

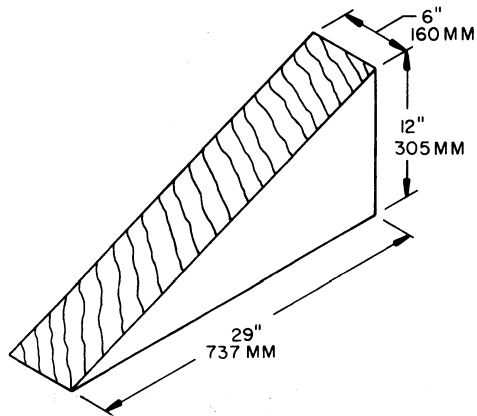
APPROVED BY
 MOVEMENTS CONTROL AGENCY,
 U. S. ARMY TRANSPORTATION
 COMMAND, EUROPE
 SIGNED *E. O. R...*
 T C CMDG
 DATE 2 Jun 70

LANCE

LOADING & BRACING ON GERMAN RAILCAR OF LOADER-TRANSPORTER, GUIDED MISSILE, XM688E1

DRAFTER JPH	PROJ. ENG. C. F. / <i>Hand</i>	AMCPM-ICSM C. F. / <i>Hand</i>	SUBMITTED
CHECKER TAS / GSE	AMC AMMO CTR John Boyd	AMSM - SF 2/29/70	<i>W. B. Harding, Col.</i> COMMANDING OFFICER, SAVANNAH ARMY DEPOT
REVISIONS			APPROVED
1	JUN 72	<i>Hand</i>	<i>Andrew W. Heid</i> ARMY MISSILE COMMAND
			APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL COMMAND
			<i>S. W. H...</i>
			U. S. ARMY MATERIEL COMMAND
			FEBRUARY 1971
			CLASS DIVISION DRAWING FILE
			19 48 7182 GSE 5LC5

DO NOT SCALE

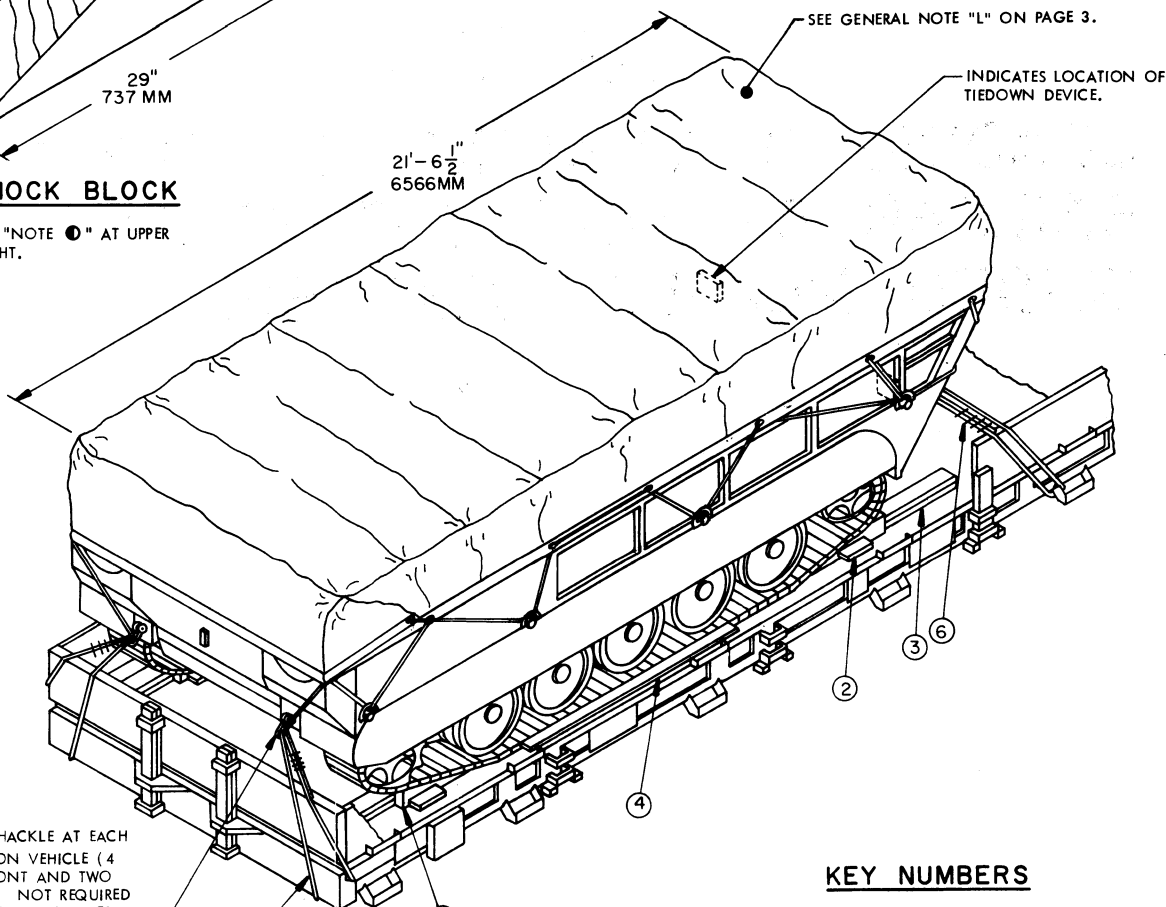


CHOCK BLOCK

SEE "NOTE 1" AT UPPER RIGHT.

NOTE 1:

USE TWO EACH SIDE-BY-SIDE AT EACH BLOCKING LOCATION. LOCATE BEVELED END OF EACH BLOCK AGAINST TRACK. TOENAIL THRU HEEL OF A BLOCK TO THE CAR FLOOR W/2-40d NAILS. TOENAIL ONE (1) SIDE OF BLOCK TO THE CAR FLOOR W/2-40d NAILS.

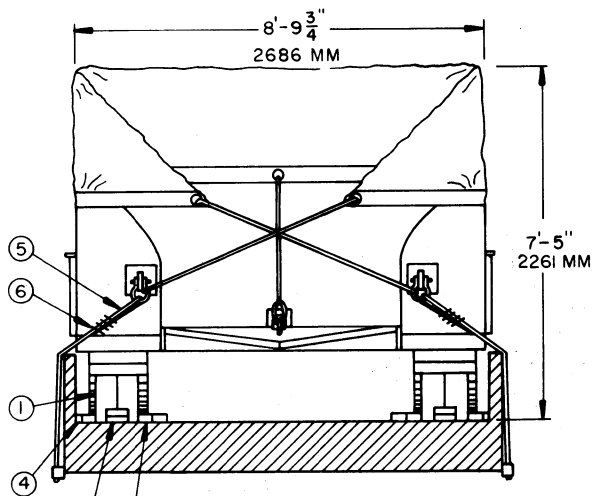


ISOMETRIC VIEW

PROVIDE A 7/8" SHACKLE AT EACH TIEDOWN POINT ON VEHICLE (4 REQD; TWO AT FRONT AND TWO AT REAR). NOTE: NOT REQUIRED IF VEHICLE IS ALREADY EQUIPPED WITH SHACKLES WHEN OFFERED FOR SHIPMENT. SEE GENERAL NOTE "K" ON PAGE 3.

KEY NUMBERS

- ① CHOCK BLOCK (8 REQD). SEE DETAIL AND "NOTE 1" ABOVE.
- ② SIDE CLEAT, 2" X 4" X 12" (60MM X 100MM X 305MM) (8 REQD). POSITION AGAINST SIDE OF PIECE MARKED ① AS SHOWN. NAIL TO CAR FLOOR W/ 4-16d NAILS.
- ③ BACK-UP CLEAT, 2" X 6" X 30" (50MM X 120MM X 762MM) (DOUBLED) (4 REQD). CENTER AGAINST ENDS OF PIECES MARKED ①. NAIL FIRST PIECE TO CAR FLOOR W/5-16d NAILS. NAIL SECOND PIECE TO THE FIRST W/5-40d NAILS.
- ④ SIDE BLOCKING, 2" X 4" X 7'-0" (60MM X 100MM X 2134MM) (4 REQD). POSITION ON OUTSIDE AND INSIDE OF EACH TRACK. NAIL TO CAR FLOOR W/1-16d NAIL EVERY 8".
- ⑤ STEEL WIRE ROPE, 1/2" DIAMETER, 11.5 TONS (4 REQD). CABLE INSTALLED AS SHOWN TO FORM A COMPLETE LOOP FROM TIEDOWN FACILITY ON RAIL-CAR THRU LADING TIEDOWN DEVICE AND BACK TO RAILCAR TIEDOWN FACILITY.
- ⑥ CLIP, SIZE 1/2" (16 REQD). FOUR (4) PER CABLE.



REAR VIEW

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 RAIL CARS OF SIMILAR DESIGN AND CONSTRUCTION.
- C. THE LOAD AS SHOWN IS BASED ON A GERMAN RAILCAR (RLMMS) 40'-11" (12471MM) LONG BY 9'-1-1/2" (2781MM) 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.
- D. LADING DATA:
 DIMENSIONS ----- 21'-6-1/2" (6566MM) LONG X 8'-9-3/4" (2686MM) WIDE X 7'-5" (2261MM) HIGH.
 GROSS WEIGHT (W/O FUEL) ----- 15,479 POUNDS (APPROX) (7021 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 SLIGHT VEHICLE BODY DEPRESSION. TENSIONING CAN BE ACCOMPLISHED BY EMPLOYING TWO (2) CABLE "GRIPPERS" AND AN APPLICABLY SIZED "COME-A-LONG" TYPE MECHANICAL HOIST.
- K. MORE DISTANCE MAY BE REQUIRED BETWEEN THE DRILLED PADS AT THE OPEN END OF A SHACKLE SO THAT IT WILL FIT PROPERLY OVER THE THICKNESS OF THE TOWING/TIEDOWN BRACKET ON THE VEHICLE. TO PROVIDE THE NEEDED CLEARANCE, EQUAL AMOUNTS OF MATERIAL MAY BE REMOVED FROM THE SHACKLE PADS BY GRINDING OR MACHINING.
- L. CAUTION: PRIOR TO SHIPPING THE DESIGNATED ITEM, THE TACTICAL COVER WILL BE STORED ON THE VEHICLE. THE VEHICLE TRANSIT COVER (PART NUMBER 10162360) WILL BE INSTALLED, AS SHOWN IN THE LOAD VIEWS, TO PROVIDE WEATHER PROTECTION; THE TACTICAL COVER WILL NOT BE USED FOR THIS PURPOSE. IF A SLING IS USED FOR HANDLING THE LOADER-TRANSPORTER, AND THE TRANSIT COVER IS INSTALLED, THE ENDS OF THE COVER WILL BE TURNED BACK TO EXPOSE THE LIFTING LOOPS FOR ATTACHMENT OF THE SLING. THE COVER WILL BE RESECURED AS SHOWN PRIOR TO MOVEMENT OF THE LOAD.

LIST OF RAILCARS THAT MAY BE USED FOR SHIPMENTS		
RAILCARS	NO. OF ITEMS	TOTAL WEIGHT OF ITEMS
* RMS ----- 31	1	15,479 LBS (7021 KG)
* RMMS ----- 33	1	15,479 LBS (7021 KG)
* RLMMS ----- 56	1	15,479 LBS (7021 KG)
* SM ----- 24	1	15,479 LBS (7021 KG)
* SSLMAS --- 53	2	30,958 LBS (14042 KG)
SSY ----- 45	1	15,479 LBS (7021 KG)
SSYM ----- 46	1	15,479 LBS (7021 KG)
XLM ----- 57	1	15,479 LBS (7021 KG)

* 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.

REVISIONS

REVISION NO. 1, DATED JUNE 1972, CONSISTS OF:

1. SHOWING THE ITEM WITH A TRANSIT COVER INSTALLED.
2. UPDATING GENERAL NOTES.
3. ADDING FEDERAL SPECIFICATION FOR CLIPS.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
LOADER-TRANSPORTER, XM688E1 (W/O FUEL)	1	15,479 LBS
DUNNAGE		300 LBS
TOTAL WEIGHT		15,779 LBS (7157 KG)

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	36	24
2" X 6"	20	20
6" X 12"	10	60
NAILS	NO. REQD	POUNDS
16d (3-1/2")	72	1-3/4
40d (5")	52	3-1/4
ROPE, STEEL WIRE, 1/2" DIA	64' REQD	28 LBS
CLIP, 1/2"	16 REQD	7 LBS

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, 11.5 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).
 REF: FED SPEC FF-C-450, TYPE I, CLASS 1.

