

MIL-STD-1344A
NOTICE 4
14 June 1985

MILITARY STANDARD
TEST METHODS FOR ELECTRICAL CONNECTORS

TO ALL HOLDERS OF MIL-STD-1344A:

1. THE FOLLOWING PAGES OF MIL-STD-1344A, METHOD 2006 HAVE BEEN REVISED AND SUPERSEDE THE PAGES LISTED:

| NEW PAGE | DATE | SUPERSEDED PAGE | DATE |
|----------|--------------|-----------------|------------------|
| 1 | 14 June 1985 | 1 | 1 September 1977 |
| 2 | 14 June 1985 | 2 | 1 September 1977 |
| 3 | 14 June 1985 | 3 | 1 September 1977 |
| 4 | 14 June 1985 | 4 | 1 September 1977 |
| 5 | 14 June 1985 | New | |

2. RETAIN THIS NOTICE AND INSERT BEFORE TABLE OF CONTENTS.

3. Holders of MIL-STD-1344A will verify that page changes indicated above have been entered. This notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by stocking points until the military standard is completely revised or canceled.

Custodians:
Army - CR
Navy - AS
Air Force - 85

Preparing activity:
Navy - AS
(Project 5935-3447)

Review activities:
Army - MI, AR
Navy - EC
Air Force - 17, 11, 99
DLA - ES

User activities:
Navy - SH, MC

Agent:
DLA - ES

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METHOD 2006.2

PROBE DAMAGE (CONTACTS)

1. **PURPOSE.** The purpose of this test is to simulate a form of field abuse of contacts during test by inserting probes into connector socket contacts.

2. **TEST EQUIPMENT.** Equipment required to perform test shall be probe damage tool similar to that on figure 1.

2.1 **Socket contact holding device.** Contacts shall be inserted into a socket contact holding device, except nonremovable type contacts shall be tested in the applicable connector. When a lathe chuck is used for the socket holding device, the holding device shall not support the socket contact pressure member in any way as to alter contact performance. The contact holding device or connector shall be capable of locking the socket contact in a horizontal position to prevent rotation during test.

2.2 **Mounting.** The mounting fixture shall be suitable to support the socket contact holding device or connector in a horizontal position and provide 360° rotation during test.

3. **TEST SAMPLE.** A test sample shall consist of the contact inserted into the socket contact holding device or connector.

4. **TEST PROCEDURE.**

4.1 **Test.**

- a. The contacts shall be subjected to an examination of product to insure conformance to the design intent.
- b. Wires required for other tests may be terminated to the contacts.
- c. The socket contact holding device or connector with socket contacts fixed in place shall be mounted in a horizontal position to a rotating fixture to allow 360° hand rotation during test (see figure 2).
- d. The probe damage tool (see figure 1), shall be inserted into the contact to a "8" dimension depth as shown on figure 1. The depth of the socket insert dielectric material shall be added to probe length "8" when a connector holding device is used.
- e. When the test setup is in conformance with 4.1c. and 4.1d., the fixture shall be slowly rotated 360° at a uniform rate with the probe damage tool inserted in the contact so that the force is applied uniformly to the inside diameter of the socket. This test shall be performed at each insertion depth specified on figure 1 on all contacts. After probe damage testing, the contacts shall meet the requirements specified in the applicable specification.

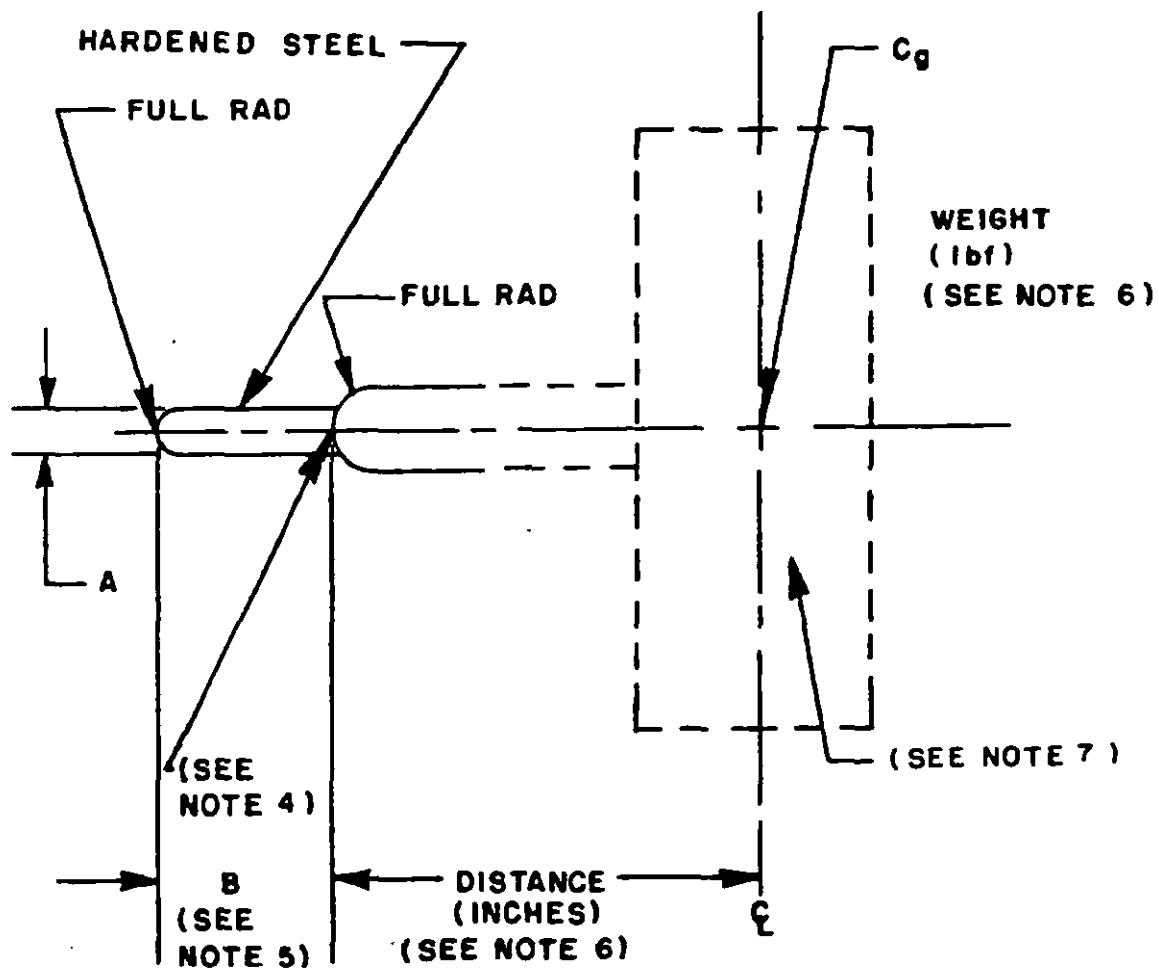
5. **DOCUMENTATION.** Data sheets shall contain:

- a. Title of test, date, and name of operator.
- b. Sample description: Include fixture, if applicable.
- c. Test equipment used and date of latest calibration.
- d. Identification of test method.
- e. Values and observations.

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6. SUMMARY. The following details shall be specified in the individual specification:

- a. Size of samples to be tested (see 3).
- b. Probe depth, if other than 1/2 and 3/4 of socket bore minimum depth (see figure 1).
- c. Specify whether socket contact holding device or connector is to be used for testing; if socket contact holding device is used, define (see 2.1).
- d. Requirements for contact separating forces after probe damage testing (see 4.1e.).

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FIGURE 1. Probe damage tool.

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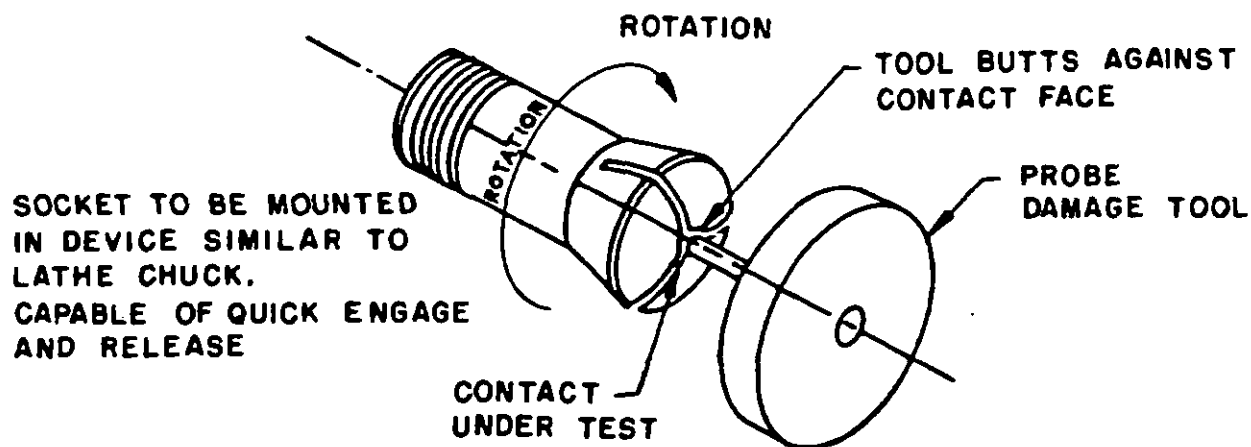
| Socket contact | A \pm .0005 (0.013 mm) | | "C" Moment in-lbf \pm 10% |
|-------------------|--------------------------|---------|-----------------------------------|
| 4/0 | .500 | (12.70) | 8.00 |
| 2/0 | .406 | (10.31) | 8.00 |
| 0 | .357 | (9.07) | 8.00 |
| 2 | .283 | (7.19) | 4.00 |
| 4 | .225 | (5.72) | 4.00 |
| 6 | .178 | (4.52) | 4.00 |
| 8 | .142 | (3.61) | 4.00 |
| 10 | .125 | (3.18) | 2.00 |
| 12 | .094 | (2.39) | 2.00 |
| 16 | .0625 | (1.588) | 2.00 |
| 20 | .040 | (1.02) | 0.50 |
| 22 | .030 | (0.76) | 0.125 |
| 23 | .027 | (0.69) | 0.125 |
| 24 | .025 | (0.64) | 0.125 |

NOTES:

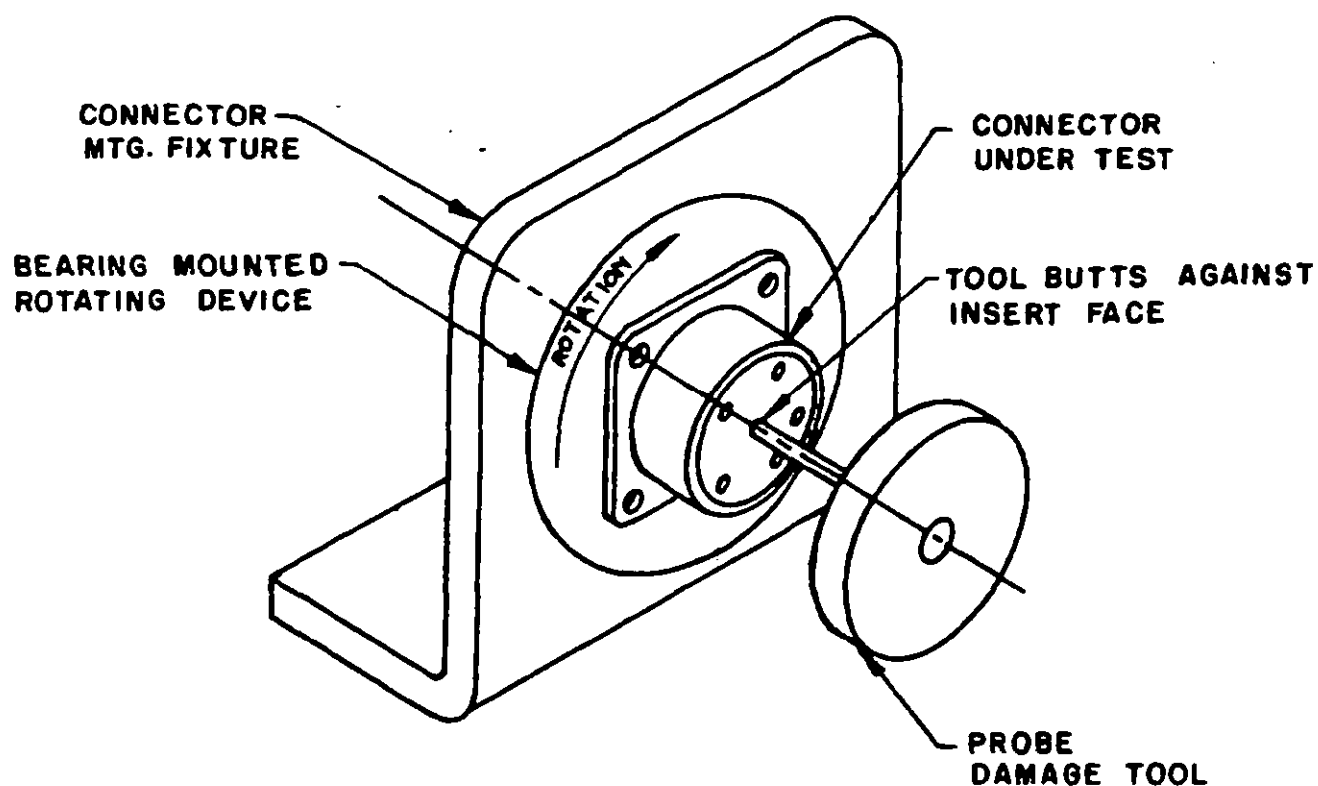
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Millimeters are in parentheses.
4. Fulcrum point for calculating moment "C" (in-lbf). (moment "C" (in-lbf) = distance (inches) x weight (lbf).
5. The "B" dimension shall be 1/2 and 3/4 of socket bore minimum depth or as specified.
6. The values for distance and weight may vary. The product of the weight and distance shall be equal to the moment C specified above.
7. The weight and weight shape may vary, but the distance measurements shall be made from the centerline (passing through the center of gravity Cg) to the fulcrum point.

FIGURE 1. Probe damage tool - Continued.

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TYPE 1. Socket contact holding device for testing socket contacts.



TYPE 2. Apparatus for testing nonremovable socket contacts within the connector.

FIGURE 2. Typical probe damage test setups.

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