

NAVSEA
STANDARD ITEM

FY-11

ITEM NO: 009-13
DATE: 24 JUL 2009
CATEGORY: II

1. SCOPE:

1.1 Title: Meter; repair and certify calibration

2. REFERENCES:

2.1 S9300-A6-GYD-010, Electrical Workmanship Inspection Guide for Surface Ships and Submarines

2.2 NAVSEA OD 45845, Metrology Requirements List

2.3 ISO 17025, General Requirements for the Competence of Testing and Calibration Laboratories, First Edition

2.4 ANSI/NCSL Z540-3, Requirements for the Calibration of Measuring and Test Equipment

2.5 NAVSEA 04-04734, Naval and Marine Corps Calibration Laboratory Audit/Certification Manual

2.6 NAVAIR 17-35TR-8, Technical Requirements for Calibration Labels and Tags

2.7 Calibration Requirements List (CRL) for Shipboard Installed Instrumentation

3. REQUIREMENTS:

3.1 Prior to the installation of meters, ensure they are in calibration and have greater than two-thirds of their calibration life remaining.

3.1.1 If new meters require calibration, proceed to 3.6.

3.2 Disconnect and remove each meter and associated impeders, reactors, resistor boxes, and shunts.

3.2.1 Record and retain hook-up data and mounting hardware.

(V) "CONDITION OF WIRE LEADS"

3.2.1.1 Inspect lead wires and insulation; broken or partially broken lead wires shall be cut back to remove damaged/questionable portions of the wire and new terminal ends installed in accordance with 2.1.

3.2.2 Remove existing and install new conductor identification sleeving in place of conductor identification sleeving found to be illegible or missing. New conductor identification sleeving shall conform to SAE-AMS-DTL-23053, Class One, white, marked with indelible ink.

3.3 Disassemble and clean equipment to remove loose paint and foreign matter.

3.4 Repair each meter and associated equipment to manufacturer's specifications.

3.4.1 Remove existing and install new components in place of those found to be missing or defective.

3.4.2 Free-up and adjust moving parts.

3.4.3 Restore unit cases to original finish.

3.5 Assemble equipment. Install new seals and gaskets conforming to manufacturer's specifications.

3.6 Calibrate and adjust each meter, including associated accessories, to manufacturer's specifications, using appropriate calibration procedures and test equipment in accordance with 2.2.

3.6.1 Calibration laboratories shall be accredited to either 2.3 or 2.4 by a Commercial Accreditation Activity, or certified by a Navy Certification Activity to 2.5 and the scope of accreditation must cover the appropriate measurement parameters and ranges of the calibrations performed.

3.6.2 In the absence of manufacturer's specifications, tolerances shall be in accordance with Section 1 of 2.2.

3.6.3 Affix a calibration label to the face of each meter, denoting the name and location of the calibration facility, the NAVSEA Lab Code if assigned, the date of calibration, and date of next calibration. Department of the Navy standards, calibration activities, and TAMS custodians shall use calibration labels and tags in accordance with 2.6.

3.6.4 The calibration interval assigned for shipboard installed instrumentation shall be in accordance with 2.7. All other meters shall have a calibration interval assigned in accordance with 2.2.

3.7 Install and connect each meter, including associated accessories, using hook-up data and mounting hardware retained in 3.2.1.

3.7.1 Install new fasteners in place of those found to be missing or defective, conforming to ASTM A 449, Type I, zinc coated for bolts; ASTM A 563, zinc coated for nuts; or selected and identified in accordance with SAEJ 2280.

3.7.2 Fasteners requiring a permeability factor of 2.0 or less shall conform to Grade 304 CRES.

3.8 Ensure correct indication of each meter during operational test of equipment.

3.9 Submit one legible copy, in electronic media, of the calibration data to the SUPERVISOR within 5 working days of the calibration.

3.9.1 Provide the following data for each meter calibrated:

Manufacturer of meter
Model
Serial Number, if assigned
Tolerance
As found condition
Procedure used
Final calibration results
Calibration interval
Calibration due date
Location of installed meter

4. NOTES:

4.1 The SUPERVISOR will supply the contractor with a copy of the CRL provided by the Ship's Chief Engineer.

4.2 The SUPERVISOR will provide a copy of the calibration data to the Ship's Force Calibration Coordinator for the purpose of updating the ship's RECALL list.

4.3 Contact NAVSEA 04RM3 for information on commercial accreditation in accordance with 2.3 and 2.4 by NAVSEA approved commercial Accrediting Bodies (AB).

4.4 Contact one of the following Navy Certification Activities for certification requirements in accordance with 2.5:

Mid-Atlantic Regional Maintenance Center
Laboratory Certification Branch (Code 222)
Phone: (757) 443-3872 Ext 2553
FAX: (757) 443-3666

Southwest Regional Maintenance Center
Laboratory Certification Branch (Code 222)
Phone: (619) 556-2662 or (619) 726-5838
FAX: (619) 556-1359