



DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
3000 MARINE CORPS PENTAGON  
WASHINGTON, DC 20350-3000

MCO 4733.1C  
I&L (LPC)  
23 JUN 2015

MARINE CORPS ORDER 4733.1C

From: Commandant of the Marine Corps  
To: Distribution List

Subj: MARINE CORPS GROUND TEST, MEASUREMENT AND DIAGNOSTIC  
EQUIPMENT (TMDE) CALIBRATION AND MAINTENANCE PROGRAM  
(CAMP)

Ref: (a) MCO 4790.25  
(b) DoD Directive 5000.01, "The Defense Acquisition System," May 12, 2003  
(c) DoD Instruction 5000.02, "Operation of the Defense Acquisition System," January 7, 2015  
(d) SECNAVINST 5000.2E  
(e) SECNAVINST 5400.15C CH-1  
(f) MCO 4000.57A  
(g) DoD Directive 4151.18, "Maintenance of Military Materiel," March 31, 2004  
(h) MCO 4855.10C  
(i) MCO 5215.1K  
(j) SECNAV-M 5210.1  
(k) 5 U.S.C. 552a  
(l) SECNAVIST 5211.5E

1. Situation. To provide Marine Corps policy and guidance for the administration and technical direction of the Marine Corps TMDE CAMP.

2. Cancellation. MCO 4733.1B.

3. Mission. The mission of the Marine Corps TMDE CAMP is to maintain the prescribed accuracy of measurement standards to ensure the satisfactory performance of all Marine Corps ground TMDE.

DISTRIBUTION STATEMENT A: Approved for public release;  
distribution is unlimited.

#### 4. Execution

##### a. Commander's Intent and Concept of Operations

###### (1) Commander's Intent

(a) To provide Marine Corps field and depot level maintenance activities with diagnostic capabilities to detect and isolate faults at design threshold levels.

(b) To ensure the Marine Corps uses National Institute of Standards and Technology traceable measurement standards as the transfer mechanism to reflect national and international measurement standards in calibrated TMDE.

(c) To maximize the use of Marine Corps calibration facilities (CF) as the preferred field level maintenance activity for calibration and maintenance of Marine Corps procured TMDE.

###### (2) Concept of Operations

(a) The Chief of Naval Operations and the Commandant of the Marine Corps have adopted the American National Standards Institute (ANSI) approved, and National Conference of Standards Laboratories (NCSL) published, "ANSI/NCSL Z540-1-1994" and the "ANSI/ISO/IEC 17025:2005" as the primary basis for criteria to ensure Naval and Marine Corps CFs are capable of performing required calibration measurements. In partnership, the Marine Corps and Navy will administer Metrology and Calibration (METCAL) Quality Programs with common goals, criteria, and standards of excellence. In doing so, Marine Corps technical publications will remain in sync with Navy technical instructions and manuals when addressing METCAL processes and procedures that are common for both services.

(b) The Marine Corps will incorporate Condition Based Maintenance Plus (CBM+) concepts and the Reliability-Centered Maintenance (RCM) process in accordance with reference (a) for the maintenance of TMDE.

(c) Acquisition of TMDE is essential for the administration of the Marine Corps TMDE CAMP. TMDE will be procured by the Program Management Office for TMDE (PMO-TMDE) Marine Corps Systems Command (MARCORSYSCOM) to support combat essential and mission critical equipment in accordance with references (b), (c), (d), and (e).

(d) TMDE will be calibrated to the extent necessary to adequately perform the required measurements.

(e) Calibrations will be accomplished in the most cost effective manner that will satisfy operational requirements.

(f) All Marine Corps organizations obtaining calibration services by establishing an inter-service support agreement (ISA) or commercial services contract with any activity outside of the Marine Corps, will contact MARCORSYSCOM Product Manager (PdM)-TMDE in regard to, and to ensure the following:

1. The calibration service provider must meet the same requirements as the Marine Corps TMDE CAMP.

2. A contract or statement of work (SOW) shall specify that the support calibration laboratory is subject to onsite review by Marine Corps/Navy auditors to validate compliance with the above requirement.

3. A certificate or report of calibration will be provided by the outside support activity for each calibration.

4. Units coordinating support through contracts will maintain copies of all current contracts and SOWs. Additionally, these units will maintain copies of all certificates and reports of calibration from outside support activities for a period of 3 years or until the next calibration is completed and a new certificate/report of calibration is issued.

5. MARCORSYSCOM PdM-TMDE recognizes Marine Corps depots as a service provider to Marine Forces (MARFORs) and as such, depots will research calibration service providers (CSP) who support unfunded program office activities (i.e., depot specific equipment that requires a CSP is not supported by MARCORSYSCOM PM-TMDE).

b. Tasks(1) Deputy Commandant, Installations and Logistics (DC I&L)

(a) Act as the Commandant of the Marine Corps' advocate for the Marine Corps TMDE CAMP.

(b) Establish and promulgate Marine Corps enterprise level TMDE CAMP policy that incorporates CBM+ concepts and RCM principles per reference (f).

(2) Deputy Commandant, Programs and Resources (DC P&R)

(a) Ensure program objective memorandum (POM) approved resources are distributed to the appropriate comptroller to efficiently execute Marine Corps TMDE CAMP activities.

(b) Receive and review Marine Corps TMDE CAMP current year deficiency requests for funding consideration.

(3) Deputy Commandant, Combat Development & Integration (DC CD&I). Coordinate with MARCORSSYSCOM, MARFORs and Headquarters Marine Corps departments to identify Operation and Maintenance, Marine Corps requirements in support of TMDE CAMP activities for the purpose of formulating POM funding.

(4) Commander, Marine Corps Systems Command (MARCORSYSCOM)

(a) Develop and implement internal command policies and procedures to facilitate the execution of this Order and incorporate CBM+ concepts and RCM principles in accordance with reference (f).

(b) Publish and maintain technical instructions (TI) and technical manuals (TM) that provide in-depth guidance for the following sub-functions/programs of the TMDE CAMP:

1. Calibrations Requirements Marine Corps TMDE CAMP.

2. Combat Ready Storage Infantry Gage Program.

3. Fleet Automotive Support Team.

23 JUN 2015

4. Infantry Weapons Gage Calibration Program.
5. Marine Corps Transfer Standards Program.
6. Navy and Marine Corps Calibrations Laboratory Audit-Certification.
7. Special Calibrations of Torque Tools Marine Corps TMDE CAMP.
8. Survey Instrument Calibrations Program.
9. Marine Corps METCAL Quality Program.
10. TMDE CAMP Maritime Prepositioning Force (MPF), Enhanced Equipment Allowance Pool (EEAP).
11. TMDE CAMP Marine Corps Prepositioning Program - Norway (MCPN).

(c) Utilize the TMDE/Calibrations and TMDE Management System (CTMS) to facilitate the CAMP.

(d) Ensure program managers for Marine Corps equipment coordinate with PdM-TMDE to conduct a calibration requirements analysis or an abbreviated calibration measurements requirements study per reference (g) in order to properly initiate requirements based acquisitions on new TMDE.

(e) Budget for and initiate the acquisition and development of instrument calibration procedures for new or replacement measurement standards and calibration equipment in accordance with references (b), (c), (d), and (e).

(f) Conduct evaluations of Marine Corps CFs from both an administrative and technical perspective, in order to maintain an effective and current CAMP.

(g) Manage the Marine Corps METCAL Quality Assurance Program, ensuring the following functions are performed:

1. Provide certified auditors for participation in external audits.
2. Participate in joint service and CSP audits.

23 JUN 2015

3. Schedule and conduct triennial external audits on all Marine Corps CFs and report all results to PdM-TMDE.

4. Schedule and conduct Marine Corps CF evaluation on results of Marine Corps Measurement Comparison Program.

5. Issue or revoke certifications for Marine Corps CFs depending on the outcome of scheduled surveillance visits, internal or external audits.

(h) Establish and maintain a Marine Corps Liaison Office, Naval Surface Warfare Center (NSWC) that provides the following support functions:

1. Provide liaison between MARCORSYSCOM, Marine Corps CFs, and the Metrology Engineering Center (MEC) located at NSWC, Corona.

2. Coordinate with the MEC for the preparation of calibration procedures and evaluation of calibration equipment requirements to support the CAMP.

3. Provide direct liaison to all Marine Corps CFs concerning calibration procedures and other technical problems relating to calibration of TMDE.

4. When directed by MARCORSYSCOM, perform administrative and technical evaluations of Marine Corps CFs.

5. Coordinate requests from the CTMS for performance of engineering services by the MEC in support of the CAMP.

6. Coordinate with MEC the revision of calibration procedures used by the Marine Corps, as directed by MARCORSYSCOM PM-TMDE.

7. Coordinate calibration requirements with the MEC for newly procured Marine Corps TMDE.

8. Carry out other duties as directed by the MARCORSYSCOM.

(i) Manage calibration policies and support for the MPF, Enhanced Equipment Allowance pool, and the MCPP-N.

23 JUN 2015

(j) Validate/provide item technical referential data to all authoritative data sources, ensuring TMDE assets that require calibrations are properly coded and interoperable with current logistics systems.

(5) Commander, Marine Corps Logistics Command (MARCORLOGCOM)

(a) Incorporate CBM+ concepts and RCM principles within the depot CFs in accordance with reference (b).

(b) Develop and implement command policy for the administration of the CAMP as it pertains to the unique depot requirements not included in this Order.

(c) Provide overflow calibrations and TMDE maintenance support to MARFOR CFs on a fiscally reimbursable basis.

(d) Calibrate TMDE prior to issuance to MARFOR.

(e) Comply with the Marine Corps METCAL Quality Program and coordinate with PM-TMDE for audit scheduling determinations.

(f) Utilize ISAs or commercial services contracts in accordance with this Order for support of unique requirements that cannot be addressed within the Marine Corps Depot CFs.

(g) Report all TMDE performance discrepancies to MARCORSYSCOM, PdM-TMDE, and initiate a product quality deficiency report per reference (h).

(h) Maintain liaison with the PdM-TMDE, CTMS, concerning calibration procedures and other technical problems relating to the calibration of TMDE belonging to the MARFOR.

(6) Commander, Training and Education Command (TECOM)

(a) Formal schools assigned TMDE are responsible for identifying TMDE used for measurement of values where the accuracy of the measurement is not considered essential to the effectiveness of the training involved, for assignment of Calibrations Not Required (CNR) status.

(b) When performance is suspect, submit TMDE for repair to a Marine Corps CF. Schools may establish ISAs or commercial services contracts in accordance with this Order.

(7) Commanders, Marine Forces (MARFOR)

(a) Administer unit calibration programs in accordance with this Order.

(b) Refer to all technical publications published by MARCORSYSCOM for detailed procedural guidance on properly administering the Marine Corps TMDE CAMP.

(c) Request assistance, as necessary, from the supporting CF for education of personnel and questions regarding the Marine Corps TMDE CAMP.

(d) When required, establish ISAs or commercial services contracts in accordance with this Order.

(e) Submit universal needs statements via the chain of command for TMDE capabilities that do not exist. Only TMDE procured by MARCORSYSCOM as a result of an official requirement will be supported by MARFOR CFs.

(f) Units that purchase unsupported TMDE assume all life cycle support management responsibilities to include repair and/or calibration.

(g) Ensure MARFOR CFs accomplish timely maintenance and calibration of TMDE.

(h) Ensure MARFOR CFs participate in the Marine Corps Transfer Standards Program.

(i) Ensure MARFOR CFs use the most up to date automated calibration and maintenance software, as approved by PdM-TMDE, for the collection of all calibration and repair attribute data.

(j) Ensure MARFOR CFs are compliant with the Marine Corps METCAL Quality Program and maintain a certification from MARCORSYSCOM PM-TMDE.

(k) Ensure the MARFOR CFs provide training, as requested or required, to using units for the education of



personnel in analyzing measurement requirements and proper use of TMDE.

5. Administration and Logistics

a. Recommendations concerning the contents of this Order are invited. Such recommendations will be forwarded to the Deputy Commandant of the Marine Corps, I&L, Logistics Policy via the appropriate chain of command.

b. This Order will be managed in accordance with reference (i).

c. Records created as a result of this Order shall be managed according to National Archives and Records Administration approved dispositions per reference (j) to ensure proper maintenance, use, accessibility and preservation, regardless of format or medium.

d. The generation, collection or distribution of personally identifiable information (PII) and management of privacy sensitive information shall be in accordance with the Privacy Act of 1974, as amended, per references (k) and (l). Any unauthorized review, use disclosure or distribution is prohibited.

6. Command and Signal

a. Command. This Order is applicable to the Total Force Marine Corps. This Order is not applicable to Marine Corps Aviation calibration facilities which operate under the Naval Aviation Command Calibration Program.

b. Signal. This Order is effective the date signed.



W. M. FAULKNER  
Deputy Commandant for  
Installations and Logistics

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