

MULTISERVICE HELICOPTER SLING LOAD: DUAL-POINT LOAD RIGGING PROCEDURES

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DEPARTMENT OF THE ARMY
UNITED STATES MARINE CORPS
DEPARTMENT OF THE NAVY
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Washington, DC, 30 AUGUST 1999

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PREFACE

This manual is one of a series of manuals for aviation and ground personnel who perform helicopter sling load missions ashore or aboard ship. Other manuals in this series are FM 10-450-3/MCRP 4-23E, VOL I/NWP 3-04.11/AFJMAN 11-223, VOL I/COMDTINST M13482.2A and FM 10-450-4/MCRP 4-23E, VOL II/NWP 3-04.12/AFJMAN 11-223, VOL II/COMDTINST M13482.3A.

These manuals are a coordinated effort of the US Army, US Marine Corps, US Navy, US Air Force, and US Coast Guard. All services participate in the sling load certification program begun by the Army in 1984. These manuals include standardized rigging procedures and other information from that program. Chapters 2 through 13 contain rigging procedures for dual-point loads which have been certified for sling load. Chapter 14 contains rigging procedures which have not been certified but have demonstrated acceptable static lift and flight characteristics during a flight test.

Efforts were made to standardize ground crew and hookup procedures and terminology. Where service-unique requirements apply to an entire chapter or body of text, the service initials are at the beginning of the chapter or text. Otherwise the initials are at the end of the applicable sentence.

Rigging equipment and procedures described in this manual may not be authorized for all aircraft or services because of equipment or service restrictions.

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CHAPTER 1

FUNDAMENTAL PRINCIPLES

1-1. INTRODUCTION

This chapter contains general information about certification for helicopter sling load and explains the role of the Military Traffic Management Command Transportation Engineering Agency (MTMCTEA) and the Department of Defense (DOD) sling load certification authority. This authority rests with the US Army Soldier Systems Center (SSC). This chapter also explains the information contained in the equipment rigging procedures and gives some general rigging instructions.

1-2. CLASSIFICATION DEFINITIONS OF SLING LOADS

a. Certified Sling Loads. Certified sling loads are those items of equipment and their associated rigging procedures which have completed the evaluation and testing required by SSC for sling load certification. These rigging procedures are in Chapters 2 through 13. Only certified sling loads are authorized for the Marine Corps. The following restrictions apply for dual point sling load certification to remain in effect:

(1) The load must be within the lifting capability of the desired helicopter model.

(2) The load shall be rigged in accordance with the certified dual point rigging procedure.

(3) The recommended stable airspeed specified for the load in the applicability section of the rigging procedure is a recommendation and not a restriction, unless so stated.

(4) This certification does not apply to helicopters of different designations (for example, CH-47 versus CH-53E helicopter) because of possible differences in dynamic vibration, helicopter/load mass differential, and rotor wash pattern.

b. Suitable Sling Loads. Suitable sling loads are those

items of equipment and their associated rigging procedures that have not been certified but have demonstrated acceptable static lift and flight characteristics. In most cases these loads were not pull tested in accordance with MIL STD 913, but are known loads which have been flown without incident for years and which SSC considers to be proven safe. These rigging procedures are in Chapter 14.

c. Unique Sling Loads. Unique loads are also equipment carried on a one time or low-frequency basis, such as telephone poles, artillery targets, or barrier material. The lack of sling load certification in itself does not preclude a unit commander from carrying a load that is not certified. Each service is responsible for determining its policy on carrying loads that have not been certified for sling load.

d. Prohibited Sling Loads. Prohibited sling loads are items of equipment that are prohibited from sling loading as determined by each service. These loads have been denied sling load certification and are a safety hazard if carried. They have either structural deficiencies or have exhibited unstable flight characteristics during flight testing. Each service will identify these loads and transmit this information by separate list. Contact your service point of contact identified in the Preface if you have any questions regarding the classification of a particular load.

1-3. CERTIFICATION OF EQUIPMENT FOR HELICOPTER SLING LOAD

a. Objective. The objective of helicopter sling load certification is to assure the user that the equipment being transported can withstand the stresses of a sling load flight environment. Certification for sling load assures the user that the item has met minimum standards for structural integrity and that the associated rigging procedures have been developed specifically for that item.

b. Responsibilities. Within the US Army, the MTMCTEA is responsible for transportability approval of developmental equipment. Within the DOD, SSC is the lead activity responsible for providing sling load certifica-