

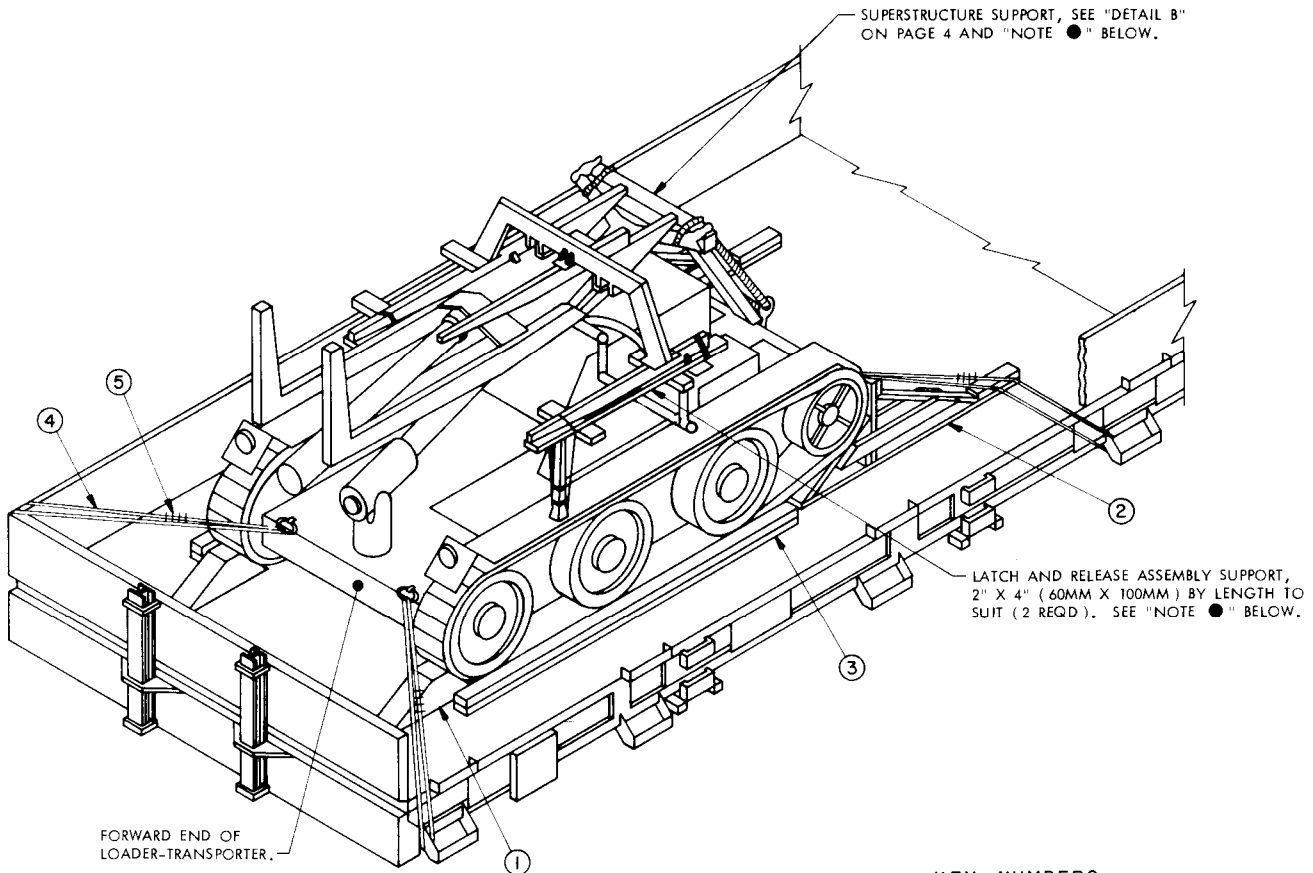
APPROVED BY
 MOVEMENTS CONTROL AGENCY,
 U. S. ARMY TRANSPORTATION
 COMMAND, EUROPE
 SIGNED *[Signature]*
 DATE *5/16/73* T C CMDG

HAWK

LOADING AND BRACING ON GERMAN RAILCAR OF LOADER-TRANSPORTER, XM501E3

REVISIONS				DRAFTSMAN	PROJ ENG
				<i>WCR/mca</i>	<i>[Signature]</i>
				CHECKER <i>RH</i>	LOG ENGRG OFFICE <i>[Signature]</i> AMSM1-SP
				APPROVED <i>[Signature]</i> C. A. Baber	
				<i>Wesley P. Gilleland</i> APPROVED BY ORDER OF COMMANDING GENERAL U. S. ARMY MATERIEL COMMAND <i>[Signature]</i> USAMC AMMO CENTER	
				U. S. ARMY MATERIEL COMMAND	
				FEBRUARY 1973	
				CLASS	DIVISION
				19	48
				DRAWING	FILE
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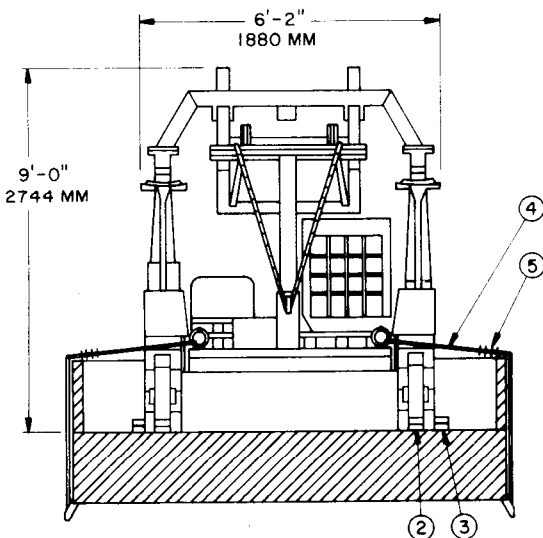
DO NOT SCALE



ISOMETRIC VIEW

KEY NUMBERS

- ① CHOCK BLOCK (2 REQD). SEE THE DETAIL ON PAGE 4. LOCATE THE 45° END OF A BLOCK AGAINST A WHEEL. NAIL THRU HEEL OF BLOCK W/3-40d AND 2-60d NAILS. TOENAIL TO CAR FLOOR W/2-40d NAILS ON EACH SIDE.
- ② REAR BLOCKING (2 REQD). SEE "DETAIL A" ON PAGE 4.
- ③ SIDE BLOCKING, 2" X 4" X 8'-0" (60MM X 100MM X 2438MM) (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE CAR FLOOR W/1-16d NAIL EVERY 8". NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE GENERAL NOTE "F".
- ④ STEEL WIRE ROPE, 3/8" DIAMETER, 6.56 TONS (4 REQD). INSTALL AS SHOWN TO FORM A COMPLETE LOOP FROM TIE DOWN FACILITY ON RAILCAR THRU LADING TIE DOWN DEVICE AND BACK TO RAILCAR TIE DOWN FACILITY. SEE GENERAL NOTES "H" AND "J".
- ⑤ CLIP, SIZE 3/8" (16 REQD). USE FOUR (4) PER CABLE JOINT.

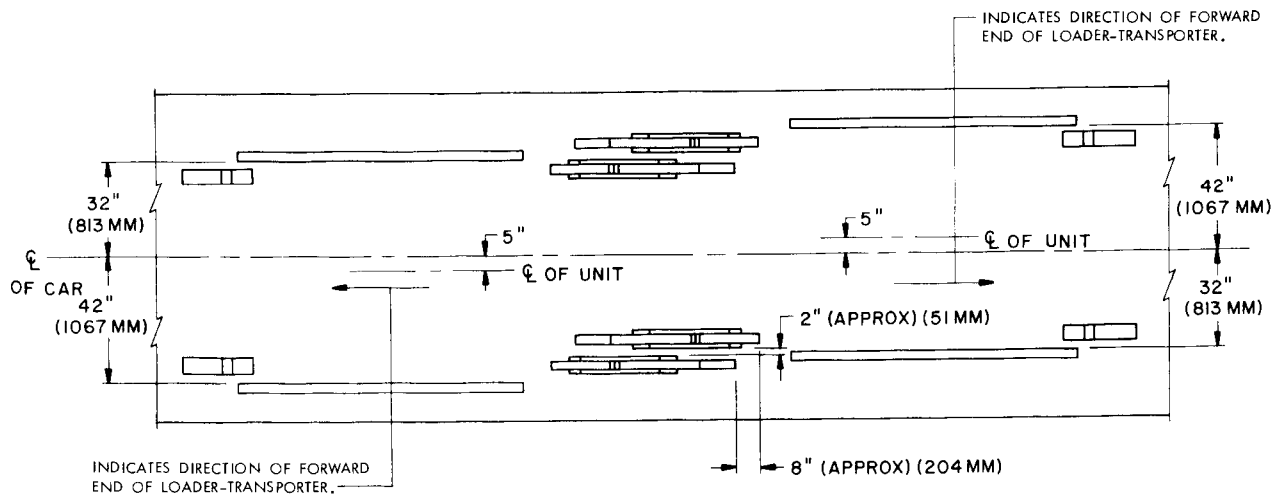


REAR VIEW

BILL OF MATERIAL (SEE "NOTE ●")		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	72	48
6" X 8"	3	12
NAILS	NO. REQD	POUNDS
12d (3-1/4")	78	1-1/4
16d (3-1/2")	68	1-1/2
20d (4")	6	1/4
40d (5")	14	1
60d (6")	4	1/2
ROPE, STEEL WIRE, 3/8" DIA. ----- 68' REQD -----		17 LBS
CLIP, 3/8" ----- 16 REQD -----		7 LBS

NOTE ●:

PREPARATION FOR OUTLOADING DICTATES THAT THE SUPERSTRUCTURE BE TURNED, COLLAPSED AND SECURED TO SUPERSTRUCTURE SUPPORT (DETAIL B) AND REAR CENTER SUPPORT USING TWISTED WIRE AS SHOWN. LATCH AND RELEASE ASSEMBLY MUST BE DISCONNECTED AND SECURED TO THE OUTSIDE MISSILE SUPPORT PADS USING 2" X 4" (60MM X 100MM) BY LENGTH TO SUIT AND STEEL STRAPPING AS SHOWN. SUPERSTRUCTURE SUPPORT (DETAIL B) AND 2" X 4" (60MM X 100MM) DUNNAGE ARE NOT INCLUDED IN THE BILL OF MATERIAL.



SPECIAL PLAN VIEW

(THIS VIEW DEPICTS A STAGGERED LOADING PATTERN THAT MAY BE USED FOR A TWO (2) UNIT LOAD ON A RLMP 700 CAR. PREPOSITIONING OF DUNNAGE IS NOT NECESSARY .

LIST OF RAILCARS THAT MAY BE USED FOR SHIPMENTS			
RAILCARS	NO. OF ITEMS	TOTAL WEIGHT OF ITEMS	
* KLMS ----- 440	2	10,500 LBS (4764 KG)	
* KLM ----- 505	2	10,500 LBS (4764 KG)	
* KLM ----- 506	2	10,500 LBS (4764 KG)	
* KBS ---- 442/443	2	10,500 LBS (4764 KG)	
* KLS ---- 442/443	2	10,500 LBS (4764 KG)	
* KP ----- 471	2	10,500 LBS (4764 KG)	
* * RLMP ----- 700	2	10,500 LBS (4764 KG)	
RKMP ----- 653	3	15,750 LBS (7146 KG)	
RMM(PIS) --- 661	2	10,500 LBS (4764 KG)	
RMMS ----- 663	2	10,500 LBS (4764 KG)	
RP ----- 668/670	4	21,000 LBS (9528 KG)	
R ----- 672	4	21,000 LBS (9528 KG)	
RS ----- 680/681 683/684	4	21,000 LBS (9528 KG)	
SAS ----- 710	3	15,750 LBS (7146 KG)	

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AMCR 740-13.
- B. THE OUTLOADING PROCEDURES SHOWN HEREIN ARE APPLICABLE TO GERMAN RAILCARS AND OTHER FOREIGN RAILCARS OF SIMILAR DESIGN AND CONSTRUCTION.
- C. THE LOAD AS SHOWN ON PAGE 2 IS BASED ON GERMAN RAILCARS (KBS 442/443 AND KLS 442/443) 41'-0-7/8" (12500MM) LONG BY 9'-0-5/64" (2770MM) WIDE WITH 18" (457MM) HIGH CAR SIDES. ADDITIONAL UNITS OR OTHER ITEMS MAY BE LOADED ON THE CAR, WITH THE VIEW TOWARD FULL UTILIZATION OF CARRIER EQUIPMENT. A TWO (2) UNIT LOAD MAY BE LOADED ON A RLMP TYPE RAILCAR BY USING THE PROCEDURES SHOWN IN THE SPECIAL PLAN VIEW. THE LOADER-TRANSPORTERS WILL BE LOADED ON THE CAR IN A STAGGERED PATTERN WITH THE FORWARD ENDS OF EACH UNIT FACING IN OPPOSITE DIRECTIONS. THESE PROCEDURES MAY ALSO BE USED ON OTHER TYPE CARS WHICH HAVE ADEQUATE WIDTH.
- D. LADING DATA:

DIMENSIONS ----- 12'-6" (3810MM) LONG BY 6'-2" (1880MM) WIDE BY 9'-0" (2744MM) HIGH.

GROSS WEIGHT --- 5250 POUNDS (APPROX) (2382 KG).

- E. REMOVE ALL POSTS FROM THE SIDES OF THE CAR AND PLACE IN RACKS UNDER THE CAR.
- F. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- G. ALL HAND BRAKES ON VEHICLE MUST BE "SET" WITH HAND LEVERS WIRE TIED OR BLOCKED, AND GEAR SHIFT LEVERS OF MOTOR VEHICLES EQUIPPED WITH CONVENTIONAL OR AUTOMATIC TRANSMISSIONS MUST BE PLACED AND WIRE TIED IN NEUTRAL POSITION.
- H. CAUTION: DURING WIRE ROPE INSTALLATION AVOID CONTACT WITH ALL ELECTRICAL WIRING, VEHICLE CONTROLS AND OTHER APPURTENANCES.
- J. WIRE ROPE CABLE MUST BE TENSIONED SUFFICIENTLY TO CAUSE SLIGHTLY VEHICLE BODY DEPRESSION. TENSIONING CAN BE ACCOMPLISHED BY EMPLOYING TWO (2) CABLE "GRIPPERS" AND AN APPLICABLE SIZED "COME-A-LONG" TYPE MECHANICAL HOIST.

* INDICATES THE PREFERRED CARS TO BE USED FOR SHIPMENT OF THE SPECIFIED ITEM. OTHER LISTED CARS CAN BE USED IF PREFERRED CARS ARE NOT AVAILABLE. ALSO, OTHER TYPES OF RAILCARS CAN BE USED, PROVIDING THESE OTHER CARS ARE PROPERLY EQUIPPED FOR THE APPLICATION OF THE PRESCRIBED LOAD-SECURING BLOCKING AND TIE DOWN MATERIALS IN ACCORDANCE WITH THE SPECIFIED METHODS. MINOR DEVIATIONS FROM THE LOCATIONS SHOWN IN THE LOAD VIEWS FOR INSTALLING BLOCKING AND TIE DOWN COMPONENTS ON A CAR ARE PERMITTED, HOWEVER, THE INTENT OF THE SPECIFIED BLOCKING AND TIE DOWN PROCEDURES MUST BE ACHIEVED.

* * TWO (2) ITEMS MAY BE LOADED ON A RLMP-700 CAR BY APPLYING THE PROCEDURES IDENTIFIED IN THE "SPECIAL PLAN VIEW" ABOVE AND GENERAL NOTE "C" AT THE RIGHT.

MATERIAL SPECIFICATIONS

LUMBER : DOUGLAS FIR OR COMPARABLE LUMBER WITH STRAIGHT GRAIN AND FREE OF MATERIAL DEFECTS. REF: FED SPEC MM-L-751.

NAILS - : COMMON, CEMENT COATED OR CHEMICALLY ETCHED. REF: FED SPEC FF-N-105. ALT: ANNULAR-RING TYPE NAIL OF SAME SIZE.

ROPE -- : STEEL, WIRE, PLAIN, PREFORMED, REGULAR LAY, 6.56 TONS, 6 X 19, FLEXIBLE IWRC, MACWHYTE WIRE ROPE CO. (OR EQUAL). REF: FED SPEC RR-W-410.

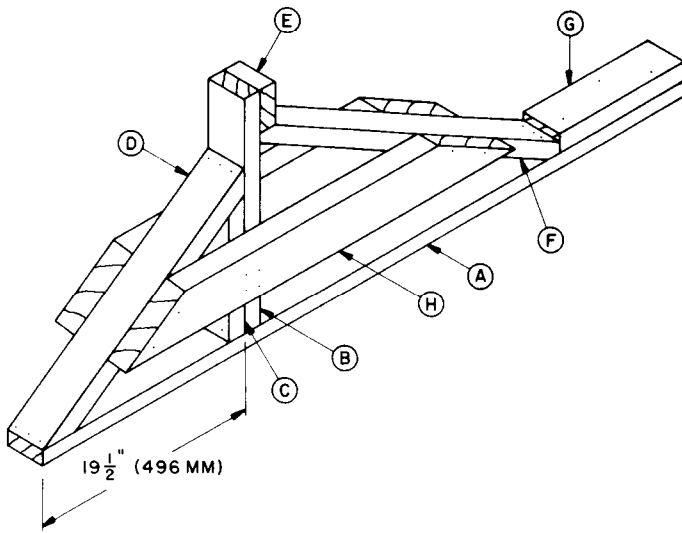
CLIPS -- : "U" BOLT, CROSBY, HEAVY DUTY (OR EQUAL).

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
LOADER-TRANSPORTER	1	5,250 LBS
DUNNAGE		178 LBS
TOTAL WEIGHT		5,428 LBS (2462 KG)

KEY LETTERS

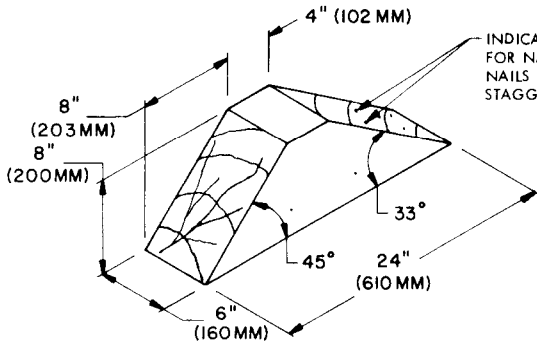
- (A) BACKUP, 2" X 4" X 62" (60MM X 100MM X 1575MM) (1 REQD). NAIL TO THE CAR FLOOR W/1-16d NAIL EVERY 6". SEE "NOTE 1" BELOW.
- (B) UPRIGHT, 2" X 4" X 19-1/2" (60MM X 100MM X 496MM) (1 REQD). TOENAIL TO PIECE MARKED (A) W/4-12d NAILS.
- (C) SUPPORT BLOCK, 2" X 4" X 11-1/2" (60MM X 100MM X 292MM) (1 REQD). BEVEL ONE END. NAIL TO PIECE MARKED (B) W/4-12d NAILS.
- (D) FRONT DIAGONAL, 2" X 4" X 25" (60MM X 100MM X 635MM) (1 REQD). BEVEL EACH END. TOENAIL TO PIECES MARKED (A) AND (B) W/3-12d NAILS AT EACH END.
- (E) STOP BLOCK, 2" X 4" X 4" (60MM X 100MM X 102MM) (1 REQD). NAIL TO PIECE MARKED (B) W/3-12d NAILS.
- (F) REAR DIAGONAL, 2" X 4" X 33-1/4" (60MM X 100MM X 845MM) (1 REQD). DOUBLE BEVEL EACH END. TOENAIL TO PIECES MARKED (A) AND (B) W/3-12d NAILS AT EACH END.
- (G) BACK-UP CLEAT, 2" X 4" X 12" (60MM X 100MM X 305MM) (1 REQD). NAIL TO PIECE MARKED (A) W/3-20d NAILS.
- (H) BRACE, 2" X 4" X 36-1/2" (60MM X 100MM X 928MM) (2 REQD). NAIL TO PIECES MARKED (B), (C), (D), AND (F) W/2-12d NAILS AT EACH JOINT.



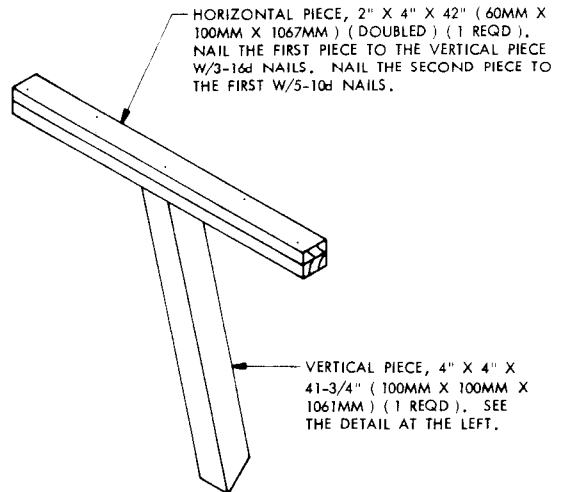
DETAIL A

NOTE 1:

NAIL PIECE MARKED (A) TO THE CAR FLOOR AFTER ASSEMBLING PIECES MARKED (A) THRU (E).

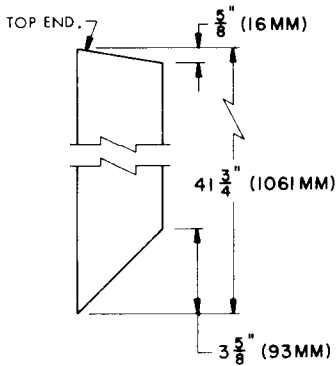


CHOCK BLOCK



DETAIL B

SEE "NOTE 1" ON PAGE 2.



VERTICAL PIECE