMTT AND THE M989A1 HEMAT, AND THE 83-15/16" REFERENCE DIMENSION ON THE M989 HEMAT ARE THE APPROXIMATE LATERAL DIMENSIONS BETWEEN THE INSIDE SURFACE OF THE SHOE ASSEMBLIES ON EACH SIDE OF THE VEHICLE FLOOR. THE 166-1/2" REFERENCE DIMENSION ON THE M977/M985 HEMTT, THE M989A1 HEMAT, AND THE M989 HEMAT ARE THE APPROXIMATE LONGITUDINAL DIMENSIONS BETWEEN THE INSIDE END SURFACE OF THE SHOE ASSEMBLIES ON EACH END OF THE VEHICLE. THE LENGTH OF THE MLRS CONTAINER BETWEEN FORE AND AFT END-OF-SKIDS IS 166". THE WIDTH OF THE TWO MLRS CONTAINERS POSITIONED SIDE-BY-SIDE AND OFFSET LONGITUDINALLY SO THE LIFT/TIEDOWN RINGS ON ADJACENT CONTAINERS DO NOT CONTACT EACH OTHER IS 82-1/4".

BILL OF MATERIAL FOR REINFORCEMENT PLATES (SEE "NOTE ①" BELOW)		
KEY NO.	NOMENCLATURE	QTY REQD
1	REINFORCEMENT PLATE, STEEL, 1/4" X 3" X 16-3/4"	2
2	REINFORCEMENT PLATE, STEEL, 1/4" X 3" X 16-7/8"	2
3	REINFORCEMENT PLATE, STEEL, 1/4" X 3" X 18-7/8"	2
4	REINFORCEMENT PLATE, STEEL, 1/4" X 3" X 19"	2

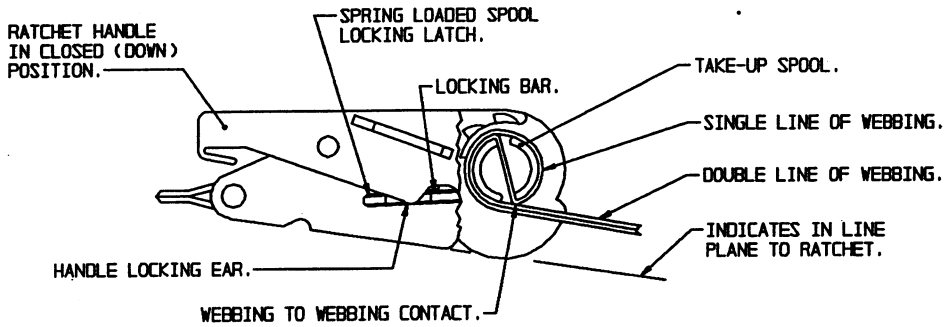
NOTE ① :

SEE THE "PLAN VIEW OF 11-TON M989 HEMAT ON PAGE 28 FOR KEY NUMBERS ① THROUGH ④.



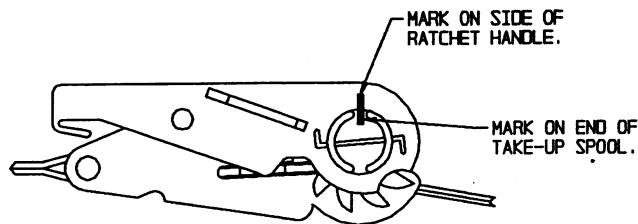
REINFORCEMENT PLATE FOR THE 11-TON M989 HEMAT
(8 REQUIRED PER TRAILER)

1/4" THICK BY 3" WIDE STEEL PLATE. WELD TO CROSS MEMBERS OF TRAILER (AT EACH END). TO BE LOCATED SO THAT WHEN THE 21/32" HOLES ARE DRILLED THROUGH THE TRAILER DECK, THEY WILL ALSO GO THROUGH THE PLATE AS SHOWN ABOVE. THE TWO 16-7/8" LONG PIECES MARKED ② WILL BE LOCATED BETWEEN THE FIRST AND SECOND CROSS MEMBERS FROM THE FORWARD END. THE TWO 16-3/4" LONG PIECES MARKED ① WILL BE LOCATED BETWEEN THE SECOND AND THIRD CROSS MEMBERS FROM THE FORWARD END. THE TWO 18-7/8" LONG PIECES MARKED ③ WILL BE LOCATED BETWEEN THE SIXTH AND SEVENTH CROSS MEMBERS FROM THE FORWARD END AND THE TWO 19" LONG PIECES MARKED ④ WILL BE LOCATED BETWEEN THE SEVENTH AND EIGHTH CROSS MEMBERS FROM THE FORWARD END. SEE THE "PLAN VIEW OF 11-TON M989 HEMAT" ON PAGE 28 FOR LOCATION OF REINFORCEMENT PLATES.



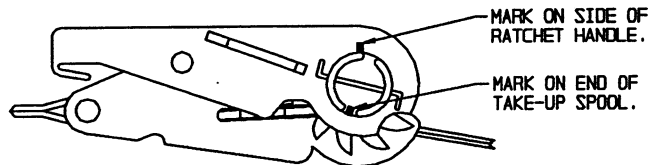
STEP 1

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.



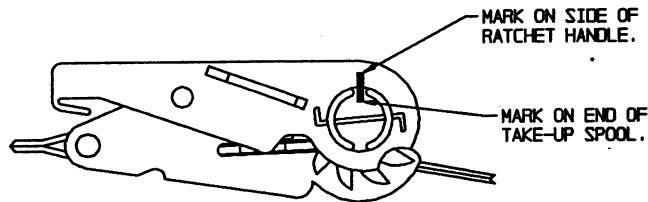
STEP 2

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.



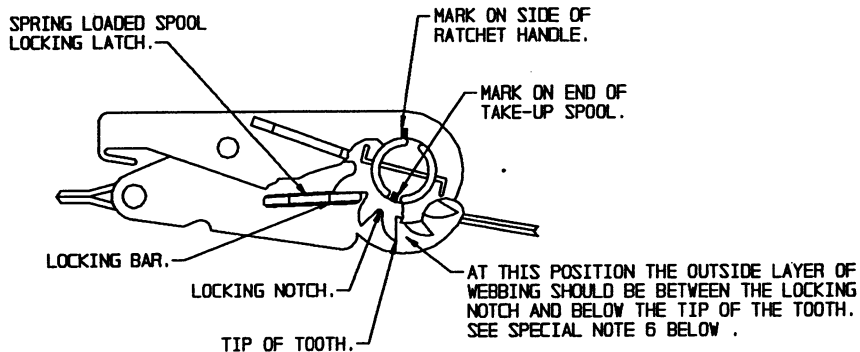
STEP 3

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:

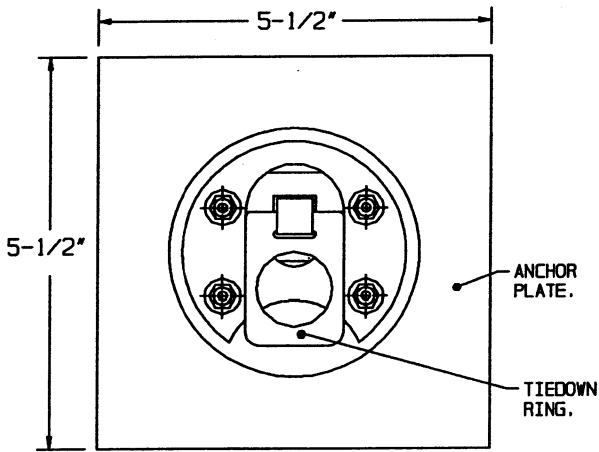
1. THE PURPOSE OF THE RATCHET DETAILS ON PAGE 30 AND THE DETAIL AND NOTES ON THIS PAGE ARE TO AUGMENT THE GUIDANCE SET FORTH WITHIN GENERAL NOTE "D" ON PAGE 2.
2. THE REQUIREMENTS FOR 1/2 BUT NOT MORE THAN 1-1/2 WRAPS OF STRAP ON THE TAKE-UP SPOOL OF THE TENSIONING RATCHET, AS SPECIFIED WITHIN GENERAL NOTE "D" ON PAGE 2, ACTUALLY MEANS 1/2 TO 1-1/2 WRAPS OF DOUBLE WEBBING, THE 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 30.
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 30. 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 30, AND "STEP 5" ABOVE.
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.

(SPECIAL NOTE 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 THE LOCKING EAR, OR SIMILAR DEVICE ON THE HANDLE, PREVENTS THE ACCIDENTAL WITHDRAWAL OF THE LOCKING LATCH. SEE "STEP 1" DETAIL ON PAGE 30. 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 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.

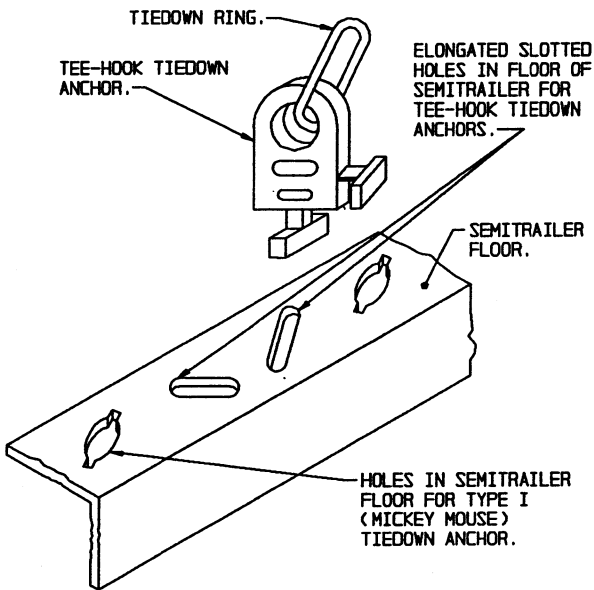
SPECIAL NOTES:

1. IF THE TACTICAL VEHICLES BEING USED ARE NOT EQUIPPED WITH THE 5,000 POUND UNIVERSAL TIEDOWN ANCHOR SHOWN AT LEFT, SEE TB 9-2300-280-30 FOR VEHICLE MODIFICATION PROCEDURES AND INSTALLATION OF THE TIEDOWN ANCHOR. WITH THE EXCEPTION OF THE HEAVY EXPANDED MOBILITY TACTICAL TRUCK (HEMTT), M977 AND/OR M985, WHICH HAS THE TIEDOWN ANCHORS INSTALLED IN THE FLOOR, THESE TIEDOWN ANCHORS ARE TO BE INSTALLED IN THE SIDEWALLS AND ENDWALLS OF CARGO TRUCKS AND CARGO TRAILERS. IF AN M127, 12-TON SEMITRAILER IS BEING USED, SEE INFORMATION IN TB 9-2300-280-30. THE M127 SEMITRAILER REQUIRES A DIFFERENT TYPE OF TIEDOWN ANCHOR.
2. THIS TIEDOWN ANCHOR IS RATED AT 5,000 POUNDS AND IS ONLY INSTALLED ON THE M872 SEMITRAILER. THERE ARE FIVE TIEDOWN ANCHOR LOCATIONS ON EACH SIDE OF THE M872 SEMITRAILER. THIS TIEDOWN ANCHOR IS POSITIONED BY INSERTING IT FROM THE TOP INTO ONE OF THE ELONGATED SLOTTED HOLES LOCATED IN THE SIDE RAILS OF THE SEMITRAILER. THIS TIEDOWN ANCHOR IS FURTHER IDENTIFIED AS NSN 2540-01-113-9285.
3. THIS TIEDOWN ANCHOR IS RATED AT 10,000 POUNDS AND IS INSTALLED ON THE M871 AND M872 SEMITRAILERS. IT IS COMMONLY REFERRED TO AS THE "MICKEY MOUSE" TIEDOWN ANCHOR. THERE ARE TEN LOCATIONS IN EACH SIDE RAIL OF THE M871 SEMITRAILER AND APPROXIMATELY TWENTY-EIGHT IN EACH SIDE RAIL OF THE M872 SEMITRAILER. FOR INSTALLATION OF THIS TIEDOWN ANCHOR, IT IS POSITIONED BY REACHING UNDER THE FLOOR OF THE SEMITRAILER, INSERTING IT UP THROUGH THE HOLE AND ROTATING IT INTO POSITION. THIS TIEDOWN ANCHOR IS FURTHER IDENTIFIED AS NSN 2540-01-112-1732.
4. THIS TIEDOWN ANCHOR IS RATED AT 10,000 POUNDS AND IS ONLY FOR USE ON THE M871 SEMITRAILER. IT IS COMMONLY REFERRED TO AS THE "BIG FOOT" TIEDOWN ANCHOR. THERE ARE TEN LOCATIONS IN EACH SIDE RAIL OF THE SEMITRAILER FOR INSTALLATION OF THIS TIEDOWN ANCHOR. IT HAS A SPRING/LOADED LOCKING DEVICE TO HOLD IT IN PLACE, IS INSERTED FROM THE TOP INTO A 1-3/4" DIAMETER HOLE, AND IT SWIVELS. THIS TIEDOWN IS FURTHER IDENTIFIED AS NSN 2540-01-117-3043.
5. THIS TIEDOWN ANCHOR IS RATED AT 10,000 POUNDS, IS NOT REMOVABLE AND IS ONLY INSTALLED ON THE M871 SEMITRAILER. THERE ARE FIVE IN EACH SIDE RAIL OF THE M871 SEMITRAILER AND THEY DO NOT SWIVEL.



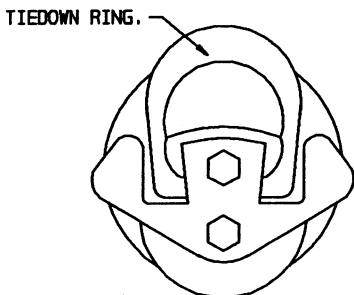
UNIVERSAL TIEDOWN ANCHOR (FRONT VIEW)

SEE SPECIAL NOTE 1.



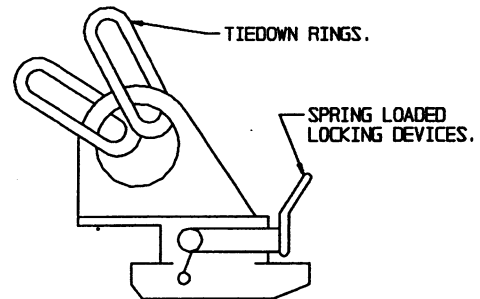
TEE-HOOK TIEDOWN ANCHOR (ISOMETRIC VIEW)

SEE SPECIAL NOTE 2.



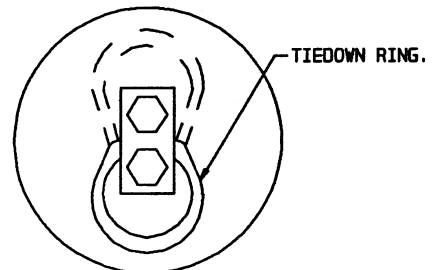
REMOVABLE TIEDOWN ANCHOR (TOP VIEW)

SEE SPECIAL NOTE 3.



REMOVABLE TIEDOWN ANCHOR (SIDE VIEW)

SEE SPECIAL NOTE 4.



FIXED TIEDOWN ANCHOR (TOP VIEW)

SEE SPECIAL NOTE 5.