
DEPARTMENT OF THE ARMY TECHNICAL MANUAL

Transportability Criteria and Guidance

LOADING AND UNLOADING MULTILEVEL RAILCARS
AT MILITARY INSTALLATIONS
IN THE UNITED STATES

Headquarters, Department of the Army, Washington, D. C.
15 August 1970

	Paragraph	Page
Purpose and scope.....	1	1
General	2	1
Methods.....	3	2
Loading procedures.....	4	11
Tiedown procedures.....	5	11
Unloading procedures	6	12

1. Purpose and Scope

a. This manual provides transportability criteria and guidance to the Department of Defense (DOD) in the movement of the multilevel railcars to Army, Air Force, Navy, and Marine Corps activities located in the Continental United States (CONUS). These criteria and guidance identify, define, and justify certain methods of loading and unloading multilevel railcars within CONUS and determine the feasibility of alternate methods, safety aspects, and other related data. These criteria and guidance are intended for military installations which load and/or unload shipments of multilevel railcars. This manual is to be used as a guide to the capabilities and limitations of the various methods of loading and unloading these railcars within CONUS.

b. The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be

submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded to the Director, U.S. Army Transportation Engineering Agency, Military Traffic Management and Terminal Service, ATTN: MTT-GD, Fort Eustis, Va. 23604.

2. General

a. In the field of rail transportation there has been a resurgence of automotive and vehicular traffic through the use of multilevel cars. The holding of this traffic depends entirely on the ability to transport these vehicles to destination on schedule, intact and damage free. The vehicle which is entrusted to the transporters' care and handling is a complex, precision-manufactured machine, worth thousands of dollars. Countless hours of engineering design, and manufacturing skill have gone into making it a durable piece of

equipment designed to serve and satisfy specific requirements.

b. Carelessness with multilevel cars during switching operations and negligence in assuring proper placement within trains can result in damage to the vehicle before it arrives at its destination. When this happens, its value and utility may be affected and costly damage claims result. Multilevel railcars now in service within CONUS are designed specifically for safe transportation of automotive equipment.

c. Information is provided in the *Terminal Facilities Guides* (AR 55-357, AR 55-358, and AR 55-359) which describe the capability of an activity to receive freight and passengers by the various modes and methods of transportation. In addition, these guides specifically designate the optimum destination to be shown on Government bills of lading and transportation requests. Information is also given as to the ability of the installation to receive multilevel railcars and load and/or unload them, or whether it will receive shipment at some distant point which has the capability of loading and/or unloading them.

d. The Military Traffic Management and Terminal Service (MTMTS) *Vehicle Loading and Unloading Capability Guide* lists the Army, Air Force, Navy, and

Marine Corps installations. It states whether the installation is capable of loading and/or unloading multilevel railcars and its saddlemount or vehicle-remount capabilities. When a ship ment of vehicles is made to a military installation, and the use of multilevel railcars is most economical, the MTMTS Freight Routing Department contacts the receiving Traffic Management Office to inquire if any means can be arranged to unload these multilevel cars. Installations which do not have the capability for unloading these cars usually improvise some economical means for unloading them or reject them in favor of singlelevel cars. When the nature of the movement exceeds the indicated capability of an activity, special arrangements must be established with the receiving activity prior to shipment.

e. Numerous routing releases are issued for shipments of vehicles by means of bilevel and/or trilevel railcars. These vehicles may be consigned to installations which, in many cases, do not have the capability for loading or unloading them. Consequently such shipments must be routed to points considerably distant from the final destination and require heavy additional costs for haulaway.

f. *The Terminal Facilities Guides and the MTMTS Vehicle Loading and Unloading Capabilities Guide* reveal the following:

	Army	Navy and Marine Corps	Air Force
Installations w/no capability to load and/or unload multilevel railcars	79	43	89
Installations w/capability to load and/or unload multilevel railcars	42	19	12
Installations w/capability at distant point.....	65	27	58
Installations w/bilevel capability only	4	2	2
Installations w/bilevel capability and w/trilevel at distant point.....	4	2	0
Total number installations.....	194	93	161*

*Does not include Air Force stations.

g. By using multilevel railcars, it has been determined that labor and material costs are reduced approximately 66 percent, and freight and transportation costs are reduced approximately 48 percent. This is due to the fact that multilevel railcars are equipped with chains for tying down vehicles. These are used indefinitely; whereas on standard flatcars, blocking, dunnage, wire, etc., are used on a one-time basis.

3. Methods

There are essentially five methods of unloading multilevel railcars

a. *The K Loader of the 463L Aircraft Cargo Loading System.* This method is used at many Air Force installations. The primary function of these loaders is the loading and unloading of palletized cargo moving by Logair flights. The K Loader is available