

CHAPARRAL

LOADING, TIEDOWN, & UNLOADING PROCEDURES FOR SHIPMENT OF ORGANIZATIONAL MAINTENANCE SHOP SET, AN/TSM-95, AND/OR SUPPORT MAINTANANCE SHOP SET, AN/TSM-96, IN TACTICAL VEHICLES

THIS DRAWING IS APPLICABLE TO THE
FOLLOWING TACTICAL VEHICLES:

<u>VEHICLE</u>	<u>SHOWN ON PAGE (S)</u>
2 1/2 TON CARGO TRUCK-----	3,4
5 TON CARGO TRUCK-----	5
12 TON STAKE SEMITRAILER-----	6,7

CAUTION:
REFER TO GENERAL NOTES AND
PROCEDURES ON PAGE 2 PRIOR
TO OPERATIONS

<small>DRAFTSMAN</small> <i>WJL/cse</i>	<small>PROJ. ENG.</small> <i>C.S./New</i>	<small>AMSMI-XGCS</small> <i>W.C.</i>	<small>SUBMITTED</small> <i>W.B. Harding, Col.</i>
<small>CHECKER</small> <i>RRS/WCH</i>	<small>AMC ANNO-CTR</small> <i>John Boyd</i>	<small>AMSMI-SPRM</small> <i>MCG/SPP</i>	<small>COMMANDING OFFICER, SAVANNAH ARMY DEPOT</small>
REVISIONS			<small>APPROVED</small> <i>Andrew W. Heid</i>
			<small>ARMY MISSILE COMMAND</small>
			<small>APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL COMMAND</small>
			<i>Paul Klein</i>
			<small>U. S. ARMY MATERIEL COMMAND</small>
			30 JANUARY 1970
			<small>CLASS DIVISION DRAWING FILE</small>
			19 48 7562 GSE 17CH 1

DO NOT SCALE

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AMCR 740-13.
- B. THIS DRAWING COVERS PROCEDURES APPLICABLE TO THE TRANSPORT OF ORGANIZATIONAL MAINTENANCE EQUIPMENT AND/OR SUPPORT MAINTENANCE EQUIPMENT IN/ON TACTICAL 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.
- C. THESE PROCEDURES DEPICT THE APPLICATION OF WIRE ROPE CABLE TIEDOWN ASSEMBLIES AND WEB STRAP TIEDOWN ASSEMBLIES. PROCEDURES DEPICTING THE USE OF WIRE ROPE CABLES APPLY TO THE VEHICLES DESIGNATED HEREIN WHICH ARE MODIFIED IN ACCORDANCE WITH TB 750-9210. PROCEDURES DEPICTING THE USE OF WEB STRAPS APPLY TO THE VEHICLES DESIGNATED HEREIN, MODIFIED TO INCLUDE THE UNIVERSALLY APPLICABLE "TIEDOWN KIT" CONSISTING OF TIEDOWN FITTINGS IN CARGO BED AND WEB STRAP TIEDOWN ASSEMBLIES.
- D. THE LOAD, WHENEVER POSSIBLE, SHOULD BE CENTERED LATERALLY IN THE TRUCK OR ON THE TRAILER IN ORDER TO PROVIDE EQUAL ANGLE HOLD DOWN BY THE CABLES OR WEB STRAPS. LOCATE THE LADING LENGTHWISE IN/ON THE VEHICLE AS SHOWN TO PROVIDE FOR PROPER TIEDOWN.
- E. ALL WEB STRAP TIEDOWN ASSEMBLIES WILL BE SECURELY HOOKED INTO THE TIEDOWN FITTINGS AND FIRMLY TENSIONED. SCUFF SLEEVES PROVIDED ON WEB STRAP ASSEMBLIES WILL BE LOCATED TO PROVIDE A PAD WHERE STRAPS PASS OVER SHARP EDGES. EXERCISE CARE IN STRAP APPLICATION; AVOID TWISTS IN THE STRAPS AND INSURE A STRAIGHT LAY OF THE STRAP ON THE TAKE-UP SPOOL OF THE RATCHET WHEN TENSIONING. TIE BACK LOOSE ENDS OF THE STRAP. A TENSIONED STRAP MUST FORM AT LEAST ONE WRAP ON THE TAKE-UP SPOOL OF THE RATCHET. **CAUTION:** DO NOT HOOK MORE THAN ONE STRAP ASSEMBLY TO ANY ONE TIEDOWN FITTING.
- F. DETAILS OF THE SHOP SET, ORGANIZATIONAL MAINTENANCE:
- UNCRATED:
DIMENSIONS ----- 182" LONG X 83-1/2" WIDE X 87-1/2" HIGH.
GROSS WEIGHT ---- 6,500 POUNDS (APPROX).
- CRATED:
DIMENSIONS ----- 197-1/2" LONG X 90" WIDE X 95" HIGH.
GROSS WEIGHT ---- 8,785 POUNDS (APPROX).
- DETAILS OF THE SHOP SET, SUPPORT MAINTENANCE:
- UNCRATED:
DIMENSIONS ----- 182" LONG X 83-1/2" WIDE X 87-1/2" HIGH.
GROSS WEIGHT ---- 3,855 POUNDS (APPROX).
- CRATED:
DIMENSIONS ----- 197-1/2" LONG X 90" WIDE X 95" HIGH.
GROSS WEIGHT ---- 6,140 POUNDS (APPROX).
- G. IF THE SEMITRAILER SIDE RACKS ARE TO BE TRANSPORTED ON THE TRAILER, THEY WILL BE STACKED ON THE REARWARD END AND SECURED WITH A SUFFICIENT QUANTITY OF WEB STRAP TIEDOWN ASSEMBLIES TO PREVENT LOSS DURING TRANSPORT. IF THE BOWS AND CANVAS COVER ARE TO BE TRANSPORTED ON THE TRUCK AND THEY CANNOT BE POSITIONED OR STOWED IN THE NORMAL MANNER, THEY WILL BE LOADED WITHIN THE CARGO BODY AND SECURED WITH A SUFFICIENT QUANTITY OF WEB STRAP TIEDOWN ASSEMBLIES TO PREVENT THEIR LOSS OR DAMAGE TO THE LADING DURING TRANSPORT.
- H. ONLY THE CARGO BODIES OR BEDS OF THE TACTICAL VEHICLES HAVE BEEN SHOWN HEREIN, 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.
- J. WHEN ONE WEB STRAP TIEDOWN ASSEMBLY IS NOT LONG ENOUGH TO SPAN THE DISTANCE DEPICTED, TWO ASSEMBLIES MAY BE HOOKED TOGETHER TO GAIN NECESSARY LENGTH.
- K. THE LOAD CONFIGURATION DEPICTED ON PAGE 3 IS SPECIFICALLY FOR OPERATIONAL USE OF THE SHOP SET, ORGANIZATIONAL MAINTENANCE AND/OR SHOP SET, SUPPORT MAINTENANCE BY THE USING UNITS.

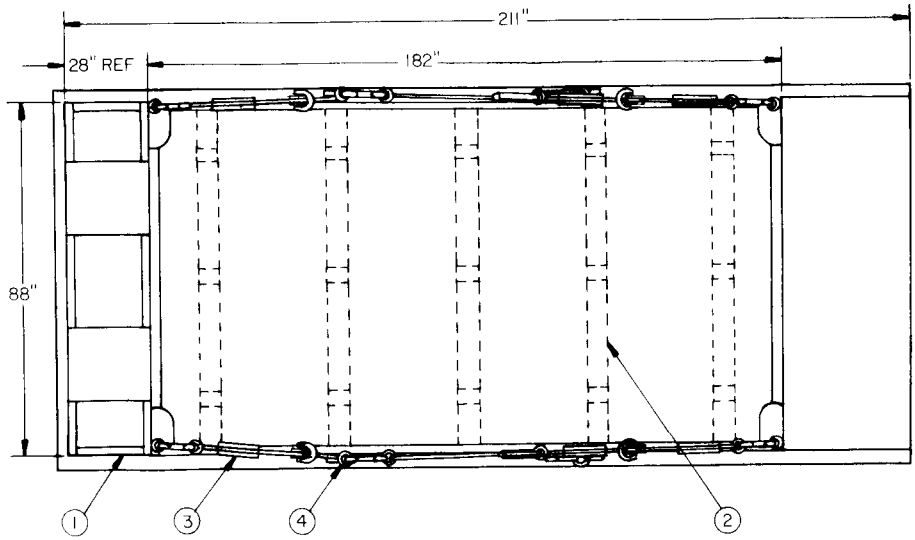
LOADING TIEDOWN, & UNLOADING PROCEDURES

LOADING AND TIEDOWN:

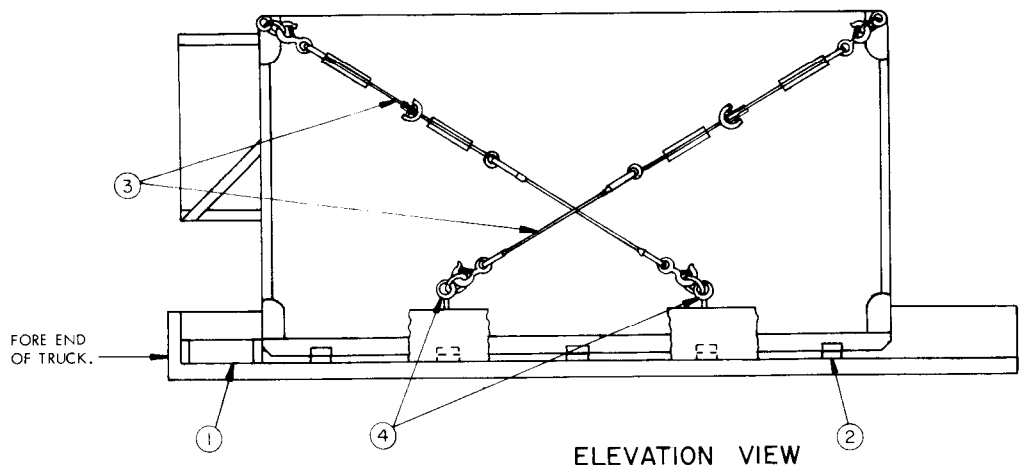
- STEP 1 - SET THE BRAKES ON THE TRANSPORT VEHICLE. FOR A TRUCK, OPEN THE TAIL GATE.
- STEP 2 - REMOVE THE CANVAS COVER AND BOWS FROM THE TRUCK OR THE SIDE RACKS FROM THE SEMITRAILER.
- STEP 3 - A. ITEM UNCRATED:
ATTACH THE HANDLING SLING TO THE LIFT POINTS ON THE SHOP SET, ORGANIZATIONAL MAINTENANCE AND/OR THE SHOP SET, SUPPORT MAINTENANCE.
- B. ITEM CRATED:
PROVIDE A TWO LEGGED BASKET SLING AND POSITION ONE LOOP UNDER EACH END OF THE CRATE IN THE 8" NOTCH OF THE CRATE SKIDS. DO NOT USE THE LIFT POINTS FOR HOISTING THE CRATED ITEM.
- STEP 4 - ATTACH THE HOOK OF THE HOISTING EQUIPMENT TO THE LIFTING RING OF THE HANDLING SLING AND CAREFULLY RAISE AND POSITION THE ITEM IN THE TRUCK OR ON THE TRAILER. FOR TIEDOWN WITH WEB STRAP ASSEMBLIES, LOCATE THE ITEM LENGTHWISE IN/ON THE VEHICLE AS SHOWN. FOR TIEDOWN WITH WIRE ROPE CABLE ASSEMBLIES, LOCATE THE ITEM LENGTHWISE IN THE TRUCK BED SO THAT THE ITEM TIEDOWN POINTS ARE CENTERED OVER THE "C" BRACKET OF THE CARGO BODY TO PROVIDE EQUAL ANGLE HOLD DOWN BY THE CABLES.
- STEP 5 - AFTER THE ITEM IS LOWERED INTO PROPER POSITION ON THE VEHICLE, DETACH THE SLING. IF THE ITEM IS CRATED, ALSO REMOVE THE BASKET SLING. POSITION AND TENSION THE WIRE ROPE CABLE TIEDOWN ASSEMBLIES OR THE WEB STRAP TIEDOWN ASSEMBLIES AS APPLICABLE. SEE PAGE 3 FOR THE APPLICATION OF WIRE ROPE CABLE ASSEMBLIES AND THE PLACEMENT OF THE FORWARD BLOCKING. FOR THE APPLICATION OF WEB STRAPS, SEE GENERAL NOTE "E" TO THE LEFT, AND THE PROCEDURES ON PAGES 4 THRU 7.
- STEP 6 - FOR A TRUCK, CLOSE AND SECURE THE TAIL GATE. SEE GENERAL NOTE "G" TO THE LEFT.

UNLOADING:

- STEP 1 - SET THE BRAKES ON THE TRANSPORT VEHICLE. FOR A TRUCK, OPEN THE TAIL GATE.
- STEP 2 - REMOVE THE CANVAS COVER AND BOWS FROM THE TRUCK OR THE SIDE RACKS FROM THE SEMITRAILER. REMOVE THE WIRE ROPE CABLE TIEDOWN ASSEMBLIES OR WEB STRAP TIEDOWN ASSEMBLIES AS APPLICABLE.
- STEP 3 - A. ITEM UNCRATED:
ATTACH THE HANDLING SLING TO THE LIFT POINTS ON THE SHOP SET, OPERATIONS MAINTENANCE AND/OR THE SHOP SET, SUPPORT MAINTENANCE.
- B. ITEM CRATED:
PROVIDE A TWO LEGGED BASKET SLING AND POSITION ONE LOOP UNDER EACH END OF THE CRATE IN THE 8" NOTCH OF THE CRATE SKIDS. DO NOT USE THE ITEM LIFT POINTS FOR HOISTING THE CRATED ITEM.
- STEP 4 - ATTACH THE HOOK OF THE HOISTING EQUIPMENT TO THE LIFTING RINGS OF THE HANDLING SLING. RAISE THE ITEM SUFFICIENTLY TO CLEAR OBSTACLES, SWING CLEAR OF THE VEHICLE AND LOWER TO THE GROUND OR PLATFORM.
- STEP 5 - REMOVE THE HANDLING AND EQUIPMENT, AND STOW THE GEAR.
- STEP 6 - FOR A TRUCK, REMOVE THE FORWARD BLOCKING IF APPLICABLE, CLOSE AND SECURE THE TAIL GATE. REPLACE THE BOWS AND CANVAS COVER ON THE TRUCK OR THE SIDE RACKS ON THE SEMITRAILER, IF APPLICABLE.



PLAN VIEW



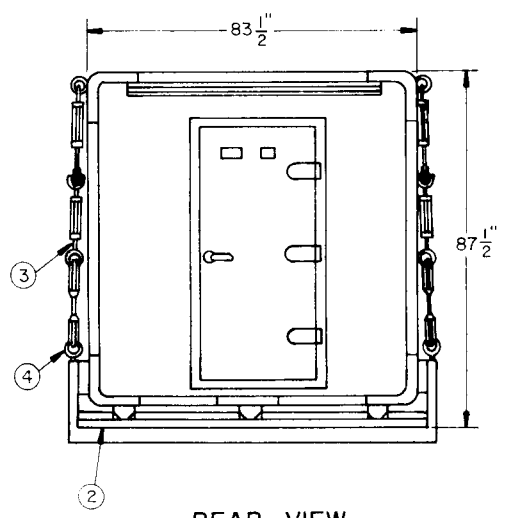
ELEVATION VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD).
SEE DETAIL ON PAGE 8. USE OF FORWARD
BLOCKING ASSEMBLY IS OPTIONAL.
- ② CROSS BRACE ASSEMBLY, 2" X 6" X 7'-4" (5 REQD).
(DOUBLED). SEE PLAN VIEW. SEE "NOTE" BELOW.
- ③ LIFTING SLING/TIEDOWN ASSEMBLIES (4 REQD). SEE "NOTE" BELOW.
- ④ RING/EYE BOLT ANCHOR ASSEMBLY (4 REQD). SEE "NOTE" BELOW.

NOTE:

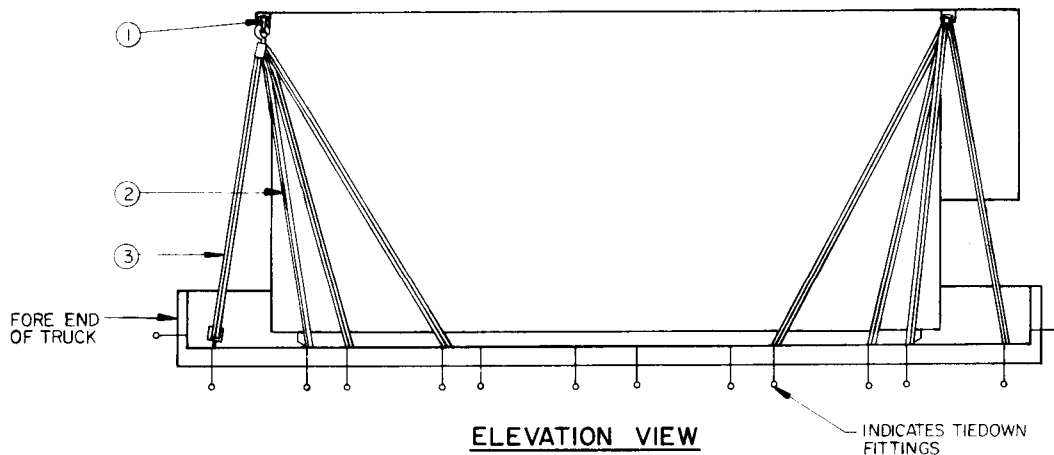
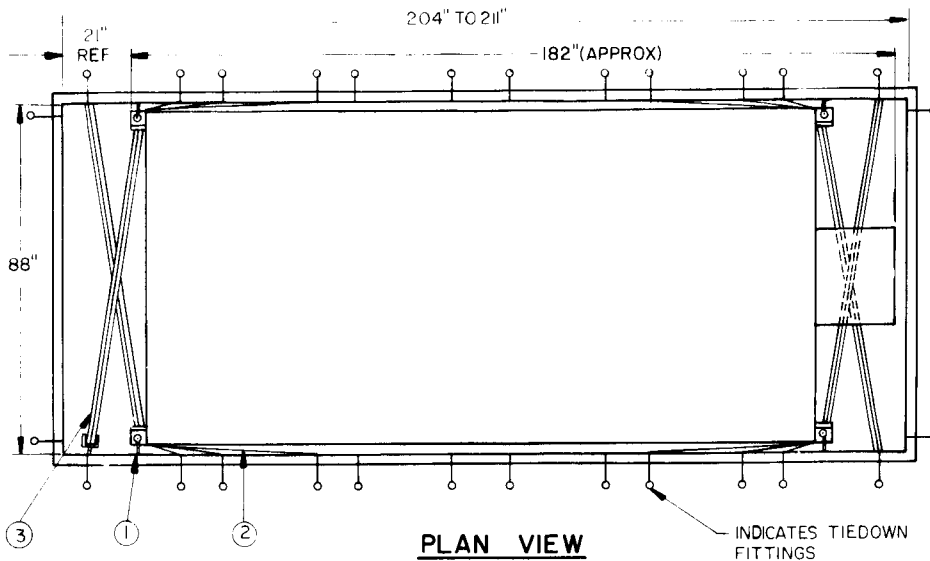
REFERENCE IS MADE TO TB 750-9210 WHICH SPECIFIES METHOD OF FABRICATING THE WOODEN CROSS BRACES (PIECES MARKED ②), AND GUIDANCE FOR SECURING AND INSTALLING PIECES MARKED ③ AND ④ .



REAR VIEW

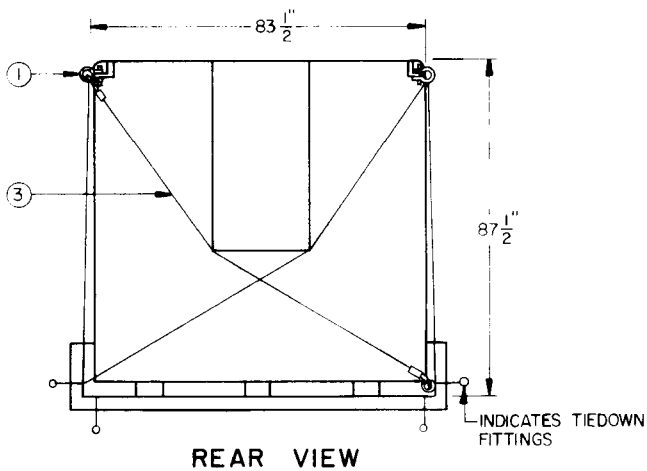
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
SHOP SET, ORGANIZATIONAL	1	6,500 LBS
SHOP SET, SUPPORT MAINTENANCE	1	3,855 LBS



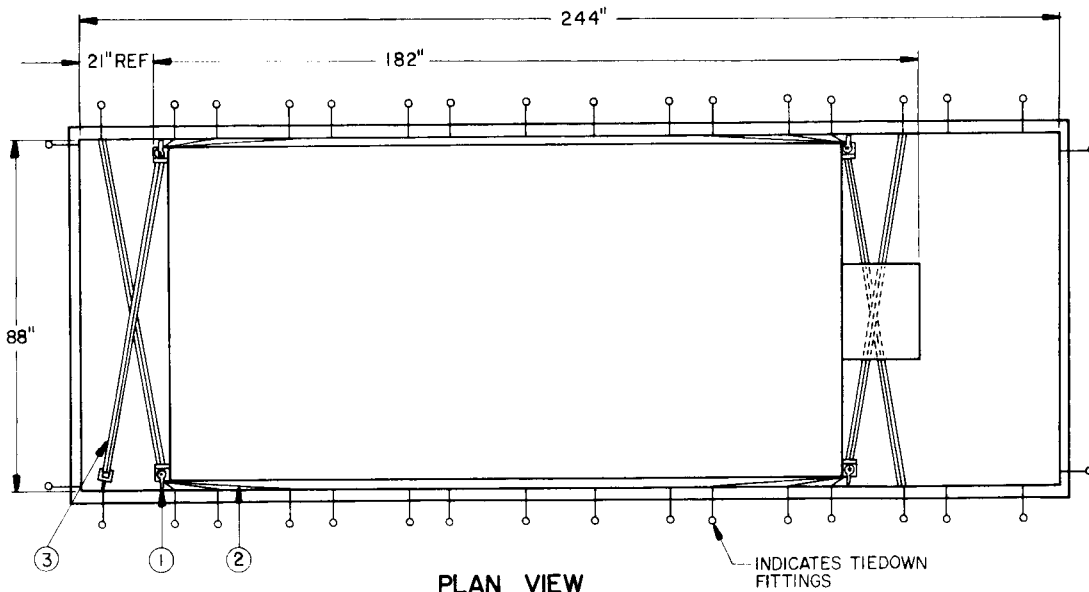
KEY NUMBERS

- ① ANCHOR SHACKLE, SCREW PIN TYPE, SIZE 5/8", PIN DIAMETER 3/4" (4 REQD). INSTALL IN EACH TIEDOWN POINT AS SHOWN.
- ② WEB STRAP TIEDOWN ASSEMBLY (12 REQD). INSTALL TO EXTEND FROM THE ANCHOR SHACKLE IN THE ITEM TIEDOWN POINT TO THE TIEDOWN FITTING ON THE TRUCK.
- ③ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL TO EXTEND FROM THE ANCHOR SHACKLE IN THE ITEM TIEDOWN POINT TO THE TIEDOWN FITTING ON THE FAR SIDE OF THE TRUCK BED - TO PREVENT LATERAL SHIFT OF THE ITEM.



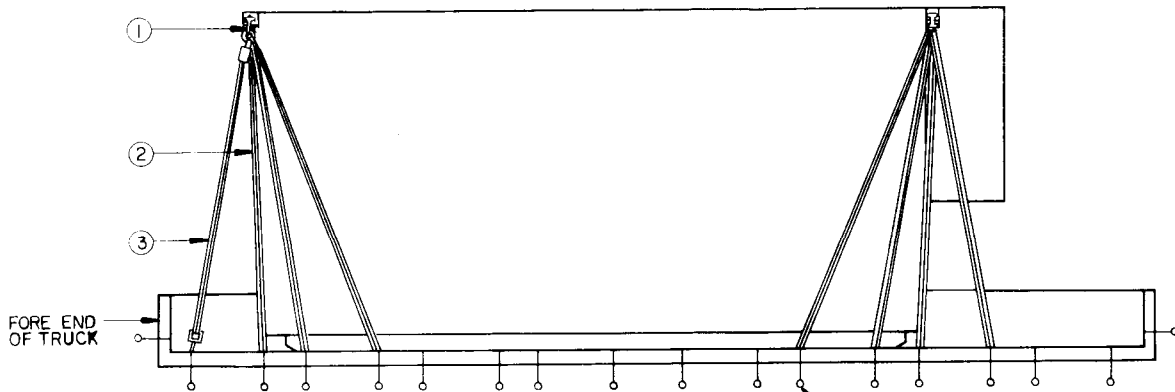
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
SHOP SET, ORGANIZATIONAL MAINTENANCE	1	6,500 LBS
SHOP SET, SUPPORT MAINTENANCE	1	3,855 LBS



PLAN VIEW

INDICATES TIEDOWN FITTINGS



ELEVATION VIEW

INDICATES TIEDOWN FITTINGS

KEY NUMBERS

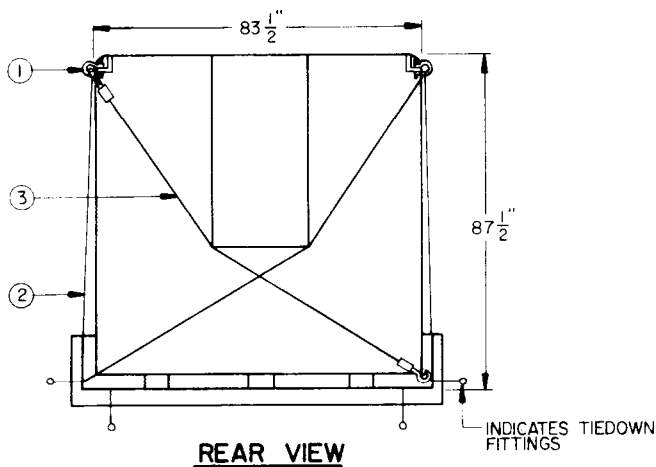
- ① ANCHOR SHACKLE, SCREW PIN TYPE, SIZE 5/8" PIN DIAMETER 3/4" (4 REQD). INSTALL IN EACH TIEDOWN POINT AS SHOWN.
- ② WEB STRAP TIEDOWN ASSEMBLY (12 REQD). INSTALL TO EXTEND FROM THE ANCHOR SHACKLE IN THE ITEM TIEDOWN FITTING ON THE TRUCK.
- ③ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL TO EXTEND FROM THE ANCHOR SHACKLE IN THE ITEM TIEDOWN POINT TO THE TIEDOWN FITTING ON THE FAR SIDE OF THE TRUCK BED - TO PREVENT LATERAL SHIFT OF THE ITEM.

NOTE

IF WIRE ROPE CABLE AND FITTINGS ARE AVAILABLE FOR USE AS TIEDOWN, PROCEDURES AS SHOWN ON PAGE 3 MAY BE USED WITH THIS VEHICLE IN LIEU OF WEB STRAP TIEDOWN PROCEDURES.

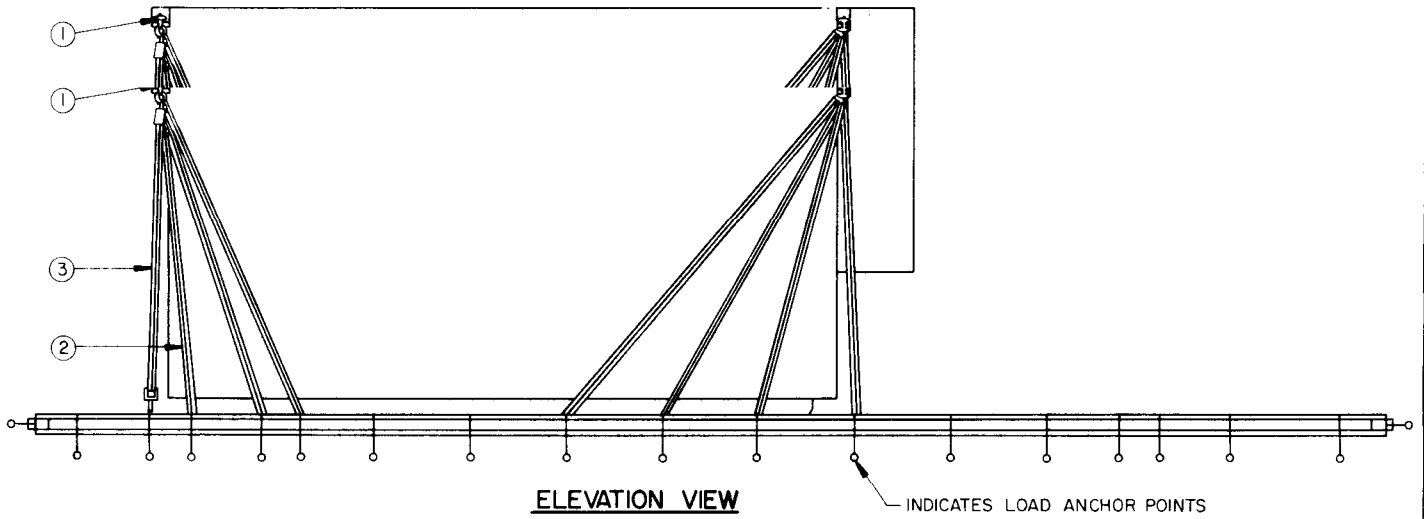
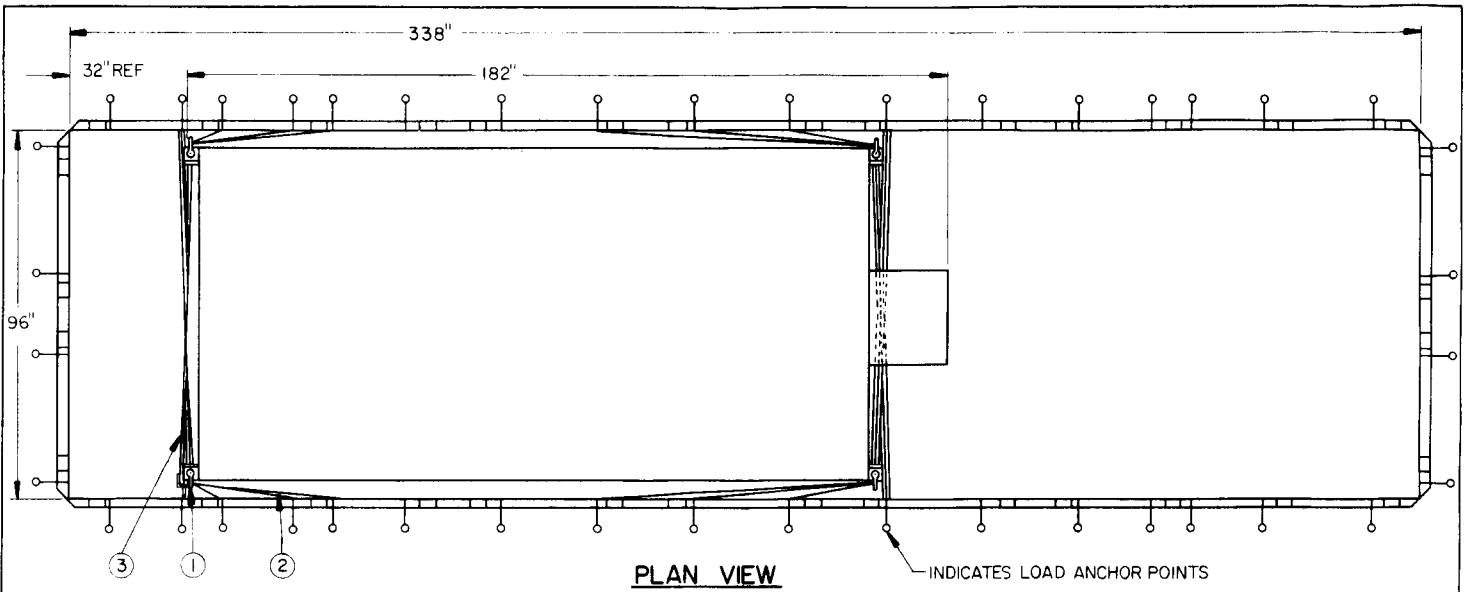
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
SHOP SET, ORGANIZATIONAL MAINTENANCE	1	6,500 LBS
SHOP SET, SUPPORT MAINTENANCE	1	3,855 LBS



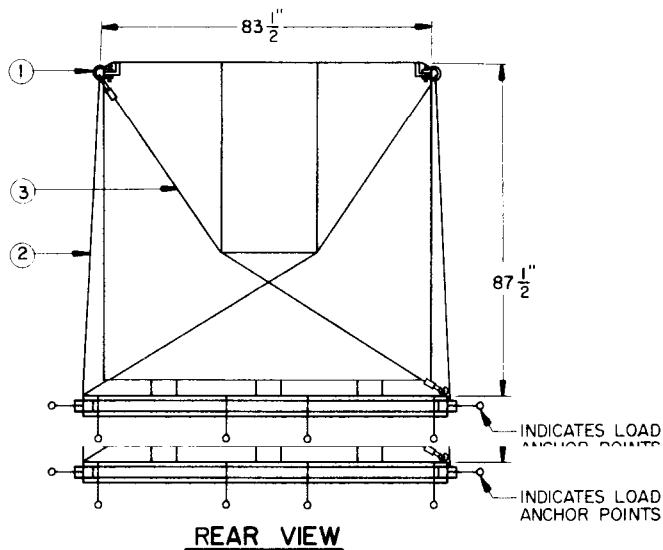
REAR VIEW

INDICATES TIEDOWN FITTINGS



KEY NUMBERS

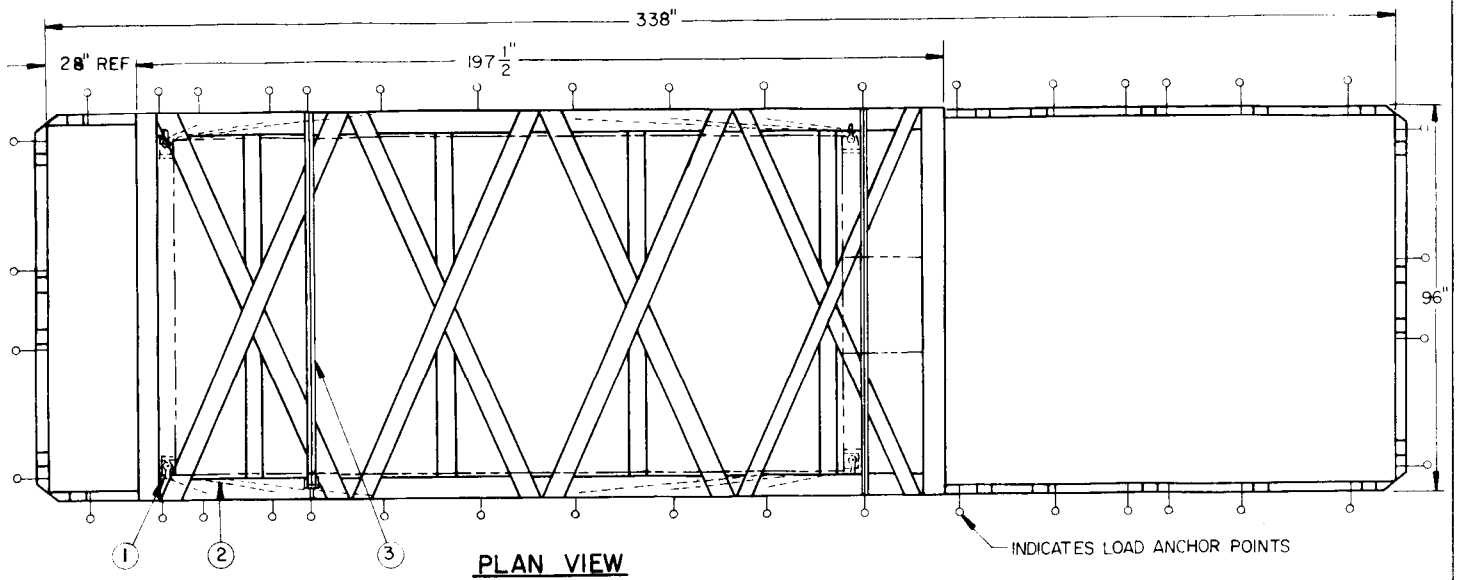
- ① ANCHOR SHACKLE, SCREW PIN TYPE, SIZE 5/8", PIN DIAMETER 3/4" (4 REQD). INSTALL IN EACH TIEDOWN POINT AS SHOWN.
- ② WEB STRAP TIEDOWN ASSEMBLY (12 REQD). INSTALL TO EXTEND FROM THE ANCHOR SHACKLE IN THE ITEM TIEDOWN POINT TO THE LOAD ANCHOR POINT ON THE TRAILER.
- ③ WEB STRAP TIEDOWN ASSEMBLY (4 REQD). INSTALL TO EXTEND FROM THE ANCHOR SHACKLE IN THE ITEM TIEDOWN POINT TO THE LOAD ANCHOR POINT ON THE FAR SIDE OF THE TRAILER - TO PREVENT LATERAL SHIFT OF THE ITEM.



LOAD AS SHOWN

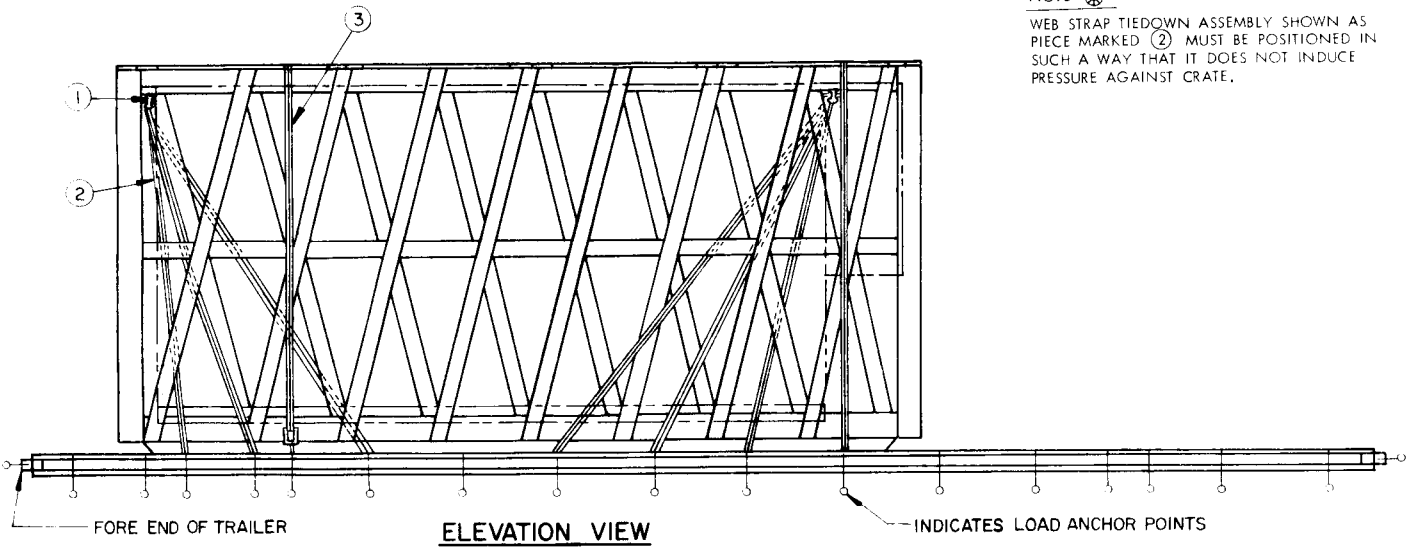
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
SHOP SET, ORGANIZATIONAL MAINTENANCE	1	6,500 LBS
SHOP SET, SUPPORT MAINTENANCE	1	3,855 LBS



NOTE ⚠ :

WEB STRAP TIEDOWN ASSEMBLY SHOWN AS PIECE MARKED ② MUST BE POSITIONED IN SUCH A WAY THAT IT DOES NOT INDUCE PRESSURE AGAINST CRATE.

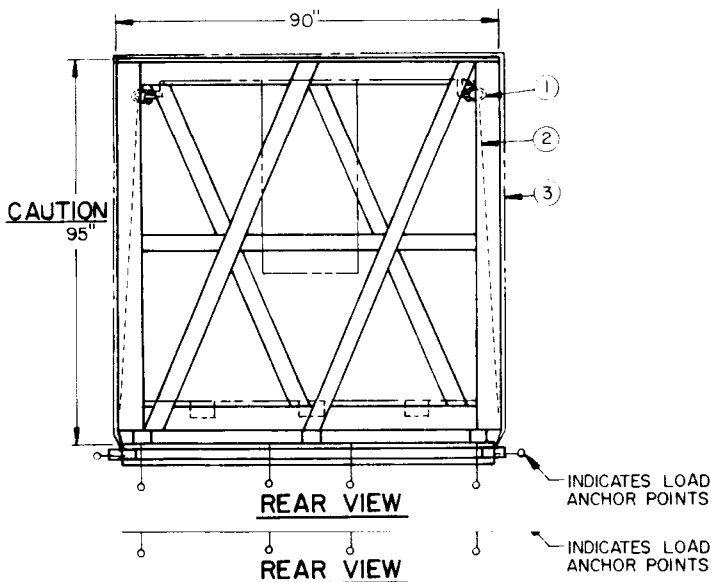


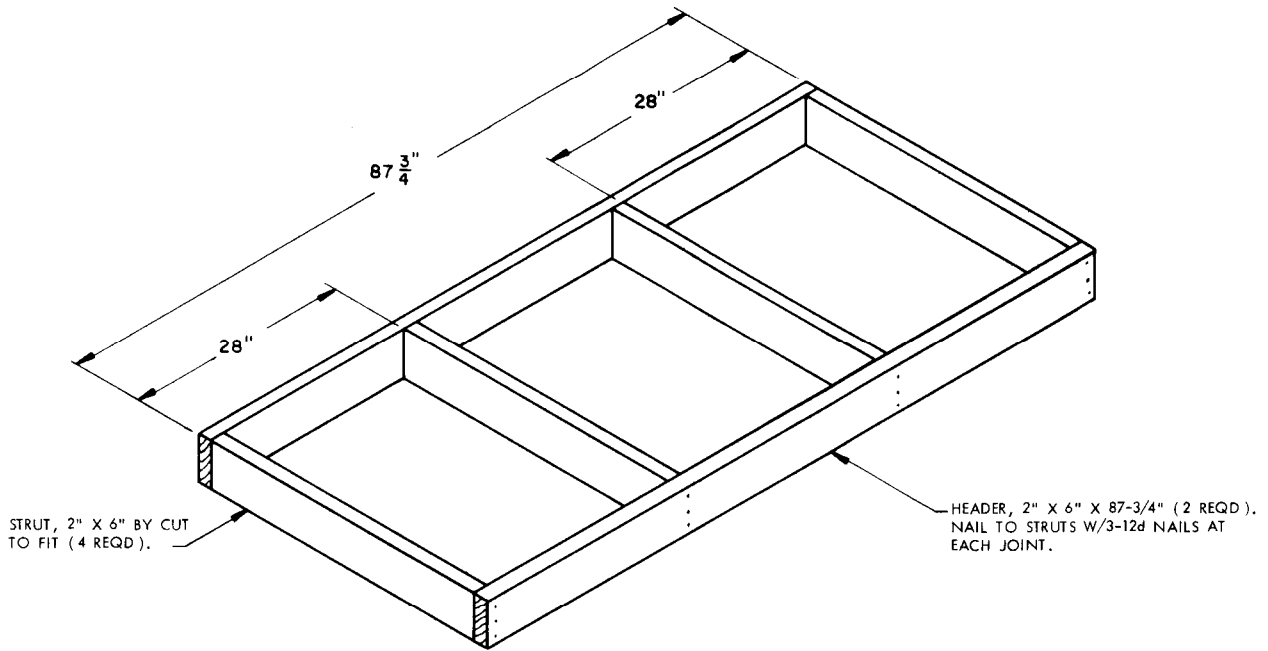
KEY NUMBERS

- ① ANCHOR SHACKLE, SCREW PIN TYPE, SIZE 5/8", PIN DIAMETER 3/4" (4 REQD). INSTALL IN EACH TIEDOWN POINT AS SHOWN.
- ② WEB STRAP TIEDOWN ASSEMBLY (12 REQD). INSTALL TO EXTEND FROM THE ANCHOR SHACKLE IN THE ITEM TIEDOWN POINT TO THE LOAD ANCHOR POINT ON THE TRAILER. SEE "NOTE ⚠".
- ③ WEB STRAP TIEDOWN ASSEMBLY (2 REQD). POSITION AS SHOWN FROM THE LOAD ANCHOR POINT ON THE TRAILER, OVER THE TOP OF THE CRATE, TO THE LOAD ANCHOR POINT ON THE OTHER SIDE OF THE TRAILER.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
SHOP SET, ORGANIZATIONAL MAINTENANCE (CRATED)	1	8,785 LBS
SHOP SET, SUPPORT MAINTENANCE (CRATED)	1	6,140 LBS
SHOP SET, SUPPORT MAINTENANCE (CRATED)	1	6,140 LBS





FORWARD BLOCKING ASSEMBLY

TO BE INSTALLED BETWEEN ORGANIZATIONAL MAINTENANCE SHOP SET AND/OR SUPPORT MAINTENANCE SHOP SET, AND FRONT END OF TRANSPORTING VEHICLE FOR PROTECTION OF DRIVER. USE OF THIS ASSEMBLY IS OPTIONAL.