HONEST JOHN

APPROVED BY

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LOADING AND BRACING "IN MILVAN CONTAINER[⊕] OF ROCKET MOTOR, M 66, WITH FOUR FINS, PACKED IN WOODEN CONTAINER, FOR THE 762 MM ROCKET, FOR SHIPMENT BY T/COFC CARRIER

> • LOADING AND BRACING SPECIFICATIONS SET FORTH WITHIN THIS DRAWING ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLAT-CAR (T/COFC) RAIL CARRIER SERVICE. THESE SPECIFICATIONS MAY ALSO BE USED FOR LOADS THAT ARE TO BE MOVED BY MOTOR OR WATER OR AIR CARRIERS. SEE GENERAL NOTE "O" ON PAGE 2.

 \oplus only milvan containers which have been modified to include A MECHANICAL LOAD-BRACING SYSTEM THAT SATISFIES THE REQUIREMENTS OF THE BUREAU OF EXPLOSIVES PAMPHLET 6C WILL BE USED FOR THE MOVEMENT OF AMMUNITION BY T/COFC SERVICE. CAUTION: OTHER REQUIREMENTS OF PAMPHLET 6C ALSO APPLY.

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DO NOT SCALE

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GENERAL NOTES

This document has been prepared and issued in accordance with ar 740-1, and augments tm 743-200-1 (chapter 5).

THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE TO THE HONEST JOHN ROCKET MOTOR 762MM: M66A1 (WITH 4 FINS, M17) PACKED IN A WOODEN CONTAINER, SUBSEQUENT REFERENCE TO THE CONTAINER HEREIN MEANS THE CONTAINER WITH MISSILE COMPONENTS.

FOR DETAIL OF THE CONTAINER, SEE DRAWING NO. 10048370.

- CONTAINER DIMENSIONS ---- 16'-6-1/16" LONG BY 41-5/8" WIDE BY 47-3/8"
- GROSS WEIGHT ------- 4,801 POUNDS (APPROX). CUBE ------ 206.05 CU. FT.

. THIS ITEM IS A DOT CLASS "A" EXPLOSIVE, AND A COAST GUARD CLASS X-C, THE OUTLOADING PROCEDURES SPECIFIED HEREIN CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED WITHIN THE DRAWING TITLE.

- . THE LOADS AS SHOWN ARE BASED ON A 20' LONG BY 8' WIDE BY 8' HIGH MILVAN CONTAINER WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 92" WIDE BY 87" HIGH. THE LOADS ARE DESIGNED FOR TRAILER/CONTAINER-ON-FLAT-CAR SERVICE.
- SERVICE. THE SPECIFIED OUTLOADING PROCEDURES ARE FOR CONTAINERS EQUIPPED WITH SELF-CONTAINED MECHANICAL BRACING DEVICES AS DESCRIBED WITHIN BUREAU OF EXPLOSIVES PAMPHLET 6C. CROSS MEMBER ATTACHMENT FACILITIES WITHIN THESE CONTAINERS MUST PROVIDE FOR THE INSTALLATION OF LOAD BLOCKING CROSS MEMBERS AT THE HEIGHTS SPECIFIED. THE HEIGHT DIMENSIONS SECIFIED WITHIN THIS DRAWING FOR THE INSTALLATION OF CROSS MEMBERS CONFORM WITH BUREAU OF EXPLOSIVES PAMPHLET 6C, WITH THE EXCEPTION THAT TWO (2) ADDITIONAL BELT RAILS HAVE BEEN SHOWN: ONE AT 72" AND ONLE AT 83" HEIGHT FROM THE CONTAINERF FLOOR, VOIDS LENGTHWISE WITHIN THE LOAD MUST BE HELD TO A MINIMUM. CROSS MEMBERS MUST BE PLACED AGAINST THE LADING AS NEARLY AS POSSIBLE IN "MATED" POSITIONS (AT EQUAL HEIGHTS AND AT EQUAL DISTANCES FROM THE END OF THE CONTAINERS, CROSS MEMBERS IN EMPTY CONTAINERS AND THOSE NOT USED IN LOADED CONTAINERS MUST BE FASTENED INTO BELT RAILS FOR SHIPMENT. COMPONENTS ASSIGNED TO EACH CONTAINER MUST REMAIN THEREWITH EVEN THOUGH UNUSED DURING SOME SHIPMENTS. THE LOAD BLOCKING COMPONENT DESIGNATED AS "CROSS MEMBER", HEREIN, IS IDENTIFIED AS "BEAM ASSEMBLY" WITHIN TM 55-8115-200-24, DATED SEPTEMBER 1972. THE BEAM ASSEMBLY IS FURTHER IDENTIFIED AS NSN 8115-00-165-6623 (FSN 8115-165-6623).
- G. VOIDS BETWEEN THE FILL ASSEMBLIES AND THE LADING MUST NOT EXCEED ONE-HALF INCH (1/2"). ADDITIONAL MATERIAL MAY BE ADDED, OR THINNER MATERIAL MAY BE USED TO ACHIEVE THE PROPER THICKNESS AS REQUIRED.
- H. IF DIMENSIONAL LUMBER IS NOT AVAILABLE FOR FILL MATERIAL, PIECES CAN BE MADE BY PLANING NOMINAL LUMBER TO THE PROPER THICKNESS. ALSO, STRIPS OF PLYWOOD CAN BE USED AS FILL MATERIAL.
- J. DUNNAGE LUMBER SPECIFIED IS OF A NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" OR 3-5/8" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE OR 1-5/8" THICK BY 3-5/8" WIDE UNLESS OTHERWISE SPECIFIED.
- K. <u>CAUTION:</u> DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.
- L. A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES 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.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

SEE TM 743-200-1, DUNNAGE LUMBER: FED SPEC MM-L-751.
COMMON CEMENT COATED OR CHEMICALLY ETCHED: FED SPEC FF-N-105. ALT: ANNULAR-RING TYPE NAIL OF THE SAME SIZE.
FED SPEC QQ-W-461.
COMMERCIAL GRADE.

(GENERAL NOTES CONTINUED)

M. PORTIONS OF THE CONTAINER DEPICTED WITHIN OF THE SIDE WALLS, HAVE NOT BEEN SHOWN PURPOSES.

DUNNAGE INCLUDES MATERIALS, OTHER T'

O. SPECIAL T/COFC NOTES:

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- <u>CAUTION</u>: LOADED CONTAINERS MUST BE ON CHASSIS EQUIPPED WITH TWO BOGIE ASSEMBLIES WHEN BEING MOVED IN TOFC SERVICE, REGARDLESS OF LOAD WEIGHT WITHIN THE CONTAINER.
- 2. LOAD LIMITS OF T/COFC RAIL CARS MUST NOT BE EXCEEDED, NOR WILL A CAR BE LOADED SO THAT THE TRUCK UNDER ONE END OF THE CAR CARRIES MORE THAN ONE-HALF OF THE LOAD LIMIT FOR THAT CAR.
- 3. CHASSIS/CONTAINERS COUPLED INTO A 40-FOOT TRAILER CONFIGURATION MUST BE PLACED AT THE B-END OF A TOFC RAIL CAR. THE REAR END OF THE 40-FOOT UNIT WILL OVER-HANG THE END OF THE CAR IF IT IS PLACED AT THE A-END. TWENTY-FOOT AND 40-FOOT UNITS CAN BE LOADED ON THE SAME CAR.

TO FACILITATE LOADING OPERATIONS, THE SIDE FILLERS, IDENTIFIED AS "SIDE BLOCKING ASSEMBLY A", CAN BE WIRE TIED TO THE CONTAINER BELT RAILS ON EACH SIDE OF THE CONTAINER, SECURE THE VERTICAL PIECES OF AN ASSEMBLY TO A BELT RAIL WITH AN 18" LONG PIECE OF NO. 14 GAGE WIRE POSITIONED NEAR THE TOP OF THE VERTICALS. INSTALL THE WIRE TO FORM A COMPLETE LOOP THROUGH THE HOLES IN THE BELT RAIL AND AROUND A VERTICAL PIECE, BRING THE ENDS TOGETHER AND TWIST TAUT.

Q. MAXIMUM LOAD WEIGHT CRITERIA:

BECAUSE OF THE LIGHT WEIGHT OF THE DEPICTED ITEM, A LOAD WEIGHT WILL NEVER EXCEED ANY WEIGHT RESTRICTION CRITERIA.

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LOADING PROCEDURES

- NOTES: (1) APPROVED MATERIALS HANDLING EQUIPMENT (MHE) IS SPECIFIED IN OTHER DOCUMENTS, MHE IS INTENDED TO MEAN EQUIPMENT SUCH AS FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS, AND SPREADER BARS.
 - (2) PRECAUTIONARY HANDLING TECHNIQUES NORMALLY EMPLOYED OR AS SPECIFIED FOR THE TYPE OF COMMODITY INVOLVED WILL BE OBSERVED.
- A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIALS HANDLING EQUIPMENT (MHE) WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS. IN THIS CASE A 6,000 POUND OR EQUIVALENT WILL BE USED.
- B. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE CONTAINERS SHOULD BE HANDLED FROM A SIDE POSITION AS MUCH AS POSSIBLE. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER A CONTAINER, TO PREVENT DAMAGE TO THE CONTAINER BY THE FORK TINES OR THE FORKLIFT PACKAGE GUARD.
- C. THE CONTAINERS SHOULD BE HANDLED FROM A SIDE POSITION, POSITION THE FORWARD END OF THE CONTAINER PARTIALLY IN THE DOORWAY AREA OF THE MILVAN CONTAINER, THEN A FORKLIFT TRUCK, WITH A BUFFER BOARD ACROSS THE FORK TINES (4" X 4", ETC.), BLOCKED HIGH ENOUGH TO CLEAR THE TOW BAR ON THE REAR OF THE CONTAINER, CAN LIFT THE CONTAINER AND SLIDE IT INTO THE PROPER LOCATION. THE CONTAINER (S) MAY HAVE TO BE PRIED INTO THE FINAL LOCATION WITH A PRY BAR.
- D. THE DUNNAGE ALONG THE SIDE WALLS OF THE MILVAN CONTAINER MUST BE PRE-POSITIONED BEFORE THE CONTAINER (S) ARE LOADED INTO THE MILVAN CONTAINER, ONLY WHEN PREPARING A TWO-CONTAINER LOAD.
- E. AFTER TWO CONTAINERS ARE LOADED INTO THE MILVAN, THE CENTER BLOCKING WILL BE INSTALLED. ANY VOID BETWEEN THE CENTER BLOCKING AND THE LADING MUST NOT EXCEED ONE-HALF INCH ($1/2^{\,\rm T}$).

(CONTINUED AT RIGHT)

(HANDLING PROCEDURAL GUIDANCE CONTINUED)

UNLOADING PROCEDURES

- A. AFTER THE MILVAN IS POSITIONED AT THE DESIRED UNLOADING SITE, REMOVE SEALS, IF PRESENT, OPEN AND SECURE DOORS IN AN OPEN POSITION.
- B. REMOVE ALL EXCESS CROSS MEMBERS AT THE REAR OF THE LADING.
- C. REMOVE THE REAR LOAD BEARING CROSS MEMBERS.
- D. USING AN APPROVED AND APPROPRIATELY SIZED MATERIALS HANDLING EQUIPMENT (MHE), SUCH AS A 6,000 POUND FORK LIFT TRUCK, ATTACH A CABLE OF SUFFICIENT SIZE TO THE TOW BAR OF THE ITEM AND INCH SLOWLY FROM THE MILVAN UNTIL IT CAN BE LIFTED FROM THE SIDE WITH THE FORK LIFT.
- E. IF IT IS A TWO UNIT LOAD, INCH THE REMAINING UNIT OUT IN THE SAME MANNER.
- F, REMOVE ALL REMAINING DUNNAGE AND SECURE THE CROSS MEMBERS IN THE CONTAINER.
- G. CLOSE AND LATCH THE MILVAN DOORS.

HANDLING PROCEDURES

PAGE 3



SECIAL NOTES:

- 1. THE LOAD AS SHOWN ON PAGE 4 DEPICTS A TWO-CONTAINER LOAD IN A MILVAN CONTAINER.
- TO MAKE LOADING EASIER AND TO ACHIEVE A TIGHT LOAD ACTOSS A CON-TAINER, SEE THE "HANDLING PROCEDURAL GUIDANCE" ON PAGE 3. 2.
- THE POSITIONING OF THE FORWARD CROSS MEMBERS MAY BE ADJUSTED SLIGHTLY TO MAINTAIN THE CENTER OF BALANCE OF THE ROCKET MOTOR CONTAINERS AT THE CENTER OF THE MILVAN CONTAINER. 3.
- PRIOR TO THE START OF LOADING OPERATIONS, THE SIDE BLOCKING SHALL BE POSITIONED AGAINST THE SIDES OF THE CONTAINER AND WIRED TO THE BELT 4. RAILS.
- AFTER BOTH CONTAINERS ARE LOADED IN THE MILVAN, THE CENTER BLOCKING, PIECE MARKED (3), WILL BE POSITIONED BETWEEN THE TWO CONTAINERS AS SHOWN, ADDITIONAL PIECES OF 4" WIDE MATERIAL WILL BE USED AS SOLID FILL, PIECE MARKED (4). THIS SOLID FILL WILL BE LAMINATED TO THE CENTER BLOCKING ASSEMBLY TO FILL THE VOID BETWEEN THE CONTAINEERS. THE FIRST PIECE OF 2" X 4" MATERIAL WILL BE DRIVEN TO THE CONTAINEERS. THE FIRST PIECE AND NAILED TO THE BUFFER PIECE W/3-10G NAILS. ADDITIONAL PIECES OF SOLID FILL AS NEEDED WILL BE DRIVEN TO THE FLOOR OF THE CONTAINER AND NAILED TO THE FIRST PIECE W/3-10G NAILS. SEE GENERAL NOTES "G" AND "H" ON PAGE 2. 5.

INDICATES CROSS MEMBER,

TIE WIRE, NO. 14 GAGE WIRE THE WIRE, NO. 14 GAGE WIRE 18" LONG (3 REQD PER CROSS MEMBER), INSTALL TO FORM A COMPLETE LOOP AROUND FILL MATERIAL AND CROSS MEMBER, BRING ENDS TOGETHER AND TWIST TAUT. SECURE TO THE FILL MATERIAL WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STRAP STAPLE.

FILL MATERIAL, 1" X 4" OR 2" X 4" MATERIAL BY LADING WIDTH MINUS 1" (AS REQD).

FILL DETAIL

THIS DETAIL DEPICTS METHOD OF POSITIONING FILL MATERIAL BETWEEN CROSS MEMBER AND LADING, WHEN THE VOID BETWEEN THE TWO IS GREATER THAN ONE INCH (1") FOR LONGITUDINAL BRACING.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT
M66 CONTAINER DUNNAGE CONTAINER	2	9,602 LBS 287 LBS 5,700 LBS

TOTAL GROSS WEIGHT ----- 15,589 LBS

LUMBER	LINEAR FEET	BOARD FEET		
1" X.4"	10	4		
2" X 4"	120	80		
4" X 4"	20	27		
NAILS	NO, REQD	POUNDS		
10d (3")	%	1-1/2		
WIRE, NO. 14 GAGE	16' REQD -	NIL		

TWO-CONTAINER LOAD

PAGE 5

APPROX)



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SPECIAL NOTES:

- 1. THE LOAD AS SHOWN ON PAGE 6 DEPICTS A ONE-CONTAINER LOAD IN A MILVAN CONTAINER.
- 2. FOR LOADING, SEE THE "HANDLING PROCEDURAL GUIDANCE" ON PAGE 3.
- 3. THE "SIDE BLOCKING ASSEMBLY B" AS DETAILED ON PAGE 8 NEED NOT BE FABRICATED FOR A DRIVE FIT. THE ASSEMBLY SHOULD BE FABRICATED SO THAT IT CAN BE EASILY INSTALLED. HOWEVER, IT MUST FIT TIGHT ENOUGH SO AS TO NOT ALLOW MORE THAN ONE-HALF INCH (1/2") VOID ACROSS THE WIDTH OF THE LOAD.
- 4. THE POSITIONING OF THE FORWARD CROSS MEMBERS MAY BE ADJUSTED SLIGHTLY TO MAINTAIN THE CENTER OF BALANCE OF THE ROCKET MOTOR CONTAINER AT THE CENTER OF THE MILVAN CONTAINER,

LUMBER	LINEAR FEET	BOARD FEET	
4" X 4" 2" X 6"	16 28	21 28	
NAILS	NO. REQ D	POUNDS	
10d (3") 12d (3-1/4")	16 32	1/4 1/2	
WIRE, NO. 14 GAGE	32' REQD	1/2 LI	

LOAD AS SHOWN

ITEM	QUANTITY			WEIGHT (APPROX)		
M66 CONTAINER		4	, 801	LBS		
DUNNAGE			125	LBS		
CONTAINER		5	, 700	LBS		
		10	494	100		

TOTAL GROSS WEIGHT ----- 10,626 LBS

ONE-CONTAINER LOAD

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DETAILS

PAGE 8