



UNITED STATES MARINE CORPS

MARINE CORPS SYSTEMS COMMAND
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MARCORSYSCOMO 3500.1B
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MARINE CORPS SYSTEMS COMMAND ORDER 3500.1B

From: Commanding General
To: Distribution List

Subj: HELICOPTER EXTERNAL LIFT (HEL) CERTIFICATION OF MARINE
CORPS EQUIPMENT

Ref: (a) Joint Logistics Commanders' Memorandum of Agreement on
External Helicopter Transported Loads of 23 Sep 87
(b) MIL-STD-209J
(c) Multiservice Helicopter Sling Load (FM-450-3, 4&5)

1. Purpose. To establish policy, assign responsibility, and prescribe procedures for HEL Certification of Marine Corps equipment and systems.

2. Cancellation. MARCORSYSCOMO 3500.1A.

3. Background. The Commanding General, Marine Corps Combat Development Command (MCCDC) is charged with identifying and articulating operational needs in formal requirement documents that subsequently serve as the basis for system design, system engineering, and system development. The Commanding General, Marine Corps Systems Command (MARCORSYSCOM) is charged with the development of equipment and systems to meet the operational needs as described in approved requirements documents. A HEL Certification required capability is an inherent requirement for many Marine Corps systems and equipment due to the amphibious and expeditionary nature of the Marine Corps. The process by which the Marine Corps verifies the design, engineering, and development of systems HEL Certification capability is entitled HEL Certification. The Commanding General, MARCORSYSCOM, as part of the systems developmental process, is responsible for systems HEL Certification capability development and HEL Certification testing of Marine Corps equipment. The Marine Corps, as per reference (a), recognizes the U.S. Army Natick Research, Development, and Engineering Command as the joint service HEL Certification authority. As Marine Corps HEL Certification testing commenced in 1985, the present level of effort in this area is divided between certification testing of systems previously fielded, and testing those systems that are now under development.

4. Information

a. HEL Certification, or External Air Transport Certification as it is known in the Army, is predicated on a system's capability to successfully meet all engineering specifications as contained in reference (b), and in its ability to adequately complete a flight stability/flight profile test while being lifted under various Marine Corps helicopters.

b. HEL Certification is only granted by Natick subsequent to review and approval of HEL Certification test data, receipt of validated rigging and slinging procedures, and receipt of a validated flight profile of the tested equipment/system.

c. Slinging and rigging procedures for equipment that has been HEL certified are documented in reference (c).

d. For the purpose of this Order, HEL Certification denotes that certified equipment has been successfully tested against the criteria outlined in reference (b), and that subsequent flight profile testing has demonstrated that the equipment is aerodynamically stable within normal flight profiles. Certification validates the equipment's "designed in" capability to be safely, efficiently, and economically externally lifted, when such lifting is conducted in accordance with the guidelines contained in reference (c).

5. Action

a. Product Group Director, Ground Transportation and Engineer Systems. Provide required resource support as functional sponsor for the Marine Corps HEL Certification Program.

b. Transportability Officer

(1) Coordinate with MCCDC in order to identify "fielded equipment/systems" that require HEL Certification.

(2) Act as proponent for Multiservice Sling Load Manual. As the proponent, review and ensure periodic updates of reference (c) accurately reflect status of HEL certified USMC systems and their rigging procedures are made.

(3) Program resources within Program Objective Memorandum process to support HEL Certification testing/retesting of identified, "fielded" Marine Corps systems.

(4) Ensure that HEL Certification testing is conducted efficiently and effectively.

(5) Review all formal MCCDC requirements documentation in order to identify systems HEL Certification capability requirements.

(6) Provide required technical assistance to the MARCORSYSCOM Program Managers in the development of weapons systems and equipment with a HEL Certification requirement. This support includes:

(a) Review and provide technical requirements to be included in weapons systems and equipment specifications to ensure that engineering standards for HEL Certification are adequately stated.

(b) Review and provide technical requirements for contract requirements (statements of work and contract data requirements list) and contract deliverables (test plans/reports and engineering analyses) to ensure that weapons systems and equipment meet the engineering requirements for HEL Certification.

(7) Provide guidance and policy as required with regard to "systems safety/systems engineering" aspects of designing in, and engineering, systems HEL Certification capability.

(8) Provide a point of contact that can identify systems that are HEL certified.

(9) Supervise and manage the HEL Certification testing, or retesting, of all "fielded" Marine Corps systems that have a required HEL Certification capability.

(10) Coordinate with MARCORSYSCOM Program Managers, Natick, and other service laboratories, as required, in order to ensure that Marine Corps HEL Certification testing is conducted in an efficient and timely manner.

(11) Maintain close liaison with MCCDC and the operating forces in order to identify user requirements and user beneficial suggestions.

(12) Review all Test and Evaluation Master Plans for HEL Certification requirements.

c. Program Managers

(1) Ensure that those developmental systems that have a required HEL Certification capability are designed, engineered, and developed so that they meet the specifications of reference (b) and all requirements of HEL Certification testing.

(2) Plan, program, and budget for HEL Certification testing of equipment/systems that are "under development."

(3) Coordinate all HEL Certification planning, and all contractor HEL Certification testing, with the Director, Systems Engineering and Integration.

d. Program Manager, Engineer Systems. Coordinate the development and/or procurement of all new "type" slings with the Director, Systems Engineering and Intergration, as new "type" slings will directly affect the HEL Certification status of all equipment carried by those slings.

6. Applicability. This Order is not applicable to Marine Corps Tactical Systems Support Activity.



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