

NAVSEA
STANDARD ITEM

FY-05

ITEM NO: 009-13
DATE: 30 AUG 2002
CATEGORY: II

1. SCOPE:

1.1 Title: Meter; repair and calibrate

2. REFERENCES:

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

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

2.3 ANSI/NCSL Z540-1, General Requirements for Calibration Laboratories and Measuring and Test Equipment

2.4 OD 45845, Metrology Requirements List

3. REQUIREMENTS:

3.1 Disconnect and remove each meter and associated impeters, reactors, resistor boxes, and shunts.

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

(V) "CONDITION OF WIRE LEADS"

3.1.1.1 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.

3.1.2 Remove existing and install new wire markers in place of wire markers found to be illegible. Install new wire markers where missing. New wire markers shall conform to SAE-AMS-DTL-23053, Class One, white, marked with indelible ink.

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

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

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

3.3.2 Free-up and adjust moving parts.

3.3.3 Restore unit cases to original finish.

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

3.5 Calibrate and adjust each meter, including associated accessories, to manufacturer's specifications, using appropriate calibration procedures and test equipment.

3.5.1 Calibration laboratories shall be accredited to either 2.2 or 2.3 by a Commercial Accreditation Activity or certified by a Navy Certification Activity to 2.3 for the specific measurement area required.

3.5.2 In the absence of manufacturer's specifications, tolerances shall be in accordance with Section 1 of 2.4.

3.5.3 Affix a calibration label denoting the name and location of the calibration facility, the date of calibration, and due date of next calibration, in accordance with Section 3 of 2.4 and the following, to the face of each meter.

3.5.3.1 The calibration interval shall be as designated on the Calibration Requirements List (CRL).

3.6 Install and connect each meter, including associated accessories, using hook-up data and mounting hardware retained in 3.1.1.

3.6.1 Install new fasteners in place of those found to be missing or defective, conforming to ASTM A449, Type I, zinc coated for bolts; ASTM A563, zinc coated for nuts; or selected and identified in accordance with SAEJ 2280.

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

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

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

3.8.1 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 provide a copy of the CRL (also known as the Measure Format 310 Document) from the 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 one of the following commercial accreditation organizations for visit arrangements (to ISO 17025 or ANSI/NCSL Z540-1) and payment requirements.

The American Association of Laboratory Accreditors
The National Voluntary Laboratory Accreditation Program

4.4 Contact one of the following Navy Certification Activities for visit arrangements (to ANSI/NCSL Z540-1) and payment requirements:

FTSCLANT
POC Jim Waller
(757) 485-6242
FAX (757) 485-6279

FTSCPAC
POC Ken Wampler
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